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EDITED BY

GEORGE F. SHRADY, A.M., M.D.,

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Original Lectures.

CARTWRIGHT LECTURES,*

ON THE

PHYSIOLOGICAL ANTAGONISM BETWEEN MEDICINES, AND BETWEEN REMEDIES AND DISEASES.

BY ROBERTS BARTHOLOW, M.D.,

PROFESSOR OF MATERIA MEDICA AND THERAPEUTICS IN THE JEFFERSON MEDICAL COLLEGE, PHILADELPHIA.

(Special report for THE MEDICAL RECORD.)

LECTURE VI.

THE ANTAGONISM BETWEEN REMEDIES AND DISEASES.

Mr. President and Gentlemen—As we have seen that the treatment of local affections is governed to a large extent by the principle of antagonisms, let us now inquire whether this principle is equally applicable to the treatment of constitutional states. An investigation in this direction will show, I think, that there are proper antagonists to inflammation, to fever, and to the diatheses and cachexiæ, and that our most successful treatment of these conditions is based substantially upon the doctrine of antagonisms.

First, as to inflammation. This is a process which, assuming no points that remain unsettled, may be defined to consist in a dilatation (paresis) of the vessel-walls, followed by stasis of the blood; in an increase of the number and modification of the character of the white blood-corpuscles, and their migration from the vessels into the surrounding tissues, in a simultaneous diapedesis of the red corpuscles; in an increase and change of character of the fibrin and albumen of the blood, and their exudation within the area of inflammation; in the diffusion of the salts of the serum, especially of the chlorides, into the inflamed parts; in an increased multiplication of the cellular elements of the tissues, in consequence of the increased pabulum furnished them; and in a breaking up, disassociation and granular degeneration of the anatomical elements of the inflamed tissues. In addition to the local process, there is a general febrile state of the system which is characterized by increased temperature, increased heart-action, and diminished arterial tension.

REMEDIES AGAINST INFLAMMATION.

There is no one remedy capable of antagonizing such a complexus of symptoms; but we have those in our possession which may counteract the various stages of the process as they successively arise.

ANTAGONISTS TO THE FIRST STAGE OF INFLAMMATION.

As any agent to be of service in the commencement of an inflammation must act upon the corpuscular elements of the blood, as well as the contractility of the vessels, we look for remedies having these effects, and find that there are two of the utmost value, and there are others of secondary importance in this connection. Quinia and morphia, if administered at the right moment, will, I believe, often suppress a commencing inflammation. There is need of facts to support this statement; but I am fully convinced that the existence of the antagonism between these agents and the initial stage of inflammation will in time be incontrovertibly established. Now as to the nature of this antagonism. Since morphia, as we have seen, has the power of increasing the vascular tension and of checking all vital processes, the explanation of its action at once becomes apparent. Quinia, however, possesses a wider range of action. It would take too much time to speak in any detail of the exhaustive modern researches in regard to its physiological effects, and I must content myself, consequently, with the barest statement of the main facts. Its power of arresting the movements and other vital actions of the white corpuscles has been proved to be due to its action, as a poison, in destroying protoplasm and the minutest forms of life, and for the demonstration of this property we are mainly indebted to Prof. Binz, of Bonn. In order to act efficiently as a protoplasmic poison it is necessary, as we would naturally suppose, that it should be given in large doses. In addition, quinia, as has been shown by Binz and other investigators, has the property of diminishing the oxidizing function of the blood; and Ranke, Kerner, and Strassburg have demonstrated that it also has the effect of reducing by fully one-half the excretion of urea and uric acid. As the amount of urea excreted shows to what extent the oxidation of the nitrogenous tissues is going on, it is obvious that quinia must have the effect of checking this oxidation. Hence, it follows this agent antagonizes the increased heat-production, the migration and subsequent multiplication of the white corpuscles and proliferation of the protoplasm of the tissues; while morphia, by raising the vascular tonus and diminishing the heart's action, tends to remove the congestion.

The three remedies whose action is of secondary importance in the first stage of inflammation are, digitalis, aconite, and veratrum viride. Although they all possess the power of lowering the circulation, they differ in the modes by which they accomplish this object. Digitalis has the effect of slowing the heart, while it energizes its movements and increases the vascular tension; but any effect that it may have over the movements and changes of the protoplasm is secondary to its action on the vascular tension. Its influence on temperature is very evident; but at the same time it ranks far below quinia as an antipyretic. One great objection to the use of digitalis in the early stage of inflammation is the slowness of its action, since it takes from five to ten hours, after the primary disturbance caused by it on the digestive organs, for its characteristic physiological effects to appear. Then, as the slow diffusion of the active constituents into the blood is only equalled by their tardy excretion, it follows that digitalis cannot be used effectively in this connection.

Aconite has the effect of diminishing the power of

* Of the Alumni Association of the College of Physicians and Surgeons, New York.

the heart, and although it also lowers arterial tension, the amount of blood reaching the seat of inflammation is reduced by it. Besides, it lessens oxidation by diminishing the work of the lungs, and reduces temperature, partly because less blood is distributed when the heart is working under its influence, and partly because the supply of oxygen reaching the tissues is less. Hence, aconite is especially indicated when the general arterial tension is high and hæmatosis is active.

Veratrum viride resembles aconite very strongly in its action, but it has a more decided effect upon the heart and proportionally less influence over the lungs. Its agency in checking inflammation, like that of aconite, depends on the reduction of the quantity of blood supplied to the inflamed area, and the diminution of oxidation which it produces. The good effects of digitalis, aconite, and veratrum viride cease with the occurrence of exudation, because new conditions then arise over which they have no control whatever.

ANTAGONISTS TO THE SECOND STAGE OF INFLAMMATION.

The antagonists to the second stage of inflammation must, of necessity, have the power of preventing or removing the products of inflammation; and such agents are found in quinia, chloral, and the alkalies. Quinia, it may be stated, ceases to be of service when the exudate has actually formed; but chloral is especially adapted to this stage, since it has the effect of reducing the temperature, dissolving the exudations, and quieting restlessness and delirium. With the exception of its solvent action on exudations, these properties of chloral are disputed by none. The experimental evidence on which the existence of this solvent action rests, however, seems to be quite conclusive; while the clinical evidence, although limited and difficult to define, would appear to be decidedly confirmatory of the experimental. Since, however, the points of contact between chloral in the blood and the exudation in an inflamed area are necessarily small, it follows that it must be more effective when it is administered before the final stasis occurs. An important contraindication against the use of chloral ought not to be overlooked, viz.: the paralyzing effect of this agent upon a weak heart. When given for the purposes indicated above the dose should be small and not repeated at shorter intervals than every two hours; while the tendency to cardiac depression which may result from it can be successfully combated by the joint administration with it of atropia, which does not diminish the efficacy of the remedy in the direction for which it is used.

It seems to be a fact, now perfectly well established by clinical experience, that the alkalies—and especially the potash, ammonia, and lithia salts—have the power, by increasing the alkalinity of the blood, of checking the formation of exudations, and causing their solution, to a greater or less extent, after they have already formed. This method of treating inflammations was practised, on a large scale, by the late Dr. J. Hughes Bennett, and his exceptionally extensive experience on this point entitles his declarations to special consideration. Ammonia being more diffusible than the other alkalies, it has always seemed to me to be more effective, and it is best given in the form of the carbonate, dissolved in the officinal liquor ammonia acetatis.

ANTAGONISTS TO THE THIRD STAGE OF INFLAMMATION.

When the exudation is undergoing solution, preparatory to absorption and extrusion, digitalis and quinia again come into use, since they seem to give tone to vessels long in a paretic condition and to favor the transformation and elimination of the inflammatory products. As the action of the heart, in consequence of the more or less long-continued strain to which it has been subjected, is apt to be irritable, quick, and wanting in energy, digitalis is probably of more service that the quinia.

THE ANTAGONISTS OF FEVER.

The discussion of the nature of fever has been very fruitful in many respects during the past four years; but it has not settled the question, and we are still in the dark in regard to its essence, while the existence of a heat-regulating centre is both maintained and denied. No single source of heat, it would seem, can be alone concerned in the production of fever, and the truth, probably lies, to a greater or less extent, in all of the theories that have been propounded. The means for reducing fever-heat which we now possess operate both by acting the source of heat-production and by facilitating its radiation from the body. In the first group are those which check or retard these processes on which the formation of heat depends, known as antipyretics, and besides the antipyretics proper there are numerous remedies (the paralyzers especially) which diminish heat-production among the other toxic phenomena which they produce.

The first of the agents affecting heat-production is repose, and I believe I was the first, or at least among the first, to show that if rabbits, pigeons, and other small animals are so fettered as to be kept immovable for some time, the temperature of their bodies declines. Hence, remedies which have the power of suspending muscular activity cause a reduction of temperature which is quite independent of any influence they may exert on heat-production, and it is obvious that conclusions drawn from observations in which this cause of lowered temperature is not taken into consideration, must be defective and misleading.

The most important medicinal agents which affect heat-production are quinia, salicylic acid, resorcin, chloral, digitalis, aconite, and veratrum viride. Besides such remedies as these, all the agents which depress the functions of respiration and circulation diminish heat-production to a greater or less extent. Liebermeister, after an exhaustive examination of the relative merits of different agents, including cold baths and all the methods of hydrotherapy, holds that quinia is entitled to the first place as an antipyretic, and his opinion is but an echo of the general sentiment among more enlightened medical thinkers. The utility of this remedy consists in the possession of remarkable power to reduce temperature, conjoined with a minimum of evil effects. In addition to what has already been said in regard to the antipyretic qualities of quinia, I need now merely state that the reduction of temperature caused by it is the result of its influence over the vital activity of protoplasm, and over the so-called oxidizing action of the blood. As to the quantity of the remedy required, not less than twenty grains can have any distinct antipyretic effect, and our German *confrères* are in the habit of giving twenty, thirty, forty, and even sixty grains, and repeating it as often as may be necessary to keep the temperature down to the proper line. It is true that in malarial diseases much smaller doses may diminish fever, but here another element enters the problem. That quinia exercises the same curative influence over febrile diseases, such

as typhoid, which it does over malarial diseases, cannot be maintained for a moment. The effect that it has on the course of fever is due purely to its antipyretic property; while on malarial diseases its action is specific and particular.

Salicylic acid, like quinia, does not affect the normal temperature, though it has a powerful effect on the temperature of fever. It has also many other analogies with quinia, but it is necessary to give it in considerably larger doses. The quantity required to produce a decided antipyretic effect is not less than sixty grains, and eighty, or even one hundred and twenty grains, are sometimes demanded. The duration of the decline of temperature which follows the profuse diaphoresis that usually occurs, is about six hours, and this furnishes the measure of time for its repetition. For the reduction of the temperature in fevers in general, it is not nearly of as much value as quinia; but in acute rheumatism its antipyretic power, which would seem to be the secret of its curative effect in that disease, renders it highly useful.

Resorcin is a new remedy which is likely to be of service as an antipyretic as well as an antiseptic. The dose as an antipyretic is about sixty grains, and as it has no irritant properties, it may be used hypodermetically without danger of inflammation and abscess. At first it produces quickened action of the heart, with flushing of the face and a sense of warmth and precordial oppression; after which profuse perspiration follows, and with this comes the decline in temperature, the latter usually being very decided.

While digitalis is both less efficient and less prompt in reducing febrile temperature than quinia, and is apt to produce gastro-intestinal disturbance, and while its use is contraindicated when there is weakness of the heart from granular degeneration of its muscular fibre, there are, nevertheless, symptoms of the febrile state against which this agent can be resorted to with signal advantage. In the exanthematous fevers, and especially scarlatina, digitalis antagonizes the symptoms most active in bringing about a fatal result, viz.: a weak heart, low vascular tension, accelerated circulation, high temperature, and deficient urinary secretion.

Aconite, although its antipyretic effect is less certain and decided than that of digitalis, diminishes the activity of the cardiac motor apparatus, and reduces the vascular tension; and hence it antagonizes the febrile condition that is associated with rapid, powerful, and irregular action of the heart, and high arterial tension. It is rather in opposition to certain symptoms of the febrile state than as an antipyretic that aconite is useful. Whenever high fever is due to sthenic inflammation it may reduce the temperature by operating upon its source, and the same is also true of veratrum viride, which, like aconite, has little value purely as an antipyretic.

The most efficient remedy in reducing the high temperature of the essential fevers is cold, and certainly no antagonism could be more exact than that between cold and heat. When the blood is heated above the normal by the febrile process in the system, the action of the heart is augmented in a corresponding degree, and when the surface blood is repeatedly cooled, the whole quantity of blood in the body at length becomes lowered in temperature, and as a result the heart-beat soon grows less frequent. The result is the same in whatever manner the cold is applied, whether by means of the cold bath, the cold pack, the rectal injection of ice-water, or the external application of ice-bags. With the decline of the body-heat, all these changes resulting from elevated temperature cease. In sunstroke, or thermal fever, and in certain cases of acute rheumatism, it is seen how quickly hyperpyrexia may destroy life, and how life may be preserved under circumstances of the most imminent danger is demonstrated when in this condition of hyperpyrexia the abnormal heat is removed by the prompt application of cold. That the treatment of fevers—of typhoid, especially—has been greatly advanced by the method of hydrotherapy seems hardly to admit of question. The treatment by cold baths is particularly adapted to those fevers in which the high temperature is the dominant fact; but hydrotherapy becomes of less and less service the more the morbid condition is determined by some special poison acting on particular organs. Typhoid fever represents one group, and small-pox the other group of febrile affections.

ANTAGONISTS TO THE ANIMAL POISONS, HYDROPHOBIA, SYPHILIS, THE DIATHESES AND THE CACHEXIÆ.

The third and last division of maladies against which we may direct our antagonists are the animal poisons, hydrophobia, syphilis, the diatheses and the cachexiæ. Woorara, as I have previously mentioned, has seemed in two instances to antagonize the convulsive phenomena of hydrophobia. To this statement may be added the remarkable case recently treated by pilocarpin, in which the tragic death in a wild delirium may be explained by the accidental moral causes, the spasms having subsided under the action of the remedy in eliminating the poison by means of the profuse salivary flow excited by it. The results obtained by Dr. Guttman in the treatment of diphtheria with pilocarpin are very striking. Of eighty-one cases thus treated by him, not one proved fatal, and he assumed that the free salivary discharge occasioned softening and detachment of the false membrane. There must, however, be some other antagonistic influence at work in order to produce such uniformly good results, and it is very desirable to have further experience in regard to the use of pilocarpin in diphtheria; but it should not be forgotten that this remedy has a depressing effect on the heart, and may, therefore, only add to the gravity of the disease, which also has a marked tendency to paralyze the heart.

MERCURY AND SYPHILIS.

Probably no fact in therapeutics is better established than the curative effect of mercury in constitutional syphilis. Although some resemblance may be admitted to exist in the action of both agents upon the system, they are such decided antagonists that they cannot exist in the same organ or tissue—one must displace the other. Iodide of potassium, on the other hand, is a chemical antidote rather than a physiological antagonist to syphilis.

THE LESSONS TO BE LEARNED FROM THE WHOLE SUBJECT.

Taking, finally, a comprehensive view of the subject treated in the preceding lectures, what are the lessons to be learned? It is obvious, I think, that the only rule which we apply in therapeutics, as far as any rule is applicable, is the rule or principle of antagonisms. In the case of the treatment of poisons the antagonism is direct, the two opposing agents counterbalancing each other until the natural powers accomplish the elimination of the toxic agent. When a poison enters the blood a series of disturbances follows, which is due to its presence, to its action on the tissues for which it has a special affinity,

and to the efforts made by nature toward its elimination. The antagonist pursues a similar course, but affects the particular tissue for which it has an affinity in an opposite manner, and thus prevents the impairment of function, which would otherwise result in death, until elimination occurs.

(Having reviewed the methods in which antagonisms are exerted in the treatment of diseases of particular organs, in inflammation and in fever, the lecturer said that the right use of remedies, in accordance with the law of antagonisms, required an accurate knowledge of physiological therapeutics, and that he feared that the same interest was not exhibited in the study of modern therapeutics as in other departments of medical science and art, there being still present the notion that observation and experience should be the sole foundations for the construction of a therapeutical science. He then concluded as follows:) While the notions of the actions and uses of drugs engendered by experience and observations are constantly changing, the deductions of experiments have the same value as the same methods in the other experimental sciences. To this end we should direct our best efforts, and rest satisfied with no less certainty than that which belongs to the exact sciences, until we have attained to the degree of perfection that, the disease being given, the remedy follows.

Original Communications.

CHLORAL HYDRATE.

By H. H. KANE, M.D.,
NEW YORK.

Part II.

DEATHS FROM CHLORAL.

(Continued from p. 705, vol. xviii.)

The history of the following interesting case has been kindly sent me by Dr. D. Tod Gilliam, of Columbus, Ohio:

E. R. P——, aged 33 years, medium stature, full habit, sanguine temperament, by occupation commission merchant, came under treatment for incipient *mania a potu*, September 24, 1877. He had habitually enjoyed good health, and his occupation secured to him much out-door exercise. He had been a total abstainer for four years; this because of his known tendency to go to extremes in drinking when once started. He never drank habitually, but paroxysmally, ending his debauches only with the wreck of purse and person. On the 20th of September, 1877, he went to Chicago on an excursion, and on account of some slight indisposition was induced to take brandy. From this time on he drank furiously, returning to this city on the 24th inst., when I saw him and prescribed:

℞. Chloral hydrat.,
Potass. bromid .... āā ʒiv.
Aquæ,
Syr. zinziber..... āā ℥ij.
M. Sig.—One tablespoonful every three hours, or, if need be, not to exceed three doses, at intervals of two hours, to secure quietude.

Perfect quietude, abstinence from spirits, and liquid nourishment seasoned, when appropriate, with cavenne pepper, were also enjoined.

September 25th.—Had been drinking and in almost continuous motion; face flushed, eyes suffused, pulse quickened and voluminous, speech stammering and excited. Naturally very affable, he was courteous to those around him, but would not brook restraint. Chloral suspended and morphia substituted.

September 26th.—No obvious change except an exacerbation in the foregoing symptoms. Is fully alive to his condition, and promises, with tears, to restrain himself. Complains of gastric distress, but does not vomit. Will not take nourishment. Has had snatches of sleep, but awakens in a panic, in which he attacks his attendants, but desists on being spoken to. Think I ordered sol. citrat. potass. for gastric trouble, and insisted on his being kept under perfect restraint. Morphia continued, as it seemed to be more potent for good.

September 27th.—Patient had defied restraint and was still drinking. Ordered a discontinuance of medicine unless provision could be made to keep him from drink. During the day he procured and took one bottle of Seltzer's aperient without my knowledge; in the evening he took about half of a second bottle. At 9 P.M. he was given a dose of the original prescription of chloral and bromide. At 11 P.M. he went to the water-closet, where he remained until 1 A.M., purging violently. He now returned to his room, much exhausted, and was given another dose of the chloral. He fell into a sleep, as also did the attendant. The latter awoke at 4 A.M., and upon going to the bed of our patient discovered that he could not arouse him, and that he had also ceased to breathe. I was sent for and found him dead. The appearance was of one in natural repose; the eyes were closed, the face retained its color, the features were calm and life-like, and *the body heat above the normal*. His friends declined to have a *post-mortem*.

The minor details of treatment are omitted for obvious reasons, but I have given you all that could, in any way, affect or modify the use of the chloral. The rise in body heat, after death, struck me at the time as being anomalous in death from chloral. It was too conspicuous to be mistaken, and was remarked on by those present.

Dr. A. P. Hayne, of the Home for Inebriates, San Francisco, Cal., writes me of two cases of sudden death after the use of chloral. In the first case there was enlargement of the heart. There was no autopsy in either case. "In the first it was my idea that there was a clot in the heart, and in the latter (there was convulsions) that the convulsions of alcoholism had arrested the circulation." The dose was in both cases twenty grains. Both patients had, on previous occasions, taken thirty-grain doses without any ill effect. An interesting pamphlet upon the subject of alcoholism has been sent me by Dr. Hayne,* and will be spoken of more fully when we come to discuss the treatment of delirium tremens by chloral.

Dr. Roswell Park, of Chicago, Ill., writes me of the case of an Irish cook, aged forty years, who, through the stupidity or carelessness of the nurse, was allowed to help herself to about 480 grains of potassium bromide and 300 grains of chloral. She sank into a stupor and died. The pupils were *widely dilated*, a very unusual occurrence, and possibly due to the large amount of potassium bromide taken.

Dr. H. W. Boyd, of Chicago, Ill., relates the following, which is undoubtedly an instance of cumulative action resulting in sudden paralysis of the heart:

"I had a patient afflicted with delirium, the result

* Alcoholism: Its Patho-Anatomical Conditions, Symptomatology, and Treatment. By Arthur P. Hayne, A.M., M.D., San Francisco, Cal.

of chronic alcoholism, who took ʒ iv. inside of twenty-four hours. He was a powerful man, over six feet in height, 190 pounds weight, aged thirty years, a blacksmith by trade. He had been on a terrible spree for a month, and was trying to stop. He could not sleep. I gave him a prescription of ʒ ij. hyd. chloral, ʒ ss. syr. tolu, one teaspoonful at once, and another in three hours if he was not asleep. He kept it up every three hours, got the prescription repeated, and kept it up for twenty-four hours, and did not sleep, but said he felt great relief from it. He went on a spree again in a few days, and in a week or two attempted to stop again. He did not come to see me, but simply got the prescription repeated, and took it as before, without producing sleep. This was repeated with similar results for three or four of his periodical sprees, until one night, after he had taken the chloral a little more freely and a little oftener, he could not sleep, and attempted to get up and put on his clothes; he fell backward on the bed, dead. Whether the chloral caused death in this case, or whether he had congestion of the brain from some other cause, I do not know. I think the chloral got the credit of killing him."

Dr. T. B Camden, of Weston, W. Va., writes me of the case of a gentleman whose friends attempted to "taper him" off, and gave him an unknown quantity of chloral in some wine. He died very suddenly, *just after sneezing.*

Dr. M. B. Mosser, of Mechanicsburg, Pa., writes me of the following cases:

A young man, aged 29 years, very intemperate, was advised by a physician to take chloral hydrate for obstinate insomnia and restlessness. He did so, and continued its use for about a year. Leaving home on a debauch, he was found, several days after, in a hotel twenty miles from home, having died from a supposed overdose of chloral, part of which was found on his person. No autopsy.

Patrick H——, aged 60 years, nervous temperament, was of spare habit, very intemperate, and by occupation a porter, was attacked by delirium tremens. Dr. N—— was summoned to his relief, and after prescribing and administering the usual remedies for three days without much effect, he concluded to administer hydrate of chloral for the relief of the insomnia then present, and which had kept up for seventy-two hours in the most obstinate manner. Twenty-grain doses of chloral were ordered every two hours until sleep was produced. But a single dose was given, when I was called upon by Dr. N—— to visit the case in consultation with him, and, greatly to the surprise of both, found the patient in a state of coma, or bearing all the indications of syncope (collapse): hurried respiration, fluttering heart, feeble pulse, low temperature, and an absolute inability to move hand or foot—in a word, was unconscious, in which condition he died soon after; *opinion* (quietly): *that there was too much chloral in the case.* No autopsy.

Dr. Madison Marsh,* of Louisiana, relates several cases of death, one from forty-five grains in three doses; fatal collapse followed fifteen minutes after the last dose. One death occurred during labor. In the next number of the same journal three cases are given where death occurred from unknown quantity in intemperate persons. All these cases are very loosely reported, not even the symptoms being given, so that it is difficult to say what really was the cause of death.

* Med. and Surg. Reporter, Jan. 16, 1875.

Death from thirty grains, in the case of a drunkard, is reported by Schwaighofer,* of Vienna.

Dr. E. Spottswood † reports two cases of death in drunkards. These cases are of but little value, owing to the loose way in which they are reported.

Fürstner,‡ of Vienna, believes that these cases of death in delirium tremens are due to the paralyzing action of alcohol and chloral on the centres in the medulla, for, in several instances where he has been enabled to hold an autopsy, absolutely no disease of the heart was found. Before death the pulse was small, frequent, and irregular, and the heart-sounds faint. In such condition of pulse and heart, therefore, he believes that chloral should not be used, more especially if there is less restlessness than is usually found.

Dr. James Perrigo, Med. Department of Bishop's Coll., Montreal, Canada, sends me the details of a case of death from chloral in delirium tremens, occurring in a London hospital some years ago. The case was one of delirium tremens following a compound fracture of the tibia and fibula. Chloral hydrate was ordered in ten-grain doses every few hours. The next day the man was dead asleep, but on the following morning he was thoroughly comatose and died. There is, in my mind, considerable question in this, as in many of the other cases, as to whether death was really due to the drug. Dr. Perrigo does not remember the details, and there was no autopsy. It was the opinion of the attending surgeon that chloral caused the fatal result, but he also believed that the house surgeon gave it in larger doses and oftener than he had ordered.

Dr. Perrigo mentions another case, that of a druggist who took an unknown quantity of the drug to relieve the pain of neuralgia. He died. There was no autopsy.

In the following cases an autopsy was held:

Dr. Long,§ of Geneva, was called to see a neuropathic patient who had taken 186 grains of chloral hydrate on his own responsibility. Respiration stertorous, face pale, skin cool, pulse strong, vibrating, and at fifty pulsations per minute. Complete relaxation. Abolition of direct and reflex sensitiveness. Pupils contracted and motionless. Conjunctiva insensible. Emetics, friction, sinapisms to body and limbs. Pulse suddenly stopped and then started again. Electricity to chest. Death two hours after taking the drug.

Autopsy, fifty-six hours after death.—No fluid in brain or membranes. Heart arrested in diastole. Clots in both cavities. Left pleura adherent. Mucous membrane of stomach hyperæmic, also ecchymotic in places. No erosions or ulceration. Bladder full of urine.

On chemical analysis the stomach was found to contain a considerable quantity of chloral hydrate. Urine from bladder contained none.

Dr. Pedro Molina Flores, of Guatemala, Central America, writes: "I know of but one case where chloral hydrate caused death. The amount taken is not known, nor were his symptoms noted, as he was seen by no physician after he took the drug. On the 14th of August, 1869, the autopsy of Joseph Viscarra was made. The superficial parts of the neck, back, and other parts of the body were spotted purplish-blue. On opening the cavity of the cranium the hairy scalp was found injected with blood. The men-

* Irish Hospital Gazette, 1873.
† Med. and Surg. Reporter, Aug. 11, 1877.
‡ Ibid., June 8, 1878.
§ Gaz. des hôpitaux, 1875, p. 141.

inges, cerebrum, and cerebellum were congested, and gave off a strong alcoholic odor. The other organs presented nothing abnormal."

Dr. Loose, of Bremen, has kindly sent me one of his articles,* which contains a report of the following case: A custom-house officer, aged twenty-three years, took about 120 grains of chloral, which he procured by means of a prescription written by himself. He retired at nine P.M., and was found dead the next morning. The autopsy showed pleuritic adhesions on the right side. Right lung markedly, left lung slightly œdematous. There was found a subpleural effusion of blood as large as a hazel-nut. There was slight mitral insufficiency. The blood, when tested three days later, showed no signs of chloroform.

Dr. B. W. Richardson, in his report on chloral hydrate, before the British Medical Association,† says:

"The post-mortem appearances were noticed after a poisonous dose. The vessels of the brain are found turgid with blood. The blood is fluid, and coagulation is delayed (in a bird to a period of three minutes), but afterward a loose coagulum is formed. The color of the brain-substance is a darkish pink. The muscles generally contain a large quantity of blood, which exudes from them on incision freely. This blood coagulates with moderate firmness. Immediately after death all motion of the heart is found to be arrested. The organ is left with blood on both sides, but with more in the right than the left side. The color of the blood on the two sides is natural, and the coagulation of this blood is moderately firm. The other organs of the body are natural."

Two cases of fatal poisoning are related by Kirn ‡ in his article on the habitual use of chloral. Other deaths from chloral are reported as follows: *Boston M. and S. Journ.*, Feb. 9, 1871; Ibid., April 1, 1880; and *Phila. Med. Times*, 1878, p. 82 (Carroll).

Francis Ogston, Jr., M.D., has kindly sent me the reprint of an article § of his from the *Edinburgh Med. Jour.*, October, 1878:

"A farmer in the neighborhood of Aberdeen, who had been in the habit of using chloral for some time, was one day found dead in a field. Some slight bruises led to a legal examination. The autopsy, made thirty-six hours after death, revealed:

"*Externally.*—The joints rigid; the pupils of the eyes normal in size; the face, front of neck, top of chest, and back parts purple. Several excoriations, with effusion of clotted blood, on the backs of both hands, and on the left leg and foot. Well-marked goose-skin on the outer sides of the thighs. The penis retracted.

Internally.—The scalp congested; the cerebral sinuses filled with clotted blood; the blood-vessels on the surface of the brain full of blood; the arachnoid thickened and of a gelatinous appearance; a large quantity of clear, watery fluid under the arachnoid and in the ventricles of the brain; the brain apparently somewhat wasted, but otherwise natural, no great amount of bloody spots being noted. Nothing unusual in the mouth, pharynx, and œsophagus, except that the last was thrown into folds, and its mucous membrane somewhat softened; but the parts at the top of the windpipe were œdematous, and the mucous membrane of the windpipe was injected and dark red in color. The lungs were deeply congested and œdematous. The heart was healthy, but its right cavities contained ten fluid ounces of blood, and its left three fluid ounces, the blood in both cavities being dark, partly fluid and partly in dark, firm clots. The gall-bladder was distended with bile. The liver, spleen, and kidneys were much congested, the liver and kidneys being slightly fatty, and the spleen being softened. The urinary bladder was full of urine of a pale color. Stomach containing a brownish fluid, having a peculiar odor, and solid particles (starchy). The mucous membrane of the great cul-de-sac of the stomach of an uniform brown-black color, with several patches the size of a sixpence, of bright red punctiform extravasation. The blackening extended in streaks toward the smaller end of the stomach, following the course of the blood-vessel, and the rugæ of the stomach were greatly swollen and œdematous, and of a red color, which near the larger end of the organ was dark brown-red, and became brighter toward the small end, where it was scarlet-red. Several patches of punctiform ecchymosis were also observed in the middle portion of the stomach. The intestines showed no marked abnormal appearances. The blood throughout the body was of a dark cherry-red color, giving the muscles a brighter hue than usual.

"From these appearances my colleague and I gave it as our opinion that death had been probably caused by one of the narcotico-acrid class of poisons, but stated that a chemical examination was necessary to determine the point with certainty, and that with this in view we had preserved some of the viscera, blood, and urine.

"An order to make the necessary analysis was sent me subsequently, and I proceeded to act on it along with my father, Professor Ogston, with the results which shall be described hereafter.

"In the meantime I shall recapitulate the points which seem to me characteristic of poisoning by chloral hydrate: 1, the blood-vessels of the membranes of the brain were full of blood; 2, the sinuses contained clotted blood; 3, the arachnoid was œdematous; and, 4, under it and in the ventricles of the brain clear serum was found in considerable quantity; 5, the brain-substance appeared somewhat shrunken, but no unusual number of bloody points was noted; 6, the œsophagus was slightly contracted and rugose, and its mucous membrane was softened; 7, the parts at the top of the larynx were œdematous, and the mucous membrane of the trachea showed fine injection of its blood-vessels; 8, the lungs were œdematous, and deeply congested; 9, the right cavities of the heart were filled with blood (ten fluid ounces), and the left were comparatively empty (three fluid ounces); 10, the blood in the heart was partly in firm black clots and partly fluid. Here and throughout the body it became, on exposure, of a dark cherry-red color, somewhat darker than that found after death by cold; 11, the urinary bladder was filled with urine of a pale color, its walls normal in color; 12, the gall-bladder was distended with bile; 13, the liver was loaded with dark blood; 14, the kidneys were loaded with dark blood; 15, the spleen was somewhat soft, and loaded with dark blood; 16, the stomach showed remarkably the action of the poison, as has been already fully described; 17, the great and small intestines showed nothing unusual."

Dr. Ogston applied the stale ammonium sulphide test to the contents of the stomach and obtained distinct evidence of chloral. He says of this new test:

"The addition of stale sulphide of ammonium to a

* Niedersächsischen aerztevereinsbund. Dritte Hauptversamsung, Bremen, June, 1878, p. 14.
† Med. Times and Gazette, April 4, 1869.
‡ (Allgem. Zeitsch. für Psychiatrie.) Practitioner, 1873.
§ A Case of Poisoning by Chloral Hydrate, introducing a New Test.

solution of chloral hydrate of moderate strength, say ten grains to the drachm (the strength of the British syrupus chloralis hydrastis), causes, in a short time (*not immediately*), the colorless liquid to assume a slight orange-yellow color, the liquid remaining clear; on letting it stand, the color gradually deepens to a brown, and now a cloudiness comes over it, which in about half an hour, or perhaps longer, is deposited as an amorphous precipitate of a brown color, and which appears to consist of sulphur.

"While the change of color is going on and the brownness appears in place of the orange, a gas is given off of a most offensive smell, apparently a mixture of chloroform and hydrogen sulphide, with something in addition, in such quantity as to fill a large room in a few minutes.

"In order to find out the smallest quantity of chloral hydrate which would give a reaction with ammonium sulphide,

"(*a*) I dissolved 1 gramme of it in 100 c.c. of water, took 1 c.c. of the solution and added 1 c.c. of ammonium sulphide, when the solution became of a canary yellow color, passing through orange-yellow to brown in the course of about six hours, letting fall a slight brown precipitate and giving off a characteristic smell.

"(*b*) I then took 10 c.c. of the above one per cent. solution, which I put into 100 c.c. of water, and, on adding 1 c.c. of ammonium sulphide to 1 c.c. of this solution, I got in about half an hour a slight straw color which had deepened to a pale orange color in twelve hours, giving off no smell.

"(*c*) Lastly, I took 1 c.c. of the solution *a*, which I added to 100 c.c. of water. Of this solution I took 1 c.c., and added 1 c.c. of ammonium sulphide, and, after standing for eighteen hours, the liquid had changed to an exceedingly faint straw color.

"Thus, 1 c.c. of *a* solution (0.01 gramme of chloral hydrate) gave the brown color, the precipitate, and the smell.

"One c.c. of the *b* solution (0·001 gramme) gave an orange color, but neither precipitate nor smell.

"One c.c. of the *c* solution (0·0001 gramme) gave a very faint straw color.

"The first and second of these results are, I think, sufficient to establish the presence of chloral hydrate; the third I should hardly trust to, as the reaction was so faint, though I verified it by repetition of the experiment.

"I may further state, that the similarity of the reaction of ammonium sulphide with chloral hydrate to that with antimony salts suggests a caution in accepting the orange coloration alone as a certain test for either poison. Antimony, on the one hand, may be known by the orange precipitate thrown down by the addition of an acid, which does not follow when it is chloral hydrate which is present; and chloral hydrate, on the other, by the fact that the orange color deepens, on standing, to a dull brown.

"In conclusion, chloral hydrate alone seems to give this reaction with ammonium sulphide, for I have submitted many of the substances of similar chemical construction to the test without any such result following. Among those were chloroform, chloric ether, formic acid, etc."

A very interesting paper by Falck, referred to by Dr. Ogston, on a toxicological study of chloral hydrate may be found in *Eulenberg's Vierteljahrsschrift für Gerichtliche Medicin* for October, 1877.

The conclusions to be drawn from a study of these cases will be given in a subsequent article.

191 WEST TENTH STREET, NEW YORK.

REMOVAL OF UTERUS

AND BOTH OVARIES, BY ABDOMINAL SECTION—MYO-FIBROMA.

BY CHAS. K. BRIDDON, M.D.,

SURGEON TO THE PRESBYTERIAN HOSPITAL, NEW YORK.

IN response to a telegraphic communication which I received December 1, 1880, I visited West Winsted, Conn., on the 3d, for the purpose of performing the operation of ovariotomy. Finding, on my arrival there, that the patient resided fifteen miles distant, at New Boston, in the State of Massachusetts, I left Winsted for that point on the morning of the 4th, in company with Drs. Steele and Welch, and arriving at our point of destination, I was introduced to Dr. Bushnell and his patient, Mrs. Carrie Lewis.

Previous history.—She is forty-seven years old; married; sterile; comes of a long-lived, healthy family, and she herself enjoyed exceptionally good health until between three and four years ago, when she began to notice an increase in the dimensions of her abdomen. It was, however, for some time regarded as unimportant, and as probably connected with the anticipated menopause, though she had always been, and is still regular, never having been troubled with dysmenorrhœa, menorrhagia, or metrorrhagia. The swelling gradually increased, and for the last two years has given her very considerable trouble; in fact, its bulk has made it burdensome for her to get about, and has caused so much physical suffering, that, with the consent and approval of her medical advisers, she has determined to run the risk of its removal.

Present condition.—She is a remarkably fine woman, and in pretty good condition; her hair is tinged with gray, face ruddy, and nothing in it that would appear to indicate the existence of ovarian trouble—no "facies ovariana;" body tolerably well nourished. Her abdomen is distended to its utmost, and stands out prominent in front. The tumor appears to be solid, smooth, and even in its contour, and reaches as high as the ensiform cartilage; per vaginam, it can only be obscurely felt in the *cul-de-sac*: the cervix lies high up, and in close approximation with the symphysis. Measurements as follows: circumference, on level with umbilicus, 38½ inches; from umbilicus to right anterior superior spinal process, 7¼ inches; from the same point to left anterior superior spinal process, 9½ inches; and from ensiform process to pubis, 17¼ inches.

I expressed the opinion that the trouble was not ovarian—at all events, not cystic; that it was probably a subperitoneal fibroid, and it was determined to commence with an explorative incision. The operation was begun at half-past nine, in the presence of Drs. Steele, Bushnell, Welch, Crozier, and Hurlburt. The spray was used, and, in fact, the whole proceeding was carried out with strict observance of the antiseptic principle. When the patient was fully under the influence of ether, a short incision was made in the median line, and midway between the umbilicus and pubis. After exposing the tumor, it was noted that it had not the appearance of a uterine fibro-cyst. It was of a light pearly hue, and to the touch was solid. To further determine this point, a moderate sized curved trocar was plunged into its centre, or it would be more correct to say, that an attempt was made to do so, for the dense, resisting character of it prevented the introduction of the instrument deeper than about an inch and a half. The removal of the canula was followed by quite an

alarming venous hemorrhage, which was arrested by plugging with sponge, and to hold the plug in position it was necessary to transfix it and the adjacent portion of tumor with a ligature, which was tied over the sponge.

It was now found that there were no adhesions, and that the tumor was uterine. I also found that I could isolate and surround the pedicle which was formed by the vagina and lateral ligaments, and I conceived it to be for the best interests of the woman to remove the whole. To do this it was necessary to carry the abdominal incision upward to a point midway between the umbilicus and the ensiform cartilage, which enabled us, with a little effort, to lift the mass outside. The tumor was marked on its surface by large venous canals, quite as large as the index finger, and the pedicle was made up mainly of vessels equally ugly in appearance. The Pampiniform plexuses in the broad ligaments, tortuous in form, were dilated into enormous vascular channels.

I commenced ligaturing these ligaments by introducing needles charged with the strongest plaited and thoroughly carbolized silk ligatures beneath the veins, and then tying them firmly above the free border of the ligament. Ligatures were then passed, taking up the structures between the veins and the vagina. I then transfixed the vagina, and tied on either side again above the free border of the broad ligament. These last ligatures were passed immediately below the os. After all vascular connection between the tumor and its sources of supply were thus cut off, I proceeded to remove the mass. Care was taken to leave enough stump to secure against the retraction of any portion of the pedicle through the nooses of the ligatures, and as a further security against this, a small portion of the os was left in the stump, so that it was almost impossible for it to escape from the embrace of the ligatures. In separating the tumor, of course, there was a deluge of blood from the mass itself, but none of this entered the abdominal cavity, which was protected all around the pedicle by linen compresses wet with tepid carbolized water. From the stump there was no hemorrhage; in fact, notwithstanding the very vascular character of the pedicle, save the small loss from the abdominal incision, the operation was almost bloodless as regarded the patient; in other words, the proceeding produced but little change in the tension of her arterial system, most of what was lost belonging to the tumor. The pulse of the patient and the ruddy appearance of her lips bore evidence to these facts.

Small cysts were found in the ovaries, and it was deemed prudent to remove them both. All the ligatures were brought out of the lower end of the wound. I should have cut them off short, but there were so many of them that I considered some suppuration as inevitable, and preferred to have an open track along which it could escape, and I should have passed them through the vagina, but that canal was so shortened by the ligatures passed through it that I feared I might wound the rectum in making the attempt. I introduced a drainage-tube of large diameter, which was fixed in the lower angle, the wound was closed with twenty silver wire sutures, and covered with protective and antiseptic gauze.

After the completion of the operation the patient's pulse was very good, she looked well, and before I left the house, half an hour afterward, she had come from under the influence of ether, presented scarcely any evidences of shock, and spoke to me cheerfully and full of hope.

I received written or telegraphic communications every day from the physicians in attendance; for the first few days they were of the most encouraging character, and then changes of pulse and temperature that betokened disaster, and though the death, which occurred on the 9th, was attributed to septicæmia, I have strong doubts as to whether it was not mainly owing to deferred shock, and will give the following extracts from communications to substantiate that view. The operation was done on December 4th. In a letter dated December 5th, "suffered very little from shock, and nothing from the effects of ether; passed a comfortable night. Temperature, 100°. Pulse, 115."

December 6th.—"Slept well during the night. Pulse rose from 120 to 140 in the evening, and in the same time the temperature rose to 102°."

December 7th.—"Restless during part of night; is much weaker. Temperature, 102°. Pulse, 140. Some discharge from drainage-tube."

December 8th.—"Condition about the same; extremities cold; skin dark colored. Temperature, 102°. Pulse, 150."

December 9th.—"Breathing irregular; partially unconscious. Pulse, 160. Temperature, 102⅘°. Died at 6 P.M."

At no time was there any marked abdominal tenderness, and very slight tension, and no chills were noted at any time.

The tumor, when drained of blood, weighed seventeen pounds and a half; its circumference was twenty-eight inches; its surface was channelled by grooves three-fourths of an inch in diameter, marking the site of veins; on one side of the section of its neck was a small opening which would not admit the little finger; on slitting this up it was found to lead into a bicornate cavity, representing that of the body of the uterus, and of about its normal size. When *in situ* the organ must have been flexed laterally and twisted on its axis, so that the mass appeared to be developed mainly from its posterior wall. On making a section the tumor was found to be so firm as to be cut with difficulty, its structure was distinctly fibrous, and it was interstitial in character; at one point of its circumference, and near the fundus, there was a spot that appeared to be undergoing myxomatous change, and in the centre of the patch was a small cavity about as big as a filbert, with a cheesy or necrotic mass contained therein.

Upon microscopical examination by Dr. W. H. Porter, Curator to Presbyterian Hospital, the great mass of the tumor was found to be composed of interlacing bundles of fibrillated connective tissue, as commonly seen in fibroid tumors. This tumor, however, had a few non-striated muscular fibres interspersed, and was more vascular than ordinary fibroids. There was one very small cyst near the surface, which contained granular and fatty matter, and fibrous elements undergoing degenerative change. There was a thin layer of tissue, darker in color, surrounding the whole mass, and evidently springing from the uterus. This layer was composed principally of non-striated muscular fibres and a dense network of capillary vessels.

From the tumor containing a few muscular fibres it might be called a myo-fibroma, but the great bulk of the growth is fibrous in character.

A Course of Stenography has been organized at the Academy of Medicine, St. Petersburg, and one hundred students have intimated their intention of following it. This is the most foolish departure in the line of medical education that we have heard of yet.

A CASE OF

METASTASIS OF ACUTE ARTICULAR RHEUMATISM TO THE MENINGES—RECOVERY.

By WALTER L. RANNEY, M.D.,

LATE HOUSE PHYSICIAN TO BELLEVUE HOSPITAL, N. Y.

KATE K——, a woman forty years of age, first came under my care on the afternoon of July 14, 1880. She was then comatose, but her previous history as given by her sister, and also subsequently by herself, was as follows:

She had always been a perfectly healthy, hard-working woman, and was, by occupation, a laundress; had never been addicted to the excessive use of alcohol, but occasionally would take a glass of beer after working.

On July 7th she was washing all day, standing during this time in rather a damp place, but, with the exception of being rather tired, went to bed feeling well. The following morning she complained of pains in her joints, and by the next day was laid up in bed with what would seem to be, from her description, a typical case of acute articular rheumatism, affecting the knee-, ankle-, and elbow-joints. The pain was very severe, preventing her from moving in bed or helping herself in any way; but there seems to have been but little constitutional disturbance.

On the morning of July 13th, five days from the commencement of the disease, she found that the pain had entirely left her joints, and from being red and swollen, they had again resumed their natural contour. Thinking she was well she wished to get up, but being troubled with a headache (for the first time in her sickness), remained in bed. This headache constantly increased, and by the afternoon she suffered intensely from intolerance of light and sound, and lay tossing and turning on the bed, unable to procure relief. In the evening delirium set in, which was moderate at first, but rapidly increased until forcible restraint was needed to quiet her. This lasted till early in the morning, when she became quiet and gradually sank into a state of coma, in which condition I first saw her. She was then completely comatose, all efforts being unavailing to arouse her. The surface of the body was moist, the face rather pale, and there was no rigidity of the neck or extremities. The pupils were regular, neither dilated nor contracted, and responded sluggishly to a strong light. Her temperature was 104½ by vagina; pulse, 100, very hard, somewhat irregular, but not intermittent, and her respirations twenty a minute. There was retention of urine, which was drawn by the catheter and found to be highly acid, with a specific gravity of 1019, and containing no albumen. A careful search for cardiac or pulmonary trouble gave negative results.

Three leeches were immediately applied to each mastoid process, and an ice-cap to the head. A drop of croton-oil was dropped on the tongue, and the patient was placed on a fever-cot, tepid-water baths being given every half-hour. The temperature was taken by the vagina ten minutes after each bath, and fell gradually to 101° F. in about three hours, being kept at this point by occasional baths if it showed a tendency to rise.

July 15th.—Patient is conscious, but stupid. The temperature remains at about 100½° F., requiring but very few baths to prevent its rising. She has taken some nourishment in the form of milk, and passes her urine voluntarily.

July 16th.—Patient to-day talks sensibly. She has no recollection of anything which has transpired since the afternoon of July 13th. The *rheumatism has reappeared* in her right elbow and wrist, the joints being swollen, hot, and tender. She was taken off from the fever-cot, and the ice-bag was also dispensed with. A thorough daily examination has failed to discover any complication in the heart or lungs. The treatment now is salicylate of soda, gr. xxv. in glycerine and water, every three hours.

July 19th.—The rheumatism still lingers in the elbow and wrist, but aside from that the patient feels well. Salicylate of soda is still continued.

July 23d.—The inflammation in the joints has almost subsided; there has been no reappearance of the cerebral symptoms.

July 28th.—Patient to-day says she feels perfectly well and is going to return to work. She was again examined, and the heart-sounds found perfectly normal and the lungs clear.

It is rather a rare occurrence to have marked cerebral symptoms in simple acute rheumatism; and when they do occur, they are due to one of the following causes:

First.—Some affection of the heart or, more rarely, of the lungs. Of these complications, endocarditis and pericarditis far outrank all others as regards frequency.

Second.—Hyperpyrexia; where the abrupt rise of temperature is the striking symptom, and the cerebral disturbance follows this.

Third.—Meningitis, either as a complication or as a true metastasis, similar to the change of seat of the inflammation in the joints.

As regards the occurrence of cardiac or pulmonary complication in this case, I am positive that they can be wholly excluded as a factor in the nervous symptoms, since, as I before stated, a daily examination failed to reveal anything abnormal, and there were no rational symptoms which would lead to the suspicion of some possibly unrecognized lesion. In patients who are broken down by chronic alcoholism, or are cachectic from any cause, delirium and coma are often very marked symptoms; but these are preceded by an abrupt and excessive rise of temperature, and are simply consequent upon this. Ordinarily the temperature during an attack of rheumatism is rarely above 104½° F.; but in exceptional cases, as that of Ringer's, it has reached 111° F. I myself have seen a case where there was furious delirium, the temperature being 107° F., which delirium immediately returned if the temperature was allowed to rise again. The present case, however, was a strong, healthy woman, and one who had no alcoholic history. Her highest temperature was 104½° F., which, though higher than we generally see in rheumatism, was certainly not enough to account for the grave symptoms presented. Aside from that, the complete return to consciousness did not occur till more than twenty-four hours after the reduction of the temperature, and during the remainder of the disease there was no tendency to an exacerbation of the fever.

We are led, then, it seems to me, to regard this as a true case of meningitis, more by the doctrine of exclusion than by any very positive symptoms.

Still, the history of headache, delirium, and coma, the moderate pyrexia, the sluggish pupils, the hard, somewhat irregular and but slightly accelerated pulse as compared with the temperature, all occurring during a rheumatic attack, satisfies me that we

have here perhaps the rarest complication of acute rheumatism, and one of which Niemeyer says he has seen but one instance.

That it was a true metastasis also, I think there can be no doubt. With the disappearance of the articular swelling and tenderness commenced the meningeal inflammation, which was as rapid in its development as the same process in the joint; and almost as suddenly again disappeared, the inflammatory action reappearing in the elbow and wrist.

Whether the local bloodletting and general antiphlogistic treatment really had any influence in changing the seat of the inflammation or modifying it in any way, I am in doubt. Still, from the success in this single instance I should be tempted to give it another trial if a chance should offer. I may add that, about three weeks after the woman recovered, she was again laid up with a second attack of rheumatism, but this was speedily cured by the use of salicylate of soda, and lasted only about ten days.

14 West Thirty-second Street.

Progress of Medical Science.

Radical Treatment of Hydrocele by Injection of Carbolic Acid.—At a meeting of the Philadelphia Academy of Surgery, June 7, 1880, Dr. R. J. Levis stated that in 1872 he had begun to treat hydrocele by carbolic acid injections, because a more plastic grade of inflammation than that obtained by ordinary injections was required, and because incision only accomplished a cure through suppuration. His method is to withdraw the fluid by an ordinary trocar, and then introduce the long nozzle of a syringe through the trocar into the vaginal sac. By this means the carbolic acid is thrown into the cavity, and there is no danger of its being injected into the cellular tissue of the scrotum. The carbolic acid crystals are merely liquefied by slight heat, or by a few dops of glycerine. To keep the injecting fluid ready for use at all states of temperature, about ten per cent. of glycerine or water may be added to the crystals. The amount of carbolic acid which Dr. Levis injects is one-half a fluid drachm, and this is allowed to remain in the vaginal tunic. The operation is almost, if not entirely, painless, because of the local anæsthetic action of carbolic acid. The patients sometimes exclaim at the moment of introduction, but have a sensation of numbness rather than of pain. The pain, when tincture of iodine is employed, is much greater. Care should be observed to allow no acid to flow upon the external surface of the scrotum, for pain and inflammation will follow such contact. After the injection the patient is permitted to walk about the house until the weight and slight soreness of the scrotum cause him to lie upon a bed or lounge. The results of this method of treatment are excellent, for undue inflammation does not occur, there is no marked pain, and a radical cure generally ensues. Dr. Levis has never seen suppuration or sloughing follow this manner of dealing with hydrocele.—*Phila. Medical Times*, November 6, 1880.

Hip-Joint Disease—Death in Early Stage from Tubercular Meningitis.—Dr. De F. Willard contributes an article to the *Boston Medical and Surgical Journal*, November 4, 1880, with microscopic examination by Dr. E. O. Shakespeare in a case of hip-joint disease, in which death resulted at an early stage from tubercular meningitis. The patient, male, aged five years, whose mother died of phthisis, was presented at the orthopedic clinic of the University of Pennsylvania. One year ago, apart from special known injury, he experienced a slight lameness, without pain, but at night complained of a sense of weariness about the hip, and a restlessness of the limb was noticed after retiring. These symptoms were the very earliest indications of inflammation of this joint, antedating rigidity of the muscles, pain, or lameness. The lameness increased, and the discomfort gave rise subsequently to pain. A diagnosis of hip-joint disease was made after a thorough examination, and treatment ordered accordingly. Patient gained steadily in every particular, growing fat and hearty under iron and cod-liver oil. Six weeks later there was no pain or discomfort of any kind; no induration could be felt about the joint; and flexion, extension, abduction, and adduction, could be performed to a considerable extent without discomfort. In January, however, he commenced to complain of headache; vomiting suddenly set in and continued persistently for three days. The pain in the head became of the most intense and excruciating character, causing piercing shrieks from the child at each onset; obstinate constipation was present; the characteristic facies, stupor, slow pulse, convulsions, and coma of tubercular meningitis, followed in rapid succession, with death upon the sixth day after the vomiting commenced, and two months after the child was first examined. The post-mortem examination was not thorough, but possession of the head of the femur and entire acetabulum was obtained, and the following conclusions were arrived at after a microscopical examination by Dr. Shakespeare. The morbid process affected the synovial membranes. The history of the case, both clinical and pathological, would seem to support the views of those who defend the doctrine that in a certain depraved animal organism inflammatory products tend to caseous degenerations, which may ultimately cause a local or general infection of the various tissues of the animal, and a limited or extensive irruption of tubercles; while there was a slight fatty degeneration of the cartilage-cells at the surface of the cartilage, there was no such decided alteration of this kind as Cornil and Ranvier and some other authors believe to be the initial and essential lesion in so-called scrofulous hip-joint disease. The microscopical examination showed further that the disease had at no point advanced to the stage of ulceration, and also that fatty degeneration had barely commenced; still, infection of the system had resulted, thus showing that while the inflammation could not be differentiated from the simple form, yet that there lurked behind this process a systemic condition, hereditary or acquired, predisposing to inflammation of a low grade —"languid." It is not uncommon to find cases both of hip- and spine-disease dying of tubercular meningitis, but such a result would not occur at an early stage of the disease were the previous condition of the child untainted.

Fracture of the Rim of the Acetabulum.—An article by Dr. Senn, of Milwaukee, entitled "A Contribution to a Knowledge of Fracture of the Rim of the Acetabulum, based on the Reports of Twenty-seven Cases and Experiments on the Cadaver," is an exhaustive and comprehensive document, and merits the attention of surgeons generally. Seven experiments were made on the cadaver which demonstrate how difficult it is to fracture the rim of the acetabulum, and tend to corroborate the views of the ma-

jority of surgeons, who consider this injury one of the rarest accidents in surgery. These experiments also lead to the conclusion that fractures through the floor of the acetabulum are of more frequent occurrence than simple fracture of the rim, and are the result of a less degree of violence. Of the twenty-seven cases, eighteen were males, four females, and in the remaining five the sex is not stated. The disproportion between the males and females is explained by the fact that the former are more frequently exposed to severe accidents. The extremes of the ages were eighteen and seventy eight years, so that most of these cases occurred during the time of life when most exposed to grave injuries. The symptoms presented are those of dislocation and fracture combined; the symptoms of the former resemble ordinary dislocation, while the latter are directly referable to the broken bone itself. A certain degree of displacement of the head of the femur was present in all cases where a diagnosis was made during life. In a large majority of cases that portion of the rim is fractured which is in the direction of the usual form of dislocation, so that the same injury which produces a dislocation may also cause a fracture, provided it is sufficient in intensity and the limb *abducted* at the time the injury is received. Inversion of the foot and rotation of the femur inward were present in fourteen cases, while the opposite condition existed in three cases, and in ten cases no mention is made of this symptom. The characteristic symptoms of the injury are those which are referable to the fracture itself, and these are crepitus, easy reduction, and difficult retention. The crepitus differs from that of ordinary fractures: it is the roughness obtained from rubbing an articular surface against a broken surface of bone and is not as loud or distinct. Crepitus and a tendency to reluxation are the symptoms on which we place the most reliance to differentiate this fracture from simple dislocation. In some cases Middledorff's method may be of great service to determine the existence of fracture of the rim. After reduction of the limb has been accomplished, a long, stout needle is passed through the tissue to the supposed seat of the fracture. By lateral movements of its point the defect in the margin, as well as the roughness of its surface, is ascertained. An effort should now be made to fix the detached fragment with the point of the needle, and rubbing it over the broken margin a rough crepitus is elicited. Regarding the prognosis, Dr. Senn is of the opinion that all uncomplicated fractures of these bones tend to recovery. In twenty-three cases where the result is noted in this regard, thirteen recovered and ten died. The prognosis is less favorable if the floor of the acetabulum is also implicated in the fracture. Of four cases of this sort only one recovered. The best method to prevent reluxation is to make the unbroken portion of the rim a support for the head of the femur and to secure immobility to the hip-joint, by applying a permanent dressing, including the pelvis and both lower extremities. When the depth of the rim is not sufficient to prevent reluxation by muscular contraction, permanent extension and fixation are necessary for the maintenance of the bone *in situ*.

Pilo-Nidal Sinus.—Dr. R. M. Hodges read a paper before the Boston Society for Medical Improvement, November 8, 1880, entitled "Pilo-Nidal Sinus," which is described as a deep, symmetrical, and somewhat conical dimple, occasionally existing near the tip of the coccyx, well forward toward the anus, in the cleft between the nates. Sound and natural as regards integument, resembling to a certain extent the navel, with the dimensions of which it may be compared, it is fixed at its deepest portion, and the depression cannot be obliterated or made shallower by stretching the skin. Congenital in origin, it attracts the attention of nurses or mothers, and in infancy inquiry is made as to its significance. Later in life, opportunities for inspection being less frequent, it passes unobserved. It probably represents an imperfect union of the lateral halves of the body, involving the integument only. Dr. J. Mason Warren, in 1867, recorded eight or ten cases. It is generally stated to have existed for a long period, and is supposed to be a fistula in ano, an impression which, if at first shared by the surgeon, is quickly corrected by the introduction of a probe, which passes a considerable depth above and below the opening, indicating a cavity of an inch or more in diameter; but it does not enter the gut. On exposing the interior by an incision a certain quantity of pus is evacuated and a lock of loose hair is found occupying the space. The cavity containing the hairs, which are always short and without bulbs, has no cyst or lining membrane, or other characteristic suggestive of a congenital dermoid wen—merely the granulating walls of an ordinary suppurating sinus, with no trace or suspicion of hairs growing from its surface, or of isolated spots of cuticle from which they might have been shed. The lock of hair being removed, the sinus fills up with new tissue and in due time heals by a solid cicatrix. For the development of this rather singular lesion, to which, for the sake of designation, the name of pilo-nidal (*pilus*, a hair, *nidus*, a nest) sinus is given, the following elements are necessary: 1st, the presence of a congenital coccygeal dimple; 2d, abundant development of hair—hence adult age, and almost of necessity the male sex; 3d, insufficient attention to cleanliness: consequently its subjects, as a rule, must be persons of the lower class, and the affection, one met with in hospital or dispensary rather than private practice.—*Boston Medical and Surgical Journal*, November 18, 1880.

A New Physical Sign in Thoracic Aneurism.—Dr. Drummond, of Newcastle-on-Tyne, has demonstrated before the Northumberland and Durham Medical Society a physical sign which will apparently be of considerable value in the diagnosis of aortic aneurism, should it not turn out to be pathognomonic. When a patient who is suffering from thoracic aneurism inspires deeply, and then closes the mouth and expires slowly through the nostrils, a puffing sound is heard on auscultating the trachea, which is synchronous with the cardiac systole. This sound is best heard with the biaural stethoscope, and is evidently a sudden involuntary expiration caused by the sudden systolic expansion of the sac expelling air from the chest. This physical sign has been demonstrated by Dr. Drummond to be absent in cases of aortic valvular disease without aneurism, while it is present in every case of aneurism which has come under his notice since the discovery of the sign, viz., four; and he also thinks it will be of importance in distinguishing between aneurism and sarcoma of the lung.—*Dublin Journal of Medical Science*, November, 1880.

The London Hospital Sunday Fund.—The council having charge of this fund has decided not to make grants to hospitals in which religious liberty is not allowed, or in which the religious principles of the patients are tampered with.

THE MEDICAL RECORD:

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GEORGE F. SHRADY, A.M., M.D., Editor.

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THE ETHICS OF CONSULTATIONS.

An honorable man needs no code to govern him in his relations to his fellows, but for one who is not actuated by the right principles, there is no set of rules which cannot be violated by him to suit his purpose. So many are the ways, for instance, by which the artful man can take advantage of his position as consultant that there appears to be a growing distrust in the real utility of consultations. We have heard some startling news bearing upon the point from a neighboring town. There it is openly acknowledged to be quite unsafe for any obscure practitioner, who cares to keep his patients, to call in as counsel one who is older or has more reputation than himself. We are glad to know that this state of things does not exist to any great extent in this city, but exceptions to the rule of honorable dealing are sufficiently numerous here and elsewhere to warrant a reference.

It is generally understood that, when a physician is called on by another as a consultant, the former must not attend the case thereafter as a family physician. The simple reason for this appears to be that the consultant would not have been known to the patient except through the attending physician, and that, consequently, he must not take advantage of such endorsement, directly or indirectly, to serve his private ends. Such an understanding protects the attending physician, at the same time gives to the patient competent and trustworthy counsel in time of need. If this were not so the attendant might be tempted to discourage consultations, and thus deny himself much valuable aid.

Although it may appear absurd to deny the right to a patient of employing the consulting physician if he so desires, this disadvantage is more than offset by the great benefit of consultations, properly conducted and properly encouraged. If the patient himself calls in a physician to consult with his attending medical adviser, the consultant is under no obligations to the latter regarding future non-interference with the patient. The consultant, under the circumstances, is not debarred from taking the case, if the patient chooses, at any future time, to discharge his medical attendant. A sense of ordinary justice, however, will compel him to do all he can to sustain and endorse the previous attending physician.

With the cultivation of the different specialties some of the ordinary amenities which obtain between attending and consultant are either in the hurry of business, or from pure thoughtlessness, or perhaps from less excusable reasons, apt to be lost sight of. Some specialists assume entire and permanent charge of a patient even when sent to them for temporary advice by the family physician. It is hardly fair to assume either that the latter cannot be trusted to carry out directions, or that the specialist has a natural right to every case in his line of practice. The only reason for taking absolute charge of the patient is the direct request to do so by the family attendant. The attending physician, as the trusted adviser of his patient, takes all the responsibility of continuing to treat the patient, if he so desires. But some specialists so much exceed their ordinary privileges in this respect that there is much complaint from general practitioners. Some of the latter have informed us that they do not care to run the risk of losing control of their cases by sending them to certain specialists. For not only has it happened that the specialist will keep the patient sent to him, but when any new disease develops itself will send him to a friend in another specialty, and not unfrequently, even for the treatment of general diseases, take the liberty of recommending another than the physician who originally sent the patient to him. Such a practice is an outgrowth of the system of helping different members of a clique, be they connected with a college, a society, hospital, dispensary, or office. Not that these gentlemen believe it is impossible to find any available talent outside of their own little circle of professional friends, but that they are bound by a community of interests not to recognize it. Such a feeling is sometimes carried to the extent which is far from prudent when the real interests of the patient are considered. Of course no prudent practitioner risks such an experiment very often, and takes occasion to give the right sort of advice to his professional friends. We are happy to say that such cases are exceptions to the genera lrule among specialists as, after completing treatment, they refer the patient back to the family physician. It is not expected that such a rule holds good with a patient who, while not under actual treatment by his family physician, calls of his own accord to consult a specialist. We are constrained to make the foregoing remarks in consequence of several cases in point which have been recently brought to our notice.

RENAL ALBUMINURIA AS A SYMPTOM.

PERHAPS there is no one question relating to pathology which is at present attracting more universal attention than the nosological significance of renal albuminuria. It is a subject which has induced recent elaborate experimentation, that in its turn has led to numerous important contributions to current medical literature. Once more it has become a prominent object of discussion by professional societies. And it even looms up in the mind of the practitioner as a practical question involving or determining therapeutic action.

It is easy to understand why this should be so. The importance which the physician attaches to this symptom, and the views he entertains concerning its origin and meaning, directly affect the conduct of his treatment in a given case. Moreover, the presence in the urine of this abnormal ingredient (for such it must be considered despite the contrary statements of some authors) is readily detected, and often as readily interpreted as a palpable manifestation of existing disease. Any obscure case, which at first sight may have appeared hopelessly intricate to the puzzled diagnostician, with the detection in the urine of an albuminoid substance suddenly, as if by charm, loses its questionable character and ceases to bewilder. Albuminuria did it. Albuminuria is responsible. But, if the routine practitioner is thus easily satisfied, the rational physician and man of science is not. Here as elsewhere the latter strives to ascertain the why and the wherefore. And it is the results of inquiry in this spirit which have modified, and are still modifying, our views respecting the significance of albuminuria.

For a long time the primitive simplicity of Bright's views swayed the professional mind, and, according to the then dominant ideas, albuminuria meant renal disease. Even at the present day, by some, the two terms are believed to denote one and the same thing. When, however, the rapid advances of pathological histology revealed some of the complexities of the subject, other factors came prominently to the front. Soon sharply defined distinctions were created separating diffuse from parenchymatous, and both from renal cirrhosis. Albuminuria was now only one in a train of symptoms indicative of kidney disease. To-day the pathogeny of albuminuria, although by no means in a completely satisfactory condition, is still better understood. We know now that various affections are associated with the appearance of albumen in the urine. Thus, Dr. Ellis has contributed much valuable information on this topic by compiling a table of the manifold conditions under which it occurs, and the list, though avowedly incomplete, furnishes 150 such conditions—and all exclusive of renal disease. Of course one should not look upon attendant phenomena in the light of causes, unless there is some satisfactory reason for so connecting them. Though the number of etiological factors is large, we have no ground for presuming that it reaches the figures just indicated, nor do we believe that Dr. E. wishes it so understood.

Transient albuminuria may be observed in a great variety of disturbances, and even the prolonged presence of albumen in the kidney secretion does not *per se* argue permanent histological change in those organs. Protracted muscular exertion may lead to albuminuria. Certain articles of diet, notably eggs, produce it—a change in the condition of life may lead to it. The effects of climate may also act as exciting causes. And all this in persons of apparently excellent health. On the other hand, slight ailments may be found in connection with albuminuria, and *vice versa*. Indigestion appears to be frequently accompanied with the renal excretion of albumen. Stimulation of the spinal cord below the medulla, irritation of the renal nerves, and other neurotic influences, give rise to it. Fürbringer (*Zeitschr. für klin. Med.*, vol. i., sec. 2) records, among other cases, the interesting instance of an otherwise healthy physician subject to albuminuria, in whom nervous depression was always followed by an increase in the amount of albumen voided.

Da Costa and Longstreth, as the result of recent important investigations (*Am. Jour. Med. Sc.*, July, 1880), even claim that "in Bright's disease, especially in the contracting kidney, there exists a constant lesion of the renal plexus." Moreover, that this is the true cause of the renal malady.

The albuminuria of fevers may also be the result of vaso-motor disturbances. In anæmic persons albumen may appear in the urine (Edlefsen, *Mit. d. Ver. Schles.-Holst. Aerzte*, 1879, No. 2), especially after exertion. Cardiac failure, or at any rate a relative weakening of the heart's power, has been pointed out as the probable cause of the symptom in such persons. This appears to be a plausible explanation enough in the light of recent investigations by Runeberg (*Deut. Arch. f. klin. Med.*, vol. xxiii., p. 41, and vol. xxiv., p. 248), for the permeability of animal membranes becomes greater under low than high pressure. Thus, Runeberg explains the transient albuminuria of healthy persons in the following way: he asserts that the transudation of serum-albumen takes place in the glomeruli on account of the increased permeability of the walls of the blood-vessels composing the tufts. The epitholial investment of the latter participate in this abnormal permeability. As the cause of this augmented permeability there may act any factor resulting in the diminution of the difference between the blood-pressure inside the glomeruli and the external counter-pressure of the renal tubules. In this connection it is well to note that Dr. Munn, of this city (MEDICAL RECORD, March 29, 1879), reported that among a number of appli-

cants for life insurance, he found albuminuria in eleven per cent., where the individuals appeared, after careful examination, to be otherwise in perfect health.

Persistent albuminuria is also explained by Runeberg as the result of structural alterations of the vascular tufts. It seems that Leube (*Virch. Arch.*, vol. lxxii., p. 145) and others have taken exception to the unavoidably theoretical deductions of Runeberg, but they certainly appear to deserve attentive consideration.

Taken altogether, it must be confessed that there exists just now a rather unsettled state of professional opinion on this important subject. Certainly, we lack the desirable basis of assured knowledge, and though some new points of interest have been elicited, the physiological laws governing the passage of albumen into the urine are still in part unknown. The practical importance of a complete comprehension of these matters should prompt untiring efforts and new researches in this direction. Meanwhile we should solace ourselves with the comforting thought that albumen may often be made to disappear by proper attention to the exciting cause, which may frequently be found if diligently sought for. Albumen, though occasionally an ingredient in the urine of healthy individuals, indicates an abnormal state at the time it is voided, and no rational physician can be otherwise than extremely watchful whenever it makes its appearance.

THE GROWTH OF THE CITY AND THE RELIEF OF ITS POOR.

The Society for Improving the Condition of the Poor is an organization which has done more than any other to carry out intelligently the objects indicated by its name. Its annual report for 1880 contains evidence of much work done and of a careful study of the needs of the poor of the city. In regard to the condition of our tenement-houses, and concerning the abuses of medical charities, there are some especially interesting statements.

The year 1879–80 witnessed a remarkable increase in the city's prosperity. The effect of this is shown in the increased number of houses built and in the greatly diminished number of applicants for relief at the offices of the society. There were nearly seven hundred new tenement-houses constructed in this city in 1879, and probably a larger number during the present year. Twenty-four millions of dollars were spent upon buildings during 1879. Such activity could not fail to furnish employment to many, and the society report that the applications for relief, which in 1878–79 were about ten thousand, in 1879–80 were only about six thousand.

In discussing the sanitary condition of our tenement-houses the report does not speak very encouragingly. The increase in the number of these houses has not appreciably affected the density of the population. The elevated roads have not carried the working population up town. On the contrary, workingmen seem to prefer a gregarious life in Mulberry street to a healthful, but more isolated one in Harlem. The morning and evening trains on the east side are loaded with workingmen who go uptown to their employment and return in the evening to the smells of a down-town tenement. The census returns for 1880 show that the population of wards lying south of Fourteenth street remains nearly the same as in 1870. One ward, however, has gained about 10,000, while the whole district, without losing in population, has undoubtedly a less number of dwellings than it had ten years ago, and is, therefore, practically in a more crowded state.

The sanitary condition of the tenement-houses has, however, improved somewhat; although, according to the present report, is it still very bad. The society's inspector states that "the condition of the tenement-houses as described sixteen years ago is their condition to-day." The agent, in the months from February to June, 1880, made 813 inspections; he found 693 defective houses. Of these, 237 houses were reported to the Board of Health, which body remedied defects in 87 cases, partly remedied them in 59 cases, and did nothing in 91 cases.

For the future, it seems likely that the most which can be done for a long time at least, will be to teach and enforce sanitary methods in the tenements now existing, and to see that new tenements are built with as few defects as possible. The so-called model tenements do not appear to be a success, so far as reaching the lowest and poorest classes is concerned. They are generally occupied by clerks, small tradesmen, and persons a little above the class of day-laborers.

The report touches more briefly than we could wish upon the subject of the abuses of medical charity. It commends the new rule adopted in several of the city dispensaries of charging a small fee for medical advice, a rule which we think should be praised with great reserve. The report continues: "It has long been feared that the habit of dependence and willingness to take alms has been implanted or cultivated by dispensary attendance. The good nature of physicians has also been thus abused by many who could well afford to pay for advice, and the community has been needlessly taxed for individual benefit." A brief history of the present movement instigated by the British Medical Association and prominent medical men and laymen, to organize a confederation of provident dispensaries in the city of London is given.

It is very much to be desired that the Society for Improving the Condition of the Poor should take up this subject of the abuse of medical charities with more seriousness than it has yet done. There is no

one direction in which charity is more pitifully misused, or in which the spirit of pauperism is more diligently fostered. The society could do more probably, than any other lay society to help solve the question. How our dispensaries and hospitals should be managed as regards the receiving and treatment of non-paying patients is a question fully deserving the attention of an organization which aims to treat pauperism in all forms in a rational manner. We would call the attention of its officers to this point, therefore, as one that deserves consideration in their future labors.

THE AMERICAN MEDICAL COLLEGE ASSOCIATION.

THE *Chicago Medical Journal and Examiner* has been devoting a large share of its editorial space to the subject of the American Medical College Association, and it has chosen to take us to task for certain editorial comments upon that body made some time ago. We are accused, it seems, of speaking ill of the College Association, and of "a Pecksniffian assumption that there is nothing of value in the medical institutions of the country" outside of the East. Our particular errors are that we attributed the withdrawal of certain eastern medical colleges from the association to the fact that they thought such an association could no longer benefit them. Also, we are accused, with much iteration, of having spoken of the western and southern medical colleges as "medical colleges scattered throughout the West and South."

The *Chicago Medical Journal and Examiner* has misapprehended the spirit in which the article it criticises was written. We are, and have been, entirely friendly to the American Medical College Association. It has accomplished much good, and, we hope, will do more. We stated, however, that it could never adopt for all its members the highest educational requirements desirable without a fatal loss of membership. This is absolutely true, and nothing has been brought forward by the *Journal* to disprove it. The strain of such small reforms as that of raising the fees to $75 has cut down the Louisville schools one-half, while the Nashville schools, though members of the Association, have made no increase in fees at all. The much-praised four-year medical school at St. Paul is said to be with few or no pupils.

There is no doubt of the fact that a large number of medical colleges have not the means of acceding to high educational requirements. There are two such colleges in the East, but there are fifty-three colleges in the West and South. Hence the natural emphasis which we put upon the institutions in that part of the country.

The facts in regard to the distribution of medical colleges and students are as follows:

Total number of medical colleges in the United States*	69
Number in New England and Middle States	16
Number in West and South	53
Total number of students	8,279
Average for each New England and Middle State college	216
Average in West and South	90
Total students in New England and Middle States	3,467
Total students in West and South	4,812

As near as can be learned from statistics given by the United States Commissioner of Education, there are nineteen western and southern colleges that have not over fifty students, and two of these have no students at all. This number of medical colleges, nineteen, is considered enough to supply all of Great Britain. The idea, therefore, that there are a good many small medical colleges throughout the West and South, if incorrect, is a very natural one. That these colleges have so many students as they do, may be explained to some extent by the fact, that up to the present year nearly one-half of them charged from $10 to $50 per year for tuition.†

But we wish to assure the *Journal and Examiner* that we intended no partisan plea for eastern medical colleges. The causes assigned for the withdrawal of the two New York colleges from the Association were correctly given, as we believe. But we are not the "organ" of any institution, and have not the slightest desire to imitate our able contemporary in making use of the discussion to advertise local schools. Our interests are those of the profession. We would like to see medical education advanced everywhere, because it would benefit the general practitioner. If the western schools have done more than the eastern to raise educational standards, as our contemporary argues, we will cheerfully admit the fact. There does not seem to be any special need for the *Journal* to continue, as it promises, its animadversions upon us; but "error is ever talkative."

HELP FOR STAMMERERS.

A CONTRIBUTOR to *Chambers' Journal*, who, according to his own assertion was a most habitual, unmistakable, and inveterate stammerer, gives his theory with regard to the production of what might be termed this vocal deformity, and details the method by which he effected a cure.

After having his life "thoroughly embittered by this malady" for about thirty years, he met with an article on the subject by Dr. Arnott, in which it was suggested that since consonants are the stammerer's deadly enemies, the prefixing of the sound of *e*, as in

* Report of United States Commissioner of Education, October, 1880.
† Ibid., 1878.

the French words *de, le, me, se,* to all words beginning with a consonant, would prove an unfailing remedy. This plan was tried with some benefit, but something more was required for words with consonant initials in the middle of a sentence, as well as for syllables with consonant initials in the middle of a word. As to *w, y,* and *u* as initials, they seemed to present insurmountable difficulties.

After considering the subject still further, he decided that, as consonants at the beginning of a word are so very troublesome, if a method could be devised for bringing them to the end of a division instead of the commencement, a great object would be attained. Once the glottis being opened by a vowel-sound, the consonant would follow. The aim of the stammerer is to prevent the glottis from closing when once it is opened.

As a further step in the development of this plan, sentences were written out in the ordinary way, and then rewritten, so that the initial consonant became the final letter of the preceding word. The sentences thus constructed were then read over and over, until in a few weeks the improvement was extraordinary.

Before entering upon a trial of the method which proved so satisfactory in the case under consideration, it must be understood that the stammerer should speak slowly and with affected ease, allowing the words to *flow* out rather than to deliver them with a jerk. Besides, when it is recommended to prefix the French sound of *e,* as in *le, de, me, se,* it is not intended that this sound should be conspicuous, but used rather as a glottis-opener, making way for the advancing consonant. Further, the statement which is sometimes made, that no stammerer ever experiences any difficulty in the enunciation of vowel-sounds, is not true, for *w, u,* and *y* are, as initials, often decided *pièces de résistance.*

Now to illustrate the proposed plan. In the enunciation of such words as have consonant or compound consonant initials, like *br, pr, dr, st, sl,* the prefix of *e* will be an amply sufficient aid. Under this head would come such sentences as, "*My* friend who has just spoken;" "*But* there is a fatality;" "*Now* all that has to be changed;" "*That* showed the power;" *N*umbers, *D*euteronomy, *S*cotland, *S*pain. Some of these words would often prove very embarrassing to a stammerer without extra help.

In case one or more words beginning with consonants occupied the body of a sentence, the sentence should be so constructed as to make the initial consonants come at the end of a division. The sentence, "May he rest in peace," would then become "Im-ay heer-est inp-eace," and this should be read aloud many times, studying to make it sound like the original. Such a division is not necessary for every sentence, but only where an obstacle presents, and this can usually be anticipated. Besides, when one formidable word has yielded, a host of others will follow suit. The well-known sentence, "I came, I saw, I conquered," becomes "Ic-ame, Is-aw, Ic-onquered.'

Where *w* stands as initial, the sound of *oo* as in moon should be used; for *y,* the sound of *ee* is called in; and for *u,* the sound of *ee* followed by the sound of *oo.* Certain words, such as universe=eeooniverse, unanimons=eeoonanimous, usual=eeoosual, should be written out and repeated aloud as before. The substitution of the equivalent sounds for *w, y,* and *u* is said to afford a relief almost incredible, but care must be taken not to *dwell* on these substitutions, but pronounce them nearly as one syllable. Practice is of course always necessary.

In conclusion, the writer adds that the benefit of this system has not been confined to himself alone, and Canon Kingsley, in gratefully acknowledging these hints on the cure of stammering, said: "For the torments I have suffered since I was six years old, God alone knows, or will know; still to me every stammerer is a friend at once by unity of sorrow—after all, perhaps the most sacred unity on earth."

Reviews and Notices of Books.

Cutaneous and Venereal Memoranda. By Henry G. Piffard, A.M., M.D., and Geo. Henry Fox, A.M., M.D. Second edition. 16mo, pp. 310. New York: Wm. Wood & Co. 1880.

Ophthalmic and Otic Memoranda. By D. B. St. John Roosa, M.D., and Edward S. Ely, M.D. Revised edition. 16mo, pp. 298. New York: Wm. Wood & Co. 1880.

It is evident that these books have supplied a want in the medical community, from the fact that a second edition has been called for so soon after the first had been issued. While by no means intended to be exhaustive treatises, they furnish, in crisp, terse, and easily accessible form, the leading facts of pathology, symptomatology, and treatment of the diseases and affections of which they treat. It is much easier to be diffuse than to be brief, and much simpler to expand than to condense; and it is therefore no small praise when we say that the authors have brought within this small compass all the most important facts, so far as known down to the present time.

The Student's Dose-Book and Anatomist. By C. Henri Leonard. Pp. 150. Detroit: Leonard's Illustrated Medical Journal. 1880.

We greatly question the usefulness or even harmlessness of such little books as this, which profess to give anatomy, materia medica, therapeutics, and obstetrics, as well as numerous facts of chemistry, toxicology, and practice of medicine, within the space of a few pages. If they are intended to take the place of larger and more complete works, they must inevitably lead to superficiality of knowledge; and if they are not supposed to be complete, they are superfluous. All that they are good for is "cramming" for examination. The book in question is about as poor a specimen of its class as we have met with, and it seems to have been gotten up as much to advertise

a certain drug-house as for any other purpose. It is not even properly bound, as in the second part pages 30 to 47 are missing, and instead, pages 65 to 80 of the first part are bound in.

THE COMPEND OF ANATOMY. By JOHN B. ROBERTS, A.M., M.D. 24mo, pp. 191. Philadelphia: C. C. Roberts & Co. 1881.

As the author says in the preface, this is not intended to take the place of more elaborate works on the subject, but as an aid to the student in the dissecting-room and in following a course of anatomical lectures. As far as possible, everything is arranged in tabular form, so that all the essential points may be seen at a glance. Thus, one table gives the name, origin, insertion, action, and innervation of the muscles; another gives the names of the openings of the skull, and tells what passes through them, etc. It is printed in clear type, on tinted paper, is well bound, and will not only be found useful by the student, but will be of service to the practitioner in enabling him to review, in a short time, matters which are apt to escape the memory with the lapse of time.

TRANSACTIONS OF THE MINNESOTA STATE MEDICAL SOCIETY, 1880. 8vo, pp. 190. St. Paul: H. M. Smyth & Co.

THIS embodies in official form the proceedings of the last session of the Minnesota State Medical Society, an account of which appeared in the RECORD at the time. After the usual addresses of welcome, the reports of the special committees and sections were read. It may surprise some of our readers to be informed that the committee on surgery believed that "more is claimed for the Lister treatment than it really deserves." In support of this statement, the chairman cites the results of Lister's own operations, "of which he has no reason to be proud." Bigelow's operation is lauded "among the advances in surgery in the past year" (?), and the reintroduction of hot water as a styptic is called to the attention of the members.

The report of the Section on Practical Medicine includes a paper on the treatment of empyema, by Dr. Talbot Jones, with the report of a case in which the author operated, inserting a drainage-tube, and the patient recovered in six weeks. Dr. Flagg contributed a paper on diphtheria, from which he concludes that throat diseases of various forms are prevalent during epidemics of diphtheria.

The Committee on Gynecology seem to differ from that on surgery as to the usefulness of the antiseptic method—at any rate, in gynecological operations. They also contribute papers on hystero-epilepsy, death from the expulsion of a musculo-fibroid tumor of the uterus, and post-partum hemorrhage; in the latter condition the use of the faradic current is especially lauded. In the Section on the Nervous System there were papers on cirrhosis of the liver with singular nervous manifestations, on locomotor ataxia, and on white cerebral softening. One of the most interesting papers is on medical jurisprudence, giving the history of a patient with organic heart-disease who was attacked and beaten by two men. On his death, five months later, his assailants were tried for manslaughter. There was a great mass of medical testimony taken as to the probable effect of such a sudden beating on the life of a man with cardiac disease. But the prosecution did not make out a case, as the prisoners were dismissed on the ground of insufficient evidence.

The Section on Ophthalmology made reports on color-blindness, senile cataract, tobacco amblyopia, and accidents to the eye. The Committee on Medical Education endeavored to impress upon the members the necessity and expediency of adopting the metric system. The miscellaneous proceedings include an able essay on heredity, by D. Daniel Leasure; one on diseases of the tonsils, by Dr. D. W. Hand, and three surgical cases by Dr. Talbot Jones. A simple method of compression of arteries is suggested by Dr. Palmer, without constriction of the rest of the limb. This consists of: a band of plaster-of-Paris around the limb, and a fenestra, through which a compress is placed upon the artery, and tightened and held in place by an elastic roller. The article on nasal catarrh, by Dr. Jay Owens, will be interesting in connection with the recent discussion before the Academy here; the author believes in its constitutional as well as its local origin, and treats it accordingly. We are somewhat surprised to be informed that in New York city . . . . a majority of the adult population are afflicted with this disease. A case of cardiac hypertrophy is related, in which fluid in the pericardium was diagnosed and aspirated for. Amputation at the knee-joint, without the use of the saw, is regarded as preferable to the usual operation. The proceedings close with a tribute to the late surgeon, William J. Sloan, Medical Director of the Department of Dakota.

ATLAS OF SKIN DISEASES. By LOUIS A. DUHRING, M.D. Parts V., VI., VII. Philadelphia: J. B. Lippincott & Co. 1879–80.

WE have, in a previous notice, said something regarding the very superior character of this atlas. Succeeding numbers have abundantly fulfilled the promise of excellence first given. The plates are chromo-lithographs and executed in the very best style of the art, forming probably as good substitutes for actual living cases as can be furnished.

The plan of the accompanying text is continued on in the same way as at first. A clinical history of the patient whose diseased skin is lithographed is given in full. Further points in regard to the symptoms, pathology, differential diagnosis and treatment are then given. The language of the text is clear, concise, and to the point, and is sufficient. It would of itself make a very good clinical work on skin diseases.

In Part V., scabies, herpes zoster, tinea sycosis, and eczema (vesiculosum) are illustrated and described. The accompanying suggestions for treatment are here as elsewhere very practical and valuable. The case of scabies was treated with sulphur ointment, ʒ j. to ℥ j. The patient was also directed to use warm alkaline baths, to apply the ointment twice daily, and to keep up the treatment for four days. In this way he was soon cured. The cases of herpes zoster and of tinea sycosis are treated by the usual methods. They are both beautifully typical ones. Indeed, the author seems to have been fortunate in getting thoroughly "classical" cases for all the diseases described.

Part VI. contains syphiloderma (pustulosum), erythema nodosum, seborrhœa, and eczema (papulosum). The case of seborrhœa is a remarkably good one, and illustrates both the dry and oily variety of the disease. The treatment advised for this was mainly local. It consisted in directing the crusts to be removed and the parts thoroughly cleansed with potash soap. Sulphur ointment was then applied. Tar ointment, carbolic acid, and oil

of cade are also recommended, and in obstinate cases internal remedies are added, *e.g.*, the sulphides with cod-liver oil.

Part VII. treats of eczema (pustulosum), impetigo contagiosa, syphiloderma (papulosum), and lupus vulgaris. The first two plates are of the usual high merit. The last one appears too diagrammatic to be perfectly satisfactory.

On the whole the high standard of this atlas is kept up throughout these later numbers, and it is safe to say that the work forms one of the best practical contributions to dermatology that this country has made.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, December 8, 1880.

Dr. T. E. Satterthwaite, President, in the Chair.

STRANGULATED HERNIA.

Dr. J. W. Howe presented a specimen of strangulated hernia with the following history: L. M——, a tailor, aged fifty-one years, was admitted to St. Francis' Hospital October 15th, suffering from a strangulated oblique inguinal hernia. Twelve months previous to admission, while lifting a heavy tailor's iron, a tumor made its appearance in the left inguinal region and scrotum. The contents of the tumor were replaced by the patient without difficulty, and there were no further symptoms of hernia until the day before his admission to the hospital, when, from the same cause as before, the tumor reappeared. This time the tumor was painful, and could not be reduced by the patient.

A physician was summoned who applied warm water and chamomile leaves, followed by taxis, but without avail. At the end of twenty-four hours the physician applied a truss and sent the patient to the hospital, unrelieved of strangulation.

On admission the patient complained of great pain over the tumor, particularly when the latter was pressed upon. He had had no passage from his bowels since the previous morning, nor had his bladder been emptied during that period. The abdominal cavity was distended, and gave a dull percussion sound below, and contained fluid. The pulse was small, irregular, and frequent. All the symptoms were much more grave than were usually witnessed in a strangulated hernia of twenty-four hours' duration. He had no stercoraceous vomiting; indeed, the patient seemed too weak to vomit. After etherization the sac was opened in the usual manner. A large mass of coagulated blood was found covering the intestine, the results of the taxis and ignorant application of the truss. The structure was tight, and when cut a large quantity of serum—over a gallon—escaped from the abdominal cavity. The intestine was much bruised at one point, but in other respects was not injured. It was returned to the abdominal cavity, and the usual dressing applied. Death took place twenty-four hours after the operation.

The autopsy was made by Dr. Wendt, curator to the hospital. The cavity of the abdomen contained a large amount of brownish colored fluid. The intestines were congested, and were loosely matted together by pseudo-membrane. A piece of intestine, six inches long, and more congested than the rest, was covered with purulent false membrane. An oblique line of ecchymosis was found in the serous coat of this part extending about two inches into the mesentery, also large and small ecchymosis on its mesenteric attachment. The visceral and parietal peritoneum were mottled. There were no signs of peritonitis about the cut or the internal ring. Both kidneys were congested, and the spleen was in the condition of perisplenitis. The liver was in the atrophic stage of cirrhosis.

The specimen was presented not so much on account of its pathological as its clinical interest, as it illustrated a method of treatment which was not uncommon among ignorant practitioners.

Dr. Carpenter thought that the clinical features of unusual interest in the case were the sudden occurrence of a hernia, which filled the scrotum, and its easy reduction by the patient.

THE BAD EFFECTS OF UNSKILFUL TAXIS.

Dr. Briddon remarked that its sudden occurrence might be explained by a patent condition of the tubular vaginal process of the peritoneum, except at the internal ring, the partition at the latter point giving way and allowing the hernia to descend directly into the scrotum. But such herniæ were attended with grave symptoms from the first, and were difficult of reduction. He thought death in Dr. Howe's case was due to delay in the operation and to the injuries inflicted during taxis. As a rule, he thought taxis did harm in such cases, and that it was much better to perform the operation without delay.

Dr. Gibney asked if taxis was not usually attended with good results.

Dr. Briddon replied that he believed taxis, as a rule, did more harm than good in cases of strangulated hernia.

Dr. Howe believed in taxis before the operation, especially by the gravity method of Hamilton.

Dr. Ripley did not think that taxis should be abandoned because it had been abused. Every physician was in the habit of reducing strangulated herniæ by taxis, and the patients recovered. Sometimes ether was administered to that end, but not always.

Dr. Briddon said that he did not condemn the method, but the ignorant men who practised it.

Dr. Heinemann, in regard to the time which might elapse between the occurrence of a strangulated hernia and death therefrom, stated that he had performed an autopsy at the end of the eighth day of strangulation. The patient was brought into hospital at one o'clock of the day of his death and died three hours afterward, and after an operation had been attempted. A portion of the ileum was constricted, and one end of the gut was floating free in the abdominal cavity, and had discharged its contents in said cavity.

Dr. Peabody referred to the case of a gentleman with strangulated hernia who died after taxis had been employed. At the autopsy it was found that the peritoneum above the internal abdominal ring had been separated from the transversalis fascia, and more than a foot of the ileum had been forced into the space thus created. There was a tight constriction found at the neck of the sac.

EXSECTION OF ANKLE.

Dr. Howe presented a second specimen, consisting of two inches of carious tibia and fibula, with a small portion of the carious astragulus, which he re-

moved by exsection from a man, aged forty-four years, a patient in Charity Hospital. The disease was over a year's duration, and at the time of the operation the patient was much reduced by pain and suppurative discharge through openings in the neighborhood of the ankle. Notwithstanding his weakened condition the operation was performed with good result, the patient having a useful limb.

A FATTY OVARIAN CYST.

Dr. Garrigues presented a specimen of fatty deposit in an ovarian cyst. It was sent to him by Dr. Dawson, who had removed it after the patient's death. Only a portion of the cyst-wall could be obtained, but sufficient to show the condition named. The cyst itself was of the mixed variety. The fatty deposit was exclusively in the outer layer of the cyst, and was for the most part lobulated in character. At one point there was a diverticulum from the cyst-wall the size and shape of the finger of a glove. It presented an appearance worthy of note, and was of especial interest in regard to the question of its origin. Dr. Garrigues stated that he had not been able to find another case on record of adipose deposit in an ovarian cyst. Dr. Noeggerath had informed him that he (Dr. N.) had met with such a condition in ovaries removed by Battey's operation. He further remarked that ovaries covered with adipose tissue were normally found in the cat.

Dr. Briddon thought that the finger-like process was a secondary cyst which had become contracted.

Dr. Peabody remarked that the adipose tissue over the cyst-wall looked like that of portions of the omentum that might have become adherent.

Dr. Garrigues said that the tissue was positively not omentum, as there were no adhesions of the latter to the tumor found post-mortem. The elongated cyst was probably altered by contraction, but its shape was quite remarkable.

DIPHTHERIA AND ACUTE EMPHYSEMA OF LUNGS.

Dr. Tauszky presented the larynx and trachea of a child upon whom tracheotomy had been performed for membranous croup. The patient did well for twenty-four hours, when it was seen by Dr. Ripley who gave an unfavorable prognosis. The condition of the lung found corroborated the statement of Dr. Ripley, in regard to these cases, that they do not die of pneumonia, but of an extension of the membrane downward producing acute emphysema, or hyperinflation of the lung rather than consolidation.

Dr. Tauszky believed that the case was one of membranous croup rather than of diphtheria, as the submucous layer was not involved in the deposit. The specimen was, on motion, referred to the Microscopical Committee.

Dr. Peabody exhibited sections of the brain, liver, and kidney removed from the body of a patient who died in an attack of congestive pernicious remittent fever. The points of interest were the deep pigmentations to be seen along the lines of the vessels of the specimens and in the vessels themselves. Some of the latter vessels, especially in the brain, were completely filled with pigmented material.

Dr. Briddon presented a large interstitial fibroid of the uterus removed by abdominal section. This was accompanied with a written history (*vide* page 7).

TAPE-WORM.

Dr. Van Giesen exhibited a specimen of tape-worm which had been discharged from a German midwife who had used, according to his directions, the fluid extract of aspidium marginale. Not giving the doctor an opportunity of examining the fæces the head of the worm, which should have been in them, was not found. A teaspoonful of the following mixture was taken six times at intervals of every fifteen minutes: Fluid extract of aspidium marginale, ʒ ij., olive-oil, ʒ iv., sulph. ether, ʒ ss. This was followed by an active purge of castor-oil and croton-oil. The following morning the worm, measuring twenty-eight or thirty feet, was discharged.

DIPHTHERIA.

Dr. Van Giesen also presented a specimen of descending laryngeal diphtheria, which had been removed from a female child aged twenty-one months. He first saw the case October 20th. At that time the patient had a slight amount of what was conceded to be diphtheritic membrane in the lower part of the pharynx. She was otherwise comparatively well. There was no increase of temperature, and no great increase in the frequency of the pulse. The child apparently got better, and when there was no visible membrane in the pharynx, the case was dismissed simply with the precaution added, that the child might be taken worse at any time. On October 26th the patient became very hoarse, and was unable to make anything more than a whispering cry. The respiration was normal, the throat was very little reddened, and by a very prolonged examination nothing could be seen in the pharynx. The remedies which had already been prescribed were repeated. The breathing became much embarrassed on the 27th, and small doses of turpeth mineral were administered. The vomiting that followed the second dose brought up a membranous cast of the trachea (which was exhibited). The breathing was very much relieved, and inhalations of solution of bromine with small doses of the latter were given. The child died twenty hours after with symptoms of suffocation.

Dr. Van Giesen remarked, in conclusion, that he had been unable clinically, pathologically, or microscopically, to distinguish between diphtheria and membranous croup.

RETRO-PERITONEAL SARCOMA.

Dr. Heinemann exhibited a specimen of retro-peritoneal sarcoma, with the following history:

Mary Fischer, aged twenty-two years, New York, single. Family history good. Well up to one year ago, when exposure, just before a menstrual period, caused a permanent cessation of the menses. She subsequently complained of slight discomfort about the left lumbar region; continued in a rather uncertain state of health up to four months before death, when dyspnœa set in; she begun to fail and to suffer from disturbed digestion. She gradually became weaker, the dyspnœa became more severe, her abdomen enlarged, and rapidly within the last fortnight; ascites and slight jaundice followed. The urine was constantly loaded with urates. The patient was seen October 28th and November 5th by Dr. G. G. Wheelock, and was attended by Dr. Bleything. On account of the extensive dulness over the region of the spleen and the anæmia, it was thought a possible case of leucocythæmia, and when the subsequent rapid enlargement of the liver occurred, malignant disease of the liver was suspected. The patient died of asthenia, November 12, 1880.

Autopsy, made by Drs. Wheelock, Bleything, and myself. — Body moderately emaciated, jaundiced, marked prominence of epigastric region.

Heart and lungs normal. Liver, weight ten and

three-fourths pounds, extended above from the right third intercostal space to the lower border of the third rib on the left side, downward to the upper portion of the hypogastric region. The right lobe was enormously increased in size and invaded by numerous large and small new-growths. The left lobe was normal in size and contained a few small new-growths.

Stomach was small, and displaced toward the left; the transverse colon was pushed down to the hypogastric region. Spleen and kidneys were normal.

In the left lumbar region, and apparently intimately connected with the kidney, but subsequently found to be independent, is a large tumor weighing not quite four pounds, which, upon section, seems to be composed of small and large alveoli, filled with yellowish, firm, and in some places red marrow-like material, and infiltrated in parts with calcific deposit.

Mesenteric and lumbar glands were much enlarged and infiltrated.

Microscopic examination reveals the tumor to be a large-celled retro-peritoneal sarcoma.

DYSENTERY; SUPPURATIVE HEPATITIS; PERFORATION THROUGH INTO THE RIGHT PLEURAL CAVITY; PERICARDITIS AND PLEURISY WITH EFFUSION.

DR. SATTERTHWAITE presented the following case as an instance of hepatic disease dependent on dysentery, a condition which he was disposed to think was much more common in this latitude than was usually supposed:

H. V——, fourteen, office boy, was admitted into St. Luke's Hospital October 25, 1880. The history he gave was as follows: In July last he had an attack of "cholera morbus," which lasted about ten days. After feeling better he returned to his work, and for a week was able to attend to his regular duties. Then he was attacked with what was thought to be "dumb ague." He had chilly feelings, felt sleepy, and wanted to sit by the fire. After a while his breathing became difficult, and he had cough. In September last, about the middle, he began to have night-sweats, and he lost flesh. There was pain in the right side, of a dull character, shooting up to the corresponding shoulder. When admitted into the hospital the abdominal veins had become distinct, and the liver was found to be enlarged and tender. There was also some tympanitis, but no vomiting. Night-sweats continued. On November 8th the patient was taken suddenly with extreme dyspnœa. Dulness was found over the entire left side of the chest, and the left lung was œdematous. The patient died at 5.30 P.M. of the same day.

At the post-mortem examination the liver was found, by measurement, to be enlarged, and the seat of many abscesses, one of which had burst through the diaphragm and discharged into the right pleural cavity. Other abscesses, through their contiguity with the peritoneal cavity, had set up a peritonitis of subacute character.

In searching for the cause of the suppuration there was little difficulty in associating it with a concomitant lesion, viz., dysentery. The mucous membrane in the rectum, sigmoid flexure, and descending colon was marked by small ulcers that had nearly healed, and were evidently dysenteric in their nature.

The empyema, excited and augmented by the discharge of pus and necrotic tissue from the liver, had caused the right lung to be so compressed against the spinal column that the respiratory function upon that side was abolished. The sudden œdema of the opposite lung was thought to be similar in character to a like condition often observed in pneumonia, where, after an inflammatory process has been proceeding slowly within one pleural cavity, it suddenly shifts to the other, causing congestion, œdema, and often a rapidly fatal issue. An additional cause of sudden death in this case may have been the effusion within the pericardium and left pleural cavity, which added further to the difficulty of breathing.

Dr. Satterthwaite stated that recently he had seen several cases of hepatic suppuration, and had been induced to consult somewhat hurriedly the records of a few NewYork hospitals. In this way he had collected six cases from the St. Luke's, Presbyterian, and Mt. Sinai hospitals, and these, together with twenty-six from the Transactions of the Pathological Society, made a total of thirty-three fatal cases. From them it appeared that the most common cause that had been ascertained was dysentery; the next most frequent was associated with the irritation produced by the presence of calculi in the gall-bladder or biliary passages; medullary cancer, traumatism and operations in or about the pelvic fossa held more subordinate places. These statistics differed from the recent ones of Baerensprung, given by Thierfelder in the last number of "Ziemssen's Cyclopædia," where, in a total of 108, sixty-eight were associated with traumatisms, of which thirty were pyæmic. In other respects the statistics agreed in so far that affections along the line of the portal system held the next place in the rank of causes, and ulceration of bileducts the third position in order. Pyæmia was observed much less frequently in hospital practice than formerly, and hepatic abscesses of pyæmic origin were quite rare.

In the majority of cases (about two-thirds), the abscesses were single, and these were located, usually, in the right lobe. The most frequent assigned cause of death was peritonitis, due to an extension of the disease either from the liver or biliary system. Some urinary complication, to which the convenient name of Bright's disease was given, came in for an occasional cause of death—certainly albumen was by no means rare, and casts were occasionally found, while the specific gravity was apt to be low and suppression not infrequent at the final issue. In the present instance the rupture into the pleural cavity was a rare incident in the disease, though rupture into the lung was not so uncommon. While not infrequently there were no symptoms of the trouble, the following were found in a certain number of cases, and they are given in the order of relative frequency: 1, rigors and sweats, often under the name of "chills and fever;" 2, pain in the epigastrium; 3, jaundice; clay- or, occasionally, bronze-colored stools. Cerebral symptoms were only mentioned in one instance, and they were those of hypochondriasis simply. In same cases observed by Dr. S. there was an absolute destruction or necrosis of liver-substance, indicating a diffuse inflammation, rather than one that had distinct walls and contained pus. Aspiration had been resorted to in two cases and incision in one.

DR. CARPENTER thought that statistics tended to disprove the position and relation between dysentery and abscess of the liver.

Dr. SATTERTHWAITE replied that in this climate the rarity of the diseases precluded one from offering extended statistics. He believed that a causal relation existed often between hepatitis and dysentery, though in special epidemics the liver might not be implicated, as shown by Niemeyer during the last Franco-Prussian war.

The Society then went into Executive Session.

THE NEW YORK SOCIETY OF GERMAN PHYSICIANS.

Stated Meeting, November 26, 1880.

DR. NOEGGERATH, PRESIDENT, IN THE CHAIR.

THROUGH DRAINAGE IN EMPYEMA.

DR. HEINEMANN showed a little boy four years old, who served to illustrate the good results that may be obtained in intractable empyema by establishing through drainage. In the present instance there had been a history of progressive deterioration, until the simple incision originally made had been supplemented by a second one, each serving for the insertion of a drainage-tube. The antiseptic cleansings were now performed by the child's mother, and the case was apparently progressing to recovery.

DR. GERSTER called attention to the excellent results obtained by simple incision with consecutive drainage under strictly antiseptic precautions. König, of Göttingen, had recently again urged the utility of these measures. Lately Dr. Gerster had occasion to observe two cases of empyema, one occurring in an adult, the other in a child. In both cases simple incision had been followed by a rapid cure after a single irrigation. He also believed that if the operation were performed at a sufficiently early period, the lungs would always expand and primary pleural adhesions would appear. These events would facilitate the healing process and cut short an otherwise tedious course. Thick pseudo-membranes, as well as extensive and rigid pulmonary infiltration would, however, invariably interfere with rapid cures. In such cases the disease would take a course resembling that in simple drainage.

DR. JACOBI thought that the choice of a particular operative method would and should depend upon the nature of the individual case. He also took occasion to warn against early costal resections in children, because in them the pliable thorax would readily adapt itself to a more or less collapsed lung, without any such surgical interference.

DEEP LACERATED WOUND OF EYEBALL—SCLERAL SUTURE.

DR. OPPENHEIMER exhibited a patient on whom he had united by suture the edges of a penetrating wound of the bulbus oculi. The man was thirty-eight years old, and by trade a machinist. In June a foreign body had struck his eye and caused an extensive lacerated wound of the bulbus. There was prolapse of the iris, the anterior chamber was filled with blood, and the whole organ seemed flabby. The protruding portion of the iris was snipped off, and a scleral suture at once applied. The progress of the case was in every way favorable and altogether painless. In about four weeks the patient was discharged from the hospital. Two weeks later his vision was $\frac{20}{30}$ on the affected side. Recently a traumatic cataract had developed, but the visual field was apparently normal, at least as regarded the impression of light. One of the patient's eyelashes had found its way into the anterior chamber, where it had remained without causing the slightest irritation.

DR. GRUENING observed that scleral wounds were most dangerous in the ciliary region. Scleral sutures had been practised with success only quite recently. In this manipulation it was essential to avoid entangling the iris between the edges of the wound. Moreover, the sutures were not to be passed completely through the fibrous walls of the eye. Some writers even advised to pierce only the conjunctiva and the subconjunctival tissue.

CANCER AT THE ILEO-CÆCAL VALVE.

DR. GERSTER presented a specimen of the above with the following history: The patient had suffered from perityphlitic abscess due to intestinal perforation. Two weeks before the fatal issue a double incision was made and through drainage established. By irrigation large quantities of pus, fecal matter, and shreds of necrosed tissue were evacuated. But the patient's condition was only temporarily improved; he died soon after of septicæmia. Previous to the formation of the abscess the patient had presented only the symptoms of a chronic enteritis. The cause of his profuse purulent discharges was not detected until after death.

At the autopsy the small intestine in the right iliac region was found firmly united to the peritoneal covering of that region. The lower portion of the ileum was enormously distended and contained many hard fecal lumps. More or less deep intestinal ulceration and necrosis existed at this point. A cancerous ring was found to occupy the site of the ileo-cæcal valve, but there was no complete occlusion, a finger easily passing through the constricted portion. This fact, together with the exclusively fluid diet of the patient, explained why symptoms of intestinal obstruction had never been observed during the patient's sickness, which extended over a period of eleven months. Dr. Gerster believed that death had been due in large measure to the extensive intestinal ulceration and necrosis, brought about by the pressure of the hard fecal masses above mentioned. The doctor also referred to six other

CASES OF PERITYPHLITIC ABSCESS

which had come under his observation within the last three years. All these cases related to young persons, and one was that of a child. With regard to the etiology of the disease, he stated, that in one instance a foreign body had caused a perforation of the vermiform appendix. This case had presented unusual difficulties of diagnosis on account of its complication with a purulent coxitis of the right side. The hip-joint had become involved by extension along the iliac bursa. The patient, a young girl, died of erysipelas, which made its appearance some weeks after incision of the abscess. In the third fatal case an operation was refused and the patient died of peritonitis following perforation. In the child's case the disease had been caused by a kick against its belly. The cause of the abscess in the two remaining cases was unknown. Five operations (with two deaths, one in the cancer case, the second from erysipelas) were performed. Three times the operation had resulted in a complete cure. The incision was chosen according to Willard Parker's directions. Of the two cases not subjected to surgical interference one died of peritonitis, the other recovered under local applications of ice, but only after repeated rigors.

DIPHTHERITIC STENOSIS OF LARYNX.

DR. SEIBERT presented a specimen of the above removed from the body of a child aged six years. The patient had died of suffocation. Diphtheritic patches were not visible when the child was living; after death they were found at the posterior aspect of the soft palate. The case might have been mistaken for

one of genuine croup. He also showed a second specimen, consisting of a

FATTY HEART,

removed from the body of a woman who had suddenly died in the course of a croupous pneumonia. The right side of the heart showed the most extensive degeneration. The large glandular organs of the abdomen also showed adipose change. A microscopical examination had not yet been made.

Dr. Jacobi remarked that the immediate cause of death had probably been acute pulmonary œdema from lack of cardiac power.

Dr. Glueck had seen good results in such cases of threatening œdema, following the use of digitalis.

A discussion here ensued as to the precise nature of the lesion, whether fatty infiltration or fatty degeneration. Drs. Garrigues, Wendt, Jacobi, and Seibert expressed somewhat conflicting opinions. The matter was referred to a committee of one.

BLACK URINE IN ACUTE POISONING FROM CHLORATE OF POTASH.

Dr. Jacobi showed a sample of characteristically black urine, voided by a patient who had been poisoned by overdoses of chlorate of potash. A complete history would be given at a later meeting by Dr. Morjé.

PRIMARY CANCER OF THE LUNGS—SECONDARY MILIARY DEPOSITS OF KIDNEYS.

Dr. Wendt presented specimens of the above, which had been previously exhibited by Dr. Ripley at a meeting of the Pathological Society (see Medical Record, Dec. 18, 1880).

Dr. Heinemann said that about two years ago he had observed a case in many respects resembling the present one. Both lungs were affected. There were no secondary tumors in the kidneys. The symptoms had been about those of a dry pleurisy. The cancer had belonged to the medullary variety.

Dr. Seessel demonstrated a plaster-of-Paris cast, showing the cerebral lobes, fissures, and convolutions, together with the different psycho-motor centres at present known.

SPONTANEOUS GANGRENE OF TESTICLE.

Dr. Gerster presented this specimen, which he had removed by castration. The patient denied ever having received the least injury. Exploratory puncture revealed a chocolate-colored fluid, coming from the interior of the organ. Incision of the large tumor showed that the tunica vaginalis had become completely obliterated, and that the tunica albuginea was thickened to about six times its natural dimensions. The substance proper of the testicle was represented by a disintegrated crumbling mass, having a reddish-brown appearance, and resembling coffee-waste. There was no abnormal epididymis. The operation was successful, the patient quickly recovering from the castration.

Dr. Klotz referred to a case of

SYPHILITIC ELEPHANTIASIS OF THE LEG

which he had exhibited at a previous meeting of the Society. The extensive necroses of the soft coverings of the leg were ascribed to the existence of an arteriitis obliterans. Last October the patient began to complain of rheumatoid pains in the hitherto unaffected leg of the left side. This was rapidly followed by extensive gangrene of the soft parts, showing that here also the vascular affection previously diagnosed had occurred. The patient was now gradually sinking, with symptoms of slow septicæmia.

OVARIAN CYSTOMA FIRMLY UNITED TO BLADDER.

Dr. Noeggerath presented the above specimen, and gave the following account of it: On the 18th of October he had attempted the performance of an ovariotomy at Mt. Sinai Hospital. The operation could not be terminated, owing to the unusual complications of the case.

About three months before this time the ovarian cyst had been punctured, and it was observed that a small cyst, situated anteriorly to the principal tumor, completely collapsed and became invisible. During the subsequent ovariotomy this smaller sac was incised in the median line, and it was now ascertained to be the bladder, which was extensively and firmly adherent to the anterior abdominal parietes. The vesical wound was at once closed by sutures, and the ovarian tumor now attacked. After incision of the cyst, a sudden alarming hemorrhage took place, apparently proceeding from a solid growth springing from the internal surface of the cyst-walls. Rapid and profound collapse at once set in, and death was only averted by ligature *en masse* of the bleeding growth.

The ovarian tumor was so intimately united with the broad ligament of one side, and so firmly and extensively attached to the adjoining structures, that it soon became necessary to discontinue all further attempts at removal. Accordingly it was determined to try abdominal drainage of the cystic cavity. Eight hours after the cessation of the surgical interference, the patient's temperature had risen to 104° F. Rectal injections of quinine effected a temporary lowering, but soon the febrile movement was again pronounced, and at length, after about twenty-four hours, the patient succumbed in collapse.

At the autopsy the vesical suture was found to be perfect. Urine had at no time escaped into the peritoneal cavity (it had during life been removed hourly with the catheter). The most complete union existed between the adjoining walls of the ovarian cyst and the bladder.

A somewhat similar mishap had occurred to Dr. McLean, in Troy, N.Y., and quite recently Dr. Thomas had met such a case in his practice. His own case would therefore be the third, and these were the only American cases known to him.

Dr. Garrigues mentioned the fact that Ohlshausen had reported several instances in which the bladder had been cut into, the operator wishing to incise a cyst.

In answer to a question from Dr. Gerster, Dr. Noeggerath remarked that the diagnosis of such conditions was probably always impossible. Slight vesical troubles were the only symptoms produced by the anomaly. The introduction of instruments for purposes of vesical exploration would fail to furnish any clue to the existence of such complications.

Illinois Pharmacy Law.—Plans are making to secure a pharmacy law in Illinois. These plans are to be considered by a convention of Illinois druggists, which will be held in Springfield early in December. The draft of a law will then be submitted for revision and adoption. The call for this convention has been signed by over six hundred druggists, from which it may be presumed that the pharmaceutical profession is enthusiastic in its endorsement of such an act. —*Chicago Med. Review.*

NEW YORK SURGICAL SOCIETY.

Annual Meeting, November 9, 1880.

DR. H. B. SANDS, PRESIDENT, IN THE CHAIR.

TORTICOLLIS TREATED BY OPEN OPERATION.

DR. A. C. POST presented a male patient, seventeen years of age, upon whom he operated in April last for torticollis. It was a case of extreme rigidity, and had existed from early childhood. Great resistance was offered by both origins of the sterno-cleido-mastoid muscle. Some of his colleagues urged the subcutaneous operation, but Dr. Post was convinced that he could not safely make a full division of the resisting bands in that manner, and therefore made an open incision over the origins of the muscle. After dividing the prominent bands there was no yielding, and he continued to introduce the director under bands that could be felt with the finger, and in that way all resistance was removed. He applied a tent of horsehair dipped in a carbolized solution, 1 to 40, washed the wound with a solution of the same strength, and it healed substantially by first intention. The subsequent treatment consisted in the adjustment of a plaster-of-Paris jacket provided with hooks, to which artificial muscles (india-rubber), extending from a helmet applied to the head, could be attached. His chief reliance was upon an elastic band running in the course of the sound muscle. The patient wore the rubber muscles continuously for three or four weeks after the operation—at night only after the first month—and discontinued their use altogether at the end of two or three months. The result was a perfect cure, and no tendency to the return of the deformity had been manifested.

DR. BRIDDON remarked that he was one of the number who urged the subcutaneous section, but, after witnessing the operation, he was convinced that the subcutaneous method would not have given the result obtained. He should in the future recommend the open instead of the subcutaneous operation in similar cases.

FRACTURE OF THE INTERNAL EPICONDYLE OF THE HUMERUS.

DR. L. A. STIMSON presented the patient, the history of whose injury was given at the first stated meeting in October. [See RECORD, vol. xviii., p. 556.] The internal epicondyle was displaced so that its lower border almost reached the under border of the olecranon. The motions of pronation and supination were perfect, and flexion and extension were complete to within 10° of the normal range. One point in the history had heretofore been omitted, namely, when first observed his arm was fixed in a position of semi-extension, and it could not be moved until reduction of the supposed partial dislocation had been effected. He suggested that there was possibly a complete separation of the epiphysis at that time, plus fracture of the epicondyle.

DR. MARKOE remarked that if the case was one of simple fracture of the epicondyle there should not have been any difficulty in flexion or extension of the joint at any point or at any time. Moreover, if the case was simply an epitrochlear fracture there should not be, as there was, thickening of the entire internal condyle, and which corresponded to the condition that would be left after fracture of the internal condyle. Again, the supposition that fracture of the internal condyle had taken place, explained the thickening, and the limited flexion and extension which, slight to be sure, but nevertheless still existed.

DR. BRIDDON believed that a fracture involving the joint had occurred.

DR. T. T. SABINE then read a paper on

DIVISION OF THE LOWER JAW AS A PRELIMINARY OPERATION, AND A NEW METHOD OF DOING THE SAME.

DR. GEO. A. PETERS had reached the following conclusions with regard to the best method of dividing the jaw, after having practised it several times upon the cadaver: 1st, drill a hole through the centre of the bone at the point where the division was to be made; 2d, drill two other holes, one upon each side and half an inch distant from the central opening, with a view to the introduction of a piece of wire, by twisting which the coaptation is made secure. Then introduce a small saw into the central hole and divide the bone above and below to within one or two lines of its borders. Having done that, divide the remaining portions with bone-forceps, without leaving any rough edges. Be careful to use the saw upon both sides of the jaw before completing the section with the bone-forceps, as by doing so you will escape the inconvenience arising from movement of the fragments.

DR. MASON suggested that the tendency of the fragments to slip out of position after division could be easily overcome by the adjustment of a rubber dental splint, as in the treatment of fracture. He further remarked that he had seen attempts to remove growths from the floor of the mouth fail, because the surgeon did not have sufficient room to enable him to remove them as thoroughly as he could have done had section of the jaw been made.

DR. POST said that he had divided the lower jaw in two cases for the purpose of obtaining access to malignant growths. Both cases terminated fatally, but it was evident that the division of the jaw did not hasten the fatal result.

DR. MARKOE thought that all must agree concerning the facility which the operation afforded for getting at tumors in the floor of the mouth; for, in many cases, it was very manifest that the surgeon could not succeed in removing the entire mass except by performing the operation in that manner. But in a case in which he operated about eighteen months, a condition followed which surprised and annoyed him very much, and which hastened the inevitable fatal termination. The tumor was an extensive one, and a part of it was upon the inner face of the jaw-bone. The bone was divided in the median line, was subsequently wired together with all possible care; the wound healed over well, and for some time improvement took place. But presently a fetid material began to be discharged from the mouth, and it was evident that the disease was reproducing itself. On examination, it was found that the bone had not united, and it did not unite, and the two surfaces looking toward the mouth became a part of the diffused epithelial growth which finally destroyed life. The degree of disability was considerable, and was the chief cause of the morbid granulations.

Dr. Markoe also referred to a case in which the patient made a good recovery, and, by the help of a dentist, he was able to chew as well as ever. In that case he removed about an inch of the jaw-bone.

DR. POST referred to a case in the old New York Hospital in which fracture of the lower jaw was followed by great deformity, and Dr. Buck made a section of the bone, wired it together, and it united perfectly.

Dr. Sabine remarked that unless very great care was taken, muscular contraction would pull the fragments out of their proper position. He further remarked that he had not seen a case in which non-union had occurred after division of the jaw. An objection, however, which had been urged against the straight incision was that non-union was liable to follow.

Dr. Markoe suggested that the condition of the bone through which the surgeon was obliged to operate favored non-union, and destroyed the parallelism between such cases and those in which resection was made through healthy bone for other purposes.

Dr. Stimson suggested that the chances of union might be increased by putting the bone in a condition similar to that which existed when fracture occurred, namely: strip up the periosteum to some distance from the point at which the division was to be made, so that when the ends of the bone were brought together the periosteum would overlap, make a periosteal bridge, and thus facilitate the formation of callous. In most cases of fracture there was such a stripping up of the periosteum upon the one or the other side, constituting a periosteal bridge, that undoubtedly assisted the reparative process. If it was a fact that pseudo-arthrosis followed the operation in a certain number of cases, might not that proportion be reduced by such a modification?

Dr. Sabine remarked that non-union had occurred a sufficient number of times to cause some surgeons to discard the operation altogether.

Dr. Markoe asked, "What is the feeling of the members concerning the performance of the operation, particularly in cases of extensive cancer involving tissue behind the jaw: what has been the result: have they prolonged life, and have they effected any satisfactory cures?" So far as he was concerned he had become entirely discouraged with reference to gaining anything by the operation, and thought that he should not again operate in such cases.

The President remarked that he felt very much as Dr. Markoe did. In most cases in which division of the jaw was required, the disease could not be treated radically by the operation, because the infiltration would not allow of its thorough removal.

Dr. Briddon believed that the operation added to the patient's misery, and shortened his life.

Dr. Mason remarked that he was present at Dr. Sabine's operation, and felt confident that all of the disease was removed. He also believed that it could not have been removed satisfactorily if division of the jaw had not been made.

Dr. Sabine thought that if cases of that kind were to be thrown out as improper for operation, cancer should be excluded altogether; for certainly tumors about the mouth were met with which could be removed entirely if sufficient room was given.

The President remarked that he had never seen a case of cancer of the floor of the mouth that was distinctly circumscribed. All had had more or less distinctly the character of infiltrating cancer, and for that reason he had repeatedly refused to operate.

SHOULDER-JOINT DISLOCATION WITHOUT RUPTURE OF THE CAPSULE.

Dr. Stimson presented a specimen which was interesting on account of its novelty and because it did not present the lesions usually described as constant in the injury of which it was an illustration. A man, sixty-seven years old, fell from the fourth story of a building, and sustaining, besides other injuries, a dislocation of the left shoulder into the axilla. The symptoms as described to him were abduction of the arm, impossibility of adducting it sufficiently to bring the arm in contact with the trunk, or to permit the hand to be placed upon the head or chest, the head of the humerus could be felt distinctly on the axilla, and there was a marked depression under the acromion. Ether was administered and reduction was accomplished by making traction downward and outward, and direct pressure over the head of the bone. The man died on the eighth day in consequence of internal injuries caused by the fall. At autopsy it was found that there was no rupture of the capsule at any point, and the tendon of the subscapularis muscle was only partially torn through. The upper facet of the greater tuberosity had been torn off, and those were the only lesions which the joint presented. The descriptions given of the lesions following this accident always mentioned rupture of the capsule on the inside, and presentation of the head of the bone in the button-hole thus formed, and usually partial rupture of the tendon of the subscapularis. There was no history of a previous dislocation.

Dr. Markoe stated that fracture of the greater tuberosity was a common lesion in this accident; and referred to a case in which both shoulders were dislocated at the same time and both tuberosities were also broken off.

Dr. McBurney asked if the fact that the capsule was not ruptured was not evidence of incomplete dislocation. He had supposed that the capsule must of necessity be ruptured in order to permit complete dislocation.

The President remarked that that was the generally accepted opinion.

Dr. Stickler, house surgeon at the Presbyterian Hospital, on invitation stated that when the man, from whom the specimen was removed, was admitted, there was a depression under the acromion upon the side of the injury; that he could grasp the head of the bone distinctly in the axilla; that there was abduction of the arm; that he was unable to put the hand upon the opposite shoulder; and, at the same time, was unable to bring the arm to the side of the thorax. He reduced it in the manner described by Dr. Stimson, and the head of the bone slipped into place with the usual sensation and noise in such cases. It had been out about two hours when the man was admitted to the hospital.

A Gross Literary Piracy.—We learn from the *Medical News and Abstract* that a gross piracy has been made by certain English publishers of Mr. Presley Blakiston's "American Health Primers." The chief wrong they have done is to omit entirely the names of both editor and authors, and announce the series as "written and edited by distinguished members of the medical profession," thus misleading the British public into the belief that the books are of European and not American origin. To carry still farther this deception, they call them "Ward & Locke's Long-Life Series," as though it were an independent and original publication. In order to prevent the detection of this fraud from the various cis-Atlantic allusions, the books have been "carefully edited," which means that everything that could show they were American in origin has been cut out. This is piracy indeed. We hope that the English public will learn of it, and condemn it.

Correspondence.

TUCKER AGAINST NOYES.

To the Editor of The Medical Record.

My Dear Doctor—In further elucidation of the above lawsuit, to which you devoted an editorial in the Record for December 25th, will you permit me, first, to acknowledge the kindness of the remarks which were made in so far as they were personal to myself? Will you also permit me to quote from the charge of Judge Horace Russel various paragraphs which show what, in his judgment, is the real status of the medical man under the peculiar circumstances of such a case—both what are his rights, duties, and discretionary powers, and what are his limitations and liabilities?

I shall put various propositions into groups, that they may shed light upon each other. Permit me to follow, in the main, the order of your editorial comments. You say, "the whole point of the case turned upon the fact whether or no the surgeon was entitled to alter the order of his operations without additional and express permission from the parties or his nearest kin." I may, for the sake of accuracy, substitute the fuller form in which the Court puts the issue.

F. 695. "We come to what is conceded by all sides to be the vital question in this case, and that is, whether or not Dr. Noyes had authority or implied authority, or whether there was such a state of facts as that he was justified in believing, and did believe, that when Tucker returned to the infirmary on Friday, November 10th, he meant to submit himself to his (Dr. Noyes') judgment, for Dr. Noyes to proceed in accordance with his judgment, or whether Dr. Noyes was forbidden, under any circumstances, to touch the left eye, and had no reasonable right to believe that he was authorized to operate on that eye."—The judge remarked that the burden of proof rests on the plaintiff to show that Dr. Noyes was negligent in that he did not obey instructions. He then summed up the evidence.

There were two versions of the interview of the preceding Wednesday, and if the plaintiff was correct, to him belonged the verdict; if the defendant was right in his version (F. 703), "that to his final judgment as to what was right to be done, they (the Tuckers, four in number) made no response, but went their several ways, and returned (on Friday) saying no more, then you have a right to say he (Dr. Noyes) had implied authority to act in that case according to his best judgment. You have a right to say that, because sometimes there is an admission by silence." The judge then attempts to aid the jury in deciding between the two respective versions, and to determine the degree of credibility to be accorded to the opposing parties.

He also says (F. 701): "Now, gentlemen, this case turns upon which of these versions is substantially true. Was that one conversation or one interview so continuous and so connected that when they went their several ways on Wednesday Dr. Noyes understood, and was obliged to understand, and it was his duty to understand, that under no circumstances did Tucker propose to have an operation upon his left eye? Or, were there two interviews, at the first of which the Tuckers expressed their doubt, dissent, or opposition, and then, after the surgeon gave his final judgment as to what was best to be done, was there such silence on their part as to give him implied authority to use his best judgment, the judgment which he had expressed to them, or had they by their silence (if they did give him implied authority) given him the right to believe he had implied authority to pursue the case according to his best judgment? And it is according as you find the transactions of that day that the merits of the case rest."

To this annex one of the requests preferred by the defendant's counsel, viz., 3, F. 658, "that if the defendant had good reason, from what occurred in the presence of the plaintiff, to believe that he was authorized or employed by the plaintiff to operate upon his two eyes, the jury must regard it the same as if such authority was expressly given."—The Court: "That I charge: that is to say, that circumstances may create an implied authority which the law determines is just as good as an express authority."

F. 664. In reply to a request of defendant's counsel, the Court says: "The substance of that is, and I so charge, gentlemen, assuming that the defendant here was authorized to operate upon the two eyes of the plaintiff, or that the circumstances and conversations were such as that he had a fair right in reason, as between man and man, to assume from what had occurred that he was so authorized, then having proceeded upon the right eye to a point which, according to the testimony, did not amount to an operation, it was within the limits of his discretion as a surgeon to substitute the operation upon the left eye for the one which was intended then to be performed on the right eye."

F. 665, 11. Request to charge, by defendant's counsel, "That in the predicament so stated, the exercise of the discretion of the surgeon as to what was proper to be done was a professional question, to be determined by the defendant in good faith upon his own judgment, and he was not bound to consult the plaintiff's father or mother, or any other person, before proceeding to operate on the plaintiff's left eye." The Court: "That is correct if you also bear in mind that it is based upon the assumption that he had authority to operate on both eyes at all; although it was his intention first to operate upon the right and then upon the left—if he had authority to operate upon both, or implied authority, or the circumstances were such as that he fairly judged he had, he cannot be said to be negligent in assuming that the parties meant to give authority, and then this operation would not come within the rule of negligence."

On F. 683, 14. To a request by plaintiff's counsel, "That in determining whether or not the plaintiff intended or expressed such purpose on Wednesday, November 8th (*i. e.*, not to have an operation on his left eye), the jury have a right, it is their duty to consider not only what the plaintiff himself said, but what the plaintiff's father and mother said to or in the presence of the defendant." Court: "I think I have charged that substantially already. If not, I recharge it, provided the plaintiff accepted what the father and mother said, and treated as his act."

F. 681, 11. By plaintiff's counsel, "That the defendant cannot be justified or excused for the operation upon plaintiff's *left eye* unless one or the other of the following conditions existed: either, 1st, that the plaintiff requested, consented to, or otherwise

authorized it; or, 2d, that the plaintiff's conduct at and prior to the operation, fairly construed, misled the defendant with respect to his wishes and directions or consent." Court: "That I charge. And let me say, here is the very gist of the case."

F. 670, 18. By defendant's counsel: "That if the defendant was authorized to operate upon both the plaintiff's eyes, according to the prescription which he swears was given by him after the final examination on Wednesday, his authority in his professional discretion in the emergency which arose upon the attempted operation on the right eye to substitute an immediate operation on the left eye was not controlled or qualified by the remark alleged by the plaintiff to have been made by him after taking his place upon the operating-table." Court: "That I charge."

It would take too much space to present other points which were discussed and passed upon. The case was submitted to the jury to decide whether or not the interview of Wednesday, in all its parts—that in which both plaintiff and defendant substantially agreed, and that to which plaintiff and his friends (four witnesses) omitted to narrate—gave defendant authority to operate on both eyes.

The court had ruled that under the special emergency which arose, it was clearly within the surgeon's professional discretion to substitute the actual operation on the left eye for the intended and not completed operation on the right eye—and he was not bound if he had already gained the needful authority to treat both eyes, to again consult the patient's kin or himself.

On the question submitted to them the jury gave two votes for the plaintiff Tucker, and ten votes for the defendant Noyes. Of the two jurors who were for the plaintiff one declared that he would go with the majority if the other would.

Now, Mr. Editor, I do not object to the rule of prudence in securing from patients and their friends the most undoubted and express authority for our professional conduct when we are to treat them surgically or otherwise. I consider it most wise and needful to do so. I certainly have no wish to involve myself again in such vexatious and unprofitable experiences as I have lately undergone. But I have given rise to a judicial expression of opinion which sets our profession upon high ground of right, duty and responsibility, and defends us from attacks founded on ignorance and possibly on worse motives. If I was by consent of all sides vindicated in my professional and personal character, I have gained what was first in my desire, but besides that the profession has been set upon a surer footing in its relations to dissatisfied and litigious patients.

The limitation and liabilities of medical men are set forth by Judge Russel in clear terms, and are not different from those which we already observe and practise. They are that a patient must give consent to any operation, and whether one organ or member, or two, shall be operated on, etc. It was also in this case decided by the court, that advantage to sight unexpectedly gained in the right eye could not be counted as an offset to injury incurred by loss of the left eye in case the operation on the left were decided to be unauthorized. He also said that the defendant could not be held responsible for any ulterior impairment in sight of the right eye from the good condition which it enjoyed for a year or more.

Very respectfully yours,
HENRY D. NOYES.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from December 19, 1880, to December 25, 1880.

BAILY, J. C., Major and Surgeon. Granted leave of absence for one month, with permission to leave the limits of the Division, and apply for one month's extension. S. O. 188, Division of the Pacific and Department of California, December 13, 1880.

HEIZMANN, CHAS. L., Capt. and Asst. Surgeon. The extension of his leave of absence granted him October 30, 1880, from A. G. O., still further extended two months. S. O. 268, A. G. O., December 18, 1880.

KANE, J. J., First Lieut. and Asst. Surgeon. Relieved from duty at Fort Cummings, and assigned to duty as Post Surgeon at Fort Union, N. M. S. O. 153, District of New Mexico, December 13, 1880.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending December 25, 1880.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Dec. 18, 1880.	0	18	180	2	28	166	5	0
Dec. 25, 1880.	0	17	192	3	35	176	13	0

LOUISVILLE, ITS COLLEGES AND DOCTORS.—A correspondent of the *Cincinnati Lancet and Clinic*, in reporting the meeting of the Tri-State Medical Society at Louisville, says:

"Louisville is noted for its doctors' quarrels and jealousies, which prevent the members of the profession from working together in a body on such an occasion as the meeting of state societies. One of the journals barely referred to the coming session. . . .

"The medical colleges here cannot be said to be in a prosperous condition this winter. All the Louisville medical schools agreed last summer to increase the fee for a course of lectures to seventy-five dollars, thus making it uniform with the fees in Cincinnati and Chicago. This was not done, however, without a previous consultation with the authorities of the Nashville colleges, who agreed to adopt the same figures. It is charged at Louisville that the Nashville professors waited until after the Louisville announcements for 1880–81 had been sent out, and then issued their own, putting the price of tuition at the old figures. Without venturing to state whether or not this is the correct presentation of the case, the fact remains that this winter the Nashville colleges have low fees and large classes, and the Louisville schools the reverse. Persons generally can scarcely appreciate the great influence this matter of a few dollars has upon the average medical student in his choice of a college."

THE "BLOWING WRINKLE."—DR. W. W. Gayle, of Hancock, Md., writes: "In your edition of November 27th, Dr. Hutton gives a new method for the resus-

citation of asphyxiated new-born infants, the 'blowing wrinkle' as he calls it. I am a young practitioner, and in the country at that, but I have seen three such cases as the doctor speaks of in my practice, and have used the blowing method every time with success. While I have never read anything on this subject (*i.e.*, blowing) I did not consider it new. I cannot give Dr. Hutton the credit of this discovery."

Case of Poisoning from Poke-Berries.—Dr. John R. Hilsman, of Trezevant, Tenn., writes: "I was called October 10, 1880, to see a child two years old, poisoned by poke-berries eaten about night the evening before; quantity not known. The parents noticed at the time its hands and face stained, and also some of the berries in mouth, but did not know the danger, and did nothing. It ate a hearty meal soon after and seemed as well as usual till bed-time, and, in fact, seemed exhilarated. During the night the child became restless, and early the next morning it was noticed that it could not see, and the power of supporting head was lost, and the muscles generally were relaxed. I was at once sent for but did not arrive till 3 P.M., at which time breathing was rapid and superficial, and heart's action feeble and rapid, pupils dilated, and extremities cold. Before I had time to prescribe the child was seized with a severe spasm, lasting fifteen or twenty minutes. Cold was applied to head, and mustard to spine and extremities. Atropia and ether were given hypodermically to stimulate heart and respiration. After spasm was relieved and heart acting better, purgatives and enemas were given to remove from bowels what might remain of berries. The seed and hulls of a number were discharged per rectum. The diapers for several days were stained with their coloring matter. The secondary effect of the poison was irritation of bowels and stomach, coming on about thirty-six hours after berries were eaten, and lasting several days, causing considerable fever. As soon as the child was revived enough to notice, it seemed to be tormented with a continual itching of skin, and about the fourth day was covered with patches of urticaria. I supposed this to be due to the poison in blood, as we well know how irritating the poke is when applied locally, producing a terrible itching, wheals, etc. I have been able to find very little concerning this poison and its antidotes in journals and books. I suppose the cause of the delay in the symptoms of poisoning was due to a hearty meal being eaten soon after the berries were taken."

"Study" of a Fashionable New York Physician.—In Mr. Henry James's recently published novel, "Washington Square," there is a very clever character study of a fashionable physician. The gentleman who is presented as a type of this class is a Dr. Sloper. He has that mixture of talent, perspicacity and adaptation which insures success in almost any profession. Starting life in a humble fashion, he both marries a fortune and makes a fortune, and this without any sacrifice of his own self-respect or resort to charlatanry. He is simply a profound student of human nature, and sees no reason why he should not humor it while endeavoring to benefit it. Mr. James says:

"It was an element in Doctor Sloper's reputation that his learning and his skill were very evenly balanced; he was what you might call a scholarly doctor, and yet there was nothing abstract in his remedies—he always ordered you to take something. Though he was felt to be extremely thorough, he was not uncomfortably theoretic; and if he sometimes explained matters rather more minutely than might seem of use to the patient, he never went so far (like some practitioners one has heard of) as to trust to the explanation alone, but always left behind him an inscrutable prescription. There were some doctors that left the prescription without offering any explanation at all; and he did not belong to that class either, which was, after all, the most vulgar. It will be seen that I am describing a clever man, and this is really the reason why Doctor Sloper had become a local celebrity."

No doubt many will recognize some very familiar traits in the above sketch. There is this to be said, however, about New York's fashionable physicians: in the regular school they hardly have the prominence in numbers or position that they possessed in the time of which Mr. James writes. Proportionally the number of physicians of the Dr. Sloper type (considerably diluted) is now much greater among the quasi-homœopaths—those who, under the guise of a broad eclecticism, profess whichever medical dogma suits their patient best. They are persons generally who excel in their powers of adaptation to the idiosyncrasies of woman.

Among regular practitioners the development of the specialties, as well as the greater infusion of the scientific spirit, has brought new elements into the problem of professional success. A consulting or specialist practice now appears to most persons a much more desirable thing than a fashionable one, and for the former there is required more study of disease and less of human nature *per se*.

Test for Sugar in the Urine.—Dr. L. S. Oppenheimer (*Louisville Medical News*) gives the following:

℞. Cupr. sulph. cryst. ..... gr. ℔.
Glycerin purif. ..... ℥ j.
M.

One drachm of this mixture will reduce one grain of grape-sugar in a caustic alkali. Two or three drops of the mixture are put in a test-tube and ℥ ss. liq. potas. added; the whole is then boiled, a few drops of urine added and the whole boiled again. If sugar is present it will be thrown down as the brownish-yellow cuprous oxide. The test is surer than Trommer's, it can be used to determine the quantity of sugar, albumen does not interfere with the reaction, and the mixture will keep indefinitely.

A National Cattle Commission.—Secretary Sherman, in his annual report just made to the President, says that the order of the Privy Council of Great Britain, ordering all American cattle to be slaughtered within ten days after reaching England, is working great injury to our cattle dealers. The order was made to guard against the introduction of pleuro-pneumonia. If that disease could be "stamped out" of this country, doubtless the order would be rescinded. The Secretary, therefore, recommends the creation of a commission which shall investigate the disease, co-operate with local authorities, and establish quarantine stations, and regulations, if necessary.

Army Medical Museum.—The President's message contains the following statements regarding the Army Medical Museum. The facts are given in connection with a recommendation to Congress to complete the fire-proof building for the War Department:

"The collections of books, specimens, and records constituting the Army Medical Museum and Library are of national importance. The library now contains about 51,500 volumes and 57,000 pamphlets relating to medicine, surgery, and allied topics. The

contents of the Army Medical Museum consist of 22,000 specimens, and are unique in the completeness with which both military surgery and the diseases of armies are illustrated. Their destruction would be an irreparable loss, not only to the United States, but to the world."

THE INFLUENCE OF HIGH ALTITUDE ON SEXUAL APPETITE, SLEEP, AND RESPIRATION.—Dr. W. P. Shoemaker, of this city, writes: "Among the many peculiarities of high altitudes, not the least interesting is the loss of sexual desire, and often of sexual power, experienced by those who ascend the mountains. Especially is this so of Colorado. The effect is not universal, but it is the rule, and I am inclined to think that all feel the effect to a certain extent. A man may live for years there, and never, either sleeping or waking, will he have the least sexual desire. I have known men to go to houses of prostitution by force of habit, and not even the combined influence of wine and women could arouse his dormant passion. But others have the ability or power, yet lack the desire, unless brought in close proximity to the exciting cause. I have known men whose thoughts by day and whose dreams by night were lust when in a low altitude, to lose all desire immediately on ascending the mountain, and have a return of the trouble as soon they descended. I will not attempt any explanation of this anaphrodisiac property. This influence is confined to men, and it has even a reverse effect on women, which makes an explanation more difficult than if the influence were general. The natives have a superstition there that it is due to the waters of a certain stream, the crossing of which renders him who has the audacity to invade their country impotent; and they give this stream a name which is significant of its supposed function. Is it not a rational presumption to hope that this feature of the climate might be utilized in the treatment of certain nervous affections which have their origin in a diseased condition of the sexual organs?

"The soporific quality of the atmosphere is another peculiarity of the climate. This quality is very different from the drowsy, languid feeling which a sea-air produces during the day. The sleep is simply deeper, more profound, and about two hours longer. You go to bed at your usual hour, and neither noise nor light will awake you, perhaps until 10 A.M. This is a pretty general effect upon the "tenderfoot," as they call visitors. I have seen great relief given to patients suffering from hyperæmia of the brain and the sleeplessness which attends that condition so generally; but I am sorry to say that the benefit afforded these cases is not permanent, but a return of the symptoms present themselves as soon as the patient returns to the low altitude. I might say that it is not necessary for a patient to go to a great elevation to experience this effect. Colorado Springs is sufficiently high to produce it, but to a less marked degree than the higher localities. A sense of exhaustion is felt on the least exercise, and this appears to be due to a lack of oxygen in the system. Until the auxiliary respiratory muscles have learned to perform their duty perfectly, the lungs cannot inhale sufficient air to keep up the demand for oxygen. In a few days the auxiliary respiratory muscles become sore, just as any other muscles will do when first they perform their functions. The respirations are increased in number, and the pulse is increased in rapidity and force, but the temperature remains the same. Frequently blood will be expectorated from the mucous membranes of the organs of respiration, the skin becomes dry, and the lips chap. The latter are due to the dryness of the air. It is not difficult for us to see that this would be a good place for the man who has a cavity, a hemorrhage, or any solidification to come from; but it is difficult for us to see what class of patients it would benefit who have lung trouble. Certainly not bronchitis, for it will produce that in a healthy lung. It would be death to a man suffering from emphysema, or any form of lung trouble which had its cause in cardiac disease, for the heart becomes an uncontrollable organ under these conditions. As a prophylactic to consumption I think nothing could be more desirable.

"So thoroughly and forcibly opening up the alveoli, it will prevent the accumulation of epithelial cells, fibrinous exudations, and leucocytes within the alveoli and bronchioles; or it may even help to clear out these accumulations before there is any thickening of the walls of the terminal bronchioles or an increase of interlobular connective tissue. But in the advanced stages of phthisis, nothing could be more irrational than to expect benefit from that climate. Always remember that, although the chemist may tell you that there is a greater per cent. of oxygen in that atmosphere, that owing to its less density, there is very much less in a cubic foot than in our own climate."

THE HUDSON COUNTY CLINICAL SOCIETY of New Jersey has been organized with the following officers: President, T. R. Varick, M.D.; Vice-President, C. W. Cropper, M.D.; Treasurer, L. J. Gordon, M.D.; Secretary, A. C. Hoffman, M.D.; Recorder, F. G. Golding, M.D.

THE "HAMMOND PRIZE" OF THE AMERICAN NEUROLOGICAL ASSOCIATION.—The American Neurological Association offers a prize of five hundred dollars, to be known as the "William A. Hammond Prize," and to be awarded at the meeting in June, 1882, to the author of the best essay on the *Functions of the Thalamus in Man*. The conditions under which the prize is to be awarded are as follows: 1. The prize is open to competitors of all nationalities. 2. The essays are to be based upon original observations and experiments on man and the lower animals. 3. The competing essays must be written in the English, French, or German language; if in the last, the manuscript is to be in the Italian handwriting. 4. Essays are to be sent (postage prepaid) to the Secretary of the Prize Committee, Dr. E. C. Seguin, 41 West Twentieth Street, New York City, on or before February 1, 1882; each essay to be marked by a distinctive device or motto, and accompanied by a sealed envelope bearing the same device or motto, and containing the author's visiting card. 5. The successful essay will be the property of the Association, which will assume the care of its publication. 6. Any intimation tending to reveal the authorship of any of the essays submitted, whether directly or indirectly conveyed to the Committee or to any member thereof, shall exclude the essay from competition. 7. The award of the prize will be announced by the undersigned Committee; and will be publicly declared by the President of the Association at the meeting in June, 1882. 8. The amount of the prize will be given to the successful competitor in gold coin of the United States, or, if he prefer it, in the shape of a gold medal bearing a suitable device and inscription.

Signed, { F. T. MILES, M.D., *Baltimore.*
J. S. JEWELL, M.D., *Chicago.*
E. C. SEGUIN, M.D., *New York.*

Original Lectures.

SERO-FIBRINOUS PLEURISY.

A Lecture,

By A. L. LOOMIS, M.D.,

PROFESSOR OF PATHOLOGY AND PRACTICE OF MEDICINE IN THE UNIVERSITY MEDICAL COLLEGE, NEW YORK.

(Reported for The Medical Record.)

PART I.

I pass to-day, gentlemen, to the history of another form of pleurisy. Sero-fibrinous pleurisy is, perhaps, a better term by which to designate it than subacute pleurisy. In this form of pleurisy there is a large amount of serous effusion and very little lymphy exudation. The pleural cavity is more or less completely filled with fluid which contains flocculi of lymph and a few cells. The cells are not abundant, the plastic material is not abundant. The serous effusion stamps the character of the inflammatory process. The most important pathological change which takes place in this form of pleurisy, however, is not found in the character of the exudation, but in the pleura itself.

In giving you the history of acute pleurisy I told you that the exudation is upon the free surface of the pleura, and that it is of a cellular, fibrinous, and serous character. The same kind of exudation occurs in sero-fibrinous pleurisy, but there is a very different condition of the pleura itself. The pleural membrane, as far as the inflammatory process has extended, will be found thickened. New connective-tissue developments have taken place, and it is this which characterizes the pathological change in this form of pleurisy. This thickening of the pleural membrane may occur both in the costal and the pulmonary pleura. It is progressive so long as the fluid remains in the pleural cavity. I have seen the pleural membrane thus thickened to the extent of half an inch. This thick, firm, indurated pleura, especially if the pulmonary pleura is extensively involved, interferes with the expansion of the compressed lung, when the fluid is removed; therefore, it is important that the serous effusion shall be removed from the pleural cavity as soon as possible. The longer the fluid remains in the pleural cavity the greater will be the pleuritic thickening and the more imperfect the expansion of the lung afterward.

If the sero-fibrinous exudation shall completely fill the pleural cavity the lung will be compressed against the spinal column, as is represented in this diagram. The diaphragm will be pushed down below its normal limits, and the liver and heart will be pushed out of position. If the pleurisy occur on the left side the heart will be pushed to the right, perhaps so far that the apex-beat will be felt under the right nipple. If it occur on the right side the heart will be pushed to the left. The amount of displacement of the viscera in the thoracic and abdominal cavities will, of course, depend upon the amount of the effusion into the pleural cavity. In extreme cases the intercostal spaces will be pushed outward. The compressed lung will have a peculiar tough, elastic feel. It is not like consolidated lung, but it has a firm, leathery feel. The lung in this condition is called carnified lung. The compression which produces it may be caused by a tumor or by fluid effusion into the pleural cavity. Not only is the lung-tissue compressed under these circumstances, but also the bronchial tubes, unless there shall be induration of the bronchial walls or of the lung-tissue around them are consolidated from some old inflammatory process, in which case the bronchial tubes will remain open and air will enter them with each inspiration, and the sound produced by its entrance will be transmitted to the surface of the chest, and you will have bronchial respiration. Therefore, please remember that in certain cases of pleurisy, in which the cavity of the pleura is completely filled with fluid, you will have bronchial respiration over the surface of the fluid, but the rule is that when the pleural cavity is filled with fluid you will not have bronchial respiration over the affected side.

If recovery is to take place, the fluid after a time is absorbed, and the fibrinous material which floats in the fluid undergoes degeneration, becomes liquefied, and is also absorbed. But absorption of the fluid will not take place if the distention of the pleural cavity be so great as to occlude by pressure the pleural and subpleural vessels, for it is through these vessels that the absorption, to a great extent, is effected. If the distention of the pleural cavity is not great, and the vital powers of the patient are not greatly depressed, all the fluid and plastic material will be absorbed and the two surfaces of the pleura will again come together.

But observe what has happened. The lung has been compressed for one or two, or, more likely, eight or ten weeks, or perhaps three or four months, and the lung is imperfectly expanded or expands with difficulty, the difficulty is increased in proportion to the firmness and perfection of the newly formed tissue in the pulmonary pleura. Then, if the fluid disappears from the pleural cavity and the lung cannot expand to take its place, the walls of the chest must retract and the thoracic and abdominal viscera will be displaced to fill the cavity.

Now, as the two surfaces of the pleura come together, they become more or less adherent to each other, the extent of the adhesions depending upon the activity of the connective-tissue formations. If it is soft and plastic, and is developing rapidly, quite firm adhesions will take place between the two pleural surfaces. They may become agglutinated to each other throughout their entire extent. As the lung cannot expand to its normal limits, the viscera are displaced to a greater or less degree: as a consequence, there is more or less deformity, especially if the pleurisy occurs in early life. After a time the adhesions may disappear, and nothing will remain but the thickened pleura.

Etiology.—Sero-fibrinous pleurisy does not occur as a primary affection. It is rarely, if ever, idiopathic. It comes on in the course of some other disease, or during the existence of some condition which has interfered with the nutritive powers of the individual. It occurs perhaps more frequently in connection with chronic Bright's disease than with any other form of disease, unless it may be with chronic disease of the lung-tissue. It is especially liable to occur in the course of chronic phthisis. When it occurs in the course of Bright's disease, it is usually in that form in which there is a good deal of interstitial change in the kidney, which is likely to be associated with a rheumatic or gouty diathesis, or with interstitial changes in other parts of the body.

It also occurs in connection with chronic lung diseases. One who has a chronic catarrhal pneumonia is very liable to have a localized pleurisy, and this

pleurisy is most likely to be of the sero-fibrinous variety.

Then it unquestionably occurs as a result of what I suppose may be called a predisposition of the system to tubercular inflammation. I have yet to see tubercular disease of the lung independent of tubercular developments in the pleura. My impression is that the tubercular developments occur, in such cases, primarily in the pleura. I am of opinion that in those cases of sero-fibrinous pleurisy where the patient does not get well, but passes into phthisis, careful investigation will show that tubercular inflammation was the beginning of the pleuritic changes—that is, from the commencement of the inflammation of the pleura, tubercular formations have taken place in its substance. The connection between this form of pleurisy and phthisis is very close. When a patient with a phthisical appearance, and who has a phthisical diathesis, comes to me, and I find he has sero-fibrinous pleurisy, as evidenced by fluid in the pleural cavity, I am very careful about my prognosis, for it is more than likely that he has a tubercular inflammation of the pleura. I believe it is possible to have a local tubercular inflammation of the pleura without there being tubercular developments in any other part of the body; and I believe that in almost all, if not in all, the cases where tubercle is developed in the lung, there has been previous tubercular inflammation of the pleura. The signs of this tubercular inflammation of the pleura are often a sero-fibrinous effusion into the pleural cavity, etc. Gentlemen, I wish to make myself clear upon this point and not be misunderstood. I shall later in the course speak of tuberculosis as an infectious disease, and class it among the blood diseases, and shall raise the question of its contagion. In that case, however, I shall refer to acute tuberculosis, which is always accompanied by constitutional symptoms of an unmistakable character, which are active in their development, rapid in their course, and which terminate fatally. But I am *now* speaking of a localized tubercular inflammation. I am not clear on this point, whether the pathological changes which occur in acute tuberculosis be the same as those in localized tubercular inflammation, or whether tubercles of the same microscopical appearance may not differ in their nature. To make myself clear to you, take syphilis for illustration. Two persons have a chancre: one, by proper treatment, suffers little from it, possibly gets well; the other, in spite of all you can do to prevent it, passes rapidly to the last extreme of syphilitic disease. So in the disease before us: here is a tuberculosis which occurs in connection with a constitutional infection which goes straight on to death. Here is another localized tubercular development which cannot be distinguished by its anatomical outlines or elements from the former, which is simply a local inflammation of the pleura, attended by serous effusion into the pleural cavity, which may possibly be recovered from.

Symptoms.—This form of pleurisy is ushered in by mild rather than by severe symptoms. It is rarely, if ever, ushered in by a distinct chill. Even pain in the side is not a prominent or a constant symptom. It comes on often so insidiously that the patient will not be aware of the time of its commencement. When you question him closely he will, perhaps, say that three, four, five, or six weeks before, he had a little pain in the side, and he noticed that there was an uneasy sensation there after exercise; but there will not be that sharp pain which attends acute pleurisy. He will have noticed, also, that for five or six weeks he has been losing strength, yet if his usual avocation require but slight physical labor he will be able to attend to its duties. He will have noticed, also, that he is paler than usual, that he has lost flesh and strength. The palms of his hands have been hot at night, and yet there has been no distinct fever; there has been no chill; there have been no sharp ushering-in symptoms which ordinarily attend the development of grave disease. When he consults you the only symptoms that you will notice will probably be this pallor of countenance, this loss of flesh, this anxious expression. The most prominent symptom which you will notice will be his shortness of breath, which is increased by the slightest exercise. While he is telling you his history he will stop and catch his breath, making his sentences short and interrupted. But none of these symptoms are characteristic of this affection alone. They simply point to a grave disease of some kind, so situated as to interfere with the respiration. The patient will, in all probability have a cough, but there will be very little expectoration. Not infrequently the only general symptoms are those of advanced phthisis.

It occasionally happens that sero-fibrinous pleurisy is ushered in by very active symptoms, symptoms as active as those that usher in acute pleurisy: there is pain in the side, a catching respiration, perhaps a chill, and so on. These symptoms continue for a time, and then the patient apparently is recovering, and perhaps, after two or three weeks, he will seem to be quite well, but upon examining the chest you will find a large amount of fluid in the pleural cavity. The disease was ushered in like an acute pleurisy, but, instead of going through the usual stages of acute pleurisy, and ending in absorption and adhesions, as occurs in acute pleurisy, the fluid remains in the pleural cavity four or five weeks, although, perhaps, small in amount. All rational symptoms may disappear, and you may think the patient is doing well, and promise him a recovery, but suddenly he is seized with great dyspnœa; he is unable to lie down, his countenance is suffused, the capillary circulation is imperfect, and so on. In this condition he sends for you, and you will find that his pleural cavity has suddenly become distended with fluid, and he demands immediate relief. Such patients may die suddenly, from the sudden fluid accumulation. I have occasionally seen patients brought into the hospital with a pleural cavity filled with fluid, with œdema of the lung on the opposite side, with all the signs of impending suffocation. This form of sero fibrinous pleurisy, which is ushered in with acute symptoms, is an exceptional form; it does not occur often. As a rule the disease is developed insidiously, so far as the rational symptoms are concerned, but the physical signs are very clear.

There is, perhaps, no disease of the lungs, unless it be emphysema, in which the physical signs are so easily appreciated as in sero-fibrinous pleurisy, where the pleural cavity is filled with fluid. If it be only partially filled with fluid, the same rules will govern you in its appreciation as I gave in connection with the history of acute pleurisy. If the pleural cavity be distended with fluid, as is represented in this diagram, the physical signs and their importance will change very much. Under such circumstances *inspection* will show that the affected side is increased in size in every direction. It will be increased upward, laterally, and downward, and you will notice bulging of the intercostal spaces on the affected side. The respiratory movements of the affected side will

not be noticed, for the reason that the cavity is distended with fluid. The heart will be found pushed out of its normal position, and the apex-beat will be noticed either to the right or left of its normal position, according as the pleurisy is upon the right or left side. There will be bulging and enlargement of the abdominal cavity, and if the right pleura be the seat of the effusion the liver will be pushed downward, below the free border of the ribs. As you grasp the two sides with your hands you will notice very little movement upon the affected side, while upon the other the expansive movement will be greater than normal. There will be absence of vocal fremitus over the seat of the effusion. This is the rule, but you know there are exceptions to all rules. If, as I described to you before, there be an open bronchial tube leading through the compressed lung into the centre of the fluid effusion, vocal fremitus may be increased. It has therefore been said by some that the absence of vocal fremitus in sero-fibrinous pleurisy is not so important a physical sign as has been claimed, but, gentlemen, whenever you get vocal fremitus below the level of the fluid in sero-fibrinous pleurisy, you may know that there is some unusual arrangement in the chest-cavity; that, for instance, the lung with a bronchial tube leading into it has not been compressed against the spinal column, as is usually the case, or that the lung is bound by old adhesions to the chest-wall; under such circumstances vocal fremitus may be increased below the pleuritic effusion. Again, as said before, if a bronchial tube shall not collapse on account of hardening from previous inflammation, the vibrations will be conducted through it to the surface of the chest, and, as represented in this diagram, you will detect vocal fremitus over the scapula behind, while below the scapula there will be absence of vocal fremitus. A knowledge of acoustic laws will enable you to readily understand how vibrations which are carried to the centre of the pleuritic effusion shall be transmitted to the surface of the chest. You may not be able to hear the sound produced by striking two stones together under water while your head is above the surface, but when you place your head under the water you will hear the sound very distinctly, even at a considerable distance. The same law holds true when vibrations of air are carried into the centre of a serous effusion in the pleural cavity.

Percussion will give flatness over all that portion of the pleura filled with the effusion. If the cavity be full a change of position will not change the line of flatness. In this event the flatness will extend below and to the right or left of the normal limits of the affected pleura, according as the effusion may be upon the right or the left side.

Auscultation, as a rule, gives entire absence of respiratory and vocal sound over the seat of the effusion, but there may also be exceptions to this rule. You can very readily see why there is absence of the respiratory murmur. I am not now speaking of the vesicular murmur alone, but also of the bronchial, both of which elements are included under the term respiratory murmur. As a rule both will be lost, but if, as said before, a bronchial tube shall remain open in the centre of the fluid, as for instance here in the diagram, bronchial respiration will be heard at this point over the fluid. Please remember this exception, for farther along in the course you will learn that bronchial respiration along with dulness on percussion is a sign of pulmonary consolidation. I remember of once being called in consultation by a physician who had rested his diagnosis of pulmonary consolidation upon the existence of bronchial respiration. He heard bronchial breathing behind, and supposed the patient had pneumonia which had existed for six weeks; he could not understand why the pneumonia did not resolve. When I introduced an exploring trochar into the pleural cavity, and drew off fluid, he could hardly believe that it came from the pleural cavity, for he had the idea firmly impressed upon his mind (perhaps when a student) that bronchial respiration always was a sign of pulmonary consolidation.

In the next stage, when absorption shall take place, inspection will show a gradual disappearance of the bulging on the affected side, the displaced organs will gradually return to their normal position, there will be some motion on the affected side. If the fluid has remained in the pleural cavity for a long time you will notice after its absorption some falling in of the affected side, the reason for which has already been given. Not only will inspection show loss of motion on the affected side, palpation will do the same, and will also show either an absence or a marked diminution in vocal fremitus.

Percussion will show no longer flatness, but dulness. The lung has expanded, but the pleura is thickened, and this new tissue thickening renders the lung more solid than normally, and in consequence of these facts there is dulness on percussion. This dulness will be noted over the entire pleural cavity, more marked, however, over the lower than over the upper portion.

Auscultation will give feeble respiration. The respiratory sound will be heard as it were at a distance; it will not seem to be near your ear, and will be less intense than normal, but still it is vesicular in character. The respiration, though feeble, still retaining its vesicular quality, will enable you to differentiate between this condition and the condition of the lung, due to fibrous induration. In the latter case bronchial respiration will be present, but in the former, vesicular breathing, feeble but distinct.

Vocal resonance is perhaps a little diminished, but it certainly is not as much diminished in intensity as is the respiratory murmur. It is usually diminished over the affected side as compared with the other side, but you must remember that this other side has been doing extra work, the lung contains more than the normal quantity of air, there has been exaggerated breathing on this side from the commencement of the effusion to its absorption, and it still continues to a certain degree during the adhesions, so that this lung is not as good a conductor of the vocal sounds as a normal lung or a lung that is doing only normal work.

Now, if you listen carefully you will notice that this feeble respiratory murmur is accompanied by a friction sound. As the roughened surfaces of the pleura come together and become more or less adherent, sounds are produced by their playing upon each other during inspiration and expiration, which are creaking in character, and have been called by some the new leather sound, or the parchment rubbing sound. Sometimes, however, there will be some pleuritic exudation which will give rise to a creaking, or rather a crepitating friction sound, so that it is possible to have a crepitant friction sound during the period of absorption, though, as a rule, it is heard only during the period of fibrous exudation.

Differential Diagnosis.—Now, gentlemen, it hardly seems necessary to say that this disease can rarely be confounded with other pulmonary diseases, but

mistakes are made in its diagnosis, and the more I see of pleurisy the more I feel that physicians do not fully appreciate the physical signs by which it may be recognized. I see it go very often unrecognized; that is, I find it confounded with something else, or I find its existence in connection with some other disease unrecognized.

Sero-fibrinous pleurisy may be confounded with *pneumonic* or *phthisical consolidation of the lung;* it may be confounded with *upward enlargement of the right lobe of the liver;* it may be confounded with *cancer*, or *with any tumor developed within the pleural cavity.* It is possible to confound *it with consolidated lung, not pneumonic, but associated with an aneurismal development* so as to press upon the main bronchus of the left side; that condition of the lung which sometimes results from pressure upon the bronchus by an aneurism of the descending portion of the arch of the aorta, the aneurism enlarging backward so as to press upon the left bronchus. Such a coudition is very likely to be mistaken for pleurisy with effusion.

Pleurisy of this variety is distinguished from pneumonia or phthisical development, in the first place, by the history of the two latter affections. Pneumonia and phthisis have a distinct history, and in these two affections there is an expectoration which is not present in pleurisy. I am now speaking of uncomplicated pleurisy; then, by the expectoration and by the general appearance of the patient you will be enabled to make the differential diagnosis between sero-fibrinous pleurisy on the one hand, and pneumonia and phthisis on the other. Then, pneumonia is ushered in by distinct symptoms which I shall speak of by and by, and phthisis has a history of phthisical development commencing at the apex of the lung. If you are still in doubt regarding the diagnosis, turn to the physical signs.

(To be continued.)

The Ambulance System in Paris. — Dr. Henry Nachtel, the originator of the night medical service in this city, read a paper before the Paris Academy of Medicine, November 30th, on the "Ambulance System of New York." He praised very highly the efficiency of this system, and contrasted it with that which now exists in Paris. In that city the method of getting emergency cases into the hospital seems to be of the most primitive kind. When a wounded or ailing man is found, policemen take charge of the person, and he is carried to the nearest apothecary. Though police stations abound in Paris, a person suffering from an accident is never carried there. A litter has to be hunted up, and then porters found, who transport the persou either to his house or to the hospital. Before all this can be accomplished, minor accidents, for want of immediate attention, become of the most serious character. Dr. Nachtel thinks even that deaths frequently occur in Paris from want of celerity in the transporting of patients. In dwelling in a most thorough way on the many advantages of the New York ambulance system, Dr. Nachtel expressed the hope that the New York system might be adopted in Paris. A commission, composed of MM. Larry, Legouest, Vulpian, and Chereau, was appointed by the Académie de Médecine to study the whole subject.

A New Small-Pox Hospital.—A survey of North Brothers Island has been made by the City Board of Health with a view to ascertaining its availability for a small-pox hospital.

Original Communications.

CHLORAL HYDRATE.

By H. H. KANE, M.D.,

NEW YORK.

CHLORAL IN SIMPLE INSOMNIA AND THE INSOMNIA OF DELIRIUM TREMENS AND INSANITY.

Chloral hydrate is the typical hypnotic. Above all its other actions stands forth its power to produce sleep, both in health and disease. In the study of its use in insomnia some heed must be paid to the different forms of this affection, to not all of which is it equally suited.

Prof. James Sawyer,[1] of Queen's College, divides insomnia into three groups which he names "psychic," "toxic," and "senile." The psychic form may be due to sudden and severe mental shock, which will sometimes at once induce persistent insomnia; or to prolonged mental strain, in all its varied phases, which produce partial or complete vaso-motor paralysis of the intracranial blood-vessels. The subjects of this form of insomnia are mostly men, particularly those of nervous temperament. A well-marked group of symptoms always follows prolonged suffering from this affection, most of which are given by certain writers among the signs of cerebral hyperæmia. It is probable that they mark what may be called irritable exhaustion of the brain, attended by more or less abnormal increase of intracranial vascularity, and accompanied by some general prostration of the bodily powers. In this form, an unnatural excitation of the cerebral vessels is the initial fault. In the next, the toxic form, a poisonous agent maintains cerebral vascularity at such a height that cerebral activity—that is, wakefulness—is an inevitable consequence. Such a poison may be introduced into the body from without, or it may be a product of diseased processes arising within the body itself. The external poisons which most frequently give rise to sleeplessness are tobacco, alcohol, tea, and coffee; the internal products which accumulate in gouty persons and in subjects of kidney d sease. When due to the latter cause (internal poisons), the insomnia is rarely complete, the patient complaining that he has great difficulty in falling asleep, that he is easily awakened, and that he always dreams when asleep. The senile form is due to degenerations of the smaller cerebral arteries; the vessels become less elastic, and physically unable to adapt themselves to the condition of relative arterial anæmia which is requisite for healthy sleep. In the treatment, soporifics are often necessary Of these, the chief are chloral, opium, morphia, the bromides, Indian hemp, alcohol, and affusion with cold water. In the severer forms of psychic insomnia, sleep must be at once procured by some efficient hypnotic, preferably chloral. In the more chronic forms, chloral should be sparingly used. In the well-nourished, bromide of potassium, in from thirty- to sixty-grain doses, is by far the best hypnotic. Tincture of ergot or tincture of digitalis may be combined with it. In many cases of chronic psychic insomnia, when the patient is worried, sorrowful, weakly, and anæmic, alcohol, in the shape of a "night-cap," is without an equal. The formation of regular habits and the taking of sufficient daily exercise should be

[1] (Lancet.) Braithwaite's Epitome, Mar., 1880.

insisted upon. In the toxic forms the external poisons should be removed; the treatment of the internal form involves the treatment of the diseases from which the poisons are derived. Senile insomnia is very obstinate; perhaps in the bromides, with full doses of hop or henbane, we have the best and least harmful means for its relief.

Chloral is especially suited to the sleeplessness of children, as first pointed out by Liebreich and Bouchut.[2] As has been already said, they bear proportionately larger doses than adults.

Dr. M. M. Palten, in the *St. Louis Med. and Surg. Journal*,[3] highly commends it in from four- to twelve-grain doses in syr. tolut., in the night terrors of children, which, if allowed to continue, may, he thinks, lead to the production of epilepsy.

Dr. E. P. Hurd,[4] of Newburyport, Mass., writes that he has found chloral especially efficacious in the insomnia of childhood. Stokoe[5] also endorses it for this purpose. I have myself used it largely in overcoming the fretfulness of infants and children, and have found it to produce a quiet, natural sleep, and to be free from the danger attending the use of opium. In children, as in adults, the effects of a single dose at bedtime sometimes seems to "hold over," giving quiet rest for several nights in succession. I am by no means in favor of constantly dosing children with strong drugs intended to produce sleep, but there are cases in which a quieting medicine may avert positive disease as yet undeveloped, and to such cases this drug seems especially suited.

The literature of this subject is filled with testimony regarding the value of chloral as an hypnotic. Its action is, as a rule, uniform, when given in cases to which it is suited. Thus Dr. J. Hughes Bennett[6] used it in twenty-one cases of consumption, making seventy-seven observations. With but two exceptions deep and healthy sleep was produced, by from twenty- to thirty-grain doses. In one case thirty grains produced an excited state approaching delirium, for some hours. In one case it caused vomiting twice when taken with cod-liver oil. When taken alone there was no vomiting. The relief to cough was great, and neither head troubles nor digestive disturbance were seen, such as is the case when opium has been taken.

In some cases it certainly does produce headache and digestive disturbance, but these are the exceptions to the rule.

As sleeplessness is usually a symptom of nervous disease, and as patients of this class are prone to form the so-called chloral, opium, or morphine habits, great care should be exercised in using the drug. A prescription which allows the patient to get the drug and use it at his pleasure should never be given. Where possible, the physician should give it himself when necessary, and the patients should be kept from a knowledge of what they are taking.

While being the typical hypnotic in simple insomnia, chloral hydrate does not act so well in cases when the sleeplessness is caused by pain. In such cases the formula advised by Bartholow[7] is excellent. He says:

"Chloral does not exert any chemical action on atropia when the two are held in solution together—for dilatation of the pupil of a cat takes place when the combined solution is instilled into the eye. Dilatation of the pupil also takes place when they are administered hypodermically together.

"An apparent antagonism is observed, as regards their action on the heart, when the solutions of chloral and atropia are placed in contact with the heart of a frog, when in position in the chest after division of the medulla, or when the heart is removed. The action of the heart is further found to continue much longer when a lethal dose of chloral is administered together with atropia. In rabbits the same result is produced by the conjoined administration of the two agents.

"Atropia is found to prolong the chloral narcosis several hours in rabbits, and diminishes the sensibility to pain.

"In man the excitant action of atropia hinders the occurrence of the chloral narcosis, but rather deepens the sopor, when it at last supervenes. The effects of atropia last much longer and are apparently in no way prevented by chloral.

"Morphia deepens in every way the effects of chloral. The author of the paper found, in the course of some experiments on himself, that many of the unpleasant effects of morphia are modified, as regards the wakefulness caused by the latter, but are not modified as regards the subsequent nausea, vomiting, headache, vertigo, and constipation. When the two agents are administered conjointly, a much less quantity of chloral is necessary in order to produce sleep.

"These agents act much more favorably when administered simultaneously. Chloral causes sleep, morphia relieves pain, atropia prevents or lessens the depression in the respiration and cardiac movements caused by the other two, while it contributes to their cerebral effects.

"These physiological studies are confirmed by the therapeutical results. The combination of chloral, morphia, and atropia is adapted to those cases of *insomnia* caused by pain, or in which chloral or morphia alone merely increases the cerebral excitement—as in hypochondria, puerperal mania, etc. This combination is also indicated in cases of fatty and irritable heart. When *pain* is to be relieved, chloral is not so serviceable as the combination with morphia and atropia. The local administration—that is, the insertion of the medicament at the site of pain—is more effective than the merely systemic impression. This is especially the case in tic douloureux, sciatica, and coccydynia, which are much more effectively treated by injections made in the neighborhood of nerves, the seat of pain. The combination of a local irritant and benumbing agent with a systemic anodyne is more curative than either used singly.

"In cases of *muscular spasm*, the author of the paper had obtained excellent results from the combined use of chloral, morphia, and atropia, and he especially called attention to the efficacy of these agents in the *cramps* of *cholera*. Many cases of *spasmodic asthma*, *hay fever*, etc., have been benefited by their conjoint administration."

Demarquay[8] advises great caution in the use of this drug as an hypnotic in old or greatly enfeebled people. Ogle[9] has had good results with it in senile insomnia.

The following curious episode is of interest:

The *Gazette Medicale de Bordeaux*[10] states that a dis-

[2] Quoted by Labbée, Bull. gén. de thérap., 1870, t. ii., p. 330.
[3] N. Y. MEDICAL RECORD, 1870, p. 226.
[4] Boston Med. and Surg. Jour., 1874, p. 139.
[5] Guy's Hospital Reports, 1870.
[6] Edinburgh Med. Journal, June, 1870.
[7] Half Yearly Compend., July, 1875.
[8] Quoted by Labbée, Bull. de thérap., 1870, t. ii., p. 330.
[9] Practitioner, 1870, p. 267.
[10] Druggist Gazette, December, 1874.

tinguished veterinarian of that town communicated to the medical society the fact that several coachmen had been in the habit, for some time past, of giving chloral to horses under their care, in order to render them less spirited and more easy to drive. The plan answered its end admirably, for very fiery horses, which could hardly formerly be kept in hand, became, after a few days of this calming regimen, quite gentle and quiet. However well this suited the coachmen, their masters were not a little surprised at the change, and one of them employed a veterinary surgeon to ascertain the cause of this great change. He found the animals exhibiting a tendency to sleep, but failed to discover the cause of this, until one day by accident he found a bottle half full of a solution of chloral. The coachman confessed to having administered a portion of this every morning, and it seems to have become the custom of the degenerate jehus of the neighborhood to follow the same practice.

Dr. Benjamin Lee,[11] of Philadelphia, has twice, in the same case, tided the patient past the time for a chill, by putting her fully under the influence of chloral, she being and remaining fast asleep at the time of the expected attack. Dr. T. W. Grimshaw,[12] of Dublin, having found it possible to convey a very sick patient a distance of sixteen miles in a carriage by means of two ten-grain doses of chloral, suggests its employment in time of war to facilitate the removal of the wounded when it is necessary to carry them long distances.

There are two diseases wherein prolonged insomnia is often the most prominent symptom, and that which chiefly endangers life. The use of chloral hydrate in the treatment of these affections (delirium tremens and insanity) requires a somewhat extended consideration.

In delirium tremens this drug has been often used sometimes with good, at others with bad results, due to the fact that in many instances a regular routine treatment is pursued without any reference whatever to the state in which the patient is found. In those cases where the patient is utterly exhausted and in an anæmic condition, with weakened heart-action, stimulants, capsicum, digitalis, and quiet are called for. When the patient is noisy, with flushed face, reddened conjunctiva, and strong cardiac action, a good purgative, followed by one or two doses of chloral, will produce the much-needed sleep, and in many instances save the patient's life. In still other cases, where there seems to be danger of apoplexy, a good bleeding, followed by a single dose of chloral, say thirty grains, by the rectum, will work marvellously. Such a case is related by Dr. R. F. Lewis, of Lumberton, N. C., as follows:

"A young man of this town, six months ago had a severe attack of *mania a potû* which lasted nearly two weeks. About a month ago he began spreeing again, and drank quantities of spirits. He had not slept for three days and nights when I was called to see him. I succeeded in getting him to undress and go to bed, when I gave him thirty grains of chloral. It seemed to rather increase his delirium. At the end of an hour I repeated the dose. There was still no inclination for sleep, and it required all my persuasive powers to keep him in bed. I found his pulse strong, hard, and very frequent, and I thought that if ever a man needed bleeding this one did. Acting upon this belief I corded the arm and abstracted about sixteen ounces of blood. Before I could properly dress the wound he dropped into a quiet slumber and remained so for seven hours, when I easily aroused him and gave him some soup, which he drank, and soon was again asleep, which continued for five hours longer, when he awoke, expressed himself as all right, got up, dressed, and ate breakfast, and thus his spree was ended and his threatened *mania a potû* aborted.

"It has fallen to my lot to treat a good many cases of alcoholism. I have used chloral freely with them, and with never anything but the happiest effects. I have often been called upon to help an old gentleman out of a debauch, and he has frequently said to me that it was the next best thing to whiskey."

In a clinical lecture recently delivered at the Royal Infirmary, Edinburgh, Dr. Balfour[13] discussed the history of the treatment of delirium tremens. Up to a comparatively recent period the production of sleep was regarded as the one object of treatment, and this led to the unjustifiable use of narcotics. Subsequently the expectant plan was pursued, on the belief that the disease was self-limited and would terminate naturally in from sixty to seventy-two hours. More recently still, modern chemical research having supplied us with safer and more active nervine sedatives, the production of sleep has again been recognized, not as a *sine qua non* in the sense of the former dogma that the patient must sleep or die, but a very important and most efficacious means of cutting short the attack—so safe and efficacious, in fact, that it seems almost a premium on vice to promulgate it, though it is neither safe nor efficacious, unless properly employed. The digitalis treatment, half a fluid ounce at a dose, has never been employed at the Royal Infirmary, as is also the case with the cayenne pepper method, scruple boluses every two or three hours, although each of these plans has its advocates. The tartar-emetic treatment, in full emetic doses, is more useful in cutting short a debauch than in treating delirium tremens, although it may prove a valuable adjunct in the latter condition. Chloroform is too dangerous, and not sufficiently reliable as a remedy.

Dr. Balfour then discusses bromide of potassium and chloral hydratis, the latter of which being the remedy on which he relies. He closes his lecture with the following summary: "I have long been in the habit of treating cases of delirium tremens by giving forty grains of chloral hydrate every hour, for three times if necessary. Sometimes, but rarely, the first dose has been enough; most commonly two doses have been required, and it is only in the rarest instances that the third dose has been necessary. If the attack be ushered in by *status epilepticus*, I shorten the interval between the doses to half an hour. Should the heart be feeble, I give each dose of chloral in half an ounce of the infusion of digitalis; the chloral, unlike the bromide, has no tendency to weaken the heart's action, while, like chloroform, it seems to induce a more equable distribution of the blood, the digitalis toning the heart and increasing the arterial blood-pressure. Even though pneumonia be present, though the risk to the patient is enormously increased, the treatment does not require to be in any way modified; it is still of the utmost importance to quiet the nervous system and keep up the heart's power.

"So far, therefore, as our present experience is concerned, we seem to possess in hydrate of chloral a remedy which in all such cases, from the slightest

[11] Medical Brief, October, 1876.
[12] Practitioner, 1871, p. 62.
[13] Braithwaite's Epitome, March, 1880.

to the most severe, acts rapidly, safely, and efficaciously—*cito, tuto et jucunde*—and which seems to deprive indulgence in drink of all its horrors and nearly all its dangers. Unquestionably, fatal cases must sometimes occur under this as well as under other modes of treatment, but the number of them must be much decreased, because, from the rapidity with which a cure is brought about, many dangerous risks are averted. Thus we avoid all the risks arising from a long continuance of maniacal excitement, or from a suicidal state of mind, all risk from the exhaustion following persistent sleeplessness or defective nutrition, the result of long-continued insufficiency of food, etc."

Risks are not from treatment, but from previous state of health. If he have fatty heart, is an epileptic, or is exhausted by continued debauchery, he may die suddenly.

Dr. Wm. J. Wilson,[14] Assistant Surgeon, U.S.A., Fort Niagara, Youngstown, N. Y., finds that *when the pupils are dilated*, chloral does not produce a calmative, but an opposite effect.

The following excellent summary of the treatment of this disease is made by Dr. Austin Flint,[15] of this city:

"Opium, given in large and enormous doses, as was formerly the practice, was conclusively shown by Ware to be pernicious. Sleep is the desired object, but narcosis is not a substitute therefor. It is hazardous to induce the latter. But an opiate, in small or moderate doses, is often useful. A quarter of a grain of the sulphate of morphia every four or six hours, or an equivalent of codeia or some other preparation, is the safe limitation as regards dose and intervals. Alcohol is relied upon by many, but opposed by some on the ground of moral considerations. The latter are of little weight. The patient will not be likely to resume the habit which has caused the disease any the more because alcohol may have conduced to the recovery. In the treatment alcohol should be given in moderate quantity, and suspended when sleep occurs. It is indicated especially when the patient is much enfeebled, and the pulse denotes cardiac weakness. The inhalation of chloroform may be tried, especially when the delusions induce extreme terror or violence of delirium. It sometimes is useful, but more frequently it fails. The attempt to produce anæsthesia is often resisted by the patient, and the violence of the delirium is thereby increased. The hydrate of chloral is more easily employed. It sometimes acts like a charm. Proper precautions are to be observed in the use of this remedy. The bromides may be given with much less reserve. They should be fairly tried. Their effect is sometimes excellent and sometimes *nil*. Digitalis is in some cases notably efficacious; it is indicated especially when the heart's action is frequent and weak. It is unnecessary to give this remedy in doses of from half an ounce to an ounce of the tincture, as may be done with safety; half an ounce of the infusion every two or three hours will secure all the benefit to be obtained from it. Antimony is suited to a certain class of cases, namely, those in which the symptoms are violent, and the patient robust, and the action of the heart strong."

Two cases of death in this disease from small doses of the drug are related by Dr. Frantz,[16] and a number from larger doses can be found in my articles on "Poisoning and Death." In one of Dr. Frantz's cases the dose of twenty grains was given one night and repeated the next night. The patient slept all night, awoke in the morning, fell into a state of collapse, and died in a few hours. In the other case two doses of twenty grains each were given. Quiet sleep all night. In the morning, respiratory embarrassment, collapse, and death in an hour's time. At the autopsy of the first case some hypostatic congestion of the left lung was found, as also intense cerebral congestion. In the second case all the organs were found in a normal condition.

Dr. Frantz ascribes the death to syncope, due to sudden paralysis of the cardiac muscles. Alcoholic subjects, according to him, present unfavorable conditions of nutrition, a special dyscrasia, and gastro-intestinal catarrh of more or less gravity. In these conditions he thinks it advisable never to give more than from thirty to forty grains of chloral at one time. This dose he considers safe, looking upon the above-recorded cases as entirely exceptional.

Naphey[17] says: "It has been shown, beyond reasonable doubt, by Dr. Madison Marsh, of Louisiana, and later by Dr. Ernest Magnan, of Paris, that drunkards do not bear chloral at all well. Its use by them, even in moderate doses, is liable to be followed by sudden death."

A case somewhat similar to those related by Dr. Frantz, although the patient did not die, is related by Dr. R. L. Pinching,[18] of San Francisco, Cal.

"In one case in which a medical friend called me to see a patient laboring under this disease, he had administered thirty-grain doses every hour for several times. The effect of these doses was to produce great prostration, feebleness of the pulsations of the heart, simulating mercurial erythismus, syncope, and all the appearance of speedy dissolution, from which he was only saved by a discontinuance of the chloral and the free administration of brandy, quinine, and nourishment."

Dr. Geo. W. Holmes, of this city, writes me that he has used chloral with success in this disease, save in one case, where it interfered with the pulse and respiration. The drug was stopped and stimulants given, with the result of relieving all bad symptoms.

Dr. R. Köhler's report on "The More Important Events in Prof. Bardeleben's Clinic at Berlin in 1876" (*Charité-Annalen*, 1878)[19] states among other things that in the treatment of delirium tremens chloral has been replaced by morphia, more than half the cases having died of late years under the chloral treatment. With the reinstatement of morphia the mortality appears—and Prof. Küster has made the same observation—to have again diminished.

In the discussion of a case of delirium tremens reported to the St. Louis Med. Society by Dr. C. Hughes of that city, Dr. C. E. Briggs[20] said that the occurrence of a number of sudden deaths during the treatment of this disease by chloral, notably one in an institution near by, had deterred him from using it. He prefers minute doses of antimony and morphia. Dr. Hughes' case reads as follows:

"The value of chloral hydrate enemata may be discerned from the following memoranda of a persistently recurring case of delirium tremens:

"Antoine F—— had the first attack to which my attention was called on the 22d of May, from which he was convalescent by the 31st inst. Nothing could

[14] By letter.
[15] Clinical Medicine. 1879.
[16] Berlin. klin. Wochenschrift, No. 37, 1876.
[17] Naphey's Medical Therapeutics.
[18] By letter.
[19] Med. Times and Gazette, Feb. 15, 1879; Med. News and Library, 1879.
[20] St. Louis Med. and Surg. Journal, Nov., 1879.

be tolerated by the stomach. Chloral hydrate enemata, in sixty-grain doses, with beef-tea, promptly resulted in sleep each day.

"On the 6th of June following he was again attacked, having also two epileptic seizures; the general cerebral condition was one of congestion. The same process as before was repeated with success. From August 23d to August 30th he had a recurrence of the disorder, and the same treatment was repeated with a like result. The quantity of the injections in these instances, however, being eighty grains of chloral hydrate. The next attack was on the 20th of September and ceased on the 27th. He was again down on the 1st of October, remaining sick until the 15th. On the 23d of February, 1878, he had another attack, which lasted to the 1st of March. On the 21st of March he had another attack, which continued to the 27th. From April 19th to the 26th he again had delirium tremens, and on July 1st, 2d, and 3d following he fell sick and died of exhaustion, without delirium.

"During the intervals between his attacks, the patient took, though irregularly, bromide of ammonium, elixir of the valerianate of ammonia and camphorated tincture of opium, as a stimulant, and bromide of calcium and the syrup of the lactophosphate of calcium as a brain nutrient and tonic."

Dr. Lutz said that he found the sleep that followed opium much more satisfactory and refreshing than that which followed the use of chloral, and that in some instances the patients awoke from the chloral sleep as delirious as before it was given.

Dr. G. M. B. Maughs did not believe at all in the use of such powerful drugs in this disease. He believed that it often quieted by killing.

Dr. Hughes said, in answer to Dr. Maughs, that in therapeutics, as in surgery, success depends very materially on the way in which one uses his tools. He could say, without exaggeration, that he had in his professional experience, in the hospital at Fulton and elsewhere, administered several hundred pounds of chloral hydrate; not mainly, however, to delirium tremens cases, but largely to cases in which there was delirium and insomnia; and yet he never knew of a sudden death resulting from it. In his practice he never administered two successive doses of chloral of sixty grains or more after an interval of less than six hours, and seldom had he administered that quantity more than once in twenty-four hours. The successful administration of chloral hydrate depends upon the manner in which it is used, and the deleterious consequences depend on the injudicious employment of the drug. It is more dangerous in small quantities, *e.g.*, ten or fifteen grains, often and continuously repeated over a lengthened period, than in large doses—forty to sixty grains—with a long interval between them. Doses of any remedy which are abortive in their effects are unsatisfactory and often unsafe. That chloral hydrate in small doses is intoxicating there is no doubt. It is much like chloroform, alcohol, and opium in this regard. Full doses induce sleep, small ones intoxicate. But there was not a case on record—and he challenged the proof—where a single forty-grain dose of chloral hydrate, given to a recumbent patient who had not been previously taking it to saturation in small doses, had produced fatal consequences. Patients who had died from chloroform had died from having the blood surcharged with the poison by too oft administration of too small doses. Certainly chloral is dangerous, so is opium, so is almost every potent drug, so is the assassin's knife, but the surgeon transforms it into an implement of cure. If the dead could speak they would probably tell us that opium had slain more victims than delirium tremens. He did not advocate chloral in preference to all other drugs at all times and under all circumstances as an hypnotic in delirium tremens; never to the exclusion of the bromide of potassium and other efficient remedies, especially nutrients and capsicum. In the vast majority of cases of delirium tremens the system would right itself without narcotics if the stomach will but retain food. He believed he had cured as many cases with beef-tea and capsicum as with anything else, and without any other remedy, except to let nature, a quiet room, and time restore the shattered nervous system. Chloral, if used at all, must be used in such doses as will take possession of the nervous system and when the patient is in a recumbent position, and not so frequently repeated either in small or large doses as to saturate the blood and poison the patient beyond therapeutic necessity.

Some authors and many practitioners, taking the general rendering of the statistics of Näcke of Dresden as their groundwork, refuse to use chloral on the hypothesis that as the kidneys are diseased in eighty per cent. of these cases, the danger lies in the fact that the drug is not properly eliminated. This is an error, and I must confess to having mistook the author's meaning myself. He says [21] that "in eighty-two per cent. of the cases, there was *temporary* albuminuria (*renal and cardiac affections excepted*). His treatment is by full doses of chloral (fifty to eighty grains in two doses), but his percentage of mortality (twenty-four per cent.) is not encouraging. He says further: [22]

The female sex is less exposed to delirium tremens than the male among the working classes; persons who are exposed to the vicissitudes of the weather, or who have much to do with spirits, *e. g.*, innkeepers, waiters, etc., are more liable to contract it. It occurs most frequently in individuals between thirty and fifty years of age, especially between thirty-five and forty. The youngest patient was eighteen years old. The greater number of cases have come under notice late in the latter part of autumn and in summer. In five per cent. of the cases the affection is merely an abortive form of the disease; it might perhaps be regarded as a delirium tremens which has not gone beyond the prodromal stage. This slight form frequently, at a later period, develops into the genuine delirium tremens. In the female sex this abortive form is met with, as a rule, and the real delirium tremens only in very exceptional cases. Another form of the affection, which is little known and very seldom met with, is the chronic delirium tremens. The author gives this name to a series of abortive paroxysms, which are preceded by an acute, well-defined attack of delirium tremens. There are generally more or less lucid intervals between the attacks. This condition lasts for weeks or even months, and the prognosis is very bad. The prodromal state generally extends over two to three days. The characteristic symptoms of delirium tremens are, among others, great thirst, an increased secretion of sweat, and more or less acute digestive troubles. In one-third of the cases there was a slight febrile movement; the temperature, however, did not go beyond 100.6°. A high temperature would be a symptom of some in-

[21] Phila. Med. and Surg. Reporter, Sept. 27, 1879.
[22] London Medical Record; North Carolina Med. Journal, Sept., 1879.

ternal inflammatory process. The febrile movement does not occur during the prodromal stage, and as a rule only on the first day of the actual delirium. The author explains it as a mere rising of the physiological exacerbation of temperature which occurs at night. The pulse and respiration were normal. In eighty-two per cent. of the cases there was albuminuria (renal and cardiac affections excepted). In one-fourth of these cases this transitory albuminuria was complicated with fever. The albumen increased in proportion as the temperature rose; but not in proportion with the delirium. It generally vanished as soon as the paroxysms were over. It appears from some chemical tests that an exceedingly small amount of phosphates is excreted at first, and that it gradually increases during the course of delirium tremens. The hallucinations are mostly illusions of sight and hearing; occasionally the taste and tactile perception are also affected. The patient is in a state of profound depression; he is surrounded by phantoms which persecute him. In one-third of the cases the patients had visions of animals, and contrary to the usual assertion, they saw large animals, not merely small ones. The visions vary very often, so does the patient's state of mind. All the symptoms of the affections exacerbate at night; even after a good night's rest they are apt to recur. The death-rate from delirium tremens varies very much. The first paroxysm is, as a rule, the most dangerous one. In no case has the *post-mortem* examination revealed any peculiar changes in the body. Narcotics, if given at the onset of the affections in moderate doses, seem to shorten its duration, and to render it less violent. Three to five grammes of chloral, given in two doses, generally induced sleep; the dose had often to be repeated. Straight-jackets, straps, etc., ought never to be used, as they are apt to produce hallucinations. In cases where the patient is likely to be very violent, the author advises that he should be shut up in a warm padded room by himself, and be dressed in untearable garments.

It has been used successfully, and has been highly spoken of in this affection by Drs. Albert Day,[23] Orlow,[24] A. P. Hayne,[25] Home of Inebriate, San Francisco, Cal.; Langenbeck,[26] D. H. Kitchen,[27] Blood,[28] Rigden, and Reynolds,[29] J. H. Barnes,[30] Rancurel,[31] Abeille,[32] Curschmann,[33] P. F. Harvey,[34] J. M. Keniston,[35] Butler Asylum, Providence, R. I.; Chas. W. Earle,[36] Washington Home, Chicago, Ill.; Atkinson,[37] Carl Bernard,[38] Barnes,[39] Chapman,[40] Richardson,[41] Barclay,[42] A. S. Payne,[43] Siredey,[44] and J. W. Hickman.[45] The following gentlemen write me that they have used the drug with much satisfaction and without accident in this disease: A. R. Kilpatric, Navasota, Texas; J. G. Stokes, Grayville, Ill.; Virgil O. Hardon, Providence, R. I.; D. M. Cool, Chicago, Ill.; Arch. M. Campbell, Mt. Vernon, N. Y.; Geo. W. Elerick, Hickory, Iowa; Pedro Molina Flores, Guatemala, Central America; H. C. Bigelow, Washington, D. C.; J. Foster Bush, Boston, Mass.; A. Atkinson, Baltimore, Md.; C. H. Greenough, New York city; T. C. Tipton, Williamsport, Ohio; Clement A. Walker, Boston Lunatic Asylum; A. Trego Shertzer, Baltimore, Md.; W. H. Travers, Providence, R. I.; Joseph Parrish, Burlington, N. J.; A. P. Brown, Jefferson, Texas; J. A. Landis, Hallidaysburg, Pa.; J. E. Dundas, Cambridge, Wis.; O. D. Abbott, Manchester, N. H.; F. L. Forsyth, Providence, R. I.; R. W. Bruce Smith, St. Thomas, Ontario; R. Hazelhurst, Brunswick, Ga.; Chas. C. Pike, Peabody, Mass.; E. Chenery, Boston, Mass.; G. W. Chamberlain, Hartford, Conn.; C. I. Darling, Boston, Mass.; G. N. Kretschmar, Morrisania, N. Y.; D. N. Kinsman, Columbus, Ohio; C. H. Hughes, St. Louis, Mo.; J. M. Pace, Dallas, Texas; Q. C. Smith, Austin, Texas; J. A. Miller, Williamsburg, Ky.; and J. H. Taggart, Yuma, A. T.

(To be continued.)

191 WEST TENTH STREET, NEW YORK.

23 Boston Med. and Surg. Journal, Aug. 4, 1870.
24 (St. Petersburg med. Woch.) Med. Brief, April, 1877.
25 Alcoholism, etc., etc.: Pamphlet.
26 Allgemeine med. Cent. Zeitung., Sept., 1869.
27 American Journal of Insanity, Jan., 1875.
28 Practitioner, 1870, p. 62.
29 Ibid., p. 124.
30 Lancet, March, 1870.
31 Bull. gén. de thérap., vol. lxcii., p. 125.
32 Ibid., vol. lxciii., p. 314.
33 Deutsches Archiv, Bd. viii., Jan., 1871.
34 MED. RECORD, 1870, p. 328.
35 Boston Med. and Surg. Journal, 1871, p. 97.
36 MED. RECORD, 1872, p. 196, and by letter.
37 (Practitioner.) Braithwaite's Epitome, March, 1880.
38 Gaz. des hôpitaux. 1875, p. 405.
39, 40, 41 Quoted by Ernest Labbé, "Du Chloral," Bull. gén. de thérap., 1870, t. ii., p. 330.
42 Practitioner, 1872, p. 297.
43 Southern Med. Record, Dec. 18, 1874.
44 Bull. gén. de thérap., vol. lxxxvi., p. 560.
45 N. Y. MED. RECORD, Jan., 1880.

OPIUM NARCOSIS IN AN INFANT SIX WEEKS OLD.

RECOVERY UNDER THE USE OF BELLADONNA.

BY S. C. CHEW, M.D.,

PROFESSOR OF MATERIA MEDICA AND CLINICAL MEDICINE IN THE UNIVERSITY OF MARYLAND, BALTIMORE.

THE following case is reported because it is deemed a valuable contribution, as it is perhaps the most recent one, to the history of "Physiological Antagonism between Medicines," to which attention has been called by the able lectures of Prof. Barthelow in the MEDICAL RECORD. It is of special interest in view of the age of the subject, and the peculiar susceptibility to narcotism from opium in early infancy, as well as the fact that six hours elapsed from the ingestion of the poison to the first institution of treatment, and the further fact that recovery seemed clearly attributable to the antagonistic method of treatment employed.

On returning to my office at half past six o'clock in the evening of November 30, 1880, I found an urgent message to visit the child of Mrs. X——, which was just six weeks and two days old.

I was informed on reaching the house that some powders containing one-fourth of a grain each of sulphate of morphia, previously directed for another member of the family, had by mistake been substituted for a package of pepsin powders that had been ordered for the baby. One of these morphia powders had been administered to the child at half-past twelve o'clock, or just six hours previously to my visit; and I was told that the whole amount contained in the powder was certainly given, the particles adhering to the spoon being carefully wiped out with the finger and placed in the child's mouth in the belief that it was pepsin. I afterward had the powders carefully weighed and found that four of them weighed just one grain.

It is to be noted, however, that immediately after swallowing the powder the child took its nursing bottle of milk, a part of which was regurgitated from the stomach after the fashion of babies. Whether any of the poison was in this way ejected or not, cannot positively be stated; but certain it is

that enough was retained to produce the profound narcosis in which I found the child.

When the sleep had lasted for some hours, alarm was taken from the difficulty in arousing the infant; but apart from a few attempts to awaken it, after each of which it would instantly relapse into deep sopor, nothing was done from the time when the morphia was administered until the hour of my visit. The pupils were then contracted to pin points, the respiration was exceedingly feeble and shallow, and the pulse at the wrist scarcely perceptible. The use of an emetic or the stomach-pump was obviously out of the question, as in the time which had elapsed since the drug was given, it must have been completely diffused throughout the system.

The only measures available were such as would physiologically antagonize the morphia by maintaining the circulation and respiration. I accordingly directed some strong coffee, which was ready in the house, to be given in teaspoonful doses every few minutes, while I went to my office in the neighborhood for some tincture of belladonna which I knew to be reliable, thinking that this might be more manageable than atropia in so young an infant. On returning I gave a drop and a half of the tincture in a little water, repeating half a drop every twenty or thirty minutes. At the same time I endeavored to arouse respiration by applying a cloth dipped in ice-water to the back of the neck for a moment at a time, with the effect of causing deep gasping inspirations. Gentle shaking and slight pricking with a pin were also occasionally resorted to; but all violent measures were avoided as being likely to exhaust the little strength that remained.

When four drops of the tincture of belladonna had been taken, a bright scarlet hue diffused itself over the face, arms, and gradually over the entire body of the child, upon which the interval between the doses was extended to an hour. Synchronously with the redness of the skin other evidences of the physiological action of belladonna were apparent; the pupil began to expand, the pulse became quicker and stronger, and the respiratory acts distinctly deeper and more frequent. So prompt indeed was the response of the respiratory function in some measure to the belladonna influence, that it did not seem necessary to use the faradic battery which I had made ready.

In withholding it I was borne out by the observation of Dr. Johnson, of Shanghai, quoted by Professor Bartholow in his second Cartwright lecture, to the effect that when the influence of belladonna has once begun, provided respiration be tranquil and regular, however slow it may be, it is injurious to resort to artificial respiration.

By half past eleven o'clock, six hours after I first saw the child, its respiration and circulation were so completely re-established, and it was so easily kept awake, that I considered its condition perfectly safe, and left it, directing, however, that it should be awakened every hour, so as to test the remanent degree of narcotism, and that if there should be difficulty in waking it, I should be notified. On the following morning it was perfectly well.

Now, in this case, as suggested by Professor Bartholow in reference to some of those which he recounts, it may be necessary to estimate the part performed by other agencies, as the coffee, the shaking, and the shock of cold to the spine. But yet the improvement seemed to result so directly from the action of the physiological antidote that I have no hesitation in ascribing the child's recovery chiefly, or exclusively, to the belladonna, which met and antagonized the morphia at the three main points along its whole line of action, the pupil, the pulse, and the respiration.

The observation of Professor Bartholow, that the state of the pupil is, in such cases, not a safe guide, is, I am persuaded, a most important one, the truth of which has been too much neglected. If the belladonna or atropia be too boldly or carelessly administered, in the belief that until the pupil expands it may be given *ad libitum*, there is grave danger lest its own sedative influence be added to that of the opium. It should be used for a definite purpose, and that purpose is not to dilate the pupil, but to maintain the respiration and circulation, which must be effected by the stimulant influence of small doses.

In connection with this subject of antagonisms, I may remark that Professor Bartholow, in his fifth Cartwright lecture, states that at least six remedies have been used with success in tetanus, viz.: chloroform, chloral, tobacco, bromide of potassium, physostigma, and gelsemium. To this list must be added conium, or its alkaloid, conia, as employed by Professor Christopher Johnston in six cases of traumatic tetanus, two of which, by the kind courtesy of that gentleman, it was my privilege to witness. In three of these cases, two of which are reported in full, and with very interesting comments, in the *American Journal of the Medical Sciences* for July, 1870, the use of the conia was followed by recovery.

One other instance of the successful use of conia in tetanus is recorded by Dr. Corry in the *Dublin Quarterly Journal of Medicine* for November, 1860.

I desire especially to call attention to these results, from the fact that Professor Bartholow, in his able and widely read "Treatise on Therapeutics," remarks that "conia is certainly indicated in tetanus, hydrophobia, and strychnia-poisoning, but hitherto it has not succeeded, probably because inert preparations were employed." This statement, as regards tetanus, needs correction, as in four recorded cases of that disease conia has succeeded.

There cannot be a more prominent instance of physiological antagonism than that which exists between the state of the spinal cord in tetanus and that produced by the powerfully sedative action of conia. In tetanus death generally results from rigid contraction of the respiratory muscles; in conium-poisoning, from paralysis of these muscles. Whether the paralyzing action of the conia extends inwardly from the terminal filaments of the motor nerves to the cord, or, as maintained by Verigo, in the reverse direction, it is no doubt powerfully exercised upon the cord.

The recoveries obtained by Professor Johnston and Dr. Corry were the direct consequences of physiologically antagonistic medication.

Baltimore, Dec. 20, 1880.

Capacity for Study in Children.—Chadwick, the best authority (says the *Boston Medical and Surgical Journal*) on the above topic, concludes that a child from the age of five to seven can attend to one subject for fifteen minutes; from seven to ten years, about twenty minutes; from ten to twelve, about twenty-five minutes; from twelve to eighteen, about thirty minutes. The total daily mental work suitable for a young person from twelve to sixteen years of age, taking Chadwick's estimates as a basis, and making allowance for the rapid development in this period, is placed at from five to six hours.

Reports of Hospitals.

PENNSYLVANIA HOSPITAL, PHILADELPHIA.

CLINIC OF R. J. LEVIS, M.D.,

SURGEON TO THE PENNSYLVANIA AND JEFFERSON COLLEGE HOSPITALS.

RARE CASE OF ANEURISM OF THE ULNAR ARTERY, SIMULATING MALIGNANT DISEASE, APPARENTLY CURED BY LIGATION OF THE BRACHIAL ARTERY, WITH ANTISEPTIC PRECAUTIONS.

THE next case that I shall present to you is one of great importance from a diagnostic point of view. It has occupied the minds of our best surgeons for several days past. The patient, about forty years of age, by occupation a butcher, has been sent to us from Port Carbon in this state. He presents a tumor occupying the upper third of the right forearm anteriorly, rather more inclined toward the ulnar side. The history is that he had been kicked there by a hog a year ago, but the patient knows of no other injury, and indeed the history is of little value. The tumor is quite painful, and has attained its size only within the past three weeks. There is a diffused pulsation all over the tumor, especially distinct at the ulnar side, while at the wrist the pulse is slightly perceptible in the radial, but not at all in the ulnar artery. The circumference of the arm over the tumor is about twelve inches. There are three separate diagnoses possible, each of which has a sufficiency of symptoms in its favor, namely, an abscess bound down by the fascia receiving transmitted pulsation, a pulsating sarcoma, and an aneurism. The diagnosis of an abscess is favored by the fact of its rapid development, for we cannot attach any great importance to the history of the injury, it having occurred so long ago. Marked pain and heat as symptoms of acute abscess are also lacking, though a chronic abscess need not present these symptoms. While, therefore, I do not exclude the possibility of an abscess, I cannot believe in its probability, and do not undertake to explore the tumor by incision, but will base my treatment on the suppositions of aneurism or malignant disease. I therefore propose a comparatively harmless procedure, namely, ligation of the brachial artery, which, if my conclusions are correct, will cure the aneurism. Should it, however, prove to be a malignant growth, nothing short of amputation of the arm will be of avail; and the ligation of the brachial will not increase the danger. As far as surgical literature goes, we have little or no information of aneurisms below the bend of the elbow. In passing I wish to mention that the patient has an enchondroma of some ten inches in circumference, growing from the thorax over the cardiac region, which receives a curious tremor from the beat of the heart against the chest.

While the patient is being etherized, some remarks concerning the causation, symptoms, and treatment of aneurism may not be inappropriate. You must know that the term aneurism is applied to a dilatation of an artery, and may be caused by injury or by atheromatous or other changes causing a weakening of the arterial coats. If the aneurismal sac is made up principally of the dilated arterial wall, it is called a true aneurism; if, however, the artery is ruptured, and the blood escaping finally obtains a kind of sac-wall of condensed cellular tissue, it is called a false aneurism. The symptoms of aneurismal tumors are pulsation, murmur, and thrill, with the concomitant features of progressive enlargement, more or less pain, and a certain elasticity upon palpation. If the artery be compressed above the growth the tumor will become more flaccid and smaller; but if compression be applied to the arterial trunk below, the sac becomes distended and therefore is increased in size and hardness. It is frequently difficult to be sure that the tumor is an aneurism, because lamination of clot within the sac may make the pulsation and thrill very indistinct; again, solid tumors lying over an artery may present transmitted pulsation. The introduction of the needle of the hypodermic syringe or aspirator will often clear up the diagnosis by giving exit to blood. Malignant growths often occupy regions prone to aneurisms, and if very vascular may present marked pulsation and simulate aneurism. A remarkable case of this kind was treated in this hospital some years ago by Dr. Morton, who ligated the internal iliac artery for supposed gluteal aneurism. The subsequent history of the case showed the tumor to be a malignant growth, though at the time of operation the opinion that it was aneurism was held by numerous able surgeons. The ligation relieved many of the symptoms, and probably prolonged the patient's life by cutting off the blood-supply of the malignant tumor.

This same question of diagnosis arises in the case before us, and it is by no means easy to determine whether this patient has a true aneurism of the radial or ulnar artery, or malignant disease involving the upper extremity of one of the forearm bones. If it is the latter, it is probably a round-celled pulsatile osteo-sarcoma. The fact that spontaneous aneurism in this locality is exceedingly rare renders the second diagnosis plausible. The only form of aneurism in this vicinity that is, or at least was not infrequently seen, is the traumatic form produced by wounds of the brachial artery in cases of venesection. Mr. Holmes, however, has recorded a case of aneurism of the upper part of the ulnar artery, that was seen at the Middlesex Hospital, and others have probably been observed. In this case it would seem to be aneurism of the ulnar, for the radial pulse is distinct, while the ulnar is not; the pulsation and murmur are more marked on the ulnar side, and the position seems perhaps too low for the brachial. There is at the present time some redness of the skin, and considerable pain on motion. When the arm is raised and pressure made upon the brachial, so as to cut off the blood-current, the tumor seems to become more flaccid. There is no enlargement or pain in the axillary glands, as might be the case in malignant disease, though not necessarily, especially if the form be sarcoma. The patient's general health is good.

Taking all things into consideration, I am rather inclined to regard the case as an inflamed ulnar aneurism, though I am bound to admit that the opinion of some of my friends, who regard it as malignant disease, may be correct. It is also possible that it is a ruptured aneurism with the blood-contents extravasated in the surrounding tissues. The case was recently presented at the meeting of the Philadelphia Academy of Surgery, and gave rise to much discussion because of its doubtful character.

The treatment of aneurism of the extremities consists of ligation or compression of the artery, and of incision into the sac with ligation of both ends of the artery. The ligature, as usually applied, is placed

on the cardiac side of the tumor, and as the blood-current is thus cut off the sac becomes filled with a solid clot, and gradually contracts until it finally becomes fibrous tissue. The collateral circulation in the meantime keeps up the life of the distal portion of the limb. Compression, which may be digital or mechanical, complete or incomplete, acts in a similar manner. For internal aneurisms we prescribe iodide of potassium in large doses, restricted diet, and absolute rest. In some cases electrolysis may be beneficial, and I have in a few instances introduced horse-hair into large aneurisms, where other treatment seemed unavailing, with the hope of producing fibrinous deposit and cure. The results, however, have not been very encouraging.

What should be done for this patient before us? I purpose ligating the brachial artery, as I have previously stated. It will be proper treatment for aneurism; and if the tumor does not seem permanently benefited by the operation, but continues growing, I shall reverse my diagnosis and advise amputation before the malignant disease, as we must then regard it, makes further progress.

I reach the brachial artery by an incision about two inches in length, over and along the course of the vessel, near the middle of the arm, in the groove along the inner side of the biceps and coraco-brachial muscles. Here I expect to find the median nerve crossing the artery, which latter is accompanied by its venæ comites. We shall carry on the operation under a carbolized spray, projected by this well-constructed atomizer, which is portable, and allows of the spray being raised or lowered at pleasure. The strength of carbolic acid in the reservoir is one part to twenty of water, which is reduced to one in forty by the admixture of the steam; while the instruments to be used are immersed in a solution of one part to forty of water. By slightly flexing the forearm upon the arm, I bring out distinctly the groove along the biceps and coraco-brachial, while the median nerve is made to stand out like a tensely drawn cord. I make my incision, as previously indicated, through the skin and superficial fascia, as I am not in the habit of taking up the superficial fascia on a grooved director. I now carefully cut through the deep brachial fascia, and have reached the median nerve, which presents a white and glistening appearance, and can be seen distinctly, even from a distance. I now separate the connective tissue with the handle of the scalpel, open the sheath of the artery, and have here the vessel exposed. I free it from its accompanying veins, and slip my aneurism-needle, armed with a carbolized catgut ligature, under the artery. My colleagues examine whether I have taken up the artery alone, without other structures, and we verify it by seeing that a temporary constriction of the same stops the pulsation of the tumor. I now tighten the ligature, cut the ends off short, close the wound by means of a few stitches of wire suture, and cover the part with charpie saturated with carbolized oil, retained by a roller-bandage.

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We have before us the case in which I ligated the brachial artery at my clinic one week ago. The obscurity of the diagnosis has not as yet been cleared up. The wound is absolutely closed, having healed in this short space of time, and there are no signs of irritation. We designate this immediate union. The ligature will soften and be absorbed. The pulsation of the radial artery has returned, while we cannot make out the pulse in the ulnar nor in the tumor. The eccentric aneurismal heaving and the aneurismal thrill which existed before the ligation have disappeared, yet there is no perceptible diminution in the size of the tumor. It measures now, as before the operation, twelve inches. The shrinking is evidently not rapid, if there is any at all.

The patient who has been the subject of so much discussion is now ready to return to his home. The tumor has shrunk considerably since the ligation about two weeks ago, giving now a circumferential measurement of about nine inches, and the man is free from pain and relieved of mental distress. The conduct of the tumor after the operation seems to point to aneurism rather than malignant disease, for although shrinkage did not occur rapidly, it was considerable, and I think more than would have taken place after ligation of the main trunk supplying a vascular sarcoma. Hence, I still believe it to be an aneurism bound down by the deep fascia, which has been cured by ligation of the brachial, and which will probably continue to shrink. I shall, however, endeavor to keep acquainted with the subsequent history of our patient.

TREPHINING FOR THE RELIEF OF TRAUMATIC EPILEPSY.

Thirteen years ago this patient sustained a comminuted fracture of the skull. At that time his physician elevated the fragments, and the man did well for three years. Afterward he habituated himself to the use of alcoholic stimulants, and for the past ten years has been a drunkard as well as an epileptic. At present he is weak-minded—indeed, almost an imbecile, and has an epileptic seizure every few hours. He is unfit for the purposes of life, and, in his present condition, is unhappy and a burden to himself and society. Bromide of potassium has some beneficial influence over his attacks, but the epilepsy has been increasing in severity, and the mental impairment becoming more marked.

At about the centre of the left parietal bone I find a hollow or depression, which clearly indicates the position of the fracture. The depression is irregular in outline, with an average diameter of two inches. The scalp-wound has left star-like cicatricial marks, and we suppose that a cranial depression exists in the course of one of these radiations.

At a consultation with my colleagues it was agreed to use the trephine as an exploratory measure, and I believe that we will thereby be enabled to find out the cause of the irritation, which probably consists of the pressure of the edges around the removed bone.

As a preparatory measure, the corresponding portion of the scalp has been shaven. The patient is now being put under the influence of ether, and I shall wait until complete relaxation has taken place. The muscles during the stage of excitement are tense, and keep the blood-vessels turgid.

A crucial incision is generally recommended, but I prefer a curved incision, which gives me a trap-door flap. It is immaterial how large a flap is made, and I therefore fully include the part. I am very careful, because in some regions there is but a dense membrane between my knife and the brain-substance. I have removed here the pericranium with the flap, which leaves the bone bare. A small cylindrical trephine will fully answer my purpose, while a conical instrument is preferred by those whose experience in this operation is limited, and who therefore feel safer with it. I fasten the centre-pin, and allow it to remain in position, until by a few semicircular turns I have made a groove. I now retract the

centre-pin, and cautiously continue the rotatory movements, stopping occasionally to remove the particles of bone from the groove with a toothpick, which at the same time answers the purpose of a probe to ascertain whether the cranium, which is thicker in some regions than in others, has been penetrated at any point. We become conscious that we have penetrated the cranium by a want of resistance, or by a feeling which can be acquired only by experience.

Having now removed a disk of the skull, I can do no harm by carefully passing this elevator underneath the skull to detect a projecting fragment of bone or an exostosis, but am unable to find anything. This will, therefore, conclude our interference to-day, as I do not desire to set up cerebral inflammation. The patient may derive some benefit from this procedure, as the edge of bone removed may have produced some irritation, though it was not actually pressing inward as a definite ridge. The flap is replaced, but no sutures are applied. The proper treatment will be perfect rest, bromide of potassium, and active purgation, since every therapeutic measure must be directed to prevent the occurrence of meningitis. We have disturbed the parts very little, but inflammation is liable to occur after all such operations, which are only justifiable in obstinate cases of progressive epilepsy such as this.

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Notwithstanding the careful manipulation at the time of operation, the patient developed cerebral symptoms, and died at the end of a week. The post-mortem examination showed arachnitis, evidently resulting from the operation. The seat of the original fracture was occupied by membrane, to which the convolutions were adherent.

Progress of Medical Science.

The Nature of the Green Vomit.—The chemical and microscopical nature of green vomit has been made the subject of recent investigations by Dr. F. Betz (*Memorab., Monatschrift f. rat. prakt. Aerzte*, October 6, 1880). It was supposed that the green vomit (*vomitus æruginosus*) was the result of a greenish discoloration of brown biliary pigment, caused by the acid action of the gastric juice. The supposition received corroboration from the bitter taste of the vomited matter, associated with its acid reaction. Dr. Betz concludes, however, that the green color is not invariably due to the presence of bile. The color often varies from a yellowish green, or grayish green to a grass green, or dark green, in accordance with the greater or less amount of the "green substance" and other admixtures.

If green vomit be allowed to stand in a vessel, the greater part of the greenish substance will sink, whereas a small portion, containing slime and fatty matters will float on top. Shaking with water shows that the green substance is heavier than water and insoluble in it, a proof that bile is not the cause of the color. Agitation with chloroform or ether likewise demonstrates this, for neither fluid takes up the green substance. It may, however, be isolated by shaking with ether in a test-tube. This manipulation results in the appearance of three strata, an upper one consisting of ether, a middle one composed of the green substance, and a lower one containing the gastric mucus. Strong sulphuric acid produces a red color, strong nitric acid leads to a yellowish discoloration of the green substance. Acetic acid develops and fixes the green color very completely. Tincture of iodine produces a yellowish brown, and not a blue tint. Alcohol dissolves the green substance. In some respects it resembles the chlorophyll of plants. The alcohol dissolves it, and even retains the green color when boiled. The green vomit may be kept for months and during the hot season, without spontaneous putrid fermentation taking place—a fact which militates against the possibility of its biliary or even animal nature. Dr. Betz also states that sometimes the green vomit has a neutral or alkaline reaction. Microscopical examination showed the green substance to consist of an amorphous, finely granular greenish mass. Discoid heaps, or rounded colonies, are commonly observed. But the green substance may also form a lining over epithelial cells, salivary corpuscles, etc. From these facts Dr. Betz infers the vegetable nature of this substance, and he adds that it is probably derived from punctiform algæ, which he calls *chlorococcus*. He denies any relation of this low fungus to other microphytes such as the torula cerevisiæ, sarcina ventriculi, or oidium. Finally the author remarks, that apart from all other considerations, the frequent occurrence of copious green vomits would go to show that bile could not find its way into the stomach in such enormous quantity. The bitter taste of the green vomit receives its explanation in part from the frequent admixture of some bile, but is also in part due to the presence of a bitter principle in the chlorococcus.—*Memorab., Monatsch. f. rat. prakt. Aerzte*, October 6, 1880.

The Treatment of Aural Polypi.—Dr. A. Politzer (*Wien. med. Woch.*, No. 31, 1880) recommends the use of *spiritus vini rectificatus* as an excellent means of producing complete shrinkage of granulations and polypoid growths of the middle ear. Politzer proceeds as follows: First of all, the parts are thoroughly washed with tepid water, or in cases of suppurative otitis media, inflation by P's. method is practised. Next the ear is dried with absorbent cotton, and then the lukewarm alcohol is poured directly into the organ, the head being inclined to one side. The alcohol is allowed to remain in the ear from ten to fifteen minutes. Sometimes burning or smarting pains are produced. If the pain is severe, diluted alcohol is first used and its strength then gradually increased. The operation is repeated thrice daily.

Politzer found that the first effect produced by the alcohol consisted in blanching of the growth; then as the fluid penetrated the interior, vascular coagulation and, finally, considerable shrinkage occurred. Shrinkage was complete in some cases after a few days, generally in a few weeks, but sometimes not for several months. The soft round-celled polypi disappear more rapidly than those having a firm fibrous structure. But even the latter were frequently entirely effaced. The following indications for the use of alcohol are given by Politzer:

First.—For the removal of remnants of polypi in the external meatus, at the tympanum, and especially those in the middle ear, which cannot be reached by the knife.

Second.—In cases of multiple granulations of the external meatus and at the tympanum.

Third.—Excessive diffuse proliferation of the mucous membrane of the middle ear.

Fourth.—Cases not amenable to surgical interference, on account of mechanical obstruction.

Fifth.—As a tentative measure in persons fearing an operation, and in children, where surgical measures are often associated with extreme difficulties, and frequently require narcosis.—*Centralbl. f. Chir.*, October 2, 1880.

Cancer of the Rectum.—Dr. C. B. Kelsey, of New York (*New York Med. Journ.*, December, 1880), has made an analysis of one hundred and forty cases of excision of cancer of the rectum. This collection of reports was undertaken with a view to determine, if possible, the relative value of excision, as compared with lumbar colotomy. The following conclusions are drawn:

First.—The fatal results which have thus far been recorded as following this operation (excision) nearly all occurred in cases where, from the extent of the disease, such a result was not improbable.

Second.—When the disease reaches above three inches, or involves neighboring parts to such an extent as to render its entire removal without injury to the peritoneum questionable, the operation is contraindicated.

Third.—Although there have been a few cases of cure, such a result is so rare as not to justify the exposure of the patient to the risk of immediate death which attends the attempt to remove extensive cancerous disease.

Fourth.—The operation is chiefly valuable as a palliative measure, and as such it is applicable to cases where the disease has not made extensive progress.

Fifth.—As a palliative measure, in proper cases, it compares favorably with the results of lumbar colotomy, both in prolonging life and in relieving pain.

Sixth.—The operation is not followed by an annoying incontinence of fæces, except in a small proportion of cases.

Seventh.—The operation is not a substitute for lumbar colotomy in cases where the disease has reached more than three inches from the anus.

Eighth.—There is no proof that the operative interference shortens life by hastening the progress of the disease.

Sudden Death in Gangrene from the Entrance of Putrid Gas into the Heart.—In 1867 Dr. Parise sent a communication to the *Académie* which was accidentally left unpublished, but is now placed on record in the *Archives générales de médecine* (November, 1880). Parise observed several cases of sudden death in gangrene of the limbs, and in each instance believed that the fatal termination was brought about by the entrance of putrid gas into the veins, and hence into the heart. Maisonneuve had previously (in 1853) published several cases of rapid gangrene, with the development of putrid gas in the veins of the affected member. But he believed that death was caused by blood-poisoning from this source. Parise, however, affirms that the putrid quality of the gas determines no septic action, but produces death in the same way that air accidentally entering the veins does. In the cases reported by the author the autopsies were made soon after death, and a very careful examination revealed the abundant presence of putrid gas in the right side of the heart and the principal venous trunks.

Parise concluded, from the study of his cases, that surgeons should be on their guard against sudden accidents, especially in those cases of gangrene which follow a violent traumatism. Prompt action was necessary. Immediate amputation was the best curative procedure, and should be resorted to unless positively contraindicated by the conditions of the patient. In the latter case deep incisions might prove beneficial; or the principal vein might be ligated or merely compressed. Amputation below the point of ligation or compression would have to be performed sooner or later.

Foreign Body in the Pharynx Dislodged after Eight Years and Two Months.—In 1876 Dr. Singletary, of Arlington, Ky., was called to see a girl, aged seven, and found her suffering from broncho-pneumonia. About four years previously, while playing with a nickel penny, she swallowed it, and since that time had been a sufferer. Previously healthy and robust, after the accident she became delicate, had constant dyspnœa, and passed through several attacks of pneumonia. She ate very slowly and with great care, for she could not swallow any solid food. It was always necessary for her to have some fluid when she ate, that her food might be washed down. During the first year her throat was sore, and she vomited often, but with great difficulty. In April, 1880, she vomited about "half a gallon of pus" intermixed with "blood and corruption." This was just eight years, two months, and one day from the time of the accident. Twelve days later she passed the penny per anum. It was quite black and corroded, but still presented all the features plainly. It weighed eight grains less than an ordinary nickel cent, and as it was probably new when swallowed, it may have lost even more than eight grains. The girl is now well, hearty, robust, and playful; talking, eating, running, etc., just as other children. Dr. Singletary was unable to find a parallel case in the published records at his command.—*Louisville Med. News*, November 27, 1880.

Acute Blennorrhagic Vaginitis and Metritis Cured by the Application of the Tincture of Iodine.—This case was reported by Lastres (*El Siglo médico de Madrid*): A woman, aged thirty years, received the contagion from her husband. The initial symptoms were rather alarming; pulse, 100; temperature, 102 F.; severe lumbar and hypogastric pains, disuria, and pains in the right shoulder. The customary local and general treatment failed to produce any effect upon the virulence of the disease. A fortnight having elapsed, a speculum was introduced, and the cervix found red and tumefied. Tincture of iodine was then directly applied to it, and also brushed over the folds of the vaginal mucous membrane. No subsequent wash was used, and internal medication was suspended. On the following day a notable improvement was observable, and the applications of iodine were therefore repeated. The patient continued to improve and was soon completely cured.—*Le Courrier médical*, October 23, 1880.

Amputation of the Mamma without Loss of Blood.—In No. 30 of the *Centralblatt für Chirurgie*, of this year, Leisrink reported two cases of removal of the mamma, in which hemorrhage was avoided by the use of a clamp constructed for this purpose. This clamp was, however, thought to be suitable only for pendulous breasts. Dr. Szuman (*Centralb. f. Chir.*, October 2, 1880) communicates a new method for bloodless operations upon the mamma, with which he has been able to obtain excellent results. He utilized the principle which underlies the application of successive ligatures to broad pedicles in ovariotomies. The author states, however, that his method is applicable only to those cases of mam-

mary neoplasms which are still movable at their basal surface. From the detailed account given of an operation involving a highly vascular pigmentary cancer, and which illustrated the efficaciousness of his method, we gather the following: A long and straight needle of large calibre, armed with a heavy double silk ligature previously carbolized, is thrust through the mamma from above downward and parallel with the surface of the thorax. The ligature is then cut at some distance from the point of exit, and the first portion of the gland tied off. By repeating this manipulation a sufficient number of times (four times in the case described), the entire base of the gland is secured between the tightly drawn ligatures. The tumor, in this instance, assumed a dark, purplish hue, but on being removed by the knife not the slightest hemorrhage occurred. There is no danger of wounding the pleura if the needle is carefully used, and if the narcosis of the patient is sufficiently deep to prevent the occurrence of sudden movements.

Dr. Stukowenkoff, in the same number of the *Centralblatt*, states that for the past two years he has been in the habit of using a clamp exactly like the one described by Leisrink. He adds that he also applied a tight ligature behind the clamp, in order to cut off the lateral portions of the tumor from blood-supply.

Pigmentation of the Giant-Cells of Tuberculosis.—At a recent meeting of the Société de Biologie, of Paris, M. Cornil stated that he had frequently found the giant-cells of tuberculosis impregnated with black granules or pigmentary matter. The latter substance was doubtless produced by transformation of the coloring matter of the blood, and was most frequently observed in connection with fibroid phthisis. In microscopic sections these granules appeared disseminated through the bodies of the cells. Sometimes such molecules were rounded, at others they had a polygonal shape. Occasionally the nuclei of the giant-cells were replaced by little collections of carbon or pigment. Sometimes the entire cell would appear filled with these black deposits. The power of resistance, and longevity of giant-cells was, he thought, due to this infiltration.—*La Tribune médicale*, October 31, 1880.

Treatment of Hepatic Abscess by large Incisions under Lister's Method.—A recent communication to the Académie de médecine by Dr. Rochard, contains the following points: Local pain is felt only when the pus has approached the surface of the liver, thus causing a perihepatitis. Sometimes a voluminous abscess will be found at an autopsy, when vital symptoms of its existence were never obtained. Reflex pain in the right shoulder is no characteristic symptom. In most cases the hepatitis follows dysentery or other diarrhœal affections. The affection may be suspected when a person having suffered from enteritis develops fever, is troubled with his digestion, and shows an enlarged liver. When the febrile movement assumes the hectic type the formation of pus may be known to have occurred, and explorative puncture should not be delayed. Frequently it becomes necessary to make several such punctures before pus is detected. This is a harmless procedure. Pus having been found, a large incision parallel with the direction of the ribs should be at once made. The cavity of the abscess is then to be washed out with carbolized water until thoroughly cleansed. Then a large drainage-tube is inserted deeply into the wound, secured in its position, and then covered over with the Lister dressing. This is to be removed once a day, the drainage-tube being also removed for cleaning at each time, and reinserted after having been shortened to correspond with the shrinkage of the cavity. In the three cases described by Rochard this shrinkage was remarkably rapid, and it was associated with a return of the patient's appetite, a permanently febrile condition, and a corresponding amelioration of the patient's general health. The facts relating to these cases were obtained from Dr. Little, of the Shanghai Hospital, and a French marine surgeon who had himself undergone the operation. A fourth successful case, reported by Mac Lean, was also alluded to.—*Bulletin de l'acad. de méd.*, October 26, 1880.

Actinomycosis in Men and Animals.—Ponfick, of Breslau, has recently called attention to an interesting condition that he has observed in five individuals, all of which were affected with a peculiar disease of the bones, and exhibited coincidently peculiar yellowish granules in the discharges from the site of the lesion. The following instance is given as a typical exemplification of the malady in question: A blacksmith, aged forty-five years, was in hospital under treatment for a destructive spinal difficulty, when it was observed that there were peculiar granules, both in the pus that was escaping through the fistulous tracks and in the gelatinous matter that lined them. They appeared about the size of lycopodium particles, and were evenly disseminated in the morbid material. P. regarded them as identical with the bodies observed by Bollinger in the so-called actinomycosis of horned cattle. In directing his attention to this latter disease, he found that it was known as "worm" in Hanover and Silicia, and was by no means uncommon. It usually has its site at the angle of the jaw, where, after a while, fluctuating tumors, often the size of one's fist, are developed. When incised such masses contain no pus, but exhibit a hollow interior filled with granulation material, in which the yellow particles above described are infiltrated. Sometimes they ulcerate and then simulate sarcomas. In their further progress the neoplasms pierce the bone, and then dilate it, producing the appearance of a true *spina ventosa*. The disease is also common among hogs, but not among the pure carnivora. Ponfick has observed that the disease is associated most frequently, perhaps, with inflammation about a tooth. Proceeding from this point metastases have been found in the spinal column. In all the instances thus far recorded there has been a fatal issue. Most of the individuals affected had nothing to do with horned cattle, though remarkably enough one of them had been frequently about an animal with this peculiar disease. The specimens had been exhibited to botanists, who regarded the granules as vegetable parasites. Still, they could give them no classification, and all efforts to cultivate them artificially had proved futile.—*Centralblatt f. Chir.*, November 20, 1880.

Anæsthetic Effects of Chloroform and Ether.—Mr. Newman contributes a report on the effects of anæsthetics on the pulmonary circulation, in the *Journal of Anatomy and Physiology*, July, 1880, from which it appears that while chloroform in seventy-five seconds stops the pulmonary circulation, and requires 600 cubic centimetres of air and 720 seconds to restore it, it requires ten times as much ether and takes 270 seconds to produce the same effect, which is removed by 200 cubic centimetres of air in 180 seconds.

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GEORGE F. SHRADY, A.M., M.D., Editor.

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THE PROGRESS OF THE METRIC SYSTEM.

An item has been circulating through the medical journals of late, intimating that the attempt to introduce the metric system in this country is a failure. All the old objections to the system are rehearsed, and some of our esteemed contemporaries have boldly announced that its principle is wrong, its various features complicated and unscientific, and its adoption among us an impossibility. A great deal of capital is made of the fact that the standard French metre is not the exact fraction of a meridian which it was first thought to be. But this can make no difference as long as a fixed standard is obtained and kept accessible for reference.

We are inclined to think that the future of the metric system is not so dark as is represented. There is not so much said about it in the medical press, to be sure, but even the most ardent champions may be expected to like a little rest. During the past year the British Medical Association has taken active steps to secure the adoption of the system, and in England it has encountered no active opposition. In this country the American Medical Association, last June, received, through its president, the endorsement given to the system in previous years. At that time a fact was cited which no theoretical cavillers can get over; it was this—that in the organization where the system had been practically and extensively applied, namely, in the Marine Hospital Service, it had proved an unqualified success. Such testimony as this outweighs all the diatribes that have been uttered against it by those who, it must be believed, have little knowledge and less actual experience of its workings.

It will be noticed, furthermore, that nearly all visiting lists, call-books, dose-books, etc., as well as works on materia medica, are now being printed with metric equivalents. In many medical colleges it is now hardly possible for the student to learn, or the instructor to impart, such branches as histology, physiology, chemistry, etc., without introducing the metric system.

The metric system, indeed, is irrevocably fixed upon scientific medicine. It is used by nearly all nations but the Anglo-Saxon. It is woven into the largest part of medical literature, and is already adopted everywhere by those engaged in scientific studies, whether medical or otherwise. It is now the common language of measurement among scientific men, just as the Latin language was the common language of scholarship three centuries ago. A system thus widespread and thus endorsed by men accustomed rigidly to weigh the merits of the tools and appliances they deal with, cannot be the absurdity which certain parties claim. The metric system must be learned by the educated physician, and will, we believe, eventually be practically adopted by him. Perhaps there have been efforts to force the matter too rapidly upon the profession. It certainly will take a long time and perhaps wiser methods than have yet been used to secure its final adoption. But all this does not lessen the fact that the metric system is the most widely established and most rational method of measurement. And it is no sign of its failure that it has not become popular on the shores of a great lake. The cackle of the burgh is not to be mistaken for the murmur of the town.

THE PAY OF HOSPITAL STEWARDS.

A bill has been introduced into Congress by the Hon. J. A. Osmer, which proposes to increase the pay of hospital stewards from the present sum of thirty dollars monthly to fifty dollars. We have examined the provisions of the bill and the reasons assigned for its introduction. It appears to be an eminently just measure, and we trust that the medical staff of the army will see that it becomes a law. The duties of a hospital steward involve a knowledge of practical pharmacy, as well as good clerical and executive ability. Besides this, he is often required to know something about minor surgery, dentistry, and perhaps cooking. His duties, indeed, are so various that a manual of three hundred and twenty-four pages has been published for his instruction and use.

The pay of thirty dollars a month, with quarters, etc., seems quite inadequate to secure permanently the kind of men who are most desirable for such a position. At any rate, it is a much smaller sum than is paid for less skilled labor in other branches of the service. The hospital stewards of the United States Marine Hospital Service receive fifty dollars a month, and even the pay of assistant stewards in that service is greater than it is in the army. The naval service has "apothecaries," with duties similar to

those of hospital stewards. These officers receive sixty-five dollars a month.

Coincident with the proposed increase in salary, the bill we have referred to establishes a competitive examination by a medical board, to which all candidates for stewardships must submit before they can get an appointment. The tendency of the bill thus is to secure a better class of men as officers. We commend the measure, therefore, to the attention of the officers of the service as being one that deserves their support.

DIET FOR THE SICK.

The physician who has but a theoretical or hearsay knowledge of drugs is but little above a dreamer, and we should certainly regard him as an unsafe man who, in a given case, would direct the nurse or the apothecary to give his patient a tonic, a cathartic, or a neuretic. There are many disorders, conditions, and diseases in which the diet is fully as important as, or more important than the medication, and yet it but too often happens that the physician tells the attendant to let the patient have a little light food or some soup, leaving to the discretion of the nurse what it is to consist of, how it is to be prepared, or in what quantity it is to be taken. We need not remind our readers that nothing that concerns the welfare of those intrusted to his care is too trivial for him to notice.

That the value of a knowledge of the preparation of food for the sick is beginning to be appreciated by the profession, is shown by the almost simultaneous appearance of two works* upon the subject; one by an experienced nurse, the other by distinguished therapeutists. The former is necessarily empirical, while the latter proceeds inductively, reasoning from physiological principles; and while they differ in many respects, yet there is a remarkable similarity between the conclusions reached regarding the proper food-constituents and the best mode of preparing them. They will both be found, if properly used, to be great aids in practice. It is of course not intended that the doctor shall go into the kitchen and direct the cook, but that he should understand enough of the constituents of articles of diet to select them intelligently and to give directions as to the best methods of their preparation. In other words, such a knowledge enables him to give the prescription for the food just as he would give the prescription for the medicine.

ABSINTHISM.

It was about one hundred years ago that a certain French refugee, named Dr. Ordinaire, came to Val Travers, in Switzerland, and there began to practise his profession. One of the results of this small incident is, that France now receives from Val Travers and the country thereabouts, 80,000 gallons of liqueur d'absinthe yearly, besides manufacturing perhaps a larger amount in her own borders. Considering the havoc which this elixir has made upon the constitution of so many of her citizens, we may wonder if France could have possibly made a worse selection when she chose to expatriate Dr. Ordinaire.

This gentleman was a regularly educated and skilful physician, though, perhaps, too much given to panaceas. One of his specially popular remedies was a preparation made from the *artemisia absinthium*, a herb which grew in great abundance in the locality where he lived and which had long been much used in domestic practice. By this mixture Dr. Ordinaire grew famous. At his death the secret of its preparation was sold to parties who continued its manufacture. Under the name of Liqueur or Extrait d'Absinthe, it became widely known. In 1830 the artemisia herb-crop alone was worth 88,000. The liqueur began to be extensively used in France a few years later. The habit of absinthe, drinking soon became and still is very prevalent in that country, especially among the better classes. It prevails also in Germany, England, and in the United States, though to a less extent than in France. In London the liqueur is advertised in many places. In New York it can be had in any of the larger saloons.

The fact that the use of the liqueur causes serious damage to the system has long been known, and the special morbid effects have been carefully studied by several observers, among them Marcé Amory, Maquan, and others. Quite recently some papers on the subject have been presented to the French Academy of Medicine by M. Lancereaux; they represent the results of his studies of acute and chronic absinthism.

Absinthe, in small doses, causes a sense of exhilaration something like that produced by alcohol. In larger doses there is giddiness, mental oppression, or later, mental excitement, and the end may be in convulsions which are very rarely fatal. These convulsions have always been considered to be epileptiform in character, as they are in appearance. M. Lancereaux, however, in his recent memoir, asserts that they are hysterical. He says also that the symptoms in chronic absinthism are more allied to those of hysteria than to those of any other disease. These symptoms are various, but in general it will be found that the absinthe tippler suffers from muscular weakness and tremblings; there is a loss of appetite, apathy, melancholia, and hallucinations. The end is often in some structural derangement of the liver, stomach, or nervous system. Insanity is said to be the direct result in some cases; indeed, about one-fourth of the cases of insanity among French officers are traced to the use of absinthe. The drug seems

* Invalid Cookery, etc. By Mrs. Julia A. Pye. Edited by Mrs. Eliza A. Pitkin. Pp. 127. Chicago, 1880: Food for the Invalid, etc. By J. Milner Fothergill, M.D., and Horatio C. Wood, M.D. Pp. 157. New York: MacMillan & Co., 1880.

to transmit its impress with great uniformity to the succeeding generation. Nearly all the children of habitual absinthe-drinkers have some physical defect. With such manifest evils attending its use, one naturally inquires what are its fascinations. The liqueur d'absinthe is composed of alcohol, oil of wormwood, anise, dittany, angelica, and other aromatics. It is a greenish liquid, and tastes very much like paregoric and water. It is hardly to the palate, therefore, that it appeals. It gives, however, a peculiar kind of exhilaration, and this effect, together with the fact that it is a fashionable drink among a certain class, must account for its popularity. Its use is said to be increasing in France and some other countries of Europe. It is not, we think, a drink which will become very popular in this country; indeed, as far as can be learned, the sale of it in New York is hardly as great now as it has been. But it is a serious evil in France, as is shown by the attention given it there by those engaged in sociological and in scientific studies.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, December 16, 1880.

FORDYCE BARKER, M.D., LL.D., PRESIDENT, IN THE CHAIR.

Dr. John M. Cuyler, of the U. S. Army, was elected an Honorary Fellow, and Prof. Jean M. Charcot, of Paris, a Corresponding Fellow of the Academy.

The paper for the evening was read by DR. ALEX. J. C. SKENE, of Brooklyn, and entitled

THE RELATION OF THE OVARIES TO THE BRAIN AND NERVOUS SYSTEM.

That the sexual organs exercised important influences upon the brain and nervous system in health and disease was recognized, in a general way, by medical authorities. There was, however, an obvious lack of exact knowledge upon the subject, especially in regard to the share which individual organs of the sexual system contributed to the sum of such influences. Therefore, his contribution was offered toward the elucidation of one section of that subject, namely, the relation of the ovaries to the brain and nervous system.

That one organ, and indeed one part of an organ, exercised a higher and better defined influence upon the rest of the organization than another, was a fact beyond question. It was well known, for instance, that the cervix uteri was less potential in affecting the nervous system than the body of the uterus. The gynecologist might wound, cauterize, or amputate the cervix without exciting violent pain or inflammation; but he found less of security from danger in dealing with the body of the uterus. The speaker referred, first, to the physiological relations of the ovaries to the other sexual organs, and said that the function of the ovaries was primary in the process of reproduction. Their physiological activity preceded the uterine functions and continued, as a rule, until the menopanse, and possibly after it. Hence the functions of the other sexual organs appeared to be responsive to the influence of the ovaries. There were, however, differences of opinion concerning that question.

Observations had been made which showed that ovulation and menstruation occurred independently of each other, in exceptional cases at least, and a high degree of importance had been given to that, apparently, independent action, but such irregularities were the exception, not the rule. There were facts in abundance to prove that, when the ovaries were absent or rudimentary from birth, the function of the uterus was never established, and the removal of the ovaries after puberty arrested menstruation in the majority of cases. All that we knew regarding the influence of the ovaries upon the development of the individual and the exercise of the sexual functions throughout the reproductive period of life, pointed to the conclusion that those organs were the prime movers in the sexual system. If we accepted the idea that the ovaries were essential to the very existence of the sexual system, and that their office was the highest and the first in the order of events which collectively made the complete process of reproduction, it was easy to understand that their absence would arrest the action of the whole system. They were paramount, not subordinate in reproduction, and in the maintenance of the relationship between the general and the sexual systems the ovaries were undoubtedly the most potential. The uterus and vagina were superadded structures, rendered necessary by a more complex and perfect system of reproduction in the higher species.

Dr. Skene then referred to Dr. Henry Maudsley's book on "Body and Brain," and quoted that author's high estimate of the relationship which existed between the ovaries and the general system, especially with reference to the development and function of the brain and nervous system.

Virchow and others had stated that the ovaries gave to woman all her characteristics of body and mind, and Dr. Skene accepted the proposition without qualification, feeling sustained in doing so by the fact that, when the ovaries were absent or defective from birth, the characteristics of the female sex were never fully developed. The tendency in the development of those in whom the ovaries were congenitally absent was toward the masculine type of the race.

Among the authors who appeared to stand in opposition to what was just claimed, Dr. Goodell, of Philadelphia, was mentioned, who maintained that "beyond the induction of sterility and the probable absence of menstruation, the deprivation of the ovaries after puberty does not change the character of the woman." Dr. Goodell had quoted Battey, Hegar, Wells, and Peaslee as confirming his opinion. But the views held by the last named authors were based upon observations made upon mature women, from whom the ovaries had been removed. That alone, however, Dr. Skene believed, was not a trustworthy source of information, because the results obtained up to the present time appeared to be quite variable. Those authors reasoned from the effects produced by the removal of the ovaries from mature women, while Dr. Skene reasoned from the facts observed in women born without ovaries.

In that connection, reference was made to the influence which the nervous system exerted in controlling the functions of reproduction, and special attention was directed to the fact that the sexual

organs were dependent upon the general nutritive system for organic support, and that they stimulated, depressed, or modified nutrition through the ganglionic nerves chiefly, and that the portions of the brain which presided over the organic functions also dominated over the reproductive organs.

In view of this great potentiality of the ovaries in developing certain capabilities of the brain and nervous system, and in influencing their functions, it was evident that, in order to maintain harmonious action of the whole organization, it was necessary that the ovaries should exist in full development and functional activity. On the other hand, those organs which were so essential to the well-being of the individual must, when diseased, exercise a potent influence in deranging the brain and nervous system.

From a somewhat extended consideration of the subject, he was satisfied that a great many affections of the brain and nervous system were due to disease of the ovaries.

When a woman was deprived of the sexual organs, the nutritive system might possibly attain a normal development, but the nervous did not, and remained upon a lower plane. There was usually mental weakness and often derangement of mind, among those in whom the ovaries were imperfectly developed. Among sixteen young single women who came under his observation in the Insane Asylum, twelve had imperfectly developed sexual organs, and the histories of the cases led to the conclusion that the defective development of the ovaries was an important element in causing their insanity. They no doubt inherited an insane diathesis, but the absence of ovarian influence, which favored a higher and more complete development of the nerve-centres, acted presumably as the major cause in producing the insanity.

Dr. Skene then spoke of the effect produced on the nervous system by derangements of menstruation, and felt convinced that conditions of the ovaries which deranged the menses affected the nervous system far more than the dysmenorrhœa due to abnormal conditions of the uterus. The symptoms of ovarian dysmenorrhœa, so called by some writers, were then reviewed.

With reference to other diseases of the ovaries, he believed that displacements and inflammatory affections of the ovaries produced remote effects more grave than disease of any of the other pelvic organs. The symptoms attending those two conditions were then studied.

The nature of many of the diseases of the ovaries and their clinical history being imperfectly understood, it naturally followed that, in that department of medicine, the art of diagnosis fell short of the demands of every-day practice.

It was often very difficult to determine the character of some ovarian diseases, and to estimate the effect exerted by them upon the nervous system. All forms of morbid nervous phenomena might arise from causes other than disease of the sexual organs, and hence there were no constitutional symptoms that were diagnostic of ovarian affections. It became necessary, therefore, to determine first that disease of the ovaries existed, and then to estimate how far the nervous symptoms were dependent upon the local affection. In all the inflammatory affections of the ovaries, a fair degree of accuracy could be obtained in diagnosis from the symptoms and physical signs of ovaritis, such as were given in our text-books, and the same could be said concerning displacements of the ovaries. Upon the latter point special reference was made to Dr. Paul F. Mundé's paper in the fourth volume of the "Transactions of the American Gynecological Society."

In the more grave diseases of the nervous system, such as epilepsy and nymphomania, which had been presumed to be due to ovarian disease, the diagnosis was sometimes exceedingly difficult. There was, perhaps, no problem in gynecology more difficult to solve than that, and very much depended upon its correct solution. With reference to treatment, the majority of patients who had simultaneously ovarian disease and nervous affections required both local and general treatment. The paper was closed by giving the histories of five cases which illustrated the position of its author.

The paper being before the Academy

Dr. Allan McLane Hamilton remarked that he had listened to Dr. Skene's paper with great interest, and believed it to be an admirable exposition of the gynecological side of the question.

He had met with many cases in which the ovaries had much to do with the production of nervous disease, not only indirectly but in connection with the direct production of convulsive attacks. He differed with Dr. Skene in his interpretation of Charcot's term hystero-epilepsy, which was used by the latter to describe the combination of a convulsive seizure and a stage of mental excitement, and did not necessarily imply that there was uterine disease.

Dr. Hamilton also referred to an interesting rôle played by ovarian disease in the production of grave organic diseases of the spinal cord, the primary condition being a hysterical paraplegia. He had known of only four or five of such cases, two of which were described by Charcot, and one by Briquet, many years ago. He had lately seen a case with Dr. Mundé, in which dislocation of the left ovary existed with a most profound hysterical condition. There had been an hysterical paraplegia for some years, the patient being twenty-one years old. Three or four years ago the symptoms of primary sclerosis of the lateral columns became added to those already present. She now presents a decided rigidity of the lower limbs, spastic contraction, the dorsal clonus, and other well-known phenomena. There was no anæsthesia, and the action of bowels and bladder were unimpaired.

At the menstrual periods the symptoms were much more pronounced. She then had constant hysterical vomiting, pain, and other curious symptoms. The slightest touch upon the cutaneous surface provoked the trepidation in her lower limbs, and tickling the soles of the feet gave rise to violent headache. There was no reason to suppose the trouble came from any other cause, and her family were free from nervous disease. Dr. H. was of the opinion that the ovaries played an important part, so far as epileptic and hysterical attacks were concerned, and alluded to the effect of pressure upon the ovaries in the latter.

Dr. Paul F. Mundé remarked that the author of the paper had discussed the subject so fully, but little remained to be said, and his references would therefore be chiefly corroborative. It has been claimed by Dr. Skene that disorders of the ovaries were much more frequently the cause of affections of the nervous system than were diseases of the uterus; yet, if that was true, it was important not to overlook the uterus.

Dr. Mundé thought that Dr. Skene was quite right in his belief that oöphoritis very frequently gave rise to symptoms referable to the nervous sys-

tem; and yet chronic inflammation of the uterus might give rise to similar, if not the same symptoms, when there was no disease whatever of the ovaries. Again, Dr. Skene had stated that the female did not attain to perfect development unless the ovaries were also fully developed; but Dr. Mundé thought that the statement admitted of some doubt. There were several cases on record in which persons were perfectly developed, generally and locally, and yet had neither ovaries nor uterus. Such cases had been reported by Chambers and others.

With reference to prolapsus of the ovaries, Dr. Mundé mentioned that there were several cases recorded in his paper to which Dr. Skene had referred, in which prolapsus of the ovary itself seemed to be the cause of the nervous diseases from which the patients were suffering. He then gave the histories of two cases in which reduction of a prolapsed ovary was promptly followed by an amelioration, and soon by a complete disappearance of all nervous symptoms. With reference to treatment, it had been thus far rather unsatisfactory. He had given considerable relief by painting the wall of the vagina near the affected ovary with plain tincture of iodine, by using hot vaginal injections and the glycerine tampon, and by maintaining external irritation with blisters and iodine.

For the relief of the constitutional symptoms, he had seen good results follow the use of the chloride of gold and sodium. The bromides, also, were beneficial, and so was electricity, especially where there was lack of development of the ovaries.

Dr. Holcombe referred to certain cases which illustrated effects produced upon the eyes by genital irritation, especially onanism. He doubted the accuracy of the statement that certain portions of the brain presided over certain functions.

Dr. W. R. Birdsall referred to experiments performed upon dogs by Röhrig, who ascertained that contractions, occurred in the uterus and blood-pressure was increased when the ovaries were irritated with the electric current; that no evidence of sensibility was produced by the external surface of the ovaries, but that when the uterus was irritated movements as though the animal was suffering from pain were quite evident. In other words, Röhrig's experiment proved that the uterus is far more sensitive than the ovaries.

Dr. L. Putzel remarked, with reference to Dr. Skene's sixteen cases of insanity and the twelve in which evidence of disease of the ovaries was found, that he had made about ninety post-mortem examinations at a lunatic asylum, and did not recall a single case in which disease of the ovaries existed.

He also directed attention to Dr. Israel's case of hysteria in which various uterine medication had been resorted to without benefit, and finally it was determined to perform Battey's operation. The patient recovered entirely, but incision was made only through the abdominal walls, and the ovaries were not touched.

He also referred to a case of catalepsy, occurring on Blackwell's Island, in which Battey's operation was performed. The patient died of peritonitis, and upon microscopical examination the ovaries were found healthy.

With reference to epilepsy occurring with the menstrual periods, he believed that in many of those cases a hereditary influence existed which gave a more rational explanation of the occurrence of the convulsive affection than congestion or disease of the ovaries, and that the physiological condition of the ovaries acted each month merely as an exciting cause of the epileptic seizures.

Dr. Skene, in closing the discussion, said that the remarks made had been so pleasant in tone that perhaps it would be wisdom upon his part to rest his case without further argument.

With reference to Dr. Hamilton's remarks he would say that he had always made a clear distinction between those cases in which there was organic disease of the ovaries and nerve-centres so related as to make their inter-dependence certain, and those in which there was disease of the nervous centres and functional affections of the ovaries, the relations of which were difficult to diagnosticate.

In some of the cases referred to in the paper there was no definite evidence of disease of the ovaries present, and yet the patients had hystero-epilepsy, presumed to be due to ovarian influence. Those were the cases which he desired to bring forward for investigation.

With reference to the cases referred to by Dr. Mundé, the fact that glandular organs, like the testicles rather than like the ovaries, were found, was sufficient to make them favor rather than oppose Dr. Skene's doctrine, that the mental and physical characteristics of sex depended for their development upon the essential organs of reproduction. There was no case, in the literature of any country, so far as he knew, in which there was any evidence whatever of sexual characteristics in the absence of ovaries or testes. Dr. Skene, therefore, thought that he could reasonably claim the cases cited by Dr. Mundé as favoring his own views.

With reference to Dr. Holcombe's question, Dr. Skene remarked that he took special care *not* to state that certain portions of the brain remained undeveloped when the ovaries were wanting, but that certain capabilities of the brain were never manifested. He, on the contrary, stated that he did not know the location of that portion of the brain which presided over the sexual functions.

With reference to the experiments performed by Röhrig, and referred to by Dr. Birdsall, they were of great value as showing the possibility of demonstrating the relative influence which existed between the sexual organs and the nervous system.

With reference to Dr. Putzel's criticism, he had misunderstood Dr. Skene, who said that the ovaries in his cases were either imperfectly developed or functionally inactive. The text of the paper plainly stated that he did not claim that the only cause of insanity in the cases cited was defective ovarian development. An inherited predisposition to insanity was recognized. He was also sure that ovarian disease, as a cause of epilepsy, was of little account compared with transmitted peculiarities of organization. He doubted if either the absence of ovaries or the presence of ovarian disease would produce epilepsy in cases in which there was no constitutional tendency to the convulsive affection.

Dr. Skene thought that, on the whole, he claimed less for the sexual organs than other observers had done. He simply desired to prove that the ovaries were the most potential elements of the sexual system, in their influence upon the nervous system.

Regarding the large number of cases examined post-mortem by Dr. Putzel, he would say that although the doctor found the ovaries apparently normal in structure, that did not prove that the sexual organs had nothing to do in the cause of the insanity. The ovaries might have been normal in structure, but deranged in function during life in

many of the cases. If his cases were all free from structural and functional diseases of the sexual organs, they were exceptional. He had never seen seventy-five insane women in middle life, taken as they came, without full derangement of the sexual organs among a large number of them.

On motion by Dr. Foster Jenkins the discussion of Dr. Skene's paper will be continued at some future meeting called by the President.

The Academy then adjourned.

CLINICAL SOCIETY OF MARYLAND.

Stated Meeting, held in Baltimore, November 5, 1880.

T. S. Latimer, M.D., President, in the Chair.

EXTENSOR PARALYSIS OF FOREARM TREATED BY ARTIFICIAL ELASTIC EXTENSION.

Dr. John Van Bibber exhibited a patient who, in consequence of the pressure exerted on the musculospiral nerve by allowing the arm to hang over the back of a chair while asleep, had incurred a complete paralysis of the extensor muscles of the right forearm. He came under Dr. Van B.'s treatment one week after the accident. The treatment consisted of the constant wearing of a rubber band extending from the elbow to the knuckles, being attached at each of these terminal points. This furnished an antagonistic force to the unimpaired flexor muscles, and gave exercise to the extensors. Added to this, massage of the limb eight or ten times a day and the faradic current of electricity were employed. The result was that after ten days of such treatment the patient was able to resume work. He is now (after seventeen days from the commencement of the trouble) able to do five days' work in eight days. The usual time of treatment of extensor paralysis is three to five months. The arm is much larger and muscles much firmer than on the well side, and the affected muscles respond readily to slight electrical currents. The interesting point in the treatment is the observation concerning the compensating effects of the will and the faradic current. In such peripheral paralyses the paralyzed muscles always react under induced currents of electricity, and if the current is tinely interrupted the muscles respond in a complete state of spasm. If milder currents are used the result is not so marked, and the muscles respond only with a slight agitation. He has adopted the plan in this case of asking the patient to contract the flexor muscles at short intervals during the application of the current, and immediately on ceasing this movement the hand becomes extended under the influence of the electrical spasm. This would be repeated some twenty or thirty times, until the paralyzed group was exhausted or no longer responded to the current.

This procedure causes a decided change in the circulation of the damaged muscular area, and gives the paralyzed group an exaggerated amount of exercise.

At the end of six days' treatment, improvement had so far progressed that the patient was able to raise the hand to a slight extent, showing by this indication that, whatever may have been the morbid condition of the nerves, it had now been overcome sufficiently to allow influence of the will to pass over the injured portion. After this improvement had been noticed the patient was examined before each application of the current in regard to the possible movement in the extensor muscles. The muscles were then tested for faradic reaction by slight currents. While the patient remained perfectly passive the diminished current would draw the hand up horizontally with the arm. If during the application of the same current the patient was asked to move his extensors as much as possible, it was found that the injured muscles acted with more force and extended the hand much above a line horizontal with the forearm. These experiments were repeated often and always with the same result, viz., that a slight current, supplemented by the will, would bring on much better contraction than either the electricity or will-power acting alone. This is another proof of the necessity of treatment to the paralyzed muscles, in order that when the impediment in the nerve is overcome the muscles may be in better condition to resume their natural functions.

EXTRA-UTERINE PREGNANCY—FETAL BONES PASSED PER RECTUM—DEATH ONE MONTH AFTERWARD.

Dr. Atkinson reported the following case: In 1872 he attended a young colored woman, who was supposed to be about five months pregnant. She was then suffering from symptoms of subacute peritonitis; these continued to term, her pregnancy otherwise being normal and exhibiting nothing calculated to excite suspicions of unnatural pregnancy. In February, 1872, he was called to attend her in her confinement. He found the os dilated to the size of a silver quarter. The fetal heart was audible and fetal movements were perceptible, both to himself and to the mother. While in this condition he was called away from her, and did not see her again until the following April, when he was told that, after lying in bed a month and discharging some bloody liquid from the vagina, she had gotten up and gone about. Examination satisfied him that there was a dead fœtus in the abdominal cavity. She was not seen again until May, 1880, having meanwhile gotten along pretty well. He now discovered a tumor in the right iliac region, about the size of a cocoanut. She suffered much pain, and could not bear the least pressure, symptoms which were attributed to peritonitis excited by the unnatural position of the child. Her pulse was 120–140, and temperature 102° F., and her condition was extremely unpromising. She had been treated by her previous attendant for typhoid fever. Dr. A. continued to treat her for the peritonitis for several months. In September, 1880, during his absence from the city, she had a severe pain accompanied by some obstruction of the bowel near the anus; this led her to introduce her finger into the anus, from which she drew out a bone. Shortly after Dr. Page extracted another bone lodged transversely in the rectum. The patient died of exhaustion about one month afterward. The two bones proved to be the inferior maxilla and ulna of a fœtus. Dr. Atkinson said that he had reflected seriously upon the propriety of operative interference in this case, but had concluded that it was better to let it alone.

Dr. B. Bernard Browne said it was an interesting question whether it was a case of primary extra-uterine conception, or due to rupture of the uterus at the time of labor. Cases are not very infrequent in which the fœtus becomes encysted; the woman may even bear children while carrying an encysted fœtus. The diagnosis of this is very difficult.

Dr. Erich said a number of these cases had been reported within the last few years, in which the women were relieved by operation. If the diagnosis were satisfactorily made out and the patient were suffering, we had better operate; many cases could

thus be saved. The great danger of the operation is in disturbing the placenta, which ought not to be meddled with.

If, in the case under discussion, the opening into the rectum through which the bones were discharged could have been reached, the patient might possibly have been saved by a complete removal of the fœtus and careful washing out of the cyst with carbolized water.

Dr. Claude Van Bibber alluded to a case reported by his father, Dr. W. Chew Van Bibber, in the *American Journal of the Medical Sciences*, 1858, in which the whole fetal skeleton was removed by the rectum four years after the symptoms of labor.

THREE CASES OF PROBABLE RUPTURE OF KIDNEY.

The first case, reported by Dr. O. J. Coskery, was that of a brewer, who fell a distance of thirteen feet upon his right side. This was followed by profuse hemorrhage from the urethra and collapse. On examination, besides other injuries there was fracture of the last two ribs on the right side, and an ecchymosis extending from the ribs to the crest of the ilium. Reaction was established under the use of stimulants by the second day, but the patient continued to pass bloody urine until the third day after the injury. Excluding other possible causes of hæmaturia, and taking the above facts into consideration, particularly the reception of the chief force of the fall over the region of the kidney, and the pain felt over the organ on deep palpation for some days after the complete clearing of the urine, Dr. C. felt justified in inferring a rupture of the kidney. The patient recovered.

The second case was that of a carpenter, who fell, with some beams and planks, thirty-five feet. He was very much bruised, especially over the region of the right kidney. At the end of twenty-eight hours, no urine having been passed, a catheter was introduced, which gave exit to clear urine, gradually changing to blood. He had no chill or pain, but the abdomen became tympanitic. The urine continued bloody until the sixth day. He returned to work on the thirteenth day.

In the third case the injury was inflicted over the left kidney by the kick of a mule, giving rise to a copious hæmaturia, which continued for ten days. The patient was discharged apparently well, but in a few months became an inmate of the almshouse, with symptoms of pus and hyaline casts in the urine, hectic fever, gradual emaciation, and sudden death. On post-mortem examination, the immediate cause of death was found to be enormous distention of the pericardium with fluid. A large abscess was found on the left side under the subperitoneal fascia, beneath and around the kidney, which was atrophied. The pus had burrowed in the tissues around extensively and had perforated the colon. There was apparently no communication between the abscess and pelvis of kidney.

Dr. Atkinson asked if there was anything in medical literature bearing upon this subject.

Dr. Coskery replied that it was alluded to by both Bryant and Erichsen.

Dr. Tiffany said a case almost identical with the last one reported in Dr. Coskery's paper was to be found in Cooper's Surgical Dictionary.

Vivisection Again.—Mr. Henry Bergh delivered a free lecture on vivisection at Association Hall on the 3d inst.

Correspondence.

LIME-WATER IN DIPHTHERIA.

To the Editor of The Medical Record.

Dear Sir—My attention has been called to the following remarkable passage occurring in a recent publication of Dr. A. Jacobi:

"Dr. Billington takes exception to my remarks on the inefficiency of lime-water, made before the New York Academy of Medicine on the occasion of the doctor's reading a detailed account of forty cases of diphtheria. In an open letter to the editor of the Medical Record, over his name and address, he says it occurred to him that the question might be answered by a very simple experiment. He says: 'I was permitted by a patient, who has an unusually patent and tolerant throat, to hold a bit of red litmus-paper at the end of a wire, and protected from the action of the saliva by coils of wire, well back in the pharynx, the patient being instructed to breathe naturally. I then, with the atomizer which I use in treating diphtheria, and in exactly the same manner, threw the spray of lime-water into the throat. In fifteen seconds the red litmus-paper was turned blue—this change occurring quite as rapidly and as completely as when the same experiment is performed in the outer atmosphere. In other words, it was not appreciably modified by the breath. Again, litmus-paper moistened with lime-water can be held in the breath for some minutes before its blueness is perceptibly affected by it. This experiment seems to me to show that lime-water spray reaches the fauces and pharynx as lime-water, and does not immediately thereafter cease to be lime-water. When spray thrown into the throat by this method enters the larynx, it does so by being drawn in thither by the inspired breath, which is comparatively free from carbonic acid, and it therefore reaches the walls of the larynx as lime-water, and there continues to be lime-water for a certain length of time.'

"So the red litmus-paper, while dry, was not easily affected by the carbonic acid of the breath? Why should it, when no chemical text-book makes a statement to the contrary? And the red litmus-paper was turned blue by covering it with lime-water—indeed! Litmus-paper owes its very existence and reputation to the fact that it is so very sensitive, and shows the effect of either acid or alkali so readily, and in the most minute quantities. Let us remember that the atomizing apparatus with each pressure sprays about one five-hundredth of a grain of lime; that, therefore, it takes hours to send a grain of lime into the throat; that, however, a membrane has to lie immersed in lime-water for hours before it shows signs of maceration; that lime-water introduced into the trachea, even, through the tracheotomy tube, does not dissolve membranes to any satisfactory degree—though they be only deposited upon, and not (as on the tonsils and parts of the larynx) into the tissue; and though in the trachea the mucus of thousands of glands readily aids in macerating; and though in the opened trachea the lime-water certainly reaches the membrane, which is not so certain in regard to pharyngeal or even laryngeal membranes when you atomize into the mouth and pharynx. And as the doctor relies on experiments, he can add one which he made when he was quite

young. Let him blow into as much as half a pint of lime-water (containing about four grains of lime), and the whole of the lime will be a turbid cloud of carbonate after a very few expirations.

"Here is another experiment: Let the doctor dip blue litmus-paper into moistened carbonate of lime, or a solution of sodium carbonate, or even bicarbonate, and his blue litmus-paper will behave exactly as it does in his patient's throat, to wit, it will remain blue—which is not remarkable at all; and then let him breathe upon the litmus-paper, moistened with calcium carbonate, ever so long, and it will remain blue. Should it not? In his experiments on his patient's throat nothing is proved except that the newly formed calcium carbonate secures the blue color to his litmus-paper for some time. That is all, and requires no proof."

This is a long delayed rejoinder to my "open letter" above referred to, which appeared in your issue of April 3, 1880. As I am not publishing a book at present, I have no other resource than to address to you another "open letter," in the hope that the hospitality of your columns, which I have so often enjoyed, will not be refused to me.

Dr. Jacobi, in his remarks before the Academy of Medicine, had asserted that so rapid is the action of the carbonic acid of the breath upon lime-water spray entering the throat, that "when it does go there it is no longer lime-water," but carbonate of lime, and is "inert, and might as well be replaced by something else." My first experiment conclusively refutes that assertion. Dr. Jacobi says: "So the red litmus-paper, while dry, was not easily affected by the carbonic acid of the breath?" etc. But no such question was raised at all. Will the doctor please state what effect carbonic acid could, under any possible circumstances, be expected to produce upon *red* litmus-paper? But in his next sentence he does exactly state the question at issue, and admits all that the experiment was intended or claimed by me to prove. He says: "And the red litmus-paper was turned blue by *covering it with lime-water*," etc. If it was turned blue almost instantaneously in the pharynx by "covering it with lime-water" from the atomizer, what becomes of the doctor's previous assertion that "when it does go there it is no longer lime-water?" Does the doctor mean to assert that carbonate of lime would produce the same effect upon red litmus-paper? Let him try the experiment.

After this uncordial, but still unconditional surrender to my first proposition (that lime-water reaches the walls of the fauces and pharynx as lime-water) Dr. Jacobi proceeds to attack my second, that "it does not immediately thereafter cease to be lime-water." He adduces the familiar experiment of blowing into lime-water, as ignominiously refuting that assertion. Let us see if it does. Even in this experiment a gill of lime-water becomes increasingly turbid for at least three minutes, although it is kept in violent agitation and the breath is brought rapidly into contact with every atom of lime which it holds in solution. But this does not answer the question as to how much time is required to effect the same change when the breath simply passes over a membrane saturated or covered with lime-water.

Dr. Jacobi says: "The doctor relies on experiments." Verily, I do. What a multitude of unprofitable discussions, not to mention other dire evils, would have been avoided had that reliance and careful performance been more general before rushing into assertion! I will therefore suggest to the doctor still another experiment: Let him take a small bit of Squibb's blue litmus-paper, which, as he correctly informs us, owes its reputation to its extreme sensitiveness to acid in the most minute quantities. Let him first moisten it in *distilled* water and then hold it in his breath. He will find that after two minutes only a very slight change is perceptible; after three minutes the blue has become a venous blue, and after three minutes more it will not have passed beyond a purplish tint. Blue litmus-paper that has been dipped in lime-water will undergo a similar change, only more faintly and several minutes more tardily. But if blue litmus-paper, or blue litmus-paper which has been saturated in lime-water, be dipped into carbonic acid water it becomes bright red in a very few seconds. What does this teach us? Evidently, that when the diluted carbonic acid of the breath passes over a membrane saturated with the solution of a substance for which it has an affinity it does not "instantaneously" penetrate it with complete chemical action, but that this process requires "a certain length of time"—"some minutes." My second proposition is therefore demonstrated.

With regard to the stress which Dr. Jacobi lays upon the smallness of the quantity of lime present in lime-water spray, I remark: 1st, let him spray upon his hand with a Delano atomizer and see how many seconds will be required to make the spot dripping wet; 2d, the same argument would be nearly as effective against most of the therapeutical uses of lime-water, external or internal. It is probable that the profession will hardly consent to its dismissal from the materia medica just yet on any such theoretical ground.

To Dr. Jacobi's argument, from the fact that the maceration of diphtheritic membrane requires hours, it is sufficient answer, that in favorable cases in which this effect is sought the atomizer can be used so frequently as to keep the membrane bathed in lime-water for a considerable portion of the time. Of course this therapeutical agent, like most others, has obvious limitations, some of which I have elsewhere pointed out. But, independently of its solvent action upon membrane, it must not be forgotten that lime-water spray, with the addition, as I use it, of just the proper proportion of carbolic acid (♏ x. in fl. ℥ iv.) is a most agreeable and efficient aid in subduing inflammation.

Dr. Morell Mackenzie says, under the head of solvents ("Diphtheria: its Nature and Treatment," p. 72): "Lime-water is certainly useful when the membrane is not very thick." Dr. Alonzo Clark (MEDICAL RECORD, May 15, 1880, p. 532) says: "The same lime-water to be thrown upon the forming membrane I believe is the most efficacious thing you may have." And similar excellent testimony might be adduced in overwhelming amount did space permit.

Is our list of efficacious remedies in the treatment of diphtheria so numerous that we can afford to discard one which may, in an occasional instance, turn the scale in our favor?

I must beg permission, before concluding, to touch briefly upon a connected topic. I have had the honor to present to the profession, before the New York Academy of Medicine and through your columns,* a method of treatment of diphtheria which has met with wide acceptance. It is a system of precisely defined details, reached through definitely

* Transactions New York Academy of Medicine, 1876, p. 287; New York MEDICAL RECORD, March 18, 1876, p. 199; April 1, 1876, p. 226; January 12, 1878, p. 21; March 27, 1880, p. 383.

stated reasonings from my own accurately related clinical experience. There have been attempts to claim for Dr. Jacobi (who certainly had written before I did) the authorship of my ideas, which attempts have not (to say the least of it) been rebuked by Dr. Jacobi. As the general conclusions upon which we happily agree were original with neither of us, only certain details being strictly "original" with me, and as I have had no disposition to set up any claim to startling originality in reference to anything whatever, nor special objection to any one else's taking credit, if he could, for everything ever said or done about diphtheria from the time of Bretonneau down, and as I have considered that the individuality of my humble contributions to the subject would be sufficiently self-evident to every fairly intelligent reader, I have contented myself with stating the simple truth as to the utter invalidity of the claim, and proving it conclusively by incontestable chronological evidence (*vide* New York Medical Record, February 23, 1878, p. 158).

But I have always insisted that any who should see fit to *test* my method of treatment should test it fairly in all its particulars (making allowance, of course, for such variations as should be required by the exigencies of exceptional cases), that it might stand or fall by its actual merits. If Dr. Jacobi's method of treatment, therefore (so far as he can be said to have ever presented any distinct method), were really (as he has claimed) identical with mine, I should not take the trouble to protest against his going on indefinitely calling my method "our method." But since, when it comes to details, there are wide divergencies in our methods, not only on the important point just now under discussion, but also on others which I consider equally important, and liable in not a few cases to be vitally important, I must enter an objection to their being confounded. Else one who should try one method and find it a failure, might involve the other also in his condemnation, and thenceforth decry (after the manner of some) all local measnres of treatment.

Dr. Jacobi agrees with me that details are "all and everything" in the treatment of diphtheria. It follows that differences of detail should not be overlooked in general resemblances, but that each method of treatment should be judged discriminately by its own results, in order that there may be a "survival of the fittest," and, consequently, of the greatest possible number of patients. Yours, very truly.

C. E. Billington, M.D.

New York, December, 1880.

THE INTRODUCTION OF THE METRIC SYSTEM.

To the Editor of The Medical Record.

Sir—There is a ratio between the unit of the dose of liquid medicines (viz., a minim) and the ordinary dose prescribed (viz., a teaspoonful or 60 min.), which, if applied to the metric system, renders the estimation of doses exceedingly simple and easy, even to one who has long been accustomed to the older system.

Now, as the unit of the dose of solid medicine (viz., a grain) is indicated in precisely the same manner as the minim by the metric system, such doses are estimated with the same facility.

It is evident that to secure a one-minim dose of a drug in a teaspoonful dose of a mixture the ratio of the drug to the menstruum should be 1 to 60.

A 60 gramme (or ʒ ij.) mixture is, I believe, a very ordinary size to prescribe; the following prescription would then contain one minim of the drug in a teaspoonful dose:

	Grammes.
℞. Tr. aconiti	1.00
Aquam ad	60.00
M. S.—Teaspoonful dose.	

and the following would contain 10 minims of the liquid and 15 grammes of the solid drug in a similar dose:

	Grammes.
℞. Tr. digitalis	10.00
Potass. bicarb	15.00
Aquam ad	60.00
M. S.—Teaspoonful dose.	

Thus far, certainly, no mental calculation is required; and from this, as a starting-point, all other doses or other sized mixtures can be computed with the greatest ease and exactness by simple multiplication or division.

An equally simple method for estimating doses for pills, powders, or other dry mixtures is obtained by prescribing in numbers of 15, and multiples or factors thereof, instead of 12, which, I believe, is the *ordinary* number at present.

(I hope this suggestion will not be considered "revolutionary" by those who oppose the introduction of the new system.)

As a gramme contains 15 grains, a pill-mass in which there is one gramme of a certain drug, if divided into 15 pills, will give a grain to each pill. For example: it is desired to make a pill containing 1 gramme extr. colocynth co., ½ gramme extr. nux vomica, ¼ gramme ferri sulph., and ¼ gramme extr. hyoscyamus, and we have the formula as follows:

	Grammes.
℞. Extr. colocynth co	1.00
Extr. nux vom	.50
Ferri sulph	.25
Extr. hyoscyam	.20
M. et in pil. no. xv. divide.	

It will be objected that such a method of calculation mixes up the two systems, and so it does; but this method is recommended only for those who have learned the doses in grains and minims, and to whom it would be almost impossible, certainly impracticable, to forget the old in learning the new.

The change is certainly desirable, and cannot be completely made by this generation. There is precisely the difference in the two methods that there is between reckoning money by the pounds, shillings, and pence of the English and our own dollars and dimes.

I am sure that the practice of a week will satisfy any one as to the advantages of this method, provided he is willing to be convinced that the new system has virtues superior to the old.

These ideas may or may not be original with me; I have never seen or heard them expressed.

C. H. Eames, M D.

East Saginaw, Mich., December 7, 1880.

ACCIDENTS TO OPERATIVES IN COTTON-MILLS.

To the Editor of The Medical Record.

Sir—Operatives in cotton-mills meet with frequent accidents from the machinery.

As this branch of the cotton industry is growing rapidly, it may be instructive to record my experience, extending over a period of two years, with a

mill that employs 2,000 operatives. Within this period several hundred raw operatives have been employed, bringing the number of accidents to a much higher percentage than formerly. Skilled operatives are much less subject to the usual injuries, but even among them there is every year an appreciable percentage of all cases.

The parts coming in contact with the machinery, and consequently most often wounded, are the hands and face. I will briefly describe the most fruitful sources of injury to the hands and face, as these accidents form seventy-five per cent. of all the cases.

Nearly all of the injuries to the hands occur in the card-rooms. On the outside of the cards is a revolving roller, covered with sharp needle-like points, called the "licker-in," from the fact that it conveys the lint cotton into the cards. This roller must be kept free from discolored lint and threads, and is oiled often. While performing this duty the hand comes in close contact with the "teeth" of the cards, and is frequently drawn in and cut.

Another source of accidents is the loom, the fingers being caught between the lathe and beam. Injuries to the face are caused by the shuttle flying out, and by belting and shafts. The finishing shears, too, produce a considerable number of wounds.

All wounds made by the cards are lacerated; by the loom, contused; by the shears, remarkably smooth, clean cuts. The cards furnish the majority of all accidents in this mill, where there have been eighty-five wounds treated in the space of two years. During this period twenty-seven fingers have been amputated, and with few exceptions all of the patients came from the four card-rooms.

The pickers have similar rollers to the cards, but cause only a few injuries, as the hand seldom comes in contact with them.

The treatment of all these wounds has been conducted uniformly on the strict antiseptic plan as laid down by Lister. In only one single incident has there been any complication arising from gangrene, erysipelas, tetanus, etc., nor has it been necessary to perform a re-amputation. In one case three thecal abscesses developed. These facts I mention—not boastfully, nor to prove that I am a blind follower of Lister's method, for I know that many wounds heal well with simple water-dressing, and that many of those that I have treated antiseptically would have recovered by a different mode of treatment—but I simply give results with the antiseptic method. The dressing I have always used is prepared in New York, and consists in the well-known oiled silk, gauze, catgut ligatures, and mackintosh. Operations are performed under a three-per-cent. carbolic spray. In wounds where drainage is necessary the usual drainage-tubes are employed. In short, the entire procedure is followed out as prescribed by Lister. The method as I use it was learned by me at Leipzig, where it was introduced, and is generally carried out by Prof. Thiersch. It would be tedious to give each individual case, or to cumber with details, as much has been written of late, and those elaborate articles on the manner of applying the dressing can be found in text-books and journals. Some minor points I would like to call attention to. Catgut ligatures should be employed when possible. The protective should be entirely covered by the gauze, and it must be impervious to the acid in the gauze. This is done by furnishing the protective silk with a coating of copal varnish. Spray must be used at the operation and at every renewal of the dressing. The dressing must be kept in a close box to prevent evaporation of the acid.

These wounds have all healed up in from six days to two weeks.

From similar accidents to the fingers and hand, three cases have fallen under my observation; all of them were treated by the open method; all three developed tetanus and died.

Repeatedly lacerated fingers and toes that have been brought to me for immediate amputation have been saved. In addition to these wounds in the Eagle and Phœnix Mills, I have treated many others in private practice antiseptically, and with unvarying results. Two cases I saw in consultation in private practice, that were treated by the open method, died respectively from septicæmia and erysipelas. In my practice at the Eagle and Phœnix Mills, in no instance has a modified antiseptic procedure been adopted, but in every case the same strict regard for antiseptic minutiæ has been observed, without speculation as to specially adaptable or non-suitable cases.

Previous to the adoption of the thorough antiseptic method, several hands and arms were amputated in the Eagle and Phœnix Mills, owing to accidental wound complications. Among the number of accidents that I have treated at the Eagle and Phœnix Mills, I will give some of the most striking: Amputation of twenty-seven fingers, and eight toes; treatment of five scalp wounds, three burns of face and arms, two gunshot wounds through the arm, one wound through the hand caused by ram-rod from pistol, one scald, one incision in thigh with dislocation of patella, one splinter through the foot, one laceration of radial artery, one incision in face three inches long and through the cheek with fracture of pons zygomaticum, three incised wounds in one man. This last-mentioned patient received one wound in each arm about one and one-half inches deep and three inches long, about two inches from the head of the humerus; the third wound was in the nape of the neck, extending downward along the spinal column; into it half of the hand was conveniently inserted. All of these wounds were closed with carbolized silk sutures and dressed with antiseptic dressing. At the end of six days union was completed without the slightest suppuration having taken place. Since the introduction of the antiseptic dressing at the Eagle and Phœnix Mills, the results attending its use have been so eminently satisfactory that the authorities of these mills urge its use in every case that falls within their jurisdiction.

S. N. JORDAN, M.D.

COLUMBUS, GA.

DR. C. L. MITCHELL'S NEW INSTRUMENT FOR MEDICATION OF THE DEEP URETHRA.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR—In your journal of December 25, 1880, I see an article by Charles L. Mitchell, of Philadelphia, on "Local Medication of the Deep Urethra," in which he describes what he is pleased to call a *new* instrument and method of making applications to the deeper portions of the urethral canal. I read with pleasure the sound teaching in said article, and agree with its author that local applications to the urethra are often necessary for a successful cure, when injections, either alone or combined with nauseous doses, will utterly fail.

In several articles I have laid great stress on the necessity of local applications, as above cited, and

not exclusively to the *deep-seated* parts, but to any diseased portion of the organ, no matter in what portion it occurs, and whether in the male or female.

I advocated such procedure, among others, in an article on the endoscope, etc. (*American Practitioner*, August, 1871), about ten years ago. Though agreeing perfectly with the principle of Dr. Mitchell, I cannot see, on the other hand, why the doctor calls this a *new* method, and his simple tube a *new* instrument.

For the last thirteen years, if not longer, I have practised local applications to the urethra in various ways. In the "Transactions of the Medical Society of the State of New York for 1870" you will find my article on the endoscope, in which the practice of local application with ocular observation is illustrated. To find a diseased spot of the urethra from the touch alone, by means of a bougie à boule, I have shown in a paper, "Electrolysis in the Treatment of Strictures of the Urethra," published in the "Transactions of the Medical Society of the State of New York for 1874." Soon after I ordered a straight tube of hard rubber for the introduction of urethral bougies *in situ*. These tubes were manufactured and have been sold up to the present time by Messrs. Geo. Tiemann & Co., New York. The same gentlemen made for my use, at about the same time, an instrument which is almost a facsimile of the tube represented in the last edition of your valuable journal as the *new* instrument of Dr. Mitchell.

My instrument consists of a hollow silver tube ten inches long, and of the size of No. 20, French scale. The lower end is slightly curved, in order to reach the deepest portion of the urethra. For the easier introduction of the instrument, a movable plug, runs through this tube. This same plug is also used for propelling the urethral bougies out of the canula into the urethra. For this purpose Dr. Mitchell has only "*an elastic steel stilette*," which is the only difference between the two instruments; but even this can scarcely be called a difference, as I have attached to my instrument also an elastic wire, twisted at the end, corkscrew-like. To this end a cotton-pledget is twisted, dipped into a solution, and carried through the tube, to the diseased portion of the mucous lining. The same wire is also used for cleansing diseased parts. I have, therefore, two applicators, the wire for carrying solutions, and the plug for carrying in solids, *i.e.*, bougies; the first at the same time acting as a cleanser, and the second as a guide for the introduction of the tube. A good illustration of plug and wire can be found in cuts in "Transactions of the Medical Society of the State of New York for 1870," opposite page 121.

Having herewith proven, I believe, that neither the method nor the instrument of Dr. Mitchell is new at this time, I am far from claiming it myself as an original idea, and know that many surgeons have practised the same method at the same time and previous to myself.

I am writing these lines on the spur of the moment, without the aid of a library, but believe the instrument to be so simple that representations of it can be found in old authorities.

Urethral bougies I have used in different forms, and made of the same material Dr. Mitchell enumerates, for the last fifteen years, without claiming any originality myself. The first idea to use gelatin, glycerin, etc., was given me in an article written by a French surgeon, whose name I cannot recall at this moment. Such manufacture has been considerably improved by the French, until the trade was supplied with the elegant articles by Reynal. At the present time we can get good medicated bougies made to order in this country. They are pressed into moulds with great force by a brass machine.

My object in writing this is not to differ with the author of the aforementioned paper; on the contrary, to agree with and to congratulate Dr. Mitchell for having brought to the notice of the profession at large such an important subject as local medication of the deep urethra, and to blame myself not to have written about it ere this. There can be no doubt that Dr. Mitchell has acted in good faith, not knowing that such an instrument has been used before.

ROBERT NEWMAN, M.D.,
Surgeon to Northwestern Dispensary.

NEW YORK, December 27, 1880.

TRACHEOTOMY AND THE TUBE.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR—In your remarks on the sad case of Dr. Wilbur F. Sanford's death from diphtheria, you say that the prompt clearing of a "tracheotomy-tube is very important, but there should be other ways of doing it than by the direct application of the surgeon's mouth . . . . It seems strange that no suitable instrument for such a purpose has been made."

I think several means are at hand. Most important of all is, of course, never to use other than double canulas, which permit the removal of the inner tube and the cleaning of it with a feather, which latter may also be pushed through the outer canula in order to remove obstructions below it. In the second place a pair of forceps, so curved as to be able to be introduced through the whole length of the canula, and even somewhat beyond, is very useful in case of croup membranes blocking up the calibre of the tube, or accumulating below its inferior end. I had one made some years ago by Tiemann & Co.

Finally, for cases where the obstruction is due to fluid accumulating below the canula, there is an old instrument, which at all events will prevent blood and mucus from coming in direct contact with the operator's mouth. It consists of a double necked bottle. To one of the necks is attached a rubber tube leading to an elastic catheter, which is introduced through the canula. When suction is made at the other neck fluids are drawn into the bottle and fall to its bottom. But even the inhalation of the air aspired is likely to be fraught with danger. I think, therefore, that the bottle might be replaced by a Davidson's syringe, which usually is easily obtained. By taking off the plunger and tying the rubber tube air-tight round the catheter, the necessary suction force can be produced by compressing the bulb in the usual way.

Yours respectfully,

H. J. GARRIGUES.

104 WEST FORTY-FIFTH STREET.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from December 25, 1880, to December 31, 1880.

MEACHAM, F., Capt. and Asst. Surgeon. To report in person to the Commanding General, Department of the East, for assignment to duty. S. O. 275, A. G. O., December 28, 1880.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending January 1, 1881.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Dec. 25, 1880.	0	5	153	2	24	177	10	0
Jan. 1, 1881.	0	10	173	2	45	157	9	0

NEW YORK ACADEMY OF MEDICINE.—At a stated meeting of the Section on Obstetrics and Diseases of Women and Children, held December 23, 1880, Dr. Henry E. Crampton was elected Chairman, and Dr. Alex. S. Hunter Secretary for the ensuing year.

DR. HENRY C. CAFFEY, who for the last ten years has lived in this city, died December 28th, at his residence, No. 315 Madison avenue, at the age of sixty years.

DR. ROBERT NESMITH.—Dispatches from Paris announced the sudden death, on December 28th, of Dr. Robert Nesmith, son of the late John P. Nesmith, of this city. Dr. Nesmith was about forty years of age. He was educated at Columbia College and the College of Physicians and Surgeons, and had been abroad for the last two years. He was a member of the Century Club, and regarded as a very promising member of the medical profession, while his literary abilities were considerable. He was the author of the sketch of the late Dr. Anthon which attracted general attention some years ago. It is conjectured that heart disease was the cause of his sudden death, but the members of the family are not yet informed as to particulars. He leaves a widow and one child.

VIVISECTION AGAIN.—Mr. Bergh opened his winter campaign against vivisection by a free, illustrated lecture on the subject, which he delivered at Association Hall, on the evening of the third inst. The hall was about two-thirds full, part of the audience being medical students. These young gentlemen showed their lack of sympathy with the speaker by applauding the name of every physiologist as it was mentioned. On the whole, however, they behaved very well, and the only approach to disturbance was when the speaker announced his belief in a hell, and that eternal torments were in store for certain physiological professors whose alleged cruelties were dramatically portrayed.

There was nothing in the speaker's remarks deserving the name of argument. The lecture was made up of anecdotes illustrating the intelligence of animals, followed by carefully selected and judiciously mutilated accounts of vivisections. He described some of the vivisections at the Veterinary School at Lyons, and spoke confidently of its professors being eventually consumed with fire and brimstone. He referred, of course, to the "bellish Magendie," and thought Sir Astley Cooper, Bell, Brodie, and Bernard not much better.

He assured his audience that the cruelties practised on the continent were going on, and in this city and state; and he described a vivisection which was performed at one of the colleges in this city. A dog was anæsthetized, and its thoracic and abdominal viscera exposed, in order to show the action of the heart and lungs. This the lecturer considered monstrous.

The burden of Mr. Bergh's remarks was this: animals have feelings and intelligence; vivisection is cruel and useless; therefore, please sign my petition to have it abolished.

The amount of cruelty in vivisection was grossly exaggerated, and the character and humanity of physiologists basely slandered; on the other hand, the usefulness of vivisection in the past, and its necessity for scientific progress were entirely ignored.

THE INTERNATIONAL SANITARY CONFERENCE began its meetings at Washington, on January 3d, and was well attended by representatives of the leading countries of Europe and America, and by representatives from Japan and China. England and Germany will be represented by the Consuls-General of those two countries stationed at New York, and Canada by Dr. Tache, Deputy Minister of Agriculture. France, Austria, Italy, Russia, Turkey, Sweden and Norway, Spain, Portugal, Belgium, Netherlands, Japan, China, Brazil, Mexico, and Chili will be represented by their respective Ministers Resident at Washington.

INSANE ASYLUM MANAGEMENT.—The Wisconsin Insane Asylum has recently been investigated by a Legislative Committee with the result of finding incompetent and extravagant management. The committee recommends a change in the management, the appointment of a paid Board of Trustees, and the entire separation of the medical from the business department of the asylum.

It is at least gratifying to see that the necessity of separating medical from executive management is becoming appreciated.

CRIPPLES IN GERMANY.—The number of deformed, lame, hump-backed people is very great. An English doctor told us he had never seen so many ricketty, ill-kept, and wretched-looking children as in Germany. How can it be otherwise? The mothers are in the fields, and cannot be looking after their babies, mending and making at home, where surely there is always enough to do for one pair of hands. As we drove along, the cripples sat by the roadside tending cows and goats, which must never be allowed to go alone, lest they should stray beyond their owners' narrow frontiers. Carts, with small wheels very far apart, most rudely put together, passed us driven by women.—*Lady Verney, in Contemporary Review.*

DEATH OF DR. DAVID P. SMITH.—Dr. David P. Smith, Professor of Surgery in the Yale Medical School, and one of the most prominent surgeons of the state, died at his residence, in New Haven, on December 26th.

THE WATERS OF THE HOT SPRINGS at Arkansas are said by one of the old physicians of that place, Dr. G. W. Lawrence, to kill consumptives. Dr. L. declares that, having no interest in any cemetery or undertaker's establishment, he does not want people to go there to die. He does assert, however, that these waters are the most valuable adjuncts in the treatment of chronic diseases of the blood, the skin, and the nervous system, and also in uterine and catarrhal affections, and in "true scrofulosis."—*Louisville Med. News.*

PATENT MEDICINES.—In the year ending March, 1880, England paid stamp duties on 16,627,131 packages of patent medicines. The receipts amounted to £135,366.

A FOG AND SMOKE CONFERENCE has been held in London. The object is to devise some way of reducing now the constantly increasing fog and smoke, which threaten eventually to stifle the city. A number of medical men and sanitarians are connected with the movement.

A YOUNG RUSSIAN LADY, a medical student in Paris, recently shot herself. The cause was supposed to be the fear that she could not pass her examinations.

BISHOPS AND DOCTORS.—"I am not ashamed to say I have a son a doctor."—*Speech of the Bishop of Liverpool to medical men.*

> "How kind of the bishop and how patronizing,
> And yet to his *Punch* 'tis a little surprising
> That speaking to medical men there in session
> He dared speak of shame and a noble profession,
> A bishop looks after our souls, but how odd is
> The sneer that's implied at the curers of bodies;
> For surely it would be no hard task to fish up
> A hundred brave doctors as good as the bishop."
>
> —*Punch.*

AN UNHEALTHY SCHOOL BUILDING. — Grammar School No. 2, this city, has been pronounced unhealthy and dangerous on account of the defective plumbing.

NOT TYPHOID FEVER.—The results of sanitary inspections by officers of the Board of Health show that a large number of cases of so-called typhoid fever are in reality only a low form of fever due to debility, bad nourishment, etc. Such cases are particularly frequent on the east side below Second Street.

THE THERMOGRAPH.—Dr. A. Wellington Adams, of Colorado Springs, Col., gives a very elaborate description and makes very strong claims for a new instrument invented by himself and called the Thermograph. It is described in the *Rocky Mountain Medical Review*, for November, 1880. This instrument will, says the author, give a continuous curve denoting the constant febrile condition of the subject. It has already demonstrated a minor heat curve for typhoid fever. It will also give at the same time and on the same strip of paper a sphygmographic and respiratory curve. The instrument is expected to be of great value to meteorological science.

The following is a brief description of its mechanism and principles: A coiled spring is made of two lamellæ of brass and steel, the brass forming the outer part of the coil. This spring is fixed at the centre, but the free end presses gently against the contents of a short vulcanite tube. As the temperature of the apparatus rises the metal coil expands, and the pressure exerted by the free end varies and always corresponds to the temperature. The vulcanite tube is filled with a powder composed of plumbago, gas carbon, and silver, in a finely divided condition. The electrical conductivity of this mixture changes with the pressure to which it is subjected. Wires from an electric battery are connected so that the current passes through the powder, and it will therefore be understood that with the rise and fall of the temperature, and the consequent changes in the pressure of the coil upon the powder, the intensity of the current will vary. It is now only necessary to arrange a means of recording these alterations in the current, and this has been done in a very ingenious manner. A wire helix, of special construction, forms part of the circuit, and into this a soft iron core is passed, free to move up or down. The position of the core is governed by the strength of the current, and as the core rises and falls it communicates motion to an index which records its position continuously upon a moving strip of paper. The battery and the recording part of the instrument are placed in a neat cast iron case, while the coil is enclosed in a German silver case about an inch and a quarter in diameter. To use the thermograph it is only necessary to place the little case in the axilla of the patient, and a continuous record of the temperature is thus obtained. The cost is estimated to be not over $50.

THE TWENTIETH ANNIVERSARY OF THE MEDICO-CHIRURGICAL SOCIETY OF GERMAN PHYSICIANS of this city was celebrated by a dinner at Sieghörtner's, Monday evening, December 20th. Before sitting down to the banquet, the proceedings of a regular meeting were transacted, the matters of most interest being a case of a particle of iron in the vitreous, which was seen on the eighth day by Dr. Brekes, and which the magnet was powerless to remove. The eyeball was enucleated. Following this report was the discussion on the management of the placenta in abortion and at full term, when adherent. The weight of opinion was in favor of the expectant treatment—that is, removing all the portions of placenta easily removable, but applying no violent force to tear off those tightly adherent until constitutional symptoms gave the indication.

The officers of the society for the ensuing year are: *President*, Dr. C. Krog; *Vice-President*, Dr. F. Nordemann; *Treasurer*, Dr. Wm. Guden; *Recording Secretary*, Dr. L. Weiss; *Corresponding Secretary*, Dr. I. Scheider; *Executive Committee*, Drs. Lilienthal, Hackeling, and Kohn; *Librarian*, Dr. I. Glaser.

DEFIBRINATED BLOOD IN RECTAL ALIMENTATION — Dr. Andrew H. Smith, of this city, writes: "I have found recently, by trial in a considerable number of cases, that the disagreeable odor sometimes observed about patients who are using defibrinated blood for rectal alimentation, may be almost or entirely obviated by the addition of a grain or a grain and a half of chloral in solution to each ounce of the blood. There is also this further advantage, that if the chloral is added to the whole quantity of blood when first received, decomposition will be delayed for two or three days longer than without the chloral, and a less frequent supply will be required. When the use of the blood tends to produce constipation, as is often the case, an occasional laxative should be given to prevent possible impaction in the colon."

DEATH AND THE TRACHEOTOMY-TUBE.—The gentleman to whom reference was made in a recent number of the RECORD, and who sacrificed his own life by diphtheria in trying to save that of a patient suffering from the same disease, was Dr. Wilbur F. Sanford, of Greenpoint, N. Y.

REMEDY AGAINST DUPLICATING PRESCRIPTIONS.—Dr. E. T. Blackwell suggests (*Phila. Medical Times*), as a remedy for the above evil, that Congress be appealed to, and that physicians' prescriptions be made copyright. The handwriting of the author and his autograph should be held sufficient to establish his claim to the property in question.

Original Lectures.

SERO-FIBRINOUS PLEURISY.

A Lecture,

By A. L. LOOMIS, M.D.,

PROFESSOR OF PATHOLOGY AND PRACTICE OF MEDICINE IN THE UNIVERSITY MEDICAL COLLEGE, NEW YORK.

(Reported for The Medical Record.)

Part II.

During the stage of effusion, bulging of the intercostal spaces, the displacement of the heart and abdominal viscera, will be easily recognized, and the presence of which will render it almost impossible for you to make a mistake in the diagnosis. But during the stage of absorption and adhesion, when there is no longer bulging of the intercostal spaces, no displacement of the viscera, etc., you have to rest your differential diagnosis almost entirely upon the signs obtained by auscultation. In fibrous induration of the lung there is retraction, and dulness on percussion; the same in the latter stage of pleurisy. In the former there is loss of motion on the affected side; the same in the latter. In the former there is increased vocal fremitus; in the latter vocal fremitus is diminished, so that by vocal fremitus you may be led to a correct diagnosis. Again, upon auscultation in pleurisy at this stage, you will hear feeble respiration at a distance, while in fibrous induration of the lung you will hear bronchial respiration, or distinct tubular breathing. The bronchial breathing which you get in the stage of effusion in pleurisy is distant and diffused, and this disappears during the stage of absorption and adhesion, and you get only feeble respiration, not bronchial in character. But in fibrous induration, or in any form of pneumonia, there will be high pitched bronchial expiration. In phthisis râles will be more or less abundant over the chest, persisting during all stages of the disease, and râles are present in fibrous induration of the lung, but they are not present in pleurisy with retraction, or after the stage of absorption and adhesion.

But suppose the patient have that form of pleurisy which comes on quite suddenly, not gradually, as it usually does, and then the pleural cavity fills with fluid, but you hear distinct bronchial respiration behind: how are you to differentiate between the bronchial breathing in this case and that heard in pneumonia? The bronchial breathing in pneumonia is heard at the bottom of the lung, at the seat of consolidation; that in pleurisy is rarely heard below the scapula, it is usually heard only over the scapula. Then, if there exist any doubt with regard to pleurisy with effusion, do not hesitate to introduce the hypodermic needle. If you find fluid, your diagnosis is positive. But, gentlemen, do not place too much dependence upon the hypodermic needle, for you may sometimes introduce it into the pleural cavity and fail to get fluid even when fluid exists. It seems to me that since the aspirator and the hypodermic needle have come to be used as a means of diagnosis in these cases, physicians are not quite as careful in their appreciation of physical signs as before. The physical signs in sero-fibrinous pleurisy ought always to be sufficient to enable you to make a diagnosis without the exploring-needle. But this instrument is always at hand, and can be used if you wish. There is, however, one condition in which you will find it necessary to use it, in order to reach a positive diagnosis, and that is in cancer of the lung, or rather of the pleura, for primary cancer of the lung is a rare affection.

Almost all cancerous developments filling up the chest cavity commence in the pleura. Cancerous developments usually begin above and extend downward, so that if you see the case early it is not difficult to draw the line of differential diagnosis between this affection and pleurisy, as the physical signs of the latter begin at the bottom of the pleural cavity, those of the former above. If you do not see the case until later, when the cancerous development shall have filled the entire cavity, you will find a bulging of the intercostal spaces, flatness on percussion, absence of respiratory murmur, and all the signs apparently of sero-fibrinous pleurisy, and you will introduce the aspirator needle with the firm belief that you will find fluid. You withdraw it, and find nothing but blood; you plunge it in farther, but still nothing but blood; you introduce it at different places, and nothing yet but blood. Under these circumstances you will begin to suspect that you have something besides fluid in the pleural cavity, and rightly, too. I have seen two or three such cases within a year or two. I was recently asked to see a patient who presented all the physical signs of pleurisy with effusion. I was asked by the physician in attendance, smilingly, for a diagnosis. I answered: "I suppose we have fluid in the pleural cavity." He said that when he first saw the case the flatness existed above, and had gradually extended downward. That, of course, changed my opinion at once, for pleurisy with effusion does not act in that way. I asked if he had aspirated the patient. He said he had; had aspirated him at different points. He wished I would aspirate him also. I did so, and I drew off six ounces of fluid. The doctor looked blank. He could not understand it; but when I aspirated again, and at another place, I could get no fluid. I had accidentally struck a cyst in the first instance. The doctor was right in his diagnosis. The patient had a cancerous development in the pleura which began above and extended downward, and in its later stages it presented all the physical signs of pleurisy with effusion.

When I was a student of medicine a patient presenting similar symptoms to the one just mentioned came under my care in Demilt Dispensary. The diagnosis of subacute pleurisy with effusion was made and the trochar introduced, but it was a dry tap. He afterward went to Bellevue Hospital, and one of the oldest physicians of the hospital made the diagnosis of subacute pleurisy with effusion, and he was again tapped, and with the same result, no fluid was found. He went to three different hospitals, at each one of which the same diagnosis was made, and the same result obtained upon tapping, and finally he came back to Bellevue Hospital and entered my service. I kept close watch of the case from first to last, and had made up my mind some time before his final return to Bellevue Hospital that he had cancer of the lung, and not subacute pleurisy. A post-mortem examination showed that the lung on the affected side was completely infiltrated with cancer. I have spoken of these cases that you may be impressed with the difficulty which sometimes attends the differential diagnosis in such cases.

The *prognosis* in sero-fibrinous pleurisy will depend altogether upon the conditions under which it occurs. If it occur in one who is simply run down

from overwork, or from depressing atmospheric influences, or who has been working under high pressure for a long time, and, being in a debilitated state, takes cold, and has a low grade of inflammation in the pleura, with effusion, complete recovery usually takes place. The prognosis is good. Not alone will absorption of the fluid effusion take place, but entire freedom of respiration will follow. But in those cases where there is a strong hereditary predisposition to phthisis, or where there are already the physical signs of phthisis at the apex of one lung, the prognosis should be very guarded; such cases are very likely to terminate unfavorably. Please understand me. When I speak of a strong hereditary predisposition to phthisis I refer to persons born of parents who had developed phthisis at the time of their birth. It is possible for a mother who died of phthisis to have given birth to a vigorous child at some time in her life, but if a person born of such a mother, at the time when she had phthisis developed, shall come to you for advice, complaining of shortness of breath, and you find fluid in the pleural cavity, you have reason to suspect that there is a predisposition to phthisical developments; that the inflammation which is giving rise to this condition is a tubercular inflammation, and although the fluid may be absorbed and the surfaces of the pleura come together again, the chances for recovery are small. The clinical connection between this form of pleurisy and phthisis is a very close one.

If the fluid shall remain in the pleural cavity a long time, compressing the lung and interfering with its circulation, a catarrhal pneumonia is likely to develop, or, at least, lobular consolidation which shall lead to phthisis. Again, there is a form of phthisis in which the fibrous indurations are liable to begin at the pleura and gradually extend into the lung-tissue, sometimes having for its origin a sero-fibrinous pleurisy.

Thus you see, gentlemen, it is by no means a trivial matter to have a sero-fibrinous pleurisy. Do not, then, deceive your patients regarding it. Do not tell them it is nothing but a pleurisy, as if it were a matter of no consequence. Tell them that their disease is serious in its nature, that they may completely recover, but that it is attended by certain dangers. The more I see of phthisis the more am I convinced that a large number of cases commence with this form of pleurisy; that the phthisical developments which occur after a pleurisy really have their origin in a pleuritic inflammation which has given rise to the physical signs of fluid effusion into the pleural cavity.

Treatment.—The main thing to be accomplished in the treatment of this disease is to remove as rapidly as possible the fluid effusion which is distending the pleural cavity. It is important that while you are accomplishing this, you shall sustain by every possible means the vital powers of the patient.

The means which have been proposed, and which are used largely for the removal of the fluid, are included under the head of hydragogue cathartics, diuretics, and diaphoretics. It has also been the custom to apply blisters to the surface of the chest. There are few at the present time who will resort to general or local bloodletting in the treatment of this form of pleurisy.

The objections to general or local bloodletting are, that the patient is in a debilitated condition at the time of the occurrence of the pleurisy. It is, in the majority of instances, as I stated to you in connection with its etiology, a secondary affection, or it is especially likely to develop in those who have a tubercular or a phthisical diathesis. This class of individuals never bear depletion well, and it is for this reason that some years ago it occurred to me that hydragogue cathartics and diuretics were prejudicial rather than beneficial in this disease; that while they did not positively remove the fluid effusion rapidly, they did diminish the vital powers of the patient. That they rather prevented the absorption of the fluid than aided in its removal.

The theory upon which the administration of hydragogue cathartics and diuretics in the treatment of this disease is based is, that they diminish the fluid constituents of the blood, and cause the absorbents to seize upon fluid existing abnormally in any portion of the body, whether it be in the pleural cavity, in the abdominal cavity, in the cellular tissue. That the rapid disappearance of fluid from cavities and the cellular tissue of the surface, in general dropsy, will follow the administration of diuretics and hydragogue cathartics, there can be no question, but you must remember that in such cases the effusions are not of an inflammatory origin; they are not the products of inflammation. They are simply the watery elements of the blood which have passed through the walls of the capillary vessels as a result of interference with the circulation. For instance, tie a string around your arm and compress the veins to a certain degree, so as to interfere with the return circulation, and you will have œdema. Now, in sero-fibrinous pleurisy, or in any form of pleurisy, such is not the cause of the effusion; the cause is an inflammation. Moreover, the effusion is not simple serum; it is sero-albuminous and sero-fibrinous. We have no evidence that the capillary vessels and the absorbents have the power to remove inflammatory products simply because the blood has been deprived of its fluid constituents by the action of hydragogue cathartics and diuretics. There is an entirely different condition in the two cases.

Again, when describing the pathological condition of this form of pleurisy I said that when the pleural cavity is distended with fluid, the capillary vessels on the surface of the lung, and in the pleural and subpleural tissue, are compressed, and cannot absorb fluid. So long as they remain compressed, all depurative means—means which are employed for removing fluid from the system in dropsy—will have no effect. Another objection to the use of these means is, that there is a fibrinous deposit upon the surfaces of the pleura which interferes with absorption of the fluid by the absorbent and capillary vessels, and the thicker this deposit the more it interferes with absorption.

Still another objection to the use of these depurative means is, that absorption of all inflammatory products goes on most rapidly when the vital powers are at their highest point. In a man debilitated and broken down the removal of inflammatory products takes place very slowly, if at all, it matters not what the inflammatory products may be; but when the nutritive powers are carried to their highest point, and the waste and repair of the system is rapid, absorption of inflammatory products will take place most rapidly.

It was the custom when I entered the profession, in the treatment of subacute pleurisy, to apply a blister on the front of the chest, and after three days to apply another in the axillary space, and after three days more another behind, and by that time the surface had nearly healed in front and the ground was gone over again. Now, gentlemen, you undertake to

treat a young, delicate, sensitive female in that way, and you will find she will not bear it; she cannot bear it. I remember the first time I treated a case of subacute pleurisy without a blister. I did it because my patient would not be blistered, and I found that the fluid in her pleural cavity disappeared as rapidly if not more rapidly than I was accustomed to see fluid effusions disappear. That led me to try its treatment without the blister, and I went on trying, and am trying it still, and I find that I get rid of the serous effusion just as rapidly as those who use the blisters. I do not say that there are not cases in which there is a low grade of inflammatory action, accompanied by a good deal of pain, where blisters may be of service. Under those circumstances they afford relief to the pain, but I do not believe that they remove or assist in removing the fluid effusion.

Then, gentlemen, if a debilitated state stands in the way of absorption of the fluid effusion, why deplete your patient with hydragogue catharties? But you say you do not deplete him. I would like to know if depriving the blood of its fluid elements by way of the bowels is not as much depletion as to abstract blood from the arm. If you do not think it debilitates one to take a hydragogue cathartic, go home to-night and take a grain of elaterium, and see if you come to lectures to-morrow. And yet you force these patients to take it not only once, but twice; they have four or five watery discharges, and each time they grow paler and weaker. But you do more than that. No hydragogue cathartic can be introduced into the stomach without disturbing the digestion. I wish doctors would stop and think once in a while, when they are putting these awful doses into the stomach, what that stomach was made for, how it revolts at it, how the patient loses appetite, how his digestion is interfered with, and with it his nutrition. You are really doing harm, because you are interfering with the very processes by which you are to remove this inflammatory exudation.

The same remarks apply, though in a less degree, to diuretics. They will deplete one, though not to the same extent, and they interfere to some extent with the nutritive processes. If you take the acetate of potash, or the nitrate, which, perhaps, is the most vigorous, for forty-eight hours, so as to get its full effects as a diuretic, the flow of the urine will be increased abnormally, and the next day you will feel weak and debilitated. I do not call digitalis, strictly speaking, a diuretic. It increases the flow of urine, but it does so by regulating the circulation.

You ask, how are we to remove this fluid from the pleural cavity, for it is all important that it be removed as soon as possible. Here arises the question of drawing off the fluid by mechanical means. In other words, shall you perform paracentesis thoracis in this form of pleurisy? You will find the profession divided in opinion with regard to its propriety. Some say there is danger of air entering the pleural cavity during the operation, and setting up in the place of the sero-fibrinous inflammation a sero-purulent one, and thus jeopardize the life of the patient. Others say that if you allow the fluid to remain in the pleural cavity, thickening of the pleura takes place by the process I have already described, and that there is danger of a different kind of inflammatory process being established. There can be no question but that if the fluid effusion remain too long in the pleural cavity it will cause by its very presence a change in the inflammatory process as certainly as the presence of air in the pleural cavity.

You see, gentlemen, the argument, theoretically, is strong on both sides. If by aspirating you shall change a serous into a suppurative pleurisy, you certainly should not resort to it; and if by allowing the fluid to remain in the pleural cavity you shall have a sero-fibrinous pleurisy changed into suppurative pleurisy, it should be removed at all hazards. I would not take the extreme of either side. There is a middle ground upon which you may stand.

If the pleural cavity is filled, or almost filled, with fluid, and shall continue so without diminishing, but rather increasing from day to day, compression of the lung having already taken place, do not hesitate to aspirate. It is impossible for air to enter the pleural cavity if you use an aspirator. If, when called to a patient, you find the chest distended with fluid, the heart and liver pushed out of position, great dyspnœa, the result of the fluid distention, then you know the condition of the serous and subserous vessels is such that absorption of the fluid cannot take place, and without waiting you should aspirate.

I will give you a few suggestions regarding the method of aspirating. Let the arm on the affected side be brought across the chest so as to render the tissues over the affected side moderately tense. In the sixth intercostal space, at the junction of the axillary and infra-scapular regions, introduce the aspirating needle. Introduce it at least two inches, and allow the fluid to flow as long as the patient does not evince any uncomfortable sensation. As soon as he begins to feel a sense of constriction about the chest, stop. I care not whether you have drawn off four ounces or twenty, stop. Why? Because it shows that the lung is not expanding sufficiently to fill the space that has been occupied by fluid.

If the fluid has remained in the pleural cavity only a short time, the thickening of the pleura will be slight, and the lung will expand readily. If the pulmonary pleura be not much involved, the lung will expand readily, and you may be able to draw off all the fluid at one time without any inconvenience to your patient. The chances for that patient's recovery are much better than those of one in whose pleural cavity the fluid has remained for a long time, and much thickening of the pleura has taken place, whose lung expands very slowly, so that only a small quantity of fluid can be withdrawn at a time. In this latter patient's case, when he begins to feel that sense of constriction on withdrawing fluid from his pleural cavity, and begins to catch his breath, wait a day or two, and then aspirate again. You will find that the next time you will be able to draw off a little more fluid than at the first operation. After another day or two repeat the operation, and so continue to do until all the fluid shall be removed from the pleural cavity. Now, gentlemen, I am convinced that by the judicious management of the aspirator you will be able to save a large proportion of your cases from the dangers which surround them when fluid is allowed to remain in the pleural cavity a long time.

Is there nothing else to be done? Yes, it is most important to increase the nutrition of the patient, so that after you have removed the fluid, changes shall take place in the plastic material which shall facilitate its absorption. Of all the drugs that have any power in this direction, I believe iron is best, and of all the preparations of iron, I think the syrup of the iodide of iron is the best. But do not give it in five- or in ten-drop doses. If you want any good effects from it, give it in large doses, at least a teaspoonful every four hours.

Give nutrition in a concentrated form; keep the patient in an even temperature. The surface of the body must not be exposed to changes of temperature. This class of patients must not be exhausted by prolonged mental or physical labor; they must remain quiet, in rooms of an even temperature, in bed most of the time, until the fluid shall have disappeared. When their strength will permit, they may ride out, well protected, in the fresh air. It is wonderful how the moderate use of stimulants helps this class of patients when they begin to recover. Their nutrition may often be increased very much by champagne with their meals. I never speak of this but I think of a reverend gentleman, about fifty years of age, who once came under my observation. He unfortunately attempted to carry on his work for a considerable time after his pleurisy had developed. Finally, the pleural cavity became filled with fluid, he suffered from shortness of breath, and was compelled to cease his work and call his physician. His physician had been brought up in the school of hydragogue cathartics, diuretics, and diaphoretics, and commenced on his already weak, feeble, anæmic patient by giving him elaterium in pretty full doses, purging him freely, and following that up with diuretics; and he would occasionally add to that a diaphoretic hot-air bath. He thought, moreover, it was quite important to put his patient upon a low diet. The result was, the reverend gentleman got into bed and was unable to get up. He began to have profuse perspirations. Under these circumstances he soon passed into a very critical condition. I saw him about this time, and proposed that he should stop hydragogue cathartics, diuretics, and diaphoretics, and be put upon the plan of treatment which I have proposed to you, and, as soon as his condition was slightly improved, to aspirate his chest. It was not very many days before the patient was able to be out of bed. He began to assume a more cheerful aspect. He took stimulants very kindly, taking a quart of champagne each day; in fact, he was not restricted in its use. Within a week I aspirated him a second time, and drew off about a quart of fluid. I aspirated him, I think, three times. From the first absorption his improvement was rapid. He entirely recovered, and is doing useful work to-day. I simply mention this case to illustrate what a marked change for the better takes place in some of these patients under this plan of treatment, after the depurative plan has been thoroughly tested.

Of course, rest from labor, a change of climate to one of an even temperature and high altitude is important during the period of convalescence. Remember, also, that after the fluid has disappeared you have work to do still. The lung is bound down by the pleuritic thickenings and adhesions, and it is important that the patient shall be subjected to systematic gymnastic exercises, in order that the lung may be frequently inflated to its utmost limit.

Dr. Charles McDermont, formerly Surgeon-General of Ohio, and one of the most prominent surgeons in the Army during the war, died at Dayton, O., January 7th, from rheumatic troubles contracted during the war.

The New York State Board of Health has sent in its annual report to the legislature. This report shows that the Board has already done excellent work, particularly in fighting small-pox. A review of the document will be given later.

Original Communications.

CHLORAL HYDRATE.

By H. H. KANE, M.D.,
NEW YORK.

CHLORAL IN SIMPLE INSOMNIA AND THE INSOMNIA OF DELIRIUM TREMENS AND INSANITY.

Part II.

Dr. Earle prefers giving the drug in small doses, often repeated, if necessary, to administering it in one or two large doses.

That drunkards will often bear very large doses of chloral without the production of sleep is seen by the following,[46] as also by several cases related in my article on poisoning.

"In connection with the recent inquest at Weymouth, I find some speculation as to the amount of chloral hydrate that can be taken with impunity, a case being mentioned where one hundred and sixty-five grains caused no ill-effects.

"I was called one evening to a gentleman of extremely intemperate habits, who had been in the habit of drinking as much as three pints of whiskey *per diem* for a month and even six weeks at a stretch. When I arrived at the house, I was informed that he had ordered a bottle of medicine from the druggist's and had drunk the whole of it. On my seeing the patient, he exclaimed, 'I say, Pitts, Pitts, Pitts, I had, had no five, five, five bobs, bobs left to buy, buy whiskey, whiskey with' (every word being repeated three or four times over); 'so I thought I would write a prescription that would have the same effect, if taken, as the spirit.' The following was the prescription:

℞. Chloral hydrat..... gr. cclx.
Potassii bromidi..... ʒ ij.
Spir. chloroform..... ʒ iss.
Aquæ camph..... ad. ʒ x.
Two tablespoonfuls every four hours.

"The whole of this he had taken at one dose some hours previously. I watched the case until I had the satisfaction of seeing the gentleman become more rational and the peculiarities of speech pass gradually away.

"Not knowing any antidote for chloral, I procured him a bottle of whiskey, under the idea that syncope was the immediate cause of death in cases of fatal poisoning with that drug. This he consumed in the course of the night, and in the morning seemed to be all right.

"The chloral did not cause deep sleep or insensibility, but only a stupid maudlin condition, in which he rambled incoherently about different past events, with occasional short naps, from which he was easily roused. His pupils were natural. The only other symptom I noticed was an apparent loss of muscular power; he seemed to have lost, to some extent, his power of grasping firmly any article.

"Henry Y. Pitts, L.R.C.P., Lond., Tue Brook."

The following case shows that chloral may be used after morphia and *vice versa* in many cases without apparent ill-effect. I must still maintain, however, that from the evidence I have found in collecting statistics for my book on "Morphia," and that which I have given in one of my earlier articles upon this

[46] British Med. Journal, Nov. 17, 1877.

subject, that *in some cases* the practice leads to a fatal result.

J. Farrar, of Edinburg, failing in a severe case of delirium tremens, after two or three days of treatment with opiates, resorted to chloral hydrate as follows: at 5.10 A.M., thirty grains; a like quantity half an hour later. At 6 A.M. a hypodermic dose of one-half grain of morphia. At 6.10, forty grains of chloral were given. At 6.25, two-thirds of a grain of morphia was injected, and at 6.55 the patient was asleep, and so remained for eight hours. Recovery followed at once.

In another case, in which digitalis, morphia, etc., had been ineffectual, chloral was resorted to in doses repeated every ten minutes until one hundred and sixty grains had been taken. Seven hours' sleep then took place, and was followed by recovery.

During the first two doses the patient was more excited and garrulous—indeed *intoxicated*—but this soon gave way to thick speech, inarticulate mumblings, and then sleep.—*Br. Med. Jour.*

Dr. A. P. Hayne,[47] of the "Home of Inebriates," San Francisco, Cal., says:

"In all forms of the acute variety there is no combination which, as the result of an experience of many years, can be compared to that of chloral hydrate and one or other of the bromides—especially the bromide of potassium. In doses of twenty or thirty grains of the former, with thirty or forty of the latter, given at proper intervals, either with or without a small quantity of spirit, or ale and porter, it is far superior to any other combination we have ever tried. The second or third dose seldom fails, in the majority of cases, to fulfil the main object of our endeavors, viz.: to tranquillize nervous excitement, quiet the mental agitation, and produce sleep.

"In the selection of the former of these medicines (chloral hydrate) it is highly important to use none but the best article. We always use the imported, generally the *German*, but the English and French are, perhaps, equally good. The American is decidedly inferior and often impure. It should be clear, semi-opaque, and crystalline, with a strong, pungent odor of chloroform, and perfectly white.

"It is also an important point that both of these remedies should be given in full doses, otherwise we may be disappointed in their action, either singly or in combination.

"Occasionally we will meet with patients who will resist very large doses, and in these we sometimes combine one-eighth to one-quarter grain of morphine with each alternate dose.

"In an experience of many years, we have generally found the simple plan thus outlined answer all purposes; and while in some instances we have been compelled by the urgency of the case to push these remedies to an apparently alarming extent, sometimes as high as two hundred to two hundred and fifty grains of chloral hydrate in twenty-four hours, we have never seen a fatal result which could be attributed to an overdose of that much abused but invaluable remedy.

That sudden deaths do sometimes occur in violent attacks of acute alcoholism, in all its forms, is a well-known fact; but in the vast majority of these the post-mortem examinations have revealed the true cause of death, and the explanation is rendered conclusive by the presence of serous effusions, cerebral hemorrhage, or embolism.

"Besides the effects of the chloral-bromide combination which we have just noticed, there is another advantage which the former remedy possesses in stimulating the appetite and enabling the stomach to retain nourishment. It also checks the profuse diaphoresis, controls the delirium, equalizes the cerebral circulation, and is the most certain of all hypnotics."

Anstie,[48] in a review of Mr. Croft's work on "Delirium Tremens in Surgical Cases," says: "The great omission is that he says nothing of chloral hydrate, a medicine which plays so important a part, nowadays, in the treatment of delirium tremens, that its discovery may be said to have inaugurated a new era therein. Chloral need not be given to decided narcotism (a state which is most undesirable in delirium tremens, as it is impossible to say what the issue of it will be), but it *is* capable in many cases of producing simple sleep, and that at an early stage, when scarcely any other drug will have the slightest efficacy in that direction; even bromides will not do so, save in comparatively rare cases, at so early a period."

A careful study of the deaths from chloral in alcoholic patients, given in my last articles (RECORD, December 25, 1880, and Jan. 1, 1881), with contraindications, etc., will bear careful study. The cases are too numerous for repetition here.

J. Milner Fothergill,[49] in the course of an article entitled "The Management of Delirium," says: "If there be considerable vascular excitement and heat of head, opiates are inadmissable. Chloral hydrate in fifteen-grain doses, repeated at hourly intervals, until a drachm be given, is a much more suitable agent, as it exercises a very decided effect upon the vascular system, as well as upon the nerve-centres; or bromide of potassium may be exhibited with advantage. One point must be remembered, and it is this: in the typhoid state, when the tongue is covered with a dark fur of dead epithelial scales, a similar layer of effete cells lines the intestinal canal, and medicines given by the mouth are of little avail, because they are not absorbed. Subcutaneous injections of chloral hydrate of a strength of ten grains to the ounce—in order not to cause severe local disturbance, as stronger solutions are prone to do—will often prove of decided service."

Panas[50] says that in two years experimenting at the Hôpital St. Louis, he has found chloral hydrate an exceedingly valuable agent in the treatment of acute traumatic delirium, especially in alcoholics. In the sub-delirium of surgical septicæmia, he has found it to be of but little use, having had much better results from opium.

INSANITY.

On the first introduction of chloral hydrate as a therapeutic agent it found much favor in the eyes of those who had the medical care of the insane. As time has passed and experience in this field has accumulated, the tide of opinion seems to have set directly against its use, save in certain cases and under certain conditions. I had hoped to have a more complete summary of the views of superintendents and medical attendants of insane asylums than is here presented, but many of the gentlemen to whom I wrote failed to answer, and I am obliged to be content with what I have. This, I am sorry to say, has been the case with reference to many diseases, where the opinions of the parties written to would have been of especial value as coming from specialists. With all due charity, I lay it more at

[47] Alcoholism, etc., op. cit., p. 17.

[48] Practitioner, 1871, p. 105.
[49] Ibid., 1874, p. 407.
[50] Gazette des Hôpitaux, 1870, p. 550.

the door of carelessness and overwork than to lazy apathy and discourtesy.

I shall first give the testimony of those favoring the use of this drug in insanity, and then that of those who object to it.

Couyba[51] was one of the first to employ it in this class of affections, and for calming excitement and producing sleep he seems to have found it eminently satisfactory. He gives a number of cases that progressed favorably under its influence, the symptoms of violence having been alleviated by it in some cases after other remedies had failed.

Dr. Johann Wirtinger,[52] Chief Physician to Vienna Hospital, Ybbs on Danube, Lower Austria, who had eighty-one epileptics and three hundred and twenty insane patients in the wards of a general hospital during last year, found great benefit from chloral at night in the psychical excitement of lunatics and epileptics.

Dr. McIntosh,[53] of the Royal Glasgow Asylum, has used chloral in a number of cases of insanity with varying results. Melancholics say that when it does not cause sleep it slightly intoxicates them. In acute mania, and especially cases of recurrent mania, it failed in many cases to arrest the paroxysms. He speaks highly of it, however, saying it is our best hypnotic.

Dr. John Barclay[54] has found chloral an excellent hypnotic in the insomnia of insanity, also commends it in delirium tremens and epilepsy.

Dr. James M. Keniston,[55] of the Butler Hospital for the Insane, Providence, R. I., gives a number of cases of insanity where chloral acted in the happiest manner. In one case there seemed to be a cumulative action after one hundred and twenty grains in three hours' time. Also relates a number of cases of delirium tremens where it had the same good effect.

Dr. Clouston,[56] Medical Superintendent of the Cumberland and Westmoreland Asylum, has used chloral in forty cases (dose, ten to eighty grains) for procuring sleep, calming nervous irritability, subduing maniacal fury, allaying extreme depression of mind, arresting an attack of mania, and in neuralgia and chorea, with most excellent success. In some cases the temperature was reduced, in others not. Reduction of temperature is a great benefit in acute mania, when the fever destroys the tissues.

Henry Meymott[57] has used chloral with marked benefit in a case of epileptic mania.

Dr. J. E. Bowers[58] advises small doses of chloral, often repeated, in melancholia with insomnia, where the patient is himself anxious for something to procure sleep.

Dr. Antoine Haller[59] states that he has used chloral as an hypnotic in lunatics with marked success. He conducted a series of experiments aiming to show the relative value of chloral, opium, and morphine. He found the best results were obtained with chloral, giving it in some cases for a long time without any bad effects. The quantity of urine was increased. He noticed the peculiarity, that in patients who were constipated the calming effect of the chloral was lessened.

Kjelberry,[60] of Upsal, Sweden, advises the use of chloral:

First.—In all cases of melancholia with sleeplessness; in excitement, hallucinations, and suicidal tendencies.

Second.—In simple melancholia, where natural sleep lasts less than four hours.

Third.—In acute mania, when a new crisis of agitation is impending.

If not borne well by the stomach he gives it by the rectum in the form of a clyster.

In acute mania, at the end of the paroxysms, when sleep has not yet set in, and in chronic mania, when excitement lasts too long, and when dementia is feared, he gives a combination of chloral and morphia.

An interesting series of experiments has been made by Dr. John A. Campbell,[61] of Garland Asylum, Carlisle. He selected fourteen patients on whom to try the relative sedative effects on maniacal excitement of hyoscyamus, bromide of potassium, and chloral. To these patients he gave each of the medicines forty-six times, using the drugs in gradually increasing doses. He concludes as follows: 1st, that both chloral and tinct. hyoscyamus are sure sedatives to maniacal excitement; 2d, that of these two medicines chloral is the most certain sleep-producer; 3d, that chloral acts more quickly than tincture of hyoscyamus; 4th, that though bromide of potassium in such doses is a sedative to maniacal excitement and to a certain extent hypnotic, yet it is not a sufficiently powerful sedative to allay intense excitement, or an hypnotic to compel sleep where great insomnia exists; 5th, that a two-drachm dose of tincture of hyoscyamus is not quite equivalent to thirty grains of hydrate of chloral. Two and a half drachms as near an equivalent as possible. He thinks bromide of potassium is only useful when the excitement or insomnia is of a slight character.

Tuke,[62] basing his conclusions on the study of some patients in the Fife and Kenross Asylums, finds chloral a most reliable hypnotic, its reliability constituting its superiority over other narcotics. One was a case of acute alcoholic mania, two asthenic insanity, symptomatized by melancholia, and one of climacteric insanity with melancholic symptoms.

In one case Tuke[63] found that the use of the drug was followed by considerable mental disturbance.

Crawford[64] speaks highly of the good effects of chloral in a case of acute mania.

Thornley[65] says that he has used it nightly with insane patients for from six months to two years, without noting any ill effects.

Schlangenhausen, of Hall, Tyrol, writes me: "In all cases of exaltation, when the insane are laboring under excitement caused by hallucination and fanatical ideas, in cases of maniacal excitement of the mad and paralytics, for hysterical and epileptic patients and for delirium potatorum, mostly with good effect. The subjects become sleepy one or two hours after taking medicine, the 'sopor' lasting from four to six hours, after a dose of from two to four grammes. In melancholia it often failed."

Dr. Wm. MacLeod,[66] Deputy Inspector General of Hospitals and Fleets, Royal Navy Hospital, Great Yarmouth, sums up an interesting article on the use of chloral in insanity as follows:

"*First.*—That in paralysis of the insane chloral acts as an excellent hypnotic by night and soothing agent by day.

[51] Bull. gén. de thérap., 1870, p. 151.
[52] By letter.
[53] Report of Royal Glasgow Asylum: Edinb. Med. Jour., Oct., 1871.
[54] Lancet, Sept. 21, 1872; Practitioner, 1872, p. 297.
[55] Boston Med. and Surg. Journal, 1871, p. 97.
[56] Brit. Med. Journal, 1870.
[57] Lancet, May, 1871.
[58] Northwestern Med. and Surg. Journal, Dec., 1871.
[59] Bull. gén. de thérap., vol. lxxxv.
[60] Ibid.
[61] Journal of Mental Science, Jan., 1872; Practitioner, 1872, p. 256.
[62] Lancet, March 26, 1870.
[63] Quoted by Or'e: Practitioner, 1870, p. 267.
[64] American Journal of Insanity, April, 1870.
[65] Lancet, Dec. 18, 1875.
[66] Practitioner, 1870, p. 65.

"*Second.*—That under its influence patients are freed from destructive habits, and gain in weight and strength.

"*Third.*—A small dose continued for days (ninety-five) gave no bad symptoms.

"*Fourth.*—The condition of the bowels and bladder improve.

"*Fifth.*—Patients suffering abnormal sensations derive much benefit from it.

"*Sixth.*—The appetite increases and food is not refused.

"*Seventh.*—It has cut short, in patients thus affected, hallucinations of hearing with suicidal tendency.

"*Eighth.*—Those with the same affection, made noisy by sensation, are calmed by it.

"*Ninth.*—The desire to maim and mutilate themselves periodically, passes away.

"*Tenth.*—In patients suffering from voices which they know depend on morbid sensation but little benefit is derived.

"*Eleventh.*—In certain cases of melancholia there was decided benefit.

"*Twelfth.*—In a similar case, with extreme depression, it had no good effect save to heal a supposed abrasion of the stomach.

"*Thirteenth.*—The greater the disorganization of the brain and cord (as judged by symptoms, especially thermometrical observations) the sooner does the system come under the influence of chloral."

Dr. Wm. A. Hammond [67] has used it in acute mania with success, as has, also, Dr. C. R. Cullen,[68] of Richmond, Va., both by the mouth and rectum in hysterical mania and similar cases.

In puerperal mania excellent results are reported by Webster,[69] Tuke,[70] Teller,[71] Hupp,[72] and many others.

Dr. Henry Maudsley, of England, kindly writes me: "The worst case of puerperal mania I ever saw, was taking 120 grains of chloral daily, in three doses. She began to recover a few days after the chloral was stopped. I have known one case of puerperal mania, in a strong, healthy woman, where death was produced by chloral. Dose after dose (I know not how much) had been given to smother the excitement, and when I saw her she was insensible, pale, cold, breathing slowly and slightly stertorously, with scarcely perceptible pulse. She died soon after."

The danger of pushing chloral to extremes in this as in any other disease is undoubted, and the practice unjustifiable. That it sometimes acts well in a condition of almost collapse is undoubted, as will be seen from the following case.

Dr. Alex. Max Adams [73] reports the case of a delicate female who, four days after the delivery of her first child, was attacked with acute ungovernable puerperal mania. Bromide of potassium, and opium in large doses, failed to give relief. Forty grains of chloral were given at a time when the pulse was scarcely perceptible and the extremities cold. In five minutes after taking the chloral she became calm and conscious. This was followed by profound, shading off into natural sleep. As the attacks recurred they were met with from forty- to sixty-grain doses of chloral until a cure was effected.

Playfair [74] states that puerperal mania has been averted by the use of this drug.

As against the free use of chloral in insanity we have the following opinions:

Dr. Henry Maudsley [75] says: "I use chloral in melancholia, seldom in mania, and then only when subacute, as an occasional thing. I believe it prolongs mania and makes it worse, but I don't know that it causes it."

In a case of tetanus in a boy aged fourteen years, reported by Dr. J. B. Carruthers,[76] Edinburg, where 1140 grains of chloral were taken in sixteen days, all manner of delusions ensued. It is but fair to state that twice as much bromide of potassium was taken.

Dr. Rhys. Williams [77] says that he has used chloral in all forms of insanity, and in no case had good resulted from its use.

Dr. Samuel Clark,[78] Med. Supt. of the Toronto Asylum, says that opium and its salts, and chloral hydrate, are but sparingly used in that asylum.

Dr. W. G. Metcalf, Med. Supt. Asylum for the Insane, Kingston, Ontario, writes me: "We use chloral very sparingly, and consequently our experience of the drug will be of but little value." When used at all he employs it as an hypnotic.

Dr. G. A. Shurtleff, Med. Supt. State Insane Asylum, Stockton, California, writes:

"In the wards of this asylum, where chloral has been given most freely to procure sleep and quietude at night, the patients taking it were found to be more disturbed and troublesome than usual the following day, and uniformly so when the practice was continued without interruption for several weeks. In these cases the drug was given at night only. For some time its use has been much restricted in this institution; and I have come to the conclusion that, on the whole, a faithful care of the insane by their attendants is more easily and agreeably performed without than with the general and prolonged employment of chloral, especially as regards the chronic classes."

Dr. J. Hawkes,[79] Med. Supt. Middlesex Co. Asylum, England, says:

"In cases of general paralysis accompanying mania, in rather elderly persons with feeble circulation and impaired nutrition, the use of chloral is occasionally attended by adverse symptoms. The most usual effect seems to be an increased congestion of the ganglionic centres, little abatement of restlessness, gradual failure of strength, and a corresponding advance of paralytic symptoms."

Dr. George H. Savage [80] (Guy's Hospital Reports, 1878), of the Bethlehem Asylum, thinks that chloral has, all things considered, done as much harm as good. He finds it useful in epileptic mania, in cases due to excess of alcohol, and in puerperal cases. In wildly maniacal and erratic patients he gives it in from ten to thirty-grain doses, rubbed up with an equal quantity of camphor, in syrup. He found alarming symptoms follow, however, in one case, after twenty grains of the mixture had been taken.

Dr. D. B. Simmons,[81] of Yokohama, Japan, from studying the symptoms in a case of poisoning from two drachms of camphor-chloral,[82] decided to try it in a case of acute periodical mania, with excellent success, it succeeding after morphia, chloral, hyoscyamus, and other drugs had failed. The dose was thirty-five

[67] N. Y. Med. Record, 1870, p. 499.
[68] By letter.
[69] Boston Med. and Surg. Jour., vol. ix., p. 265.
[70] Quoted by Ogle, op. cit.
[71] N. Y. Med. Record, 1870, p. 574.
[72] Trans. Med. Soc. State of West Virginia, 1870.
[73] Lancet; N. Y. Med. Record, 1870, p. 197.
[74] Med. Times and Gazette, April 16, 1870.
[75] By letter.
[76] Lancet, Sept. 26, 1874; Practitioner, 1874.
[77] Lancet, Dec. 5, 1874.
[78] By letter.
[79] Lancet, Jan. 6, 1872.
[80] Theodore Fisher: Boston Med. and Surg. Jour., 1879, p. 655.
[81] American Jour. Med. Science, Jan., 1850.
[82] Chloral and gum camphor, when rubbed up together, form a thick syrupy mass.

drops. He claims better results from the combination than could be had from equal or double quantities of either drug used alone. The mixture is worthy of trial. Dr. Eugene Wittich,[83] of Berlin, speaks very highly of the hypnotic powers of camphor used subcutaneously in the dose of fifteen grains in the insomnia of insanity. He dissolves it in almond oil, uses a large canula, and claims that there is neither pain, inflammation, nor abscess. The combination of two such powerful hypnotics should certainly give us a good result in this class of diseases.

Dr. J. A. Campbell, of the Garland Asylum, Carlisle, writes[84] concerning the treatment of excitement by sedatives or otherwise. He has seen instances of an error not unknown to us, chargeable usually to physicians in general practice. The mistake is occasionally made of trying to quell an outbreak of insane excitement by the use of large quantities of ether, chloral, bromide of potassium, opium, or other narcotics, given day and night, without much pains to enforce proper nourishment. This management, if pushed to extremes, may lead to dementia, or death by exhaustion.

Dr. Campbell says that if sleep can be produced at night the patient does better without sedatives by day; chloral, though an efficient sleep producer, is dangerous from its depressant action on the heart, and should not be used in frequent or repeated doses by day. In the excitement of general paralysis sedatives should not be given which, like the bromides, impair still further the powers of locomotion and deglutition. In the few cases where he has been obliged to resort to continuous sedation, he has found the bromides alone almost useless, but in combination with cannabis indica, hyoscyamus, valerian, or even opium, the bromide acts as a drag, prolonging the sedative effect. Frequent feeding by day and night, with occasional stimulation, he has found to produce quiet, and not only to prevent fatal exhaustion, but also to decrease the degree of dementia in cases that do not recover. The noisy condition of some foreign asylums, and formerly of English asylums, he attributes to under-feeding. Much exercise, either active or passive, and living much in the open air, conduces to quiet. The shower-bath is useful in certain cases; also blistering over the region of the ovaries in excitement due to ovarian irritation.

At the last annual meeting of the Association of Superintendents of American Asylums for the Insane, held in Philadelphia, the subject of chloral came in for a share of discussion. As physicians attached to lunatic asylums have probably more occasion to observe the effects of the drug than practitioners otherwise situated, the relation of their experience cannot fail to command attention. The remarks given below are taken from the report published in the MEDICAL RECORD, 1876, p. 436:

Dr. S. R. H. Smith, of Lunatic Asylum No. I, Fulton, Mo., introduced the subject of the use of chloral, which he considered a highly important one. He thought much injury was done by the injudicious use of this drug, and regarded it as a remedy which ought to be used with the greatest care and the results closely watched. He believed frequently the results of the chloral were mistaken for the regular progress of the disease, and that sometimes it had caused death. In chronic cases of insanity he regarded chloral as a very unsafe remedy; also in the cases of aged people.

Dr. Geo. C. Catlett, of Lunatic Asylum No. 2, at St. Joseph, Mo., said that he knew of three well authentic cases of death from the administration of ordinary doses of chloral as a sedative in cases of delirium from intemperance.

Dr. C. F. McDonald, of the State Lunatic Asylum for Insane Criminals, at Auburn, N. Y., states that on one occasion an attendant gave a patient two drachms of chloral by mistake. The patient suffered from acute mania, and soon after taking the dose fell into a heavy sleep, and afterward awoke quieter and calmer, and progressed to a complete recovery.

Dr. A. E. MacDonald, of the City Asylum for the Insane at Ward's Island, N. Y., considered chloral a valuable remedy, and had used it in his practice. He had never heard of a death said to be from chloral when the post-mortem examination did not reveal other causes for death.

Dr. Kirkbridge said that his sad experience with chloral had been that sometimes patients died unexpectedly to him, and he would not like his medical friends to administer it to him under any circumstances.

Dr. W. M. Compton, of the lunatic asylum, Jackson, Miss., said there were several noisy patients in his institution who had taken doses of twenty to thirty grains every evening for years, merely to quiet them and to put them to sleep, and he had never seen any bad effects.

It has been used with success by the following gentlemen: Drs. Clement A. Walker, Boston Lunatic Asylum; N. P. Bolles,[85] Dorchester, Mass.; Norton Folsom,[86] Boston, Mass.; R. W. Bruce Smith,[86] St. Thomas, Ontario; A. Ady, West Liberty, Iowa; Carlos F. McDonald,[88] James Donaldson,[87] London, England; E. Chenery,[86] Boston, Mass.; R. E. Sutton,[86] Rome, Ga.; James Perrigo,[86] Montreal, Canada; J. H. Etheridge,[86] Chicago, Ill.; H. C. Donaldson, Morrison, Ill.; C. H. Hughes,[86] St. Louis, Mo.; J. M. Pace,[86] Dallas, Texas; Wm. Judkins,[85] Cincinnati, Ohio; Q. C. Smith,[86] Austin, Texas; and H. Moe, of Chicago, Ill. All these are heard from by letter, with the exception of Dr. McDonald.

From the reports of institutions for the insane we make a few extracts in regard to the use of chloral:[89]

Dr. Earle, of Northampton, says: "For rapidity and certainty of effect in that direction (producing sleep) it appears to have no equal, unless it be opium. The sleep induced by it is more transient than that from opiates, but it has none of the disagreeable consequences that in some constitutions follow the use of them."

Dr. Brower, of the Eastern Virginia Asylum says: "We have made a thorough trial of the remedy, and are satisfied it is a valuable addition to our materia medica."

Dr. Lewis, of the Northern Ohio Asylum, says: "It is a valuable addition to our means of procuring refreshing sleep in those cases laboring under acute or chronic mania. As a hypnotic it is superior to opium, it having produced sleep when the latter has entirely failed."

Chloral has been used largely in the asylum since February, 1870. The whole amount used is ninety

[83] Med. Times and Gaz.; Druggists' Circular, etc., Aug., 1879.
[84] Lancet, Aug. 2 and 9, 1879. Fisher: Boston Med. and Surg. Journal, 1879, p. 655.

[85] Puerperal mania.
[86] Acute mania.
[87] Hysterical mania.
[88] Am. Jour. Insanity, Jan., 1878.
[89] Judson B. Andrews: Am. Jour. of Insanity, July, 1871.

pounds, which has been prescribed in three hundred and seventy cases, as follows:

Form.	M.	W.	Total.
Mania	69	119	188
Melancholia	30	59	89
Dementia	18	50	68
Paresis	12	1	13
Epilepsy	2	2	4
Employés	3	5	8
	134	236	370

The average length of time of administration has been, to the men, thirty-nine days; to the women, forty-three days. In a case of melancholia marked by the most distressing delusions and wakefulness, it was given in twenty-grain doses, for two hundred and fifty-seven nights, as a hypnotic, without losing its effect, and with the happy result of securing refreshing sleep. The patient recovered. In this case, as in others, the value of the remedy was tested by occasionally intermitting the dose. Sixty grains were administered during an attack of mania for one hundred and ninety-five nights in succession.

Dr. John Bowen, Riverside Hospital, this city, writes me as follows: "My experience in the use of hydrate of chloral is almost entirely limited to a two years' service in the New York Female Lunatic Asylum, of which institution I was formerly assistant superintendent. In the asylum we used hydrate of chloral to a very great extent, and I may add that my experience there caused my views concerning its use to undergo a very decided change. I sometimes use it at this hospital, in continued fevers, but generally in combination.

"My usual commencing dose is fifteen grains. The largest amount I ever gave at one dose was one drachm, and in twenty-four hours, two drachms.

"I have used it especially in delirium tremens, alcoholic, acute, puerperal and chronic mania, and to some extent in melancholia. I have almost invariably obtained good results from its use in all of the above enumerated diseases (when properly combined with food and stimulants), except melancholia. In chronic mania its effect was, of course, temporary.

"Case I.—Acute mania. Had not slept or taken food for six days. Gave one drachm of hydrate of chloral, two and a half ounces of whiskey, and one pint of warm milk, by means of stomach-tube. Put patient to bed, with artificial warmth to extremities, and watched her carefully. She went to sleep in less than an hour, slept for five hours, and awoke much refreshed. Chloral, in smaller doses, and milk were frequently repeated. Result eminently satisfactory.

"Case II.—Melancholia, attended with a good deal of excitement. Gave one drachm chloral and repeated it in two hours. Produced poisoning, with partial coma. Patient recovered from poisoning after the most careful and laborious attention."

In one case of mania, Dr. Frank L. Forsyth,[90] of Providence, R. I., found that chloral increased the symptoms.

INSOMNIA AND DELIRIUM OF FEVERS.

In the insomnia and delirium of the various fevers, chloral, in small doses, has proved itself an excellent remedy. It has been used for this purpose with success by Drs. A. A. Smith, of this city; H. H. Doane, Litchfield, Ohio; W. H. Travers, Providence, R. I.; Norton Folsom, Boston, Mass.; A. Ady, West Liberty, Iowa; C. C. Pike, Peabody, Mass.; J. W. Hickman,[91] Delta, Pa.; John Bowen, Riverside Hospital, New York city; G. W. Chamberlain, Hartford, Conn.; and J. A. Miller, Williamsburg, Ky.

Dr. Hickman says: "Exceptionally good results are obtained in inflammatory and febrile conditions when attended by delirium and wakefulness, with a high temperature. Recently, in a case of typho-malarial fever treated by the writer, chloral was found to control, in a most happy manner, the busy, exhausting delirium attendant thereon. It was administered by enema, and the sleep induced constituted the turning point in the case."

R. Fowler, of Aurora, Texas, lauds it as an efficient tranquilizer and sudorific in typho-malarial fever.

Roswell Park has employed it satisfactorily to calm nervous irritability and reduce temperature in fever.

Trelat[92] has found it of service in calming the delirium of erysipelas, as also has Dr. S. Teller.[93]

191 West Tenth Street, New York.

[90] By letter.

THE CLINICAL STUDY OF INEBRIETY.

By T. D. CROTHERS, M.D.,

HARTFORD, CONN.

The first impression from a careful study of many cases of inebriety is one of great astonishment that so little is known clinically of these cases, especially when they are found in every section of the country, and come under the observation of nearly every physician. No general record of cases or study of symptoms has been made, which indicates the origin, development, and character of inebriety; or the degenerations of the higher cerebral functions, manifest in impairment of the senses, and perversions of the emotions and will. Occasionally, for legal purposes, a lunacy specialist will attempt to classify the phenomena of inebriety, but always in the most vague and bewildering manner, simply because he has never made a clinical study of such cases. Not unfrequently such opinions are incorporated into psychological literature, and are accepted as authority, while clinically they are absolutely deficient of any information that exhibits the nature of this disorder. A general comparison of the theories and opinions of different writers, as to the nature and character of inebriety, indicates clearly that the time has come for a new study of the subject from a clinical stand-point. Here the first great fact that will be apparent is the correspondence of symptoms in every case of inebriety, no matter what the origin may have been. Between the two extremes of confirmed chronic inebriety, and the first toxic condition (or intoxication) from alcohol—a period exceedingly variable and uncertain—may be found groups of general symptoms, which indicate both psychological and pathological changes that march down with more or less uniformity. A closer study and grouping of the symptoms of a number of these cases gives unmistakable evidence of the presence of some laws and mutual dependencies, which extend through all the perplexing details, that can often be understood and sometimes predicted. Often the psychical symptoms exhibit a correspondence in their very per-

[91] Med. Record, Jan., 1880.

[92] (Gaz. des hôpitaux.) Edinburgh Med. Jour., July, 1870.

[93] N. Y. Med. Record, 1870, p. 574.

plexity that is amazing. Even the changes, variations, and long halts seen in the progress of many cases, appear to follow a certain law and order, which the limits of our present knowledge has only jointly discerned. In 1870 Dr. Parrish pointed out this fact, and showed conclusively that inebriety was not a disorder of accident, but that its origin, continuation, and decline, was governed by laws, modified by temperament, race, and climate, etc., which from clinical study would be well understood in the future.

My own experience, founded on the study of many cases, confirms this statement, and further indicates that future studies in this direction will reveal not only the general but special conditions from which inebriety takes its origin, but the laws which control its development, progress, and termination, and the methods of treatment founded on these facts will be eminently successful.

Inebriety is one of the insanities, less pronounced but more complex, lying on the border land, which shades down to the most emphatic mental disease on one side, and on the other, ranging up through all the various grades of nerve and brain disorder to health. Under the influence of alcohol, exhibiting marked symptoms of insanity, removed from this influence, the general appearance of health may be present; thus passing rapidly from one apparent condition to another, exhibiting a confusing chain of symptoms that cannot be understood without careful study. Through all this oscillation the line of disease is often obscure, partially masked, and cannot always be traced from step to step. Alcohol in most cases simply develops this condition of disease. I have no doubt that certain kinds of alcohol often determine the nature and character of the disorder, increasing or diminishing certain symptoms or complicating diseases, or intensifying the degeneration of this or that organ: but the general symptomatology and progress remain the same in all cases. No study of the pathological appearances, or morbid anatomy, will indicate the exact nature of the disease, because both the functional and organic condition of the brain varies constantly, from the slight excess of hyperæmia to the intense and widespread capillary engorgement, or to the exudation of inflammatory products into the tissues. Inebriety must be studied through its symptomatology; from trustworthy clinical records we shall be able to analyze all the disorders of the mental functions, of volition, intellect, and emotions, and the strange propensities which are displayed in a confused and ever-shifting mass, and recognize the diseased condition from which they spring. From the want of this study comes the vague and confused notions of inebriety. The following case is presented as indicating the character of the present study of inebriety in the profession generally:

Case I.—*Periodical inebriety—Inherited—Exposure—Periods of trembling—Delusions—Exhaustion—Great activity—Restoration—Relapse, etc.*—J. B——, aged forty years, an officer in a bank, was threatened with dismissal if he did not stop drinking. Consulted an eminent physician, who treated him with bromides, the continued current, and different preparations of phosphoric acid; urging him to gradually withdraw from spirits, and use beer and lighter drinks. He had drank brandy in excess for five years, most of the time with distinct intervals of sobriety, lasting from thirty to ninety days. For a year past these intervals had been shorter, and lately he had used brandy in small doses nearly every day at dinner. Receiving no benefit he employed another physician equally eminent, who advised a vacation and rest, with cinchona and coca, as steady remedies and as a substitute for brandy, light wines, and mineral waters.

The case finally came under my care, and I wrote to both physicians for a history of their diagnosis and treatment of this patient. The first one answered in a courteous letter of some length, describing the case as one of marked alcoholism, springing from bad company and fast life, and presenting no characteristics of anything worthy of the name of disease, except such symptoms as could be traced directly to alcohol. He had examined the patient in company with a lunacy specialist, and together they had failed to discover any mental defects; the real remedy seemed to him to simply break up his adverse surroundings, and impress on the patient's mind the personal responsibility and danger of continuing the use of spirits. He was agreed with his friend the lunacy specialist that medical treatment beyond the relief of temporary functional disturbances would be injurious, by creating in the patient's mind a hope of relief from sources outside of himself, and thus prevent exertion on his part. In his experience the use of the bromides and electrical current readily removed the effects of alcohol, and the lighter, purer drinks, such as wine, and sometimes beer, enabled the patient to break up the habit and become a thorough temperance man.

The second physician wrote that he had made a careful study of this case, and could not find any class of symptoms from which he could make out a disease. Possibly it was a mild case of alcoholism, for which the patient was most culpably responsible. But if he would give up his club, and join a church, he would fully recover. He had found congested liver, functional heart disorder, and dyspepsia, which were all local, and dependent on the alcohol used. He was undoubtedly suffering from a bad, vicious habit, which good surroundings and better company would do more to cure than all other means. Hence he advised that I should call in the aid of a clergyman and try to build up his moral nature. He thought cinchona was very useful, but was sure the sudden withdrawal of all spirits injurious, hence he urged light wines and mineral waters as a substitute. He closed his letter with a strong protest against calling drunkenness a disease, and thus setting up a refinement in science which was dangerous and misleading.

This summarizes the results, from the so-called studies of two excellent physicians, of this case. By one he was treated and under observation for over six months, the other was in charge for four months, affording ample opportunity to ascertain a full history of the case. My studies in this case were not only based on his own statements, but the testimony of his sister, the bank officials, and two of his intimate friends who had observed him in many different conditions. His father was an inventor, who lived in conditions of much poverty and case, and died of general paralysis at forty-two. His mother was a melancholy, dyspeptic woman, under medical care for a long period, and finally died of consumption at thirty-eight years of age. Her father (the grandfather) was a cattle-drover, and drank to excess at times all his life; both of his sons drank to excess and died early. Her mother died from cancer in middle life, and she was the only surviving one of the family. On the father's side of this patient, consumption seems to have been the special disease which appeared in all the members.

Nothing unusual was noted during childhood of this patient, except his extreme nervousness and excitability, which would come on suddenly and soon pass over. When seventeen years old he enlisted and went into active service at once in the Potomac army. Up to this time he had never been away from home, but had been occupied writing and drawing for his father, living a temperate, quiet life. From his own statement, he came back from a scouting raid one day, thoroughly prostrated, not having had any food for nearly twenty-four hours, and finding the water unfit to drink, used whiskey with marvellous relief, and from that time its use, when prostrated, seemed a necessity. He remained three years in the service, using alcohol to intoxication on many occasions. During the next twelve years he was engaged in life insurance and banking, and finally was promoted to cashier of a city bank. During the first five years after leaving the army he rarely drank to intoxication, and then only in secret, but always, when depressed and exhausted, the desire for spirits was intense, and had to be gratified. He claimed to be a temperanee man, and had a horror of being a druukard, disliked the taste of any form of spirits. As business cares and duties increased, he had attacks of nervous wakefulness at night, which nothing but brandy would relieve. Joining a club, he sought diversion and change, drinking only beer and light wines occasionally. The death of both parents and the breaking up of his home, threw him into a low, nervous fever for several days, during which he remained in bed, and drank large quantities of mineral water, giving as the only reason that they made him feel better. He resumed business for two days, then disappeared, and was found four days later in a hotel, intoxicated, where he had taken a room and drank steadily to exeess during this time. His recovery was rapid, and he seemed in better health and spirits for a long period. This was the beginning of the periodical attacks of inebriety. He lived with his sister, and was perfectly temperate and correct in all his habits of living for periods of three or four months, then he would disappear for a few days, giving some business excuse to account for his absence, and returning would seem more nervous and manifest an inordinate appetite for some days after. These attacks increased and the free intervals grew shorter; then he drank to excess in the club at night, and continued his business in the daytime, although under the influence of alcohol, more or less, for three or four days, then reformed, and was a rigid abstainer again for a long time.

These attacks were preceded by seasons of unusual activity at the bank, and great anxiety to provide against loss or danger from every source; such as re-examination of securities, and double caution in regard to doubtful clerks, and not unfrequently, when he returned home, he would be seized with muscular tremblings, and intimations of speedy death. In the presence of strangers or company he would control this, and appear to be in the highest spirits. Nights of wakefulness and wild dreams of injury would follow, and in the morning he would appear dejected and exhausted. Soon after he would be intoxicated. Generally he was noticed to drink first in the morning on the way to the bank, in a confused, hesitating manner; this would be repeated at intervals during the day. To the warnings of friends that he was going to be intoxicated again, he seemed entirely oblivious. Through business hours he was very sensitive and fault-finding. When his work was over at the bank, he either went home or to the club, and was profoundly intoxicated in a short time. Next morning he would be sober, go to the bank, drink moderately through the day, be intoxicated again at night at the club or at home. The third day would be a repetition of the others, only that he was less sensitive, seemingly more heavy and indifferent to the surroundings. On the morning of the fourth or fifth day he would rouse up, take an active cathartic, stop all stimulants, use beef-tea for two or three days, seem dejected, but very quiet and courteous to all he had found fault with before. Sometimes before and after these attacks his manner and habits seemed different. He was often secretive and suspicious, made extravagant promises, and complained that friends misrepresented his weakness; but always listened to temperance and vice, signed every pledge, and seemed anxious to recover. The result of the advice from the two physicians, was that he began to use brandy every day, and was intoxicated every three or four weeks. When he came under my care, he was filled with the delusion of strength to give up the use of brandy any time, but claimed he needed it for digestion, etc. He slept badly, complained of dreams of intoxication, and feared sudden death, or financial disgrace, and was confident a plot was forming to have him sent to prison. He suffered from periods of muscular agitation, and consciousness of inferiority and guilt. All these symptoms disappeared in a few weeks, and he entered heartily into every effort to help others. He seemed anxious to do all he could to build up his health for the future. At long intervals he suffered from dreams of intoxication, but sought relief at once from baths and medicines. He remained under treatment three months, and was obliged to return to the bank, or lose his position. He continued for nearly two years a temperate, hard-working man, then resigned his place to become president of a gold mining company in Nevada.

A few months after taking up a permanent residence in the neighborhood of the mine, he relapsed, and is now suffering from recurrent or periodical inebricty as before. I have purposely omitted all detailed studies of the symptoms, only presenting such general facts, which should have been noted in the observation of every physician. The origin of this case was very clear in the inherited nervous condition and general predisposition to this malady from his grandfather on his mother's side. The special exposure following the hardships of army life not only developed this latent neuroses, but gave it speeial form and character, which appeared in all his subsequent life.. The periodicity of the alcoholic excess pointed unmistakably to disease. A regular progression of symptoms was apparent in the early concealment of the attacks, and later in the boldness and indifference which he manifested as to his appearance, and the delusion that he was not noticed, or in any way different from others. The nervous exaltations and rapid changes of the emotions, also of the manner and disposition of the patient, both before and during the attaek, were strong evidence of disease; also the vague and confused manner in which the attack began, and the sudden termination from causes that were inadequate to bring on that result, such as a single dose of salts, or any earthartic that he fancied would answer, indicated a very significant mental disturbance. The increase of all the symptoms, up to the time of coming under my care, recovery and final relapse two years later, under conditions of great exposure, is a natural sequence, and confirms all previous indications. The danger

from failing to recognize the disease of inebriety in such cases, is in the neglect of prompt and efficient measures in the treatment. Had this case been recognized by the first physician, and put under the care of some one who could have regulated and controlled all his habits, and given him proper medical care for months or a year, the possibility of final restoration and cure would have been greatly increased. In my experience these cases can be treated with great success, in proper homes or surroundings conducted on exact hygienic conditions, and by suitable means adapted to each case, readily ascertained from clinical study. The natural tendency of every case is towards chronicity, complicating diseases, and death. Owing to the want of clinical study, or recognition by the profession, the case becomes chronic before medical aid is sought. Then follows a long period of empiric efforts to treat it as a vice, or sin, or some condition of the stomach or liver, or what is termed the weakened will. At length, when all other means have been exhausted, and the patient is in a confirmed chronic stage, it is suggested that a study of his case medically in some asylum might be of benefit. Three months in an asylum merely begins the process of restoration, when he comes out and soon relapses, and the inference from this, by his friends, encouraged by the physician, is, that asylums are humbugs, and the disease theory a fiction. This is repeated in every city in the country, and the poor inebriate, suffering from a malady practically unknown, sinks lower and lower to a dishonored grave. The number of inebriates in this country probably exceeds that of all the other cases of disease combined, and up to a recent period nearly all the literature of this subject has come from clergymen and reformed drunkards. To-day, from nearly every pulpit and lecture-hall in the land, clergymen and temperance lecturers are teaching the public what inebriety is, and how to treat it, and the profession acquiesce through silence. The teachings of patients who had recovered from typhoid fever or insanity, and the pulpit discussions of clergymen on these subjects, would be equally valuable as contributions to science. Inebriety must be studied clinically by the profession before its nature and treatment can be understood, and before any practical measures can be applied to prevent its growth and spread in every community.

A CASE OF

OBSCURE ABDOMINAL ANEURISM DIAGNOSED BY ASPIRATION.

By CHAS. A. HART, M.D.,

PLAINFIELD, N. J.

February 24, 1879, I was called by Dr. H. D. Burlingham to see John Slater, colored, aged forty-seven years, who had an obscure abdominal tumor. His principal occupation had been that of waiter. Had suffered from chills and primary syphilis. No history of general poisoning. Never had rheumatism. Had been rather intemperate. Has had pain in the lumbar region for five years, at times very severe, of a gnawing character. Was obliged to give up work a year ago on account of suffering. When standing, would incline the body toward the right side. The middle of the present month first noticed a small tumor in the right side below the ribs. Has been having daily chills without fever. Is considerably emaciated and unable to help himself. Pulse feeble, temperature normal. Not much pain except on motion. Urine charged with urates, but no albumen. The abdomen is distended by a tumor occupying the right hypochondrium and a portion of the left, extending nearly down to the crest of the ilium; the umbilicus is dragged about an inch to the right of the median line. Percussion dull from the sixth rib to the right anterior spine of the ilium. Surface of tumor generally smooth, but at one point nodular. General outline well defined and seems continuous with the liver. The growth has a very decided pulsation, *but no thrill or bruit*. The mass feels doughy but not fluctuant. Pulsation of right femoral artery less forcible than left.

From the above examination I was unable to decide the nature of the growth, but inclined to the opinion of aneurism of the abdominal aorta. Several physicians who had seen the case thought it either malignant disease of the liver or abscess. I next saw the case with Dr. Burlingham on March 5th. The tumor had increased greatly in size and seemed nodulated, with indistinct fluctuation, but still no bruit. The patient's condition being so deplorable, I determined to explore the tumor with a round-pointed aspirating needle, attached to a hypodermic syringe (reported in Medical Record, January 3, 1880), and settle the question of its nature. The needle upon puncturing the sac gave the sensation of having entered a cavity, and the *barrel of the syringe filled with arterial blood*. The tumor was undoubtedly aneurismal. No leakage took place from the point of puncture. The tumor continued to increase rapidly, and on March 19th the patient died suddenly, about six weeks from the time the growth was first discovered.

Post-mortem twenty-eight hours after death. Cadaveric rigidity slight. Abdominal cavity only examined. The tumor extended on the right side from above the free border of the ribs to the iliac fossa. The liver and intestines were crowded to the left side of the abdominal cavity. The ascending colon, vena cavæ, and the abdominal aorta, were found partly overlying the sac and closely adherent to it. The outer portion of the cyst was firmly adherent to the abdominal wall. A portion of the proper aneurismal sac, the size of the hand, had been absorbed, and its place supplied by the posterior abdominal wall. In the upper and posterior wall of the sac a large rent was found where rupture had taken place, giving exit to about two quarts of blood. A removal of the tumor showed its origin to be from the descending aorta, about two inches below the diaphragm. The opening in the vessel was three-fourths of an inch in size. A small portion of the sac lay over the spinal column. The last dorsal and first four lumbar vertebræ were found very much eroded, the second and third lumbar vertebræ were absorbed to the depth of three-fourths of an inch. The intervertebral substance had not suffered from pressure. The right kidney was found on the outer and anterior face of the sac, very much flattened, and was what had given the feeling of nodulation. The deposit of fibrin on the anterior side of the sac was quite thick, but thinned on the posterior. The aorta showed extensive ætheromatous deposits. I failed to discover the site of exploration. The obscurity of the disease, its rapid development after discovery, and large size, renders the case worthy of note. Without exploration I am at a loss to know how a diagnosis of its nature could have been arrived at with any degree of certainty.

Progress of Medical Science.

Obstruction of the Bowels Caused by Large Worms—Death.—In the *London Lancet* for Dec. 4, 1880, Dr. E. Downes has reported a case of intestinal obstruction caused by large worms. The patient complaining of constipation, purgatives were administered several times, but without avail. There was no indication of internal hernia. The abdomen was very much distended, and some coils of the intestines could be seen and felt pretty plainly through the abdominal walls. After a brief consultation it was agreed to perform Amussat's operation. Accordingly an incision four inches long was made about two inches above the crest of the ilium on the left side, and about parallel with it. On the morning of the third day, when evacuations occurred both from the artificial anus and the rectum, it was stated by the mother of the patient that an immense number of round worms, "about two pounds" in all, had passed by the wound. There seemed little doubt to the operator that the obstruction had been caused by the worms. The case terminated fatally a few days later.

A Recent Colles' Fracture Examined at Post-mortem.—The opportunity of examining a recent Colles' fracture at an autopsy was afforded Dr. Theodore A. McGraw, of Detroit, Mich. The patient, aged sixty years, had sustained a fall, and, in addition to a traumatic aneurism of the gluteal artery, fractured the radius. At the post-mortem examination the ulna was found in its place. No ligaments anywhere around the joints were broken or injured in the least, neither was there any extravasation of blood near the fracture. The lower end of the radius was broken into four fragments, which however, were, held together by the periosteum and ligaments. They were broken off the shaft just one half inch from the articular surface, and were inclined back with the characteristic deformity. It was with difficulty that they could be brought into proper apposition, and only by first making traction, and then bending towards the palmar surface. It was evident that they were held in their acquired position by bony impaction and by nothing else. It was difficult even when the bones were bare of flesh to get much crepitus, owing to the spongy consistency of the bone at that point.

Three of the lower fragments formed the dorsal rim of the articular cavity. The fracture had been undoubtedly produced by the sudden flexion of the hand and wrist upon the posterior edge of the radius. —*Detroit Lancet;* December, 1880.

On Chian Turpentine and its Uselessness in Cancer.—Dr. Henry Morris (*Lancet*, Dec. 4, 1880) denies the efficacy of this drug in the treatment of cancer, stating specifically that there is not a single symptom over which it seems to exercise any favorable influence. It cannot be relied upon to assuage pain, to diminish or alter the character of the discharges, to check hemorrhage, or promote the destruction of the growth by ulceration or sloughing. He has used it in twelve cases. In eight the female genital organs were involved, and in four the breast. Of the eight uterine cases five are dead, two are known to be extremely ill, and one, after a short trial of the turpentine, refused to continue taking it. This last is the only instance in which the turpentine was not taken for several weeks in succession. Of the four breast cases two are dead; a third is in the hospital, and the disease is very rapidly advancing, so that she will probably not live many weeks; while the fourth has the more chronic variety of scirrhus, which, after ulceration, heals in part and spreads in part. In the few cases where the patient at first thought she was benefited, the impression was due to that "clutching-at-straws" tendency that is so often observed in persons suffering from lingering and incurable diseases, and her being encouraged to think that she was taking a new and certain cure. Besides, it was not to be overlooked, in observing the effects of drugs on cancer, that some cases seem to halt in their progress, and stand still, for a longer or shorter time, while some even retrograde. A case of cancerous annular stricture of the rectum is cited to illustrate this point. Again, cicatrization of a cancerous ulcer, is seen every now and again, more especially in old people and in cancer of the breast; but the process is generally to be distinguished from the healthy cicatrization by the occurrence of fresh induration in or beyond the cicatrix. Again, one not infrequently sees cases where the whole of a large tumor of the breast has sloughed away by degrees, leaving a narrow sulcus or fissure, with perhaps a small flattened indurated ulcer at one part, partly scabbed over, and having shallow sulci radiating from it into the thickened parts around. In some of these cases it is hard to believe at first that an operation has not previously been performed. As a cure for cancer chian turpentine is utterly valueless.

Sir Henry Thompson's Operation for Cystitis and Enlarged Prostate.—Dr. Ashhurst has recently treated a case of cystitis with enlarged prostate and recto-vesical fistula, by Sir Henry Thompson's method of introducing a tube into the bladder through an opening above the pubes. The patient had for several months suffered from inflammation of the bladder associated with great enlargement of the prostate. There was no retention of urine, but, on the contrary, the bladder was much contracted, the patient micturating frequently and with intense pain, and the catheter not bringing away more than a fluid ounce of very offensive and dark-colored urine. The patient declared that there was an opening between the bowels and the bladder, but this was doubted by the doctor. Internal administration of ergot and chlorate of potassium having failed to give relief, Sir Henry Thompson's operation of establishing a direct communication with the bladder above the pubes was performed. The only point in which the operation differed was in the use of a metallic instead of a flexible tube. When the patient was visited in the ward, about an hour after the operation, it was found that fæcal matter was mixed with the urine which flowed through the vesical tube, thus showing that the patient's suspicion of an abnormal communication between the bladder and gut had been well founded. The operation was followed by no constitutional disturbance, and there has been measurable relief from pain. The enormous size of the prostate prevents any attempt at relieving the recto-vesical fistula by operative means.—*Medical Times*, Dec. 18, 1880.

Successful Removal of an Orbital Exostosis.—The following interesting case is reported by Dr. H. B. Sands, in the *Archives of Ophthalmology* for December, 1880: A young and healthy looking farmer had noticed a slight protrusion of the right eye for some three years, and had suffered subsequently

deep-seated orbital pain, headache, and vertigo. The protrusion gradually increasing, the right nasal passage had become obstructed. There was no impairment of vision. Finally he could hardly close the right lid. A firm smooth growth springing from the floor of the orbit seemed to be the cause of the difficulty. The sides of the nasal passage were closely approximated. No positive diagnosis was made, although the coincidence of exopthalmos with nasal obstruction led to the suspicion that the tumor was connected with the antrum. The patient consenting, the following operation was performed: A triangular flap, having its apex near the inner canthus, was reflected so as to expose the anterior wall of the antrum. This was cut away sufficiently to admit the finger, when it was ascertained that the cavity was empty. The eyeball being now protruded and pressed upward, the inferior edge of the orbit was gradually removed until the index finger could penetrate deeply enough to feel the morbid growth. This was found to be a hard, roundish body, a little larger than a large hazel nut, attached to the superior maxillary fissure. By the use of a chisel and an elevator it was removed, bringing with it a portion of the floor of the orbit. A horse hair drain was then introduced into the wound, which was closed with sutures. The patient did well after the operation, and left the hospital at the end of a fortnight. The protrusion of the eyeball had almost entirely disappeared, and vision remained unaffected. An examination of the tumor showed it to consist of a shell of compact bony tissue containing a large nucleus of cartilage.

Kassowitz on the Normal Development of Bone.—This process, which has attracted the attention of so many excellent observers recently, has been the subject of an extended treatise now going through the press. The views of the writer, as summarized by Maas, of Freiberg, are as follows: A question of surgical interest, namely, the growth of bone by apposition or expansion, is decided by recognizing the former as a normal process, while the latter is thought to be impossible, a view which is now very generally accepted. The development of bone from the periosteum is either direct, *i.e.*, without the intervention of cartilage, or indirect, *i.e.*, through this medium, which latter view is in opposition to that of most histologists. Cartilage, in the opinion of K., is produced where there is danger of the young bone being injured by external violence. In the growth of cartilage he believes that an interstitial expansion takes place and calcification is a sequence of the arrested expansive growth of the cartilage. Why this is not always the case is not explained. Giant-cells, which are associated with absorption of bone and are then designated osteoclasts (Kölliker), are not thought to be typical elements, but the transformed products of some fibrillar structure of greater or less size.—*Centralblatt f. Chirurgie*, November 20, 1880.

Tripolith as a Substitute for Plaster-of-Paris.—After a series of experiments Prof. von Langenbeck recommends this new material for surgical purposes. It was discovered by Schenk, and consists of lime, silicon, and the oxide of iron. Gray in color, and fine in quality, it is lighter and more durable than plaster-of-Paris, and, as it stands the weather well, was designed for stucco-work. It is applied in precisely the same cases as the plaster-of-Paris dressing, and in the same way. After enveloping the limb or body, as the case may be, in flannel, the gauze bandages that have been impregnated with the tripolith powder are immersed in water, then smeared with a thin paste of the tripolith and applied. The following advantages are claimed: It does not absorb moisture so readily as the plaster-of-Paris. Such dressings are lighter by about fourteen per cent., and more easily worn. After application they harden sooner (in three to five minutes), and when once hard and dry never absorb any moisture at all. It is possible, therefore, for patients to bathe while still wearing the tripolith dressing. It is also cheaper than the plaster-of-Paris.—*Berl. klin. Woch.*, 46, 1880.

Incubation and Diagnosis of Hydrophobia.—At a recent meeting of the French Academie de Médicine (*Le Courier médical*, Nov. 13, 1880), M. L. Colin reported a case of hydrophobia in a human subject which followed the bite of an enraged dog some five years previously. The case, however, seemed to lack inherent probability, judging from the symptoms which are now generally accepted as pathognomonic. In the discussion which followed, M. Bouley stated that he would base his diagnosis in such cases upon two points: first, the evidences at post-mortem, viz., apoplectiform foci along the floor of the fourth ventricle, the lymphatics and perivascular sheaths being filled with lencocytes, and, secondly, the inoculation of rabbits to determine whether the disease was true or spurious hydrophobia. On the former point, as remarked by M. Maurice Raynaud, the presence of these peculiar *miliary abscesses*, as they have been called, were valueless, since they have been seen by different observers in other morbid states. Inoculation of rabbits has also been tried in England to decide doubtful cases, but the results were often negative. It is now pretty generally recognized that laryngeal and pharyngeal spasm are the two most important elements in the diagnosis, while there is absolutely nothing distinctive in the pathological appearances; while inoculation, even with genuine rapid virus, only takes in a limited percentage of the cases. Certain individuals and animals have no susceptibility to the disease.

Abscess of the Liver treated by Subcutaneous Aspiration—Subsequent Discharge of a Biliary Calculus.—M. Guerin recently presented at the French Academie de Médicine a man upon whom he had operated for hepatic abscess. In January, 1873, he complained of pain over the liver and intermittent fever, which latter was relieved by quinine. Some months subsequently his pains returned, and a hepatic abscess was diagnosticated. A trocar was then introduced at the base of a large fold of skin, and the abscess cavity was cleared of its contents by aspiration. A rubber tube was passed through the wound, and frequent injections were made with carbolized water. Though the abscess seemed to close, not so the external wound. In the following year the patient returned to the country with the fistula still discharging. While absent he experienced a severe exacerbation of hepatic pain lasting forty-eight hours. He then expelled a biliary calculus, the size of a pea. Six months after there was a fresh attack, and a second calculus passed. Immediately thereafter the wound healed rapidly, and the patient entirely recovered his health.—*Le Courier méd.*, Nov. 20, 1880.

A New Method of Operation for Congenital Phimosis.—Dr. Demeaux, of Puy l'évêque, has devised a new and simple method for the operative

cure of congenital phimosis, with which he has already had pleasing results. He states that the operation is simple, short, devoid of all danger, unattended by loss of blood, and not followed by suppuration. It is described as follows: A strong silk ligature about one foot long, is well waxed and provided with two needles, one at its middle, the other at one extremity. A grooved director is now introduced under the prepuce and pushed as far as the end of the glans (sometimes not quite so far). The needle fixed at the end of the thread is then introduced along the director, made to pierce the skin at the termination of this instrument, and the thread is then drawn out. Now the second needle, with a double thread, is made to pierce the prepuce at its middle. The thread being cut, there are two loops, which are firmly tied, thus constricting the foreskin at two points. After five or six days, the ligatures have cut through the tissues and the prepuce is divided. In a fortnight or three weeks the cure is complete.—*Le Courier médical*, October 2, 1880.

The Functions of the Soft Palate and the Pharynx.—Dr. Falkson, of Königsberg (*Virchow's Archiv*, vol. lxxix., p. 477, 1880), had occasion to study this subject in connection with a patient whose naso-pharyngeal space had been opened to view by an operation in the orbital cavity. Speaking, swallowing, coughing, as well as deep inspirations, always produced conspicuous movements of the velum and upper portion of the pharynx. The soft palate participated, in a typical manner, in the process of articulation. A decided elevation took place with the pronunciation of every word or letter. This elevation of the palate was most marked with the letters *i* and *u*, less so with *e* and *o*, and least of all with *a*. Loud speech or mere whispering caused no appreciable difference in the extent of elevation. In pronouncing the consonants *m* and *n* no motion was visible. During speech the laryngo-pharyngeal space was never completely shut off from the naso-pharyngeal cavity. Falkson agrees with Voltolini in supposing the nasal twang of the voice to be independent of incomplete closure, since it occurred also when the velum was so placed as to make closure complete and perfect. The height of the voice does not at first materially influence the position of the velum; after a while, however, it invariably descends. Speech is more or less completely hindered if the movements of the palate are interfered with. During respiration there is no active participation of the velum. Snoring, on the other hand, is accompanied by a rise of the same, and a trembling vibration of the uvula and posterior palatine arches. Simultaneously the base of the tongue was seen to bulge upward. In deglutition the closure of the naso-pharyngeal cavity is very complete.—*Schmidt's Jahrb.*, vol. clxxxvii., September 27, 1880.

Gluteal Abscess following Child-Bed.—A. Davidson, M.B., M.R.C.S. Eng., Toronto, reports two cases of gluteal abscess which occurred in women shortly after confinement. The two cases here related are almost precisely similar, occurring, as they did, in young married women, in the same region of the body, during the winter months and following childbed. Case No. 1.—Patient had given birth to a child nine weeks previous to entering the hospital, but her lying-in was not attended with a good recovery. She complained of throbbing pain in the right buttock, which continued to increase in severity, resulting eventually in the formation of an abscess, which was opened and a quantity of pure pus discharged. The abscess-cavity measured about six inches in all its diameters. The after-treatment consisted in the introduction of a drainage-tube and the daily washing out of the cavity with a solution of carbolic acid (1–40). This mode of treatment was continued for some weeks; still the cavity did not seem to be decreasing in size. The walls of the cavity were then brought together and retained in this position by means of splints and a compress. This treatment was continued for two weeks, but without benefit. The patient became unruly and she was dismissed from the hospital before the wound healed. Case No. 2.—Patient had a good delivery; two weeks subsequently she observed a "dumb pain" in her right hip. When admitted to the hospital all the signs of a gluteal abscess were present. The abscess was opened under the carbolic spray, a drainage-tube was introduced and the wound dressed with antiseptic precautions. About nine ounces of thick, healthy pus was evacuated.—*Canada Lancet*, November 1, 1880.

Intestinal Croup and Diphtheria.—This is the title of a thesis for graduation, written by Schwarck, of Bonn. The author states that the disease occurs as primary diphtheritis, which is said to have an independent origin, and as secondary diphtheritis following previous affections of a different kind. There is no anatomical distinction between these two forms. Schwarck carefully studied a characteristic and typical specimen of diphtheritis of the colon, associated with evident dysenteric ulceration. The microscopical examination of the membranous deposits found in the colon revealed a structure altogether identical with that of similar membranes ordinarily observed in the fauces. The smaller patches showed a structure corresponding to that of the larger deposits. Both were said to owe their formation to the coagulation of a fibrinous substance, but neither the blood-globules nor the intestinal epithelial cells contributed to this formation. Lenticular products of exudation were discovered in the deeper layers of the mucous membrane, and these were thought to represent follicles degenerated by the croupous transformation, and surrounded by an area of infiltration. Such follicular exudations caused ulceration in consequence of sloughing. The arterioles in many places underwent a sort of hyaline metamorphosis, and becoming choked up also led to embolic ulceration. The local process in the intestines was for various reasons thought to be the result of constitutional disease. Finally, the author showed that a distinction between croup and diphtheria was inadmissible, inasmuch as the former might lead to ulceration just as well as the latter.—*Centralbl. f. klin. Med.*, No. 29, 1880; *Allg. med. Cent. Zeit.*, Oct. 13, 1880.

Occipital Neuralgia Cured by Nerve-Stretching.—Dr. Schüssler, of Bremen, treated a case of persistent neuralgia successfully by exposing the nerve along the course of which the pain was felt, and after carefully dissecting it out from its hyperæmic sheath, stretching it by digital force. The rather extensive wound healed by primary union, the operation having been antiseptically performed, although the spray was dispensed with. For a period of three days after the operation the patient complained of severe lancinating pains. On the fourth day no pain was felt, and since then she has never for a single moment complained of the least ache.—*Berl. klin. Woch.*, Sept. 27, 1880.

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THE COMING MEETING OF THE STATE SOCIETY.

THE coming meeting of the Medical Society of the State of New York will, as usual, be one of the notable events of the year. The large membership which this association possesses, the representative character of its organization, and the intimate and peculiar relations which exists between it and the county societies of the state, invest its doings with an importance second to no similar society in the country, and give its decisions on medical legislation, and kindred matters, a corresponding weight. When it is stated that matters of some importance will be presented for action at this meeting the interest in the results will very naturally extend beyond the mere confines of this state. It is well known that through the action of this society a law has been created regulating the practice of medicine in this state. On several occasions we have referred to its provisions, to its practical workings, and its ultimate influences upon the suppression of quackery. This law has been in operation for a sufficiently long period to enable the different county societies to report upon its utility or to make any suggestions that may tend to improve its practical working. If any such reports are to be made, they will insure the attention of medical men everywhere, but more especially such as are watching the effects of the law with the view of securing the passage of a similar one in their respective states. No report will be more eagerly desired than one from the medical society of this county. But that such is not forthcoming may be in itself of the greatest interest, in view of the fact that as yet no means have been devised by the County Society for enforcing the law, except, perhaps, the extra assessment levied recently for such a purpose. But the legality of this measure is so seriously questioned that it has been referred to the State Society for action. There are very good grounds for supposing that the State Society cannot endorse this measure. If this be the case, no other county can follow the example of that of New York and provide an extra fund for the enforcement of the medical act. The question—which, in connection with the object for which the extra assessment was made, is of the greatest importance—may come up, as to whether it would or would not be desirable to alter the law limiting the membership fee of county societies to one dollar. There is no doubt that to the county societies belong the duties of enforcing the law, but how and by what means such duties are to be performed will not be so satisfactorily decided. This will be one of the points which will engage the attention of the society.

Another matter, of perhaps even greater importance, at least to the medical profession outside of the state, is the recommendation from the New York County Society, to the effect that a revision of the Code of Ethics be made. The Committee on Ethics of the County Society, at its recent annual meeting, made a very elaborate report, in which was set forth the necessities of such change from many points of view. These points are for the most part well taken. The committee state, with truth, that not only the state but the national code are more honored in their breach than observance.

With a desire to perform an unpleasant task, without giving unnecessary offence to any, the committee called the attention of the writers of several medical certificates to the by-law of the society forbidding the publication of said certificates. To its surprise the committee was answered by an advocacy of the principle of certificate-writing, and by a determination to continue the same, and this from leading members of the profession from whom we have a right to expect better things. In the report of the committee the subject of newspaper advertising in its various phases is discussed, particularly the fashionable form of personal interviews. The inevitable conclusion appears to be that there is no article of the code which cannot be conveniently evaded to suit the purposes of these advertisers. Between the duty of informing the public on medical matters and the wrong of advertising oneself as a practitioner of medicine there is a wide range of discretion allowed. Is it to be wondered at that any really public-spirited man should hesitate as to which course he should pursue?

Bearing upon these and other matters relating to an advocacy of revision of the code, the committee make the following statement, which we take occasion, in passing, fully to endorse: "In this connection, it may be pardonable for the committee to state that its experience during the past year has, in a forcible manner, demonstrated the inadequacy of the present codes of medical ethics to the existing demands of the profession. The code adopted by

the American Medical Association thirty odd years ago, has in many respects become obsolete; what were deemed offences then are no longer regarded in the same light. *Per contra*, the ingenuity of man has developed practices which were unknown when the codes, national and state, were established, and hence were unprovided for. The code of the American Medical Association contains a mass of sentimental advice, which, together with its moral platitudes and verbiage, would seem to suggest the necessity for its revision. Our own system of medical ethics, which the State Society adopted in 1823, and which has since been subjected to but few alterations, is perhaps even more obsolete than the code above alluded to. The profession is now in no sense guided by these codes; nor does it seem desirable to hold it together, either by the regulations that pertain to trades unions or by the moral platitudes of existing codes, but it rather requires for its wholesome government clear and business-like regulations, backed up by our ample statutory laws, leaving the matter of moral maxims and precepts, as well as personal manners, to the social conditions that surround the individual."

The presentation of this report to the State Society, and the indorsement by the County Society, will doubtless bring the question to an issue. There is but one way in which intelligent action can be taken upon it, and that is by recommending such alterations in the present codes as are consistent with the advances of civilization and with the corresponding demands of a liberal profession. The medical society can well afford to take the initiative in this matter, and prepare the way for the other states. Another point in this report which will doubtless require attention is, whether or no every member of the profession shall be compelled to join his county society, and also whether any member can resign at his option. The law on the latter is ambiguous enough to require further elucidation.

We do not undertake at this time to go over all the probable subjects which may be presented for decision at the next meeting of the State Society, but have referred to several which appear to have a leading significance, and which may serve as texts for our general remarks upon the importance of the coming meeting. There will no doubt be the usual supply of scientific material, and it is to be hoped that time and opportunity will be given for the discussions.

QUACKERY AND THE RELIGIOUS JOURNALS.

A PROMINENT religious journal, *The Evangelist*, has announced its position on the question of advertising quack nostrums. Its editors say that they do not claim to know anything about the genuine value of the panaceas they advertise. There may be, they say, something in them; one out of ten is very likely a "boon to suffering humanity." But they only present the claims of the drugs, with illustrative cuts and evangelical testimonials. Their readers can try them and thus learn what their therapeutical value really is.

The text which forms the basis of this argument is a flaming two-column advertisement of the "Only Certain, Effective, and Permanent Catarrh-cure." The remedy was discovered thirteen years ago, since which time it has presumably cured 60,000 cases. It is now sold only by a certain retired clergyman in an obscure western town, with whom all afflicted readers will please communicate.

The *Evangelist* states that it does not know whether the claims of this medical clergyman for his remedy are true or not. We find it very hard to believe this statement, or at least to believe that the *Evangelist* does not know that a large part of the very extravagant claims is not false. Could a man without medical knowledge have accidentally compounded an "only certain, effective, and permanent cure" for a chronic disease, thirteen years ago, without its yet being known to those most interested in obtaining remedies for this disease! Can any intelligent person read over the announcement in question and not believe it to contain many misstatements and gross exaggerations? But it is these which attract the attention, deplete the purses, and imperil the constitution of the readers.

The *Evangelist* argues that perhaps one-tenth of patent medicines may be useful, though the other nine-tenths are not. Therefore, for the sake of the tenth, a quasi-indorsement may be given of all. This is certainly Jesuitical reasoning.

Our estimable contemporary also thinks that it would be carrying principle to an extreme if the advertisement of a preparation of cod-liver, indorsed by some eminent and reputable medical men, were refused insertion. But this is a great misapprehension or evasion of the point. There is no objection to advertising any special drug or any mixtures whose formulæ are authoritatively known. But we protest against religious journals advertising, as specifics, secret preparations, whose properties may be injurious, and are always less effective than they are claimed to be.

Some religious journals would put the matter on a purely commercial basis, and end discussion by saying that "business is business." But it cannot be disposed of so easily. Religious journals pretend to have an object higher than that of simple financial success. They must guide themselves then by this high ethical standard which they would impose upon the world. And it is not in accordance with such a standard to circulate advertisements, nine-tenths of which, upon their own admission, are fraudulent.

We present an analogy: A city missionary goes about with a Bible in one hand and a package of handbills in the other. He proclaims the gospel

and distributes the handbills, remarking, parenthetically, "These tell of a very celebrated show; go and see it. I don't know anything about it myself, but it may benefit you; or you may get blown up during the performance—and this is more likely. It may do you neither harm nor good—I don't know anything about it; go and see for yourself; admission one dollar, one-fourth of which goes to myself."

The Apostle Paul said that some things should be avoided for appearance sake, even if not bad in themselves. This is an argument which we do not like to use in denouncing quack advertisements, but it may have force with some who have consciences too obtuse to appreciate the real condition of affairs. There is no doubt of the wide existence of a feeling against the practice of quack advertising in religious journals. It is shown by the cartoons in our weekly illustrated journals, and by the comments in the daily press. The advocates of the Christian religion should be above the reproaches and suspicion which the practice they now indulge in brings upon them. If they cannot see any harm in the practice, they must admit that others do. Is it better then to have the gold brought in by advertising a patent pill than to avoid all appearance of evil?

UNDERTAKING AS A HIGH ART.

We are glad to hear that the undertakers of this city are appreciating their high calling. A goodly number of the craft have formed themselves into a protective association, from which are excluded all persons who have not been regularly educated to the profession. It is high time that such should be done, and the undertakers who have thus boldly taken the stand against fraud and quackery should have the sympathies of members of the other liberal professions. The great causes for complaint among the mortuary artists are that mere sextons and livery-stable men commit fraud upon decedents and their friends by assuming the higher duties of the art when utterly incompetent for their performance, and also that they cheat the friends of the survivors of the melancholy satisfaction of paying the usual accessory fees. The consequence has been that men who know no more about trimming a coffin or dressing a corpse than they do about arranging the mourners or filling the carriages are monopolizing the profession and reducing it to the level of the merest trade. With a man who truly loves his profession and who has an eye to its æsthetical requirements, the situation is a painful one. The accessories of a funeral are everything to the undertaker. For upon these he must depend for the extra fees which give him a living. It is the proper management of these that give him a claim upon the community and entitle him to the rank which he now so justly claims. Naturally he will look to the medical profession for help in maintaining his rights. To such medical men as most frequently meet the undertaker he appears to be a man who deserves encouragement, and the feeling is doubtless reciprocated by him. At all events, he has been made to feel a sort of dependence upon the medical profession in many ways, and it is but just that it should not desert him in his hour of trouble. High art, æsthetical accessories, large fees, and the maintenance of professional tone are among the requirements of our advancing civilization. While the carpenter, the ice dealer, the trimmer, the florist, the livery man, and the grave-digger should have their due, the one who blends the doings of all into a harmonious whole must always claim his paramount professional rights. Unless he is enabled to do so, decent burials will probably be at an end; we shall have a return to the primitive and heathenish practices, and undertaking, as an art, will have perished from the face of the earth. That this should not be, was proven at the meeting by strong statements and by impartial arguments.

From the time that death was typified as a journey, the undertaker has been the toll collector. From the time that the coin for ferriage was placed in the mouth of the corpse until the present, when it is found in the pockets of the survivors, his profession has grown in influence and importance. We repeat, then, that his profession must be respected. Its members cannot too zealously guard against encroachments of the church-sweeper, the inroads of the hack-driver, or the meanness of the box-maker.

The organization has been effected none too soon. The next steps are the creation of a fee-table, a code of ethics, a training-school, and a register. Too much care, however, cannot be taken to exclude unworthy members. We would suggest to the active movers in the organization that many valuable suggestions as to the fitness and experience of candidates could be obtained from some of the members of the Pathological Society, or from such of the medical profession as are, by force of circumstances, compelled to attend the funerals of their patients.

We have said this much to commend the subject to the attention of such of our readers as might otherwise be apathetic concerning it. Not only should physicians do all they can to aid the undertakers in their struggle for existence, to help them in their efforts to elevate their profession, but should recommend to their patients only such of the craft as are qualified to perform the duties of their high office. If it were not that the undertaker's bill takes precedence in law of that of the physician, it would seem proper to recommend that the medical bills to survivors be low enough to allow for the necessary and extra charges for all first-class funerals.

THE NEW YORK SANITARY REFORM SOCIETY.

The New York Sanitary Reform Society has just completed its first year of work. It now announces

the results of its labors in a pamphlet which contains suggestions and statistics of much interest. The society in question has devoted itself chiefly to securing the carrying out of the Tenement House law, and it has worked very successfully in this direction. With the co-operation of the City Board of Health, this law has been more stringently enforced, builders being compelled to put in larger air-shafts and to curtail the percentage of lot occupied by the buildings. The prevention of the introduction of defective plumbing into tenement houses has also occupied the attention of the society. Largely by its earnest representation of the importance of this matter, the City Health Board resolved to enforce the law strictly in this respect, and oblige all plans of plumbing to be submitted first for approval. A third point dealt with by the society was in regard to the practicability of abating nuisances in a more summary manner than has heretofore been done. As is observed in the report, the *eventual* abatement of a nuisance is a very different thing from its *prompt* abatement.

For the future the society proposes to continue its work in reforming the condition of the tenement houses, and will try to secure a law extending the supervision of the Board of Health over the plumbing in all buildings hereafter erected in this city. Such questions as the proper construction of public schools, the cleaning of the streets, the sanitary education of the poor, the suppression of the Hunter's Point nuisances, and the licensing of milk venders, will engage the attention of the society in future. As its work has been judicious and productive already, we may expect much from its proposed labors.

Reviews and Notices of Books.

A Practical Treatise on Surgical Diagnosis. By Ambrose L. Ranney, A.M., M.D. Second edition. 8vo, pp. 471. New York: Wm. Wood & Co. 1880.

In this, the second edition, issued within a year after the first, the author has enlarged, amplified, and improved his work. The addition of some descriptive text beside the tabulated statement of signs and symptoms will make the book more intelligible and clearer; while not detracting from its value as a book for study, it will enhance its value as a book of reference. The introduction of a short sketch of the pathology and etiology of inflammation, in a condensed and readily understood form, will do much to throw light upon a subject which is apt to prove dark to the student, and a proper appreciation of which is too often wanting to the practitioner.

Of the work itself it is impossible to speak in too high terms of praise. No one who has never attempted the task can know the difficulty of arranging the principal characteristics of diseases which resemble each other in such a shape that, while their points of similarity are made known, the particulars in which they differ are made apparent. It is a work which requires not merely a thorough acquaintance with the subject, both in its literature and its practice, but also the mental faculty of grasping the prominent characteristics and arranging them so that word pictures shall be produced, similar yet different, vivid yet truthful. The man who has studied each individual disease and morbid condition may think that he understands it fully; still, it is only when he views it by comparison with another, when he arranges its salient points in tabulated form, that he fully grasps it and masters it. This is the work that Dr. Ranney has performed for us in his book; and the results of his labor are so nearly perfect that it is difficult to see how, in the present state of knowledge, they could be improved upon. The copious index at the end will tell the surgeon who is in doubt as to his diagnosis, where he may look, and when he turns to the page he may rest assured that he will find just what he needs.

Student's Pocket Series of Muscle Tablets. New York: Wright & Schondelmeier.

These tablets will be found useful by the student, as they are compact, and occupy so little space that they can easily be carried in the pocket, thus enabling the industrious to utilize their spare moments. They are five in number and give the names, origin, insertion, function, and innervation of the muscles, as arranged by Prof. Jos. D. Bryant.

How a Person Threatened or Afflicted with Bright's Disease Ought to Live. By Joseph F. Edwards, M.D. Philadelphia: Presley Blakiston. 1881. 12mo, pp. 87.

While devoid, as far as possible, of technical expressions, and written for general comprehension, this little book is a treatise on the hygienics of Bright's disease, from the perusal of which the professional man will be able to draw many valuable lessons. After describing the disease, and calling attention to its increasing prevalence, the author lays down the rules which should govern the afflicted. He regards it as hereditary. He advises exercise in the open air, avoidance of worry, residence in the country, a dry climate, the wearing of woollen underclothing, frequent bathing, keeping the feet warm, total abstinence from alcoholic drinks and tobacco, avoidance of excess of nitrogenized food, attention to the proper working of the bowels, and the securing of at least eight hours sleep daily. In short, the patient "should live reasonably and moderately."

Medical Heresies, Historically Considered. By Gonzalvo C. Smythe, A.M., M.D. Philadelphia: Presley Blakiston. 1880. 12mo, pp. 228.

The title of this book is unfortunately selected. The word heresy suggests unpleasant reminiscences of the inquisition and the rack, the *auto da fé* and the stake. Moreover, it fails to express the true character of the work. It contains an outline sketch of the principal sects which have flourished at different periods in history, as well as of their principal exponents. But the main portion, and by far its most valuable part, consists in a refutation of homœopathy, treating it not with ridicule but with serious argument. It shows the original character of this school by quotations from the writings of its founder, lays bare its transcendental character, its ignoring of pathology, its opposition to all scientific and physical knowledge. It exposes the absurdity of its fundamental doctrine of similars, and the impossibility of its numerous triturations and dilutions; and, finally, shows how, at the present time, many of those who call themselves homœopaths are teaching and prac-

tising something very much like what regular physicians inculcate. If a copy of this very readable, clear, and convincing book could be placed in the hands of every intelligent person who practices or supports homœopathy, they would see how egregiously they are being duped.

HORSES' TEETH: A Treatise on their Mode of Development, Physiological Relations, Anatomy, Microscopical Character, Pathology, and Dentistry, based on the Works of well-known Odontologists and Veterinary Surgeons; to which is added a Vocabulary of the Medical and Technical Words used. By WILLIAM H. CLARKE. New York: Published by the author. 8vo, pp. 262. 1880.

THIS work is largely a compilation from various authors. It is a very crude performance, showing neither good judgment or literary skill in putting the materials together. There is, however, a good deal of valuable matter collected in the book, and as it takes an unoccupied field, it will doubtless prove useful.

AN ELEMENTARY TREATISE ON THE FUNCTION OF VISION AND ITS ANOMALIES. By DR. GIRARD-TENLON. Translated from the second French edition by LLOYD OWEN, F.R.C.S.I. London: Baillière, Tindall & Cox. 1880.

THE object of this little work is to place the principles of the more abstruse portion of modern scientific ophthalmology within the reach of the general practitioner. The author has, on the whole, succeeded in this object remarkably well. The only criticism which can be made is, that the condensation is in parts too great, and some of the technicalities may be found not to be sufficiently explained. This is, however, more pardonable than the opposite extreme, now so fashionable, of popularizing specialities, so that they will appeal to the laity almost as much as to the general practitioner. The book is still thoroughly scientific in its treatment of subjects. We can heartily commend it as being, in the field which it covers, a very useful manual.

IS CONSUMPTION CONTAGIOUS; and can it be transmitted by Means of Food. By HERBERT C. CLAPP, A.M., M.D. Boston and Providence: Otis Clapp & Son. 1881.

THE question of the contagiousness of consumption is one of much more pathological than of practical interest. Hundreds of thousands of people die annually from phthisis. If out of this vast number a few cases of apparent contagion are found, the immense remainder should also be remembered. We have little sympathy with the alarmists who would popularize the idea that phthisis is contagious. Dr. Clapp can hardly be classed with "alarmists," but he evidently wants to believe in contagiousness, and his bias has impressed itself on his study. His book is chiefly a collection and study of the evidence favoring the theory of contagiousness. As such, it has considerable value, and will fully repay perusal. The latter part of the book is devoted to the question whether consumption can be transmitted by means of food. This we regard as a much more serious question, and one deserving the earnest attention of physicians. It is not a settled question as yet, however, and Dr. Clapp has added nothing new to its solution.

THE INTERNATIONAL SANITARY CONFERENCE met on January 4th, but, owing to the non-arrival of several delegates, adjourned until the 12th inst.

Reports of Societies.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, December 27, 1880.

DR. A. E. M. PURDY, PRESIDENT, IN THE CHAIR.

CERTIFICATES of membership were presented to DRS. Wm. C. Gilliam and Edward A. Judson.

ANÆMIA IN INFANCY AND EARLY CHILDHOOD.

DR. A. JACOBI read an elaborate paper upon the above subject, in which he directed special attention to the fact that, although the condition was so frequent and so dangerous, and one which deserved to be treated of by the best men among practitioners and writers, yet there was no text-book in which a comprehensive study of the subject could be found. In the large majority of instances the condition was secondary in character, although the author of the paper maintained that there were cases of idiopathic anæmia, that is, idiopathic in the same sense in which the term idiopathic pneumonia or idiopathic peritonitis is used. Every disease occurring in infancy and early childhood might give rise to anæmia. For example, all the various hemorrhages resulted in anæmia in many instances, because infants resisted them much less than do adults. Premature children, also those born with congenital diseases, were especially liable to become the subjects of anæmia. Diseases developed in later life might result in that condition. For example, endocarditis, protracted diarrhœa, constipation, malaria, prolonged albuminuria, pernicious anæmia, of which two cases occurring in children had been recorded, leucæmia, leucocythæmia, sleeplessness from any cause, mercurial cachexia, hereditary or congenital syphilis, rachitis, fatty liver, enlargement of lymphatic glands, the complex phenomena grouped under the head scrofula, diseases of the bones, of various kinds, and diseases of the lungs and the pleura.

In anæmia both skin and mucous membrane were pale, of a yellowish hue, thin and flabby. Those organs or tissues which were least used, emaciated first; thus, in very young children fat and muscle were first affected. But there were cases in which fat was persistently retained, and in which it even increased in quantity. For, when the red blood-globules were destroyed there was scarcity of oxygen for the completion of the combustion of albuminous substances; and fat, the physiological result of such incomplete combustion, was deposited in large masses. Particularly was that the case when anæmia was either complicated with or resulting from general rachitis, and when at the same time the glands of the chest were suffering from the results of rachitic processes.

In consequence of anæmia all the organs were, functionally, considerably affected, and with the debility there was a corresponding irritability. The nervous system was less affected than any other, because of the rapid growth and development which occurred during that period of life. Not unfrequently were anæmic and emaciated babies in the best of spirits, because their brains were comparatively in good condition. Every baby with considerable depression of the fontanelles must be considered

as being in danger from the very degree of inanition present.

Murmurs in the jugular veins were not very frequent in infancy and early childhood. Murmurs in the carotids and over the large fontanelle were not at all rare. It was not true that murmurs audible over the brain belonged to rachitis alone; for they might be found in every condition in which blood pressure in the large arteries in the cranial cavity was lessened. The heart itself seldom exhibited functional murmurs. They were so rarely found in the functional disturbance of infancy and childhood that whenever they were heard it was safer to attribute them to organic disease than to merely functional conditions.

Although the brain itself was not so liable to suffer from emaciation, depending upon anæmia, as were other organs, still there were a number of cases in which headaches, attacks of syncope, sleepiness, or, on the contrary, sleeplessness and hysterical attacks, were the result of anæmia only, and disappeared when that condition was relieved. Not a few of the babies and children who cried the greater part of the night had no other ailment than general anæmia, and were frequently relieved by a meal, or some stimulant either before they were put to bed, or given during the interruption of their sleep. The pulse of such children was sometimes very much accelerated, while at other times it was slow and even irregular. Perhaps the pulse was among the symptoms which were the least reliable at that age. In babies it was counted best during sleep, and better over the fontanelle than upon the radial artery.

Anæmic children rarely had a good appetite except in the beginning. The circulation was deficient, and consequently the normal secretions were either defective or deficient. Therefore both appetite and digestion were impaired, and sometimes destroyed.

There was one consequence of the anæmic condition which was of the utmost importance, and which carried with it the indication for its removal in the shortest possible time. It was that whenever any disease set in it was not only more liable to terminate fatally in consequence of the impaired powers of resistance, but when there was the slightest tendency to effusion or exudation those processes would become more extensive, and in less time than in the normal organism. Pneumonia or peritonitis or pleurisy occurring in an anæmic child was a great deal more dangerous than when either of those or any other disease attacked a child in a good, general condition. The author of the paper then spoke of predisposition to and special causes of anæmia. Improper feeding and food were very frequent causes. For the author's views upon that part of the subject the reader was referred to his article on "Infant Hygiene," in the first volume of Buck's "Hygiene." Special reference was made to the deleterious effects of nursing children after they were nine or ten months old. Lactation and pregnancy also were incompatible.

HYGIENE, INFANT FEEDING, AND REMEDIAL TREATMENT OF ANÆMIA.

Barley-water and cow's milk would make better muscle than poor, mother's milk. Avoid solid food, in the main, for infants. Avoid cow's milk, either undiluted or diluted with water only. Avoid condensed milk diluted with water only. Use no milk without the addition of some gelatinous or farinaceous decoction, such as barley-water, etc. In anæmia add beef soup. Solid food might be given at the end of the first year, and such articles might be slowly added to the diet list as physiology and experience permitted. Prohibit, as bad habits, irregular and fast eating. Enforce out-door exercise. Avoid crowded school-rooms and excessive private lessons. There were laws to protect children against cruelty in various directions, but none to protect them from equally injurious influences in various other directions. Too many books were bought for Christmas and too few skates.

Among the remedial agents iron had long been resorted to in the treatment of anæmia and chlorosis. Whether or not it was the iron which produced the beneficial effect had not been answered to the satisfaction of all; for, a great many of that class of patients recovered in consequence of change of diet, with rest and an improved general nutrition, and without the use of any iron whatever. Besides, there were a number of cases in which the administration of iron had been absolutely unavailing. Moreover, there was plenty of iron in almost every article of food. Certainly the doses usually given were large when compared with the iron contained in the food, and with the amount of iron (three grammes and no more) present in the whole quantity of blood circulating in the human body. But it had not been found whether the iron did not act in some way other than by increasing the amount of the metal contained in the hemoglobin. There was no doubt, according to Dietl and Heidler, that it was absorbed in the stomach, and also, very probably, in the upper part of the small intestine. It reappeared in the bile, the pancreatic juice, and the intestinal secretions, not only after it had been taken into the stomach, but also after it had been injected into the veins. The preparations which, in his opinion, were the most beneficial in anæmia of children were the lactate, the tincture of the pomate, the pyrophosphate, the subcarbonate, and the tincture of the chloride. The syrup of the iodide was indicated where, in addition, an absorbent was indicated: as for example in slow convalescence after inflammations resulting in exudation, and specially in disease of the glands and lungs. The subcarbonate combined with three times by weight of subcarbonate of bismuth, and three or four times by weight of bicarbonate of soda, was especially beneficial when gastric catarrh interfered with general improvement during slow convalescence or progressive anæmia. The tincture of the chloride must be regarded as a vascular irritant, and, whenever the action of the heart was lowered and blood pressure was lacking, it was *the* preparation which would be found to be most beneficial.

It had seemed to him that the pyrophosphate was the preferable preparation in cases of anæmia with gastric catarrh, and catarrh or digestive incompetency of the upper portion of the small intestine. The compound hypophosphites and the phosphates he had used with good results, notwithstanding their elimination was nearly as rapid as their ingestion.

In cases of chronic anæmia he had also used arsenic with benefit in minute doses daily after meals, and well diluted with water, especially in a peculiar torpid condition of the stomach which would not digest and assimilate in consequence of absence of both nerve power and gastric juice. It might be given with iron, with or without stomachics. Strychnia, also, in his hands, had proved very useful as an adjuvant to either iron or arsenic, and to a child two years old it might be given with safety in doses of one-fortieth of a grain daily, and continued for

a long time. He had also used phosphorus in substance, in minute doses, with good results.

Cod-liver oil in many cases was beneficial, but frequently its contraindications were overlooked. Most children did not bear it well in the summer time. Some did not bear it at all. At all events, it should not be forgotten that, whenever digestion was impaired and gastric catarrh was present, preliminary treatment was required before the administration of either cod-liver oil or iron.

SPLINT FOR COLLES' FRACTURE AND A NEW FRACTURE-BOX.

Dr. W. P. Bolles, of Boston, on invitation, exhibited a modification of Gordon's and Bond's splints for the treatment of Colles' fracture, and also a fracture-box made up of a series of segments strung upon steel rods with thumb-screws, by which segments could be loosened and tightened as the surgeon might desire.

The President announced the death of Dr. Edouard Seguin and Dr. Nelson Clements, Jr.

THE INDEX MEDICUS.

Dr. Jacobi directed the attention of the society to the value of the subject catalogue of the National Medical Library, and also spoke of the Index Medicus, urging members to subscribe for that publication, at least, until the existence of the work was fairly established. Subscriptions to cover $1,200 were needed.

ASSESSMENTS IN COUNTY MEDICAL SOCIETIES.

Dr Ellsworth Eliot offered the following resolution, which was adopted:

Resolved.—That our delegates to the State Medical Society be instructed to obtain from the State Medical Society an opinion whether a county society can legally lay an annual assessment or tax of any amount, or whether the laws of the state limit the amount of the annual tax or assessment which a county society can impose.

On motion by Dr. F. V. White, the society gave a vote of thanks to Dr. Jacobi for his interesting and most valuable paper, and also to Dr. Bolles for exhibiting his ingenious surgical apparatus.

The society then adjourned to meet on Monday evening, January 10, 1881, when Dr. C. L. Dana will read his prize essay "On the Benignity of Syphilis."

NEW YORK SURGICAL SOCIETY.

Stated Meeting, November 23, 1880.

Dr. H. B. Sands, President, in the Chair.

Dr. C. T. Poore reported a fatal case of

LIGATION OF THE EXTERNAL ILIAC ARTERY.

Dr. Briddon thought that to him the credit belonged of opening the peritoneum, as it was through his suggestion that the mistake was made. He believed, however, that opening the peritoneum had nothing to do with the fatal result, as the autopsy showed that it had united by first intention.

Dr. Poore's case was the third in which he had seen serious hemorrhage follow a sloughing phagedenic chancroid. In one case the attending physician stated that the stream of blood was so large that he did not see how it could come from any other artery than the femoral, but when Dr. Bridden had arrived the hemorrhage had ceased, and it was not deemed prudent to disturb the wound in order to find out from which vessel the blood came. The hemorrhage did not recur. In the second case the hemorrhage was of a similar character, not so profuse as in the first one, and there was a large sloughing ulcer upon the inner and upper aspect of the femoral region. The hemorrhage had ceased when he arrived, and it did not recur.

He had seen several cases in which very profuse hemorrhage had occurred from the dorsal artery of the penis, as a complication of sloughing chancroid, and immediately after the cessation of the bleeding the healing process went on very rapidly.

Dr. T. M. Markoe referred to a practical anatomical point in connection with the ligation of the external iliac artery, namely—the fact that there is a much looser connection between the peritoneum and the fascia transversalis in the immediate neighborhood of Poupart's ligament than there is above; and that fact had been utilized in selecting that precise location in which to perform the operation, because the surgeon could, with a very great degree of certainty, there distinguish the two tissues. That certainly was still further increased by the quantity of fat which was found between the peritoneum and the fascia transversalis at that point. In proportion as the surgeon went above Poupart's ligament, the ability to distinguish between the two structures diminished.

Dr. Briddon remarked that the fat referred to by Dr. Markoe was rarely absent, even in the most emaciated subjects.

Dr. L. A. Stimson asked for the opinion of the Society concerning the advisability of seeking for the ends of the bleeding vessel in the wound rather than ligating the vessel in its continuity above the seat of hemorrhage. Not infrequently, in cases of severe hemorrhage, it is not demonstrated that the main artery is involved. In a case recorded by Liston, the external iliac was tied for hemorrhage, supposed to come from the femoral artery. The patient died of gangrene, and at autopsy it was found that the hemorrhage was from a branch, and not from the main trunk of the femoral.

Again, even though the hemorrhage be controlled by the ligature above, was that a guaranty that bleeding would not occur from the distal end of the vessel? The presence of ulceration over the vessel was not proof that it could not bear the ligation safely. In other words, would not the indication be, if unable to control the hemorrhage by pressure, to seek for and secure the vessel with two ligatures, one just above and the other just below the opening in its coats.

Dr. Briddon said that he should be very loth to apply a ligature around a vessel in a wound that was continuous with the sloughing surface of the original bubo; for it was very probable that the sanious discharge from the sloughing surface would invade the deeper incision and produce disastrous results.

Dr. A. C. Post recalled a case which came under his observation when House Surgeon in the New York Hospital. Dr. Valentine Mott was the attending surgeon, and he performed amputation of the leg. Copious secondary hemorrhage took place from the stump. Dr. Mott came and tied the femoral artery. In the course of a few days hemorrhage occurred from the femoral where it was ligated, and Dr. Mott then tied the external iliac artery. A few days later hemorrhage occurred from the point where it first took place from the femoral, and a consultation was held with reference to ligation of the primitive iliac; but while it was being held the

bleeding was so copious that the bed was soaked through, and a puddle of blood was formed upon the floor, and the patient was so reduced by the loss of blood that the proposed operation was abandoned as hopeless. But that state of extreme prostration arrested the hemorrhage, there was no further recurrence, the patient rallied rapidly, and within two or three weeks he eloped from the hospital upon crutches. The case was interesting as illustrating that hemorrhage from a very large artery sometimes ceases without operative interference.

Dr. Briddon thought that surgeons were apt to interfere too soon in cases of secondary hemorrhage; yet, unless they had trained assistants, they did not feel safe in leaving the patient, in most instances, without having placed a ligature around the vessel.

Dr. Chas. McBurney asked: "Is it not sometimes erroneous in operations in this region (that embraced in Dr. Poore's communication), in cases in which the fascia transversalis is made a landmark, to look for a perfectly distinct tissue?" In attempting to demonstrate this fascia upon the dead body, he had, in a number of instances, failed, although full opportunity was afforded to make a large flap, and the fascia was found to consist of nothing more than a loose layer of connective tissue. In such cases, after cutting through the muscles, if one was to depend upon finding a dense membrane, and was always willing to cut through the first really *dense* membrane found next to the muscles, one would cut the peritoneum itself. He thought that the usual rule given was incorrect; certainly it did not hold good upon all dead subjects.

Dr. Briddon thought it was the safer method to divide the muscles, and not attempt to divide the fascia transversalis. As soon as the surgeon could lift up the peritoneum it was best to cut.

Dr. Stimson referred to an advice given by Tillaux in a recent book, namely, not to attempt to divide the fascia transversalis, but to tear it off as soon as the muscles are divided. Dr. Stimson doubted its practicability in all cases.

The President agreed with Dr. Briddon with reference to the ready separation of the peritoneum from its attachments, as a test of its having been reached, but differed with him as to the necessity for cutting through the fascia transversalis. It seemed to him that a great deal of embarrassment was caused by failure to divide the fascia transversalis when that membrane was well developed. If the surgeon cut upon the fascia, and did not cut through it, he would find it a difficult matter to strip it from the iliac fossa; and if force was employed, and the tissues were stripped up, not only would the peritoneum be raised, but the layer of fascia beneath the artery, and he would fail in exposing the vessel with that nicety which was desirable before attempting to surround it with a ligature. Dr. Sands was quite sure that unless the fascia transversalis was divided, the subsequent steps of the operation were likely to be difficult.

Dr. Markoe questioned the soundness of the general view expressed by Dr. Briddon, that surgeons were apt to interfere too early in cases of secondary hemorrhage. His impression was that more lives were lost by waiting too long than by interfering too soon. He thought that the surgeon was apt to be misled by the fact that the hemorrhage had ceased after it had recurred several times, and was thereby deterred from operating, whereas if he had operated at once after the first recurrence more favorable results would have been obtained. Dr. Markoe was perfectly satisfied that it was an error to postpone interference in cases of recurring hemorrhage in necrosis, but then, however, there was a specific reason for a prompt operation; but, in general, he believed that an error was made more frequently by postponing than by operating too early.

Dr. Briddon said that his remarks were to be applied only to those cases in which the secondary hemorrhage had ceased; perhaps temporarily, perhaps permanently.

Dr. Poore asked if such cessation occurred when the blood came from a large artery, and Dr. Briddon replied that it did.

Dr. Markoe said that it was by far the most common fact, in cases of secondary hemorrhage from a large vessel, that the hemorrhage ceased as soon as the patient became faint, and he believed also that it was that very fact which was apt to mislead surgeons.

He further asked Dr. Briddon how many times hemorrhage had occurred in the cases to which he referred, and Dr. B. replied that only a single hemorrhage occurred.

Dr. Markoe then stated that a single hemorrhage would not justify an operation for securing the vessel; but, when hemorrhage recurred, that fact justified an *immediate* operation; for in nine out of ten cases the blood came from a large vessel.

Dr. Briddon remarked that in this second case the hemorrhage was profuse, but it came from the superficial circumflex instead of the femoral. He thought that in the majority of cases in which the irritating cause was a sloughing chancroid, the sloughing process rarely extended beyond the deep fascia.

Dr. McBurney asked Dr. Briddon whether he would interfere at once or would wait in a case in which hemorrhage had recurred three or four times and the evidence pointed toward an opening in the femoral artery.

Dr. Briddon thought that if the hemorrhage had occurred more than once or twice it would not be safe to leave the patient. In his previous remarks he referred to operating directly after the first occurrence of secondary hemorrhage. But he considered the occurrence of secondary hemorrhage a number of times as an indication of a tendency to further recurrence; therefore the propriety of interference.

The President regarded the question raised by Dr. Markoe, as to the necessity of early interference, as an interesting one, and agreed with him as to the propriety of operating without delay, if pressure failed to control the hemorrhage. He had, however, seen a number of cases of hemorrhage from arteries of large size tied in continuity, which had been checked by pressure made either with the fingers or with some form of mechanical contrivance. When he was House Surgeon in Bellevue Hospital Dr. Wood tied the external iliac artery for the cure of a femoral aneurism. One or two days after the separation of the ligature, the patient had a copious bleeding, and it was thought that he would die. He recovered, however, under treatment by digital compression exerted for the greater part of one day and afterward followed by the pressure of a shot-bag.

Dr. Sands also referred to a case in which Dr. Willard Parker tied the carotid artery for an erectile tumor of the scalp, the patient being a child and the disease congenital. In that case the patient, shortly after the separation of the ligature, and while running about the yard, was seized with hemorrhage, which was permanently checked by digital compression.

He also referred to a case in which he tied the carotid and the subclavian arteries for the supposed aneurism of the innominate artery. That patient had two attacks of secondary hemorrhage from the carotid, which was checked by a graduated compress, and did not seem to retard recovery.

He once assisted Dr. Parker in tying the femoral artery for popliteal aneurism, and that patient had a tolerably profuse secondary hemorrhage, which was arrested by the application of a compress, and a bandage being applied to the limb from the toes up to the groin.

He agreed with Dr. Markoe that no time should be lost after hemorrhage recurs, and he supposed the only reason why the rule was not always followed of cutting down upon the artery and tying it, as in a case of primary hemorrhage, was the softness and lack of resistance of the coats of the bleeding vessel. But he thought it should be the rule, with few exceptions, to open the wound at the point of lesion, and tie whatever artery might be found open, if it would bear the ligature. In any case, there were great objections to tying the artery in its continuity, because the operation was not sure to check the hemorrhage, although it seems to have done so in Dr. Poore's case. Again, in the lower extremity it was almost certain to cause gangrene, because it rendered necessary the maintenance of the circulation through two sets of collaterals instead of one. Some surgical writers have stated that when a ligature is applied to the superficial femoral, and one subsequently to the external iliac, gangrene is inevitable. This is not so, however, as he had had occasion to observe, in a case in which Dr. Stephen Smith tied both these arteries, in Bellevue Hospital, and gangrene did not follow the operation. But the vitality of the limb was greatly reduced, and every winter, for several years, the lad came into the hospital to be treated for superficial gangrene of small patches of integument that could not resist the effect of extreme cold.

Dr. Markoe thought that the cases in which secondary hemorrhage occurred after the vessel had been ligated in its continuity, differed in character from those in which the hemorrhage took place from ulceration or sloughing. In the artery tied in continuity the ligature is supposed to be passed through healthy tissue, and it is hoped that the plug has already formed, so that the bleeding which occurs finds its way alongside of the plug, and all that is necessary is to support by moderate pressure the plug, which already partially restrains the flow of blood, and the patient will often recover. He thought there was an essential difference between the precept founded upon those cases and that founded upon cases in which the opening made in the artery was the result of ulceration or sloughing.

The President said that he recognized that difference very decidedly. He would say that, in the case of an artery opened by ulceration, the practice should be, if possible, the same as that followed when the artery was divided with the knife, namely, to tie above and below the point of lesion in the artery.

Dr. Briddon asked if the President would recommend that operation when the ulceration was of the character of a sloughing phagadena, and when the artery would be left as a part of the ulcerated surface?

The President replied that while every case must be judged of by itself, it was expedient to tie the artery at the lowest point where it would hold the ligature, so as to diminish the chances of secondary hemorrhage and gangrene.

Dr. Markoe thought that the rule enunciated by the President would hold good, except in cases in which the tissues were disorganized and presented an obstacle to tying the artery *in situ*. The law was to tie *in situ*, if possible, and the exception should be made only where the condition of the tissues in the wound was such as to forbid its application.

Dr. Briddon believed that the incision would undergo the same destructive process as existed in the original ulceration.

Dr. Post suggested that the same law would apply to wounds that remained open for a week or more and were filled with granulations. The first capital operation he ever performed was in a case of that kind. He was called to see a man who had cut the lower part of one of his legs with an axe. The physician who was called did not tie the bleeding vessel, the anterior tibial artery, but relied upon pressure, and when Dr. Post saw the patient the wound had granulated, and it seemed to him to be impracticable to find the artery in the wound, and he ligated the femoral. But the operation was ineffectual, hemorrhage recurred a number of days afterward, and was finally controlled with the actual cautery.

NEW YORK ACADEMY OF MEDICINE.

OBSTETRIC SECTION.

Stated Meeting, December 23, 1880.

Dr. Salvatore Caro, Chairman.

ABSENCE OF THE LABIA, CLITORIS, UTERUS, AND OVARIES, IN A PERSON FEMININE IN APPEARANCE.

The Chairman narrated a case as follows: An Italian woman, aged twenty-nine years, had been married nine years, but was sterile and had never menstruated. For many years she had suffered from periodic attacks of great distress in the precordial region, resembling angina pectoris, and for relief she had been always bled and physicked. Between two and three years ago she came to the United States, and the distressing attacks have continued without special modification, although she has been blistered, bled, cupped, and purged. In September last she came under Dr. Caro's care, and he found her with a rapid pulse, 112, face pale, difficult respiration, skin of a yellowish, sallow hue, and she could only with difficulty be aroused so that she would speak. The cardiac attacks had appeared regularly every month for several years. Nitrite of amyl relieved her entirely of all precordial distress.

On making an examination to ascertain, if possible, the cause of the sterility and the absence of menstruation, Dr. Caro found a conical vagina about two and a half inches deep, and very narrow. He was unable to find any uterus, except a rudimentary nodule about the size of a small hemp seed. He was unable to detect any ovaries. There were no labia. There were only a few hairs on the mons veneris. There was no clitoris. The patient had never had any sexual desire whatever. The breasts were well developed, looking like virgin mamma, but there was no areola, and only a rudimentary nipple, which was very small and did not differ in appearance or feel from the skin on any part of the body. There were no hairs in the axillæ. The patient was feminine in appearance. Her intellect was equal with that of the peasant women of her native country.

Correspondence.

HYPNOTISM AND ITS PHENOMENA.

To the Editor of the Medical Record.

Sir—Some twenty years ago "Professor" somebody created quite a sensation in this city by a public exhibition of what he termed "electrobiology" or "psychology." At the close of his lecture, which consisted of an explanation of the phenomena that appeared satisfactory to himself, although not in the least accounting for them, he directed all the persons composing the audience to grasp the thumbs of their left hands with two fingers of the right hand, hold them so, close their eyes, and remain motionless. At the end of two or three minutes he stepped to the front of the platform, looked fixedly at the people, called out energetically and in a loud voice, "You cannot open your eyes." Strange to say, quite a considerable proportion of the audience were unable, or at least appeared to be unable to open their eyes. The persons thus affected were taken up to the platform and used by the Professor to illustrate what he had presented in the lecture. He claimed that by proper preparation any individual could become susceptible to the "magnetic" influence, and that for a consideration he would impart his method to any one. The way that he accomplished his object was, to furnish the one he desired to bring under his influence a small silver coin, set in a circular frame of polished metal, on which the person was to look, without taking his eyes off, for a certain number of minutes each day. After a length of time, different in different individuals, he claimed that any one would become a subject.

Having witnessed his exhibition, and being thoroughly satisfied that the phenomena he showed were genuine, I resolved to experiment myself, and soon found that I could produce results similar to those of the "professor." In a short time I had some ten persons under observation, most of them excellent subjects.

Although I was able to demonstrate the reality of the manifestations perfectly, to my own satisfaction, almost every effort to engage others in an attempt to study them was repulsed with a hint that I was over credulous and was deceived.

Although several writers, some of them able scientists, had turned their attention to the subject, and published their observations, yet it seemed but little known by physicians generally. There is but little doubt that it was fairly understood by the ancients, and for several centuries there has been mention made of peculiar psychical conditions that have without doubt been the same as those alluded to. Quite recently, under the name of *hypnotism*, it has been brought forward by Charcot and others, and is now fairly before the scientific world for investigation.

Some of the observations made by myself on the individuals whom I was able to hypnotize, I think, may be of sufficient value to publish.

The most perfect subject was a boy about ten years of age. The method I employed with him was to take his left hand in my right, press the palm between my two fingers and thumb, and then look steadfastly into his eyes for about three minutes. At the end of that time I closed his eyelids, pressed my thumb on his forehead, and in a confident voice told him he could not open his eyes.

He was quite unable to open them. Then, on telling him that his eyes were all right, his power over them instantly returned. Without further manipulations I informed him that he could walk to a certain line on the floor but that he could not cross it. He would walk easily to the line, but he was utterly unable to pass over it, and in the same way, I could make him walk or run, twirl his hands, or execute any other movement that I might order, and he would continue it till I told him to stop. All this time his mind appeared to be quite unaffected. Being an excellent subject he soon passed into what I should call a second stage. This is, without doubt, only a more profound state of the first condition. While in this state he was both mentally and physically under my control.

I might indicate to him that he was some other individual than himself, and he would immediately suppose himself to be that individual. For example, if he was addressed as General Kossuth, who at that time was the lion of the city, he would commence a speech, or in some other way act out his conception of Kossuth. He was so easily brought into this state that by catching his eye, even at a distance, I had him under my influence.

A second case was that of a young lady, of about twenty years. She was also an excellent subject. Although of a very diffident nature, and, under ordinary circumstances, impossible to be persuaded to "favor the company with a song," when addressed as Jenny Lind, and asked to sing, would sit down at the piano with all the airs of the great artist and give an aria, undoubtedly fully under the impression that she was the "Swedish nightingale" herself. On one occasion salt was placed in this young lady's mouth and called sugar. She ate it, apparently taking it for sugar, but as soon as she came to herself she found her mouth painful and sore from the action of the salt.

I have never seen any serious or even unpleasant effect follow in persons who have been experimented upon, with one exception. In this case I persuaded a gentleman who was skeptical as to the genuineness of the demonstrations, to make the attempt himself, to bring the subject, a young girl of about fourteen, into this condition.

He pressed her hand, looked into her eyes, etc., as I have described, and in a short time she was fully under the influence. When he perceived that this really was the case, he became alarmed, and endeavored at once to restore her to consciousness. She evidently was affected unpleasantly by his troubled and undecided manner, and soon began to laugh and cry and betray other evidences of an hysterical attack in which she remained about an hour. I advised him to leave the room a few moments, enter in an unconcerned way and speak to her in an easy, natural tone, on some ordinary subject. He did so, when she came to herself instantly, but remained in a somewhat hysterical condition for about half an hour, after which all traces of the trouble had disappeared.

Experiments on these and other persons were continued for about a year. The conclusions arrived at were as follows:

First.—Impressions cannot be communicated to individuals in the hypnotic condition, except through the external senses. The mind of the operator cannot influence that of the subject by a purely mental effort. He must either speak, write, or gesticulate to convey his ideas.

Second.—Remembrance of what has passed, during

the hypnotic state, in the mind of the subject, is very slight, but if he is told to remember any particular thing while so affected, he will recollect it when he awakens.

Third.—Although I pursued the method used by others, I am satisfied that the employment of any means that will induce a temporary abstraction of the mind is all that is required to induce the peculiar condition.

Fourth.—Although the subjects seem to be entirely oblivious to all that is going on, they are not perfectly so. In the case of a young lady, who was told that she was a bird, and thereupon commenced to hop, her dress became disarranged, and, although continuing to hop like a bird, she was careful to keep her dress in its proper condition.

Fifth.—It is not necessary that the operator nor the one operated upon believe in the truth of hypnotism, or the success of the trial. If the necessary conditions are complied with the effect will follow. One case mentioned above proves this to be true.

All the strange psychical conditions under the names of hypnotism, magnetism, braidism, mesmerism, trance, somnambulism, ecstacy, etc., come under the same category, and I believe that clairvoyance and spiritualism can be included in the list.

As far as I have seen, I have never observed contraction of muscles, areas of hyperæsthesia, or other disorder of sensibility, or any unnatural condition or action of any part of the body in the persons affected, unless the operator should direct their attention to themselves by speaking or motioning to them; for example, he would indicate that their faces were away, that their arms or fingers were stiff, or that they had a pain in the head, back, or some other part. In such a case what was told them would be the basis on which they would feel or act.

If I should venture an explanation, or more properly a description of the phenomena of hypnotism, I would say that they resulted from a suspension of function of the centre for ideas in the brain of the subject, and also of his will, while the infra-cortical ganglia remain free to act from a reflex excitation imparted by the voice, gestures, or manners of the operator.

WOOSTER BEACH, M.D.

105 EAST EIGHTY-NINTH STREET.

LIME WATER IN DIPHTHERIA.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR—From Dr. Billington's letter you printed on page 50–52, I learn the following facts, viz.:

First.—That the doctor and I do not agree in regard to the efficacy of lime-water in diphtheria. This I deplore.

Second.—That he objects to my speaking of "our treatment." In regard to that I shall simply say that I was so far from trying to detract from the merit of his efforts, that, instead of insisting on his merely carrying out my suggestions as to the treatment of diphtheria, I meant to speak complimentarily of him. As for the publishing of formulas, I am not in the habit of believing the members of the profession to be unable to write their own prescriptions after they have been advised what to administer, and how often. In regard to priority, I refer you to the paper published by me in the February number, 1875, of the *Journal of Obstetrics*, etc., and the doctor's subsequent papers on the same subject. As you have eyes, you will see.

To conclude, I have neither the leisure nor the inclination to concoct long letters. The profession, after reading papers, need not be told of their virtues in epistolary postscripts. There is nothing "remarkable," therefore, in my "long delay" in answering the doctor's last year's letter. I never intended to speak of or for myself. Art is too long, work too hard, and life too short to spend it in idle quarrels over priority or offended self-esteem.

Very respectfully yours,

DR. A. JACOBI.

PARACENTESIS OF THE PERICARDIUM.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR—In the MEDICAL RECORD of December 11th an article appears from Prof. J. B. Roberts, of Philadelphia, putting considerable stress upon a quasi-successful case of "Paracentesis of the Pericardium" that occurred down in North Carolina last July. That, Dr. R. says, numbers twelve (12) in this country, as far as reports now lead him on that subject. I wish to report you a case briefly that was in the hands of Dr. Clemons, of this city, a few months since, and reported at the last meeting of the Erie County Medical Society. We will count this case number thirteen, if you please.

In reporting a case of this kind, it may be useless to enter into many details, whether white or black, married or not, weight, height, etc., as is the custom of many, but give you brief facts in a practical point of view. The author says: "I have in several instances aspirated the pericardium in dropsy of the heart sack, one of which was successful so far as the accumulation in the pericardium was concerned, but as the patient was suffering from incurable Bright's disease, there could be no extended or satisfactory test of the benefit in the operation only so far as it relieved the distressing symptoms of dyspnœa, which proved to be instantaneous and permanent. The operation in nearly all cases, generally speaking, is simple, and may be considered harmless. Many physicians look upon perforation of the pericardium as one of the 'dreaded realities,' and it may be within keeping of this paper to state how the operation may easily be done. In the above case, seven and a half ounces of liquid were withdrawn. The fifth intercostal space is usually selected to puncture, as it is nearer the apex of the heart, but this will be modified somewhat by the amount of distention of the pericardium. (The hypodermic needle frequently answers every purpose, providing the needle is large enough.) The puncture should be made about two and a quarter inches from the left border of the sternum, thus avoiding the internal mammary artery and its distributions. Of course, first see that your syringe is in good working order.

"After carrying the needle slowly inward and upward to the extent of half an inch (your patient in the same recumbent position), set the instrument so that the suction shall extend to the point of the needle, and cautiously carry the needle obliquely upward and inward, watching closely for the moment when the fluid shall appear in the glass tube. It is well to remember that in proportion as the fluid is evacuated the walls of the heart draw nearer the point of the needle, hence it would be a timely precaution, at the moment, to withdraw the instrument slightly. On account of the effusion in the part round about it is sometimes difficult to trace the intercostal space as readily as might be wished, and the

greater danger that could result from this condition of things is plunging the needle into the costal cartilage and thus obstructing the channel in the needle. In the second case the operator was positive the point of the needle came in contact and touched the heart itself. At this time a No. 1 needle was used, and not meeting with the expectant fluid the needle was slowly crowded forward and inward until a peculiar rhythmic movement at the end of the needle was felt, in short, cardiosysophic in its character, and a thread of bright clear blood passed through into the glass barrel of the instrument. It is not for a moment preposterous in any one to ask the result of an unintentional operation of this kind. So far as this case is concerned there was not a symptom manifested from the accident that even broached threatening danger. The case (patient) finally, in due course of time, succumbed to hypertrophy without pericarditis. To say the least, the above case was neither improved or materially worsed by the operation of puncturing."

W. R. Page, M.D.,
Sec. Erie Co. Medical Society.

Sandusky, O., January, 1880.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from January 2, 1881, to January 8, 1881.

Baily, E. I., Lieut. Col. and Surgeon. Granted leave of absence for two months. S. O. 277, A. G. O., December 30, 1880.

White, C. B., Major and Surgeon. Relieved from the duty assigned him in S. O. 229, October 25, 1880, from A. G. O., and to report to the Surgeon-General. S. O. 276, A. G. O., December 29, 1880.

Williams, J. W., Major and Surgeon. To report to the commanding officer, Department of Arkansas, for assignment to duty, temporarily, as medical director of that department. S. O. 2, A. G. O., January 5, 1881.

Brown, J. M., Capt. and Asst. Surgeon. The leave of absence granted him in S. O. 264, December 2, 1880, Department of the Missouri, is extended three months. S. O. 2, C. S., A. G. O.

Carter, W. F., 1st Lieut. and Asst. Surgeon. Granted leave of absence for one month, with permission to leave the department. S. O. 265, Department of Texas, December 28, 1880.

Medical Items and News.

Contagious Diseases — Weekly Statement. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending January 8, 1881.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Jan. 1, 1881.	0	10	173	2	45	157	9	0
Jan. 8, 1881.	0	14	179	6	30	168	20	0

Abolishing Coroners.—At a recent meeting of the Medico-Legal Society, Mr. Clark Bell read a paper in which he advocated the entire abolition of the system of coroners. He sustained his position by an elaborate argument, in which he showed the superiority of the German method of administering the functions now assigned to the coroner.

Election of Officers of the New York Academy of Medicine.—At the stated meeting of the Academy, held January 7th, the following officers were elected: *President*—Dr. Fordyce Barker; *Vice-President*—Dr. Robert F. Weir; *Trustee*—Dr. S. T. Hubbard; *Member of Committee on Admission*—Dr. J. H. Emerson; *Member of Committee on Education*—Dr. C. C. Lee; *Member of Committee on Ethics*—Dr. V. P. Gibney; *Member of Committee on Library*—Dr. C. S. Bull. The library of the academy now contains over 17,000 volumes, and receives regularly 122 American and European medical journals. Mr. John Jacob Astor has recently given $500 for the improvement of the journal and circulating department of the library.

Dr. E. M. Wight, of Chattanooga, Tenn., forty years old, died of pneumonia, January 6th. He was a member of the Tennessee State Board of Health, Inspector of the National Board of Health in 1879, and enjoyed a wide reputation in the South as a physician and politician. He was the Republican candidate for Governor in 1878, and for two terms was Mayor of Chattanooga.

Dr. George Ford, who has for over thirty years been connected with the State Emigrant Refuge and Hospital, on Ward's Island, died at his residence, on the island, January 7th, of gastritis. Dr. Ford was born in County Leitrim, Ireland, in 1812. He graduated from the Royal College of Surgeons in London in 1837, and came to this country in 1849. He received the honorary degree of Doctor of Medicine from the old New York Medical College. He had been connected with the Emigrant Hospital almost since his arrival in America, at first as a resident physician, and at one time as visiting physician. He was appointed the assistant physician in 1855, and so remained until six years later, when he became the Physician-in-Chief, which position he filled with recognized ability up to the time of his death. He married in Ireland a niece of Felix Ingoldsby, formerly well known in this city, and leaves seven children. Dr. Ford was a member of the County Medical Society and of the Pathological Society, as well as of the Society for the Relief of the Widows and Orphans of Medical Men, and of the Friendly Sons of St. Patrick. He was a man of very retired habits, attending strictly and conscientiously to the duties of his office, to which he gave his whole time.

Dr. L. P. Yandell has retired from the editorial management of the *Louisville Medical News*. Dr. R. O. Cowling will continue as sole editor of that sprightly and wide-awake journal.

Bequest to Yale Medical College.—The late Dr. David P. Smith, Professor of Surgery in Yale Medical School, whose recent death has been so widely lamented, bequeathed to the Yale Medical College all his professional library and instruments, also two-fifths of all his property. This last sum is to be used in the endowment of the Chair of Theory and Practice of Medicine.

MEDICAL CERTIFICATE WRITING.—A correspondent on Murray Hill sends us the following amusing hit on medical certificates: "I am a constant reader of your most valuable journal. I see it almost every week—at some friend's office. It is an excellent medical journal, the best in the country, and deserves the liberal support which we all give it, either by subscribing to, or reading it.

"I will state my case briefly: I have a young friend—a rising young man—not in the baking-powder, drug, or wine business, I am sorry to say; in case he had been, then I would have a precedent to go by. My young friend has invented a trap—a rat-trap—a most extraordinary contrivance, sure catch every time. It retails at fifty cents; wholesale, twenty-five cents. A liberal reduction made to ministers and their families. Although not yet fairly in the market, over a hundred ministers have given certificates as to its wonderful working. My friend lacks capital to freely put the article before the public; he offered me a partnership provided I furnished the money. On the matter of business I believe the Code of Ethics is very explicit—if it is not the spirit is against it, and that is what we are all after just now, I understand. The partnership I did not seriously entertain, partially because I have not just now the ready money—and of course on account of the code. It struck me that my professional reputation being somewhat enviable, that I could give character to his trap enterprise by a suitable certificate. I know I could conscientiously write such a certificate and testify to the fact that it is an entirely original invention, that my friend is perfectly trustworthy in everything he says, and that I know the iron of which it is made comes from Sweden and is the purest in the market. Also, that no rat has as yet escaped from its jaws. The only objection to all this is, that my motives might be impugned, as he would send the circulars everywhere for the good of householders in general, and our committee on ethics would write me a note. Still, I am proud to believe that the reputation of the profession is safe in my hands, and my position would secure me from petty persecution. But I desire to do what is right, nevertheless. It cannot be said that the trap is 'any patented instrument intended for medical or surgical use.' Neither is it a 'drug, nostrum, mineral water, wine, or other proprietary article intended to be used as a nostrum or remedy in disease.' Hence, I believe I am beyond the reach of the code at least, and I wish to think so in the interest of a really useful invention."

THE WALNUT HILL ASYLUM, AT HARTFORD, CONN., for the treatment of inebriates and opium-takers, has been reorganized, and is now open for the reception of patients as a private institution, with full legal powers, and on the basis of a first-class family home. Only a limited number of patients are received, each one receiving direct personal care and treatment. The former superintendent, Dr. T. D. Crothers, will have the full charge.

SUMMARY OF 2,247 CASES OF ACCOUCHEMENT, FROM JUNE 8, 1819, TO MAY 1, 1879.—At a recent meeting of the Greene Co. (N. Y.) Medical Society, Dr. J. B. Cowles, of Durham, Greene Co., N. Y., presented the following summary of his obstetric experience for the past sixty years: Whole number of cases, 2,247; premature cases, 63; males, 1,153; females, 1,094; twins, 26—males 10, females 10, male and female, 6; delivered by forceps, 14, three children died; craniotomy, 4; face-presentation, 4, two children died; placenta previa, 4; adherent placenta, 4; monsters, 2, both died; deranged development, 4; convulsions, 5, all died; foot presentation, 40, four children died; breach-presentation, 5; shoulder-presentation, 3, one died; arm- and hand-presentation, 4, one died; both hands, 2; funis-presentation, 4, one died; imperforate anus, 1, died. All other cases, natural or head-presentation, not interfered with particularly.

Dr. C. presents the following conclusions: Cases of placenta previa relieved as soon as possible by the use of ergot and plugging of the vagina. In adherent placenta, if natural efforts do not soon relieve, introduce the hand after ergot is administered, and detach with care. If hemorrhage supervene after the extraction of placenta, I excite action by pressure externally, and internal manipulation, until the normal action is restored. In treating all cases of convulsions of seven months, bleeding in the arm and antispasmodics give relief. These cases resemble hysteria epileptica. Three cases of convulsions were due to puerperal apoplexy. These were relieved by opening the "temporal artery," and labor came on in one hour, and consciousness returned. All had been bled previously in the arm, twenty-four hours before, without relief. Of the cases of monstrosity, in one of them the left limb looked like an amputated stump, at the lower third of the thigh, one hand attached to the forehead, the head, a mere sack of fluid occupying the left side of the neck. The other case had the appearance of having the lower viscera pressed out above and below the pubes. I relate this case as peculiar, from the history of the mother. While milking, the cow trod upon a chicken and pressed out the viscera, the child, when born, resembled the chicken. The mother was enciente about three months when this accident took place. (Query.) Did the effect upon the mind produce the results? The case of imperforate anus was that of a male. Two cases of kyllosis, one case, foot turned in; the other case, foot turned out. Two cases of hare-lip, one of these a deficient os palati and vomer; child died very soon. In the other case operation was successful. One case of twins at seven months. Labor was superinduced by tapping for dropsy of amnois, in which thirty-six pounds of fluid escaped, which afforded relief; one child lived eight days, the other forty-eight hours. The other case, in which it had become necessary to relieve twice, by craniotomy, on account of contracted pelvis, in order to relieve the anxiety of the mother, and hoping at the end of seven months the child might live. One child lived five weeks, the other but a few days. In this last case the woman died in child-birth, having fallen into unskilful hands. In all cases except head- and face-presentations, I have pursued podalic version with satisfactory results.

BOOKS RECEIVED.

How to Use the Forceps. By Henry G. Landis, A.M., M.D. New York: E. B. Treat.

Medical Diagnosis. Fifth Edition. J. M. Da Costa, M.D. Philadelphia: J. B. Lippincott & Co.

Lectures on Surgical Disorders of Urinary Organs. By Reginal Harrison, F.R.C.S. London: J. & A. Churchill.

Smithsonian Contributions to Knowledge, 357. Fever: A Study in Morbid and Normal Physiology. By H. C. Wood, A.M., M.D. Philadelphia: J. B. Lippincott & Co.

Rocky Mountain Health Resorts, etc. By Charles Denison, A.M., M.D. Second Edition. Boston: Houghton, Mifflin & Co.

Atlas of Histology. By E. Klein and E. Noble Smith. Part XIII., and Atlas of Skin Diseases. By Louis A. Duhring. Part VIII. Philadelphia: J. B. Lippincott & Co.

Differential Diagnosis. By F. De Havilland Hall, M.D., London. Second American Edition. Edited by Frank Woodbury. Philadelphia: D. G. Brinton. 1881.

Original Communications.

ON FALSE HEARING AND AUTOPHONY IN SINGERS, SPEAKERS, AND PERFORMERS ON CERTAIN MUSICAL INSTRUMENTS.

By SAMUEL SEXTON, M.D.,

AURAL SURGEON TO THE NEW YORK EYE AND EAR INFIRMARY.

(Read before the New York Academy of Medicine, January 6, 1881.)

Mr. President and Fellows of the New York Academy of Medicine:

Musical people, speakers, and others, when affected with certain aural diseases, are thereby frequently incapacitated for their pursuits. Under such circumstances, however, the aurist is not always consulted, but the advice of the general practitioner is sought for fancied ailments, in which the ear's disease is not always considered a factor. The defects in hearing that are found to exist in these cases arise from diseases that are more or less familiar to every practitioner, but it seems to the writer that clearer definitions are desirable in order that more effective treatment may prevail.

The anomalies of hearing are conveniently separable into two groups: 1, defects that pertain to sounds produced and heard by the patient himself, *e.g.*, his own voice, the notes of a cornet upon which he plays, etc.; 2, defects that pertain to sounds heard by the patient in the natural way; these are such as strike the ear in daily life, as the voices of others, etc. The first class refers to false hearing, the second class to hardness of hearing. The former of these has the greater interest for us here. Before going into the subject, however, it would be well to have a clear meaning of the terms false-hearing and autophony, as understood by otologists. Autophony signifies in this connection the hearing of one's own voice, while speaking, as though it failed of utterance in the usual manner, and passed directly to the speaker's ear from within the head.

The definition of pseudacousma (false hearing), which I shall use, may not be assented to by all, but it is the best I can give under the circumstances. The person, from some affection of the ears, fails to hear his own voice in the usual manner; it does not appear to issue forth from his mouth, and then come around and strike his ear-drums, but instead gains access to the nerve of hearing by traversing the tissues between the mouth and ears in a more or less direct line, thus being heard *false* as compared to normal hearing; it is false both as regards pitch and timbre. Sometimes both ears are affected in this manner, but if the disease is confined to one of them he then receives the normal sound impression in the usual way in one ear, and the perverted impression in the other ear. In a certain number of cases, owing probably to some peculiar resonance in the tympanum or its connections, there is heard what is well described as an "echo" after each word spoken.

These phenomena are frequently ascribed by the patient to some throat affection which is supposed to modify the voice, even after repeated assurances that the vocal organs are healthy.

Although this disability cannot be experienced without distress by any musical person, yet it is probable that none suffer so much in this way as singers, for even a simple cold in the head may give origin to false hearing, not from the physical disability as regards the throat, but from the autophonous voice that so frequently accompanies the "stuffiness" in the ears then experienced. This condition must not be confounded with the simple nasal tone acquired by reason of a stoppage of the nasal passages from any cause, for in this state the patient's voice sounds alike, both to himself and others.

False hearing may be experienced at any age. It usually announces itself suddenly in the course of acute aural affections, and after a longer or shorter duration takes its departure as quickly as it appeared. In the more chronic cases, however, it comes on more slowly and is more persistent. In all acute cases there is more or less false hearing at some period of the attack.

When the subject of false hearing performs on certain musical instruments, especially upon the violin or the cornet—instruments held in contact with the face or lips when played upon—he finds that sonorous vibrations appear to fail to issue forth from the instrument, that, like autophonous voice, they are by him only recognized as resounding within the head.

With this brief and somewhat imperfect explanation of the phenomena to be touched upon I shall proceed to introduce from my note-books some illustrative cases which, I trust, may aid in throwing light upon the subject. These cases are divested of such details as would be without particular interest in this connection, an omission that includes the examinations made with the tuning-fork, König's rods, organ-pipes, the voice, and such other means as are usually employed to determine defects of the auditory nerve, and the condition of the transmitting mechanism of the middle ear. The vocalists are, for convenience, arranged in one group, and in another the performers on musical instruments.

CLASS I.—VOCALISTS.

Case I.—This is a singer, fifty-two years of age who consulted me in May, 1879, for an acute purulent inflammation of the left middle ear which had been greatly aggravated by the ill-advised use of an irritant lotion. There was deafness to ordinary sounds, and in speaking he experienced autophony; when he attempted to sing in the church choir to which he belonged, he was unable to strike the correct pitch, his voice sounding unnatural to him; when he sang, his notes were a "confused jumble," as he himself expressed it. This case proved to be a very grave one, and the permanent injury to the conductive mechanism prevented an entire cure as regards the autophony. After his entire recovery from all inflammation, which took place in about a month, the autophony yet remained in some degree: he could, however, remove the symptoms by pulling the tragus firmly outward and downward.

Case II.—This patient, a lady thirty-four years of age, came to my office in September, 1880, with chronic catarrhal inflammation of both middle ears. The disease was of several years' standing, and since it was first noticed until the present time there has been a gradual increase in the deafness, and she can now only hear loud conversation. For two years past she has been unable to sing without hearing the sound of her voice most unpleasantly in her ears; however great her efforts, the notes appear to die away without utterance. Her voice is a very good one, as I can testify from hearing it, but she sings

without any confidence in her own power. She hears conversation best when in a rumbling conveyance, or when on a noisy street. She is still under treatment.

Case III.—Is a gentleman forty-six years of age, who, while suffering from an itching of the external auditory meatus, was advised to drop into the ear a weak solution of carbolic acid. By mistake he prepared a mixture of equal parts of concentrated carbolic acid and glycerine, a drop or two of which was put into the left ear. He instantly experienced pains of a most excruciating character, and although water was at once instilled into the ear to dilute the mixture, perforation of the drum-head ensued and acute purulent inflammation of the middle ear was established. The accident that gave rise to these unpleasant symptoms occurred in February, 1878, and owing to the patient's run-down condition, it was nearly twelve months before recovery took place. Throughout the attack the voice was autophonous, as regards the left ear—a symptom that annoyed the patient very much, for he had a musical voice, and, before the attack, derived much pleasure in singing duets with his wife at social gatherings; owing to the autophony, however, his voice seemed flat—to himself it was about half a note low. He was very sure, at first, that the throat was in some way involved in the difficulty; an explanation of the phenomena, however, corrected his mistake. When the ear was cured the ability to use the voice in singing returned.

Case IV.—A leader of a church choir. He is forty-three years of age. This patient consulted me in September, 1878, for a subacute catarrhal inflammation of both middle ears, engrafted upon a chronic catarrhal inflammation of long duration. The subacute attack was attributed to a severe cold. There was autophonous voice in both ears, but in the right one it was occasionally absent. When speaking or singing the voice seemed to strike the ears, especially the left one, most unpleasantly—the words failing, as he fancied, to find utterance from the mouth. The autophony sometimes alternated from one ear to the other, and it was more or less intermittent in both of them. His attempts to sing with the choir were the cause of both astonishment and amusement to the auditors, and as for himself, he was utterly discomfited by the misfortune, and sorrowfully acknowledged that his "voice was out of tune." Although unable to sing with others, when he came to my office he heard correctly the notes of a hand-organ in the street, which was at that moment playing a selection from Trovatore. Entire recovery did not take place in the three months that he remained under my observation.

Case V.—This patient was a commercial traveller, thirty-four years of age. He was first seen by me in April, 1879, at which time he believed himself to have some throat trouble. A careful examination of the vocal organs had been made before he was sent to me, but all assurances of their healthfulness failed to entirely convince him that the difficulty was elsewhere. An examination, now made by myself, showed that there was chronic catarrhal inflammation of both ears, evidently of long standing. The voice, he informed me, had been autophonous for three years, and it sounded so disagreeably that he was unable to sustain vocal efforts long at a time. In consequence of this disability he lost his situation, and for a short time before consulting me his precarious livelihood depended on his exertions as a canvasser. Whenever the autophony came on—it was intermittent—all business had to be put aside for a time, and some attacks, when the mental depression was great, lasted for hours. These attacks came on quite suddenly, were characterized by most distressing roaring in the ears, which was increased by every attempt to use the voice. The mental condition seemed to favor palpitation of the heart, and altogether, the attacks left him exhausted for a time and incapacitated for work. The tinnitus aurium and autophony were the cause of great deafness, but when absent the hearing was good. This patient assured me that he had frequently thought that suicide would be preferable to the distress he had to endure. My first effort in this case was to convince the patient that the anomalies experienced in no way prognosticated danger to life, and an absence of dread has been followed by almost entire relief as regards the severe paroxysms described.

CLASS II.—PERFORMERS ON MUSICAL INSTRUMENTS.

Case VI.—A teacher of music, sixty-seven years old, consulted me in March, 1879, for an acute purulent inflammation of the left middle ear. The attack was ushered in with very severe pains and tinnitus aurium in the ear, and the patient was soon dismayed to find that when he attempted to play upon the violin its notes were, to himself, anything but musical; in fact, the favorite instrument that had never failed to respond in rhythmical sympathy to his cultivated touch, now sent forth noisy discordant sounds only. He also discovered, much to his astonishment, that his voice was autophonous. The false hearing, both for the voice and for the violin, was confined to the left ear, and inquiries elicited the fact that the strange conduct of his violin only manifested itself when held against the left cheek while played upon, for when it was held away from the face its tones were heard in the usual way. Normal hearing returned on his recovery from the aural disease, which was in about three months from the beginning of the attack.

Case VII.—This patient performs on a cornet in a small orchestra; he is thirty-five years old. He came to me in January, 1879, while he was suffering with an acute purulent inflammation of the left middle ear; in this ear he was deaf to ordinary voice. When he plays on the cornet he fancies that no sound issues forth from the instrument, but that from his lips the vibrations go back to the left ear, from which they resound again most unpleasantly. When attempting to play upon his cornet with the orchestra it seems, to himself, to be pitched a quarter of a note higher than the other instruments, and when he lowers the pitch to that of the orchestra he is told that he plays too low. After several futile attempts to play in tune he was obliged to throw up his engagement. A violin played upon while resting against the left cheek, sounds more loudly tl an if heard in the natural manner. The effect of orchestral music on the affected ear was peculiar—it seemed to be "damped." The cornet's tones, for example, sounded like that instrument when the "mute" is used. The music, however, was distinguished, unless low tones, which were first imparted to the floor before reaching his ear through the body, had the effect to confuse his perception in some degree. By placing his hands on a piano, while the cords were in a state of vibration, the sound was carried to the affected ear through the tissues of the body. This patient's voice was autophonous. His recovery from the severe aural affection was slow; a cure, however, was effected in three or four months, and it was then found that he had not been permanently incapacitated, inasmuch as he resumed his former place in the orchestra.

The transmission of sound, under certain circumstances, through the tissues of the body to an ear affected by disease, is of frequent occurrence. Patients not infrequently complain of the unpleasant sensation thus experienced by hearing their own footsteps on the pavement, or the heavy rumbling sounds of the street.

Case VIII.—This patient is likewise a cornet-player. His age is fifty-three years. I first saw him in September, 1880, three weeks after he had contracted a severe cold from exposure one stormy night in going home from a performance. A few days after the exposure there was deafness in the left ear, and he could not hear conversation spoken in a low tone. Examination showed an acute catarrhal inflammation of the middle ear. I found that he was deaf to the notes of the highest organ-pipe. When he plays upon the cornet the whole volume of sound seems, to himself, to pass backward and escape out of his head through the left ear. He has autophonous voice.

The attack in this instance was a mild one, and the patient resumed his place in the orchestra in about a week after he first came under my observation.

This patient could play upon the violin, and from an experiment made during the aural attack it was found that this instrument was heard false, the phenomena experienced being the same as were reported by the previous patient under very similar conditions.

Case IX.—This patient, a teacher of music, aged forty-one years, was sent to me by a medical friend in October, 1879. His deafness was very great; he hears words only when shouted directly into his ears. For the past eleven years he has suffered greatly from both autophony and tinnitus aurium. The cause of these most unpleasant symptoms is chronic catarrhal inflammation of both the middle ears. He has become exceedingly nervous and irrascible, and his manners make his family as wretched as himself. Thoughts of putting an end to his life are constantly in his mind. He informs me that since his sufferings began he has been under the treatment of nearly every prominent aurist in this country and in Germany, besides many general practitioners, but without benefit from any; indeed, it is to be feared that his sufferings have been increased by the frequent inflations to which the drums have been subjected by the Politzer method. Before he had any serious disease of the ears he played upon several musical instruments, but their sounds to him are now tormenting. His wife tells me that he is most of the time "wild with nervousness," that the noises in the head, when the voice is most autophonous, convince him that he must be possessed of some serious ailment. Frequently he refers to his throat as the seat of some disease. For several years past he has devoted whatever strength and means remain subject to his control to travelling about in search of relief. This patient was benefited by the use of cotton-wool pellets, adjusted to the relaxed conductive mechanism, but he was unable to keep them in place very long without causing irritation of the drum-head.

Case X.—This girl is now receiving musical instruction on the piano. She is thirteen years old and has a talent for music. She was brought to me in November, 1878, while suffering with acute catarrhal inflammation of both middle ears, caused in part by reflected dental irritation. The right ear was most affected, but the voice was autophonous in both. With the autophonous voice in the right ear she describes the sound of the voice as remaining there a perceptible period of time and having a timbre resembling a vibrating piano cord. The piano, heard at a distance, sounds damped, but is not unmusical. All of her efforts to perform on the instrument are unsatisfactory, for the sounds reaching the ear by tissue-conduction—through the body—are heard false, and create an unpleasant and discordant jangle. A good recovery was made in about two months, when she resumed her musical instruction. The hearing, which of course had been imperfect, was entirely restored.

Case XI.—The patient is an organ-tuner, aged twenty-three years. His hearing was always good until three weeks before consulting me, in September, 1879. He now had an acute purulent inflammation of the right middle ear. In this ear he cannot hear ordinary conversation. In the other ear the hearing is good. There is autophony and tinnitus in the affected ear. He is unable to tune an organ, for when he blows the tuning-pipe its sounds seem to be within the head; and furthermore, the beats above upper F are indistinguishable, unless the ear is close to the pipe. Normal hearing was restored after five weeks' treatment.

REMARKS AND CONCLUDING SUMMARY.

From a careful study of false hearing in these cases, and many others, I am led to believe that the causative lesions are mostly to be found in the middle ear—the conductive mechanism failing to transmit sound to the auditory nerve in the normal manner. The pathological lesions here concerned permit of great variety in the manifestations of the phenomena in different patients, since in some instances a careful examination of the ear fails to bring to light scarcely any change in the conductive mechanism, while in others but vestiges only of these structures remain. The particular abnormity, however, would seem to be some structural change that gives rise to interruptions in the normal tension of the ossicular chain. Such interruptions would occur from luxations of the malleo-incudal or incudo-stapedial joints, or from other displacements that disease might cause to the ossicles. When defects of this kind exist other influences affect the character of the false hearing experienced. Thus a relaxed drum-head, by its greater freedom of motion, increases the frequency of autophonous experiences; or the presence of air, fluid, or any product of acute or chronic inflammation in the ear will modify the resonance of the tympanum. Next in importance to the changes in the ossicula as a causative abnormity, is the movable drum-head which, indeed, is the essential agency in causing the interruptions that occur in pseudacousma; for, so long as a certain tension in the ossicular chain remains, the drum-head may be greatly relaxed, suffer much loss of substance by perforative inflammation, or become thickened and loaded with opacities, without causing false hearing. In fact, good hearing often remains notwithstanding such changes. As regards this view, I am aware that other authorities trace the origin of many of these phenomena to affections of the inner ear, and I am free to confess that a decisive conclusion, in which all shall agree, will not be reached until those who have the opportunity shall have given more time and attention to both the physiology and pathology of this subject.

My own experience, so far, has been mainly in the clinical study of the pathology of middle-ear disease, and if it is thought that in the cases I have pre-

sented the differentiation was not in all cases warranted by the symptoms, it may be said in reply that absolute certainty in diagnosis is not possible until our knowledge of the physiological functions of the terminal filaments of the auditory nerve has a more substantial foundation than theory alone. Otologists have given, however, no little attention to this subject, especially in the past ten years. Prominent among these, Roosa, in his work on the ear, and Knapp, in a paper in the second volume of the "Archives of Ophthalmology and Otology," express the belief that the cochlea is the seat of lesion in a certain number, if not all, of the cases under discussion; while Burnett, in his treatise on the ear, maintains that the phenomena of autophony—which he describes as "an altered resonance of the voice"—are caused by an abnormal condition of the Eustachian tube, which gives rise to undue intratympanic air pressure. Brunner, who describes an interesting case in the second volume of the "Archives of Ophthalmology and Otology," part first, page 107, entertains the opinion that autophony is a resonance from "a vibration of the air in the middle ear, shut in by the closure of the tubes."

The conclusions of the two first-named observers were, in good part at least, drawn from the interpretations of patients, whose psendacousma was tested by the notes of musical instruments, while the experiences of the two last mentioned otologists were confined to their patient's autophonous voice. I cannot but believe that if the observers first alluded to had kept in mind the fact that vibrations from musical instruments could reach the ear, in the instances cited, in the same manner the voice does when autophonous, their conclusions might have been different.

My own opinion as regards the *modus operandi* of the production of false hearing, is, that in the diseases where it occurs the ear fails to take cognizance in the normal manner of sounds that reach it through the surrounding air; the conductive mechanism not only failing in a greater or less degree to transmit such sounds to the auditory nerve, but permitting sounds within the body, usually inaudible, to be heard. Thus, in psendacousma the sounds of the voice, or of the cornet, are transmitted in a more or less direct course through the intervening tissues from the mouth to the ear, to be heard, so to speak, from within the head. Undulations of sound in speaking, singing, or playing upon the cornet, are, of course, always transmitted to the ears through the intervening tissues, as well as by the air, but in the normal state of the transmitting mechanism the former are excluded; otherwise, there would be confusion from interference. Even if these media transmitted sound from the mouth to the ears with equal velocity, confusion would still ensue, for the ear would be unable to harmonize the undulations received in both a normal and abnormal manner at the same time—the one through the air, the other through the tissues. A patient who experiences autophony, finds it a difficult matter to locate the precise source of his own voice, as it approaches the ear from an unfamiliar source; this experience, moreover, seems to vary in different patients, some locating it in the ear itself, others in various regions of the head. A lady, for example, who suffered with autophony, informed me that her voice seemed to go out of the back of her head, and she fancied it was heard by those standing behind her only. To some the vocal intonation is so unfamiliar that it is difficult for them to believe that the voice is not spoken by another, and that the speaker is at a distance, or in a different apartment. In certain instances the patients describe the voice as remaining in the ear a perceptible period of time, or as echoing in the head; these are experiences most confusing, inasmuch as they give rise to the sensation of the head being "empty," or "hollow." Musical people, when experiencing this feature of pseudacousma, either in singing or playing upon certain instruments, likewise find the tones produced lingering in the ear, and seeming to have a different pitch than at their inception.

Patients who experience autophony, are aware that the pitch of the voice has undergone a change; in certain cases it seems lower than natural, and sometimes it is described as hoarse; such patients, when singing or speaking, raise the voice above the natural pitch. On the other hand the voice sounds unusually loud to some individuals, and, in order to avoid disturbing others, they speak in low, or even whispering tones. When autophony is intermittent, the patient will alternately raise and lower the voice during conversation.

The diseases that give rise to false hearing include a large portion of all of those embraced in the nomenclature of otology; a complete list would include nearly all of an intratympanic origin, as well as those located in the external auditory meatus and Eustachian tube, which in any way interfere with the movements of the conductive mechanism. Among the causes sometimes located in the external auditory canal, the most common are diffuse and circumscribed inflammation, the impaction of cerumen or foreign bodies; sometimes a syringeful of water thrown against the drum-head will cause temporary psendacousma.

With the well-known affections of the auditory nerve and its ultimate filaments, in which total deafness usually exists, we have no concern here. That the inner ear, however, is conjointly affected in certain middle-ear diseases, there can be no doubt, but the obscurity of labyrinthine affections, and perhaps their rarity as well, has prevented aural pathologists clearing up the ground as thoroughly as could be desired. It is, therefore, because I have absolutely nothing new to add to the scanty literature of labyrinthine diseases that I have thought best to confine myself to the more common affections of the middle ear, which, after all, have the greatest interest for the profession in general.

The diagnosis of pseudacousma is not always easily made, as the phenomena vary in almost every case, and the patient's description is liable to mislead. Owing to the patient's fancy respecting his changed vocalization, and to the sympathetic cough that so often accompanies aural affections, the patient's throat is likely to receive an undue share of attention; this fact should not be overlooked in any case, but in singers it is important, for obvious reasons, to avoid any influence of this kind in treatment. One important fact should always be kept in mind in cases of false hearing: namely, the phenomena pertain exclusively to sounds that reach the patient's ear through his own tissues. Of course if the patient is so deaf that his own voice does not affect his drum-heads from without, he constantly hears false in a certain sense, but we are here more particularly concerned with that state where the false hearing is, owing to intermissions in the ossicle's tension, of a variable character. Such intermittent pseudacousma is common during acute inflammation of the middle-ear, especially when the case is recovering, and also

in certain chronic catarrhal inflammations of the same region. In these cases the patient while singing, reading aloud, speaking, or playing upon certain instruments, may suddenly hear the sounds produced resounding in the head, while he fancies their tone must be quite unnatural to others. These unpleasant symptoms usually disappear, for a time, as suddenly as they came, and the deafness for external sounds, which always exists while the pseudacousma lasts, also disappears. The interruptions vary in their duration from a few seconds to days or even months.

A very slight cause, as a cold in the head, may so disarrange the conductive mechanism that a singer's voice becomes false to an incapacitating degree, and while the pseudacousma exists he cannot pitch his voice to the same tone with other singers or with an orchestra, because he hears his own voice in a false tone as compared to the accompanying tones which he hears with greater or less distinctness. A similar difficulty in keeping in tune is experienced by performers on certain musical instruments. When the conductive mechanism is subject to frequent alternations of tension in these cases, as when the membrana tympani is greatly relaxed, the rapid changes from true to false hearing are exceedingly distressing.

Deafness, unattended by pseudacousma, although not always preventing correct singing or hearing of musical tones, if very great in degree, practically unfits any one from engaging in professional musical pursuits; a singer will under these circumstances sing so loudly and play the accompaniment on a piano so heavily that it is positively painful to hear his performance, although he sings and plays in tune.

Some musical people, when affected with pseudacousma, cannot endure the sounds of music, for at one moment its strains strike on the ear with a pleasing effect, and at the next they seem muffled: at the same time certain notes, especially the lower ones, may be heard through the body.

There are some anomalies of hearing, that, to a thorough knowledge of this subject, should be alluded to, although not classified with false hearing; the following are examples: A gentleman contracted from sea-bathing an otitis media serosa of the right side. The external auditory canals were large, and in diving, water was freely admitted to the drum-heads, the right one, on examination, being found moderately hyperæmic. The tympanic cavity contained a considerable quantity of serous fluid, which could be observed to change its position whenever the patient moved his head. When the drum was inflated with air by Valsalva's method the fluid was thrown into bubbles which lined the whole inner surface of the membrane. As he suffered but little pain or deafness from this attack I was not consulted until the fifth day after getting the sea-water in his ears; it was at this date the above observations were made. His voice was now autophonous, and his footsteps jarred very plainly on the right ear. He could hear a low tone of voice in both ears, but the highest pipe of the organ could not be heard in the affected ear. This gentleman, who is a Long Islander, when a boy, sometimes followed the hounds. It was then well known to all of the hunt that he could hear the dogs better than others; in fact, even after all the rest had ceased to hear them, if the party kept quiet he could hear their deep notes and also indicate the direction from whence they came. He related to me another interesting experience that illustrates his wonderful capacity to distinguish low tones: When boating in the Great South Bay a few years ago with some friends, he heard the low peals of thunder that accompanied the sheet lightning then attracting their attention, a phenomenon which was inaudible to all of the party but himself; his companions were aware of the flashing only. His recovery from the otitis media serosa was rapid and complete.

A case reported by Dr. Charles H. Burnett in the "Transactions of the American Otological Society," vol. i., p. 106, is also of interest. The patient was a young lady, of musical acquirements, who had good hearing except for low tones like the bass notes of an organ, or thunder; as regards the latter "she first became aware of her deficiency while walking in the fields with her father, for the latter could distinctly hear the thunder of an approaching storm" while "she could hear nothing of the kind." Dr. Burnett does not report any peculiarity in the auditory apparatus in this interesting case. In my own case above noted the drum-membranes were among the largest I have ever seen, and slight inflation by Valsalva's method caused bulging of the drum-membrane on both sides of the malleus handle. The flapping membrana tympani seem not to affect the hearing for ordinary sounds, the tension of the chain of ossicles probably remaining intact.

Attention has been called by writers to the fact that in certain cases where deafness exists the patients could hear best the notes of the middle register of the piano. The number of observations having been too few to throw much light on the subject, I determined to institute some experiments on a considerable number of patients at the same time, and as the piano was not considered the best instrument for the purpose, I requested my friend Prof. Mayer, of the Stevens' Institute of Technology, Hoboken, to conduct some experiments with me on the large organ of Dr. Hall's church, which was, some three years ago, kindly placed at our disposal for that purpose. The results of these experiments have not been as yet prepared for publication, but two of the patients whose hearing was tested on that occasion are of interest here: they were both of them women of about forty-five years of age, extremely deaf to conversation from the effects of chronic catarrhal inflammation of the middle ear. Neither of these patients could distinguish the higher notes, but when the *middle register* was reached they could plainly hear the notes sent forth by the organ. Below the middle register these patients heard no sound again until the lower notes were sounded; these were heard by both patients. The experiences of others present on this occasion seemed to confirm the observation respecting the capability of some individuals to hear the middle register best; one of them, a gentlemen of musical education, although hearing all the notes in some degree, found that those of the middle register were heard most distinctly. The following case is another example: A piano-tuner, fifty years of age, who had been thus employed for twenty-five years, gradually became quite deaf; it was finally ascertained that in tuning a piano, after passing above the middle, he began to sharpen up to the end of the scale—in the three octaves he sharpened a fifth. This, of course, did not fail to dissatisfy the customers of the establishment that employed him, and he had to give up his occupation.

Facts like these seem to confirm the physiological theory used in explanation of these anomalies:

namely, that in such cases there must be some pathological change in the cochlea. Inquiries of practical musicians, however, elicit the statement that the cornet or reed stop of the organ is the clearest and most natural in the scale, and, therefore, most easily heard. On the piano, middle C is the equivalent of this, which accounts for its being heard better in certain cases.

It is an interesting fact that sound undergoes a peculiar modification in certain cases of acute inflammation of the middle ear, whereby low, heavy undulations from street trucks, elevated railway carriages and the like, are heard as high in pitch; the causative abnormity existing in these cases has not been, so far as is known to me, satisfactorily explained; that it will be found to lie in the conductive mechanism, however, I do not doubt. These cases are to be distinguished from paracusis acris, where the painfully acute sensibility to sound will be found to depend on other diseases than those of an aural nature; this latter, together with some other symptoms having a close relationship to aural disease, will be discussed in another paper.

The prognosis of pseudacousma in acute affections of the middle ear is usually favorable, as normal hearing is re-established in a very considerable number of cases, and false hearing disappears in nearly all of them. When, however, the anomaly occurs in the course of chronic catarrhal inflammation of the middle ear it is a very persistent symptom. In the cases that arise from dislodged collections of cerumen that impinge on the drum-head, or from foreign bodies, the removal of these is usually sufficient to relieve the patient. With the cure of furuncles or of diffuse inflammation in the external auditory meatus, the result is likewise favorable.

As regards treatment, we can scarcely ever confine ourselves to the treatment of these symptoms alone, and after all pseudacousma is only a symptom that may accompany many aural diseases: any attempt in this direction would, therefore, carry me beyond the scope of this paper.

The successful treatment of any aural disease, however simple its nature may be, often depends on the recognition of the value of the symptoms discussed in this paper, and we should not fail to keep them in mind when considering the management of our cases. The absence or presence of the acoustic symptoms, pseudacousma and tinnitus aurium, is a valuable guide in treatment, although our remedies should meet the physical conditions rather than the acoustic, knowing, as we do, that hearing will generally return when the physical functions assume their wanted sway.

In conclusion, I crave the indulgence of observers with whom I honestly differ on some yet obscure points, trusting that we may by our united efforts leave this subject further advanced than we found it ten or fifteen years ago. My main object in this paper has been to endeavor to present to those of the profession who are engaged in more general professional pursuits, some hints respecting the management of cases daily seen in the practice of medicine, but not always fully understood.

Small-Pox in New York and Philadelphia.—Forty persons died of small-pox in Philadelphia last week, and it is estimated that this mortality was among one hundred and fifty persons suffering from the disease. In New York the disease is traced to Italians or persons from Philadelphia.

THE DISEASES OF JAPAN.

By DUANE B. SIMMONS, M.D.,

DIRECTOR AND SURGEON-IN-CHIEF TO JIEUZEN-IN (GOVERNMENT HOSPITAL) OF YOKOHAMA, ETC., ETC., YOKOHAMA, JAPAN.

The difficulties which oppose themselves to the acquisition of a correct knowledge of the diseases of Oriental nations is much greater than would be supposed, and cannot be appreciated by any one who has never made the attempt. Nearly twenty years' residence in this country, a large consulting practice with the native doctors, and many years' charge of one of the largest of the government hospitals, has given us unusual opportunities, however, for the collection of a mass of facts bearing upon this subject, and forms the basis of the following notes.

It is but justice to ourselves to state here that there are no mortuary records kept by the government of a reliable nature, as not one in ten of the so-called medical men can diagnose any but the most simple diseases. Here, as it is the world over, the greatest mortality is to be found during infantile life. At the head of the list of general causes operative in producing this result here, as elsewhere, is the inability of the poor to give their offsprings proper care, their ignorance of the first principles of hygiene, and, especially in this country, inefficient, and in many cases entire absence of medical treatment.

The influence of a high temperature on the mortality-rate of infants in this country is very pronounced. Diarrhœa and cholera infantum, though common as causes of death, are far less so than affections of the nervous centres terminating in convulsions. We have no means of estimating the mortality from this cause, but are disposed to think it greater than from all others during the summer months. Some explanation for this may be found in the fact that all infants have their heads shaven for the first year, and, tied on the backs of nurses or their elder brothers or sisters, are often exposed to the rays of the sun quite unprotected by any kind of covering.

This exposure of the unprotected shaven heads to the cold in winter gives rise to affections of the respiratory organs, and especially the very fatal one of capillary bronchitis. Hereditary syphilis, both as a direct and predisposing cause of infantile mortality, is undoubtedly very great.

As the milk of animals is not used by the Japanese, there is no good substitute for that of the mother, when poor or insufficient, so that many infants undoubtedly suffer from semi-starvation, thus causing them to fall an easy prey to diseases which the well-nourished are able to withstand. We would observe, however, that a feeble attempt is made to supply the want of milk from animals by the use of malt properly diluted with simple water, or that from long-boiled rice.*

Passing, now, to the diseases of childhood, we find that scarlet fever and cerebro-spinal meningitis have never yet made their appearance in this country. I am aware that this is denied by at least one foreign medical man, in regard to the former, who claims to have seen eight or nine cases of it. But if this is so, how happens it that no one else has observed it? A disease so terribly infectious as scarlet fever could hardly be limited to the practice of one individual. As to the absence of cerebro-spinal menin-

* Malt has also been used from time immemorial by the Japanese for various forms of dyspepsia and weak digestion.

gitis, in an epidemic form at least, there appears to be no question. Still more is this country to be congratulated on its escape from the ravages of diphtheria, that terrible scourge of the West. Though sporadic cases are not uncommon, I have never seen it epidemic. Indeed, in one instance only, have I seen it attack several members of the same family, including adults. According to my observations, most cases which terminate do so by the extension of the disease to the larynx, in other words, as diphtheritic croup. Simple membranous croup is common, and, as elsewhere, nearly always fatal. I have never seen a sufficient number of cases in one locality, however, with clearly traceable evidence of direct infection, to warrant its being called epidemic. An interesting question here suggests itself, as to the cause of this comparative immunity from two of the most fatal diseases of western countries. Measles, though occurring in an epidemic form, appears to do so only at long intervals, then completely dies out. The last epidemic was in 1861, twenty-seven years having elapsed between it and the previous one. It then swept from one end of the empire to the other in a few weeks, and, as we had an opportunity of observing, attacked all under twenty-seven years of age, or at a rough estimate 15,000,000 ont of the entire population, calculated at about 35,000,000.

The mortality was very great, it being estimated that in Yedo alone (then with a population of 1,500,000) the number of deaths from the disease was 75,000.

Some years ago we published in the *Pacific Medical Journal* a chronological record of wide-spread epidemics of the disease in this country, dating as far back as 552 A.D. Since that time there have been thirty-seven epidemics, the longest interval being one hundred and fifty-two years, and the shortest eleven. That the disease dies out, and requires a fresh importation each time of its appearance, seems borne out by the fact that since the epidemic of 1861 I have not seen a single well-marked case of measles among the natives, nor have I heard of its existence elsewhere. Rubeola Germanica is quite common, however, and is not unfrequently mildly epidemic. Hooping, or the hundred day cough, as it is termed by the natives, and mumps, present nothing unusual in their type and degree of prevalence from what is observed of them in the West.

Small-pox, till vaccination was introduced by Dr. Merrick in 1849, was exceedingly prevalent, both in its endemic and epidemic forms. Since that time, its visitations appear to be somewhat less frequent. It was not till the severe epidemic of 1875 swept over the country, however, that I succeeded, as sanitary advisor to the Government, in getting systematic sanitary measures adopted for its control and future prevention. During the epidemic, a house to house inspection was instituted, and all attacked with the disease were removed to the hospital, or visited at their homes by a corps of physicians, detailed for this especial duty. All persons who had not been protected by a previous attack of small-pox, or been vaccinated, were ordered to present themselves to the vaccinating bureau for the operation. The registration of the entire population, being a part of the municipal organization of the Government, a list of the members of each household was furnished the vaccination bureau, and their names checked off as they presented themselves, so that few were able to evade the law.

Though five years have now elapsed since this system was inaugurated in this place, there has been no return of the disease even in an endemic form.

Typhus fever, though common, is not so prevalent as generally supposed, from the fact that nearly all continued fevers, including malarial intermittents, are reported by the native doctors as typhoid.

Dysentery, even as a sporadic disease, is rarely met with in this section of the country, though reported as occasionally epidemic elsewhere. Asiatic cholera has been epidemic in Japan several times, and twice within twenty years, viz., in 1861–1862, and in 1877, 1878, 1879.

No reliable information exists of the mortality of the epidemics of 1861–1862, though it is known to have been very great. The number of cases in 1877 were 12,378—deaths, 6,508, or 54.56 per cent.; in 1878, cases, 975—deaths, 532, or 54.56 per cent.; in 1879, cases, 164,264—deaths, 97,422, or 59.30 per cent. This year (1880) a few cases have been reported, but we doubt if any of them were real Asiatic cholera.* Marsh malarial affections are very prevalent, and complicate almost every form of disease. Common ague, however, in which the three stages are well marked, is rare in this section of the country, and I have seen but few cases of any other than quartian type. The marked form of the disease is by far the most common, and, in fact, comprises ninety per cent. of all the cases met with. Congestive and pernicious malaria, though occasionally observed, are not common.

Beriberi, a disease *having its origin in a specific soil echalation*,† is very common in this country. Its areas of especial prevalence are the low-lying towns on the eastern and southern shores of the islands collectively forming this empire. Consumption is very common, and furnishes, as elsewhere, a larger percentage of deaths in adults than any other disease. Scrofula is, according to my observations, somewhat rare. Leprosy, though indigenous to Japan, and met with in almost every part of the country, is evidently kept in check by the belief of the people in its hereditary nature, and as a consequence a careful inquiry by the families of both parties about to marry into each other's history, with special reference to the existence in them of this malady.

Syphilis is very prevalent, so much so that we think we are safe in saying that three-fourths of the adult male population, especially in the large towns, suffer from it sooner or later. Our observations have led us to the opinion, however, that its manifestations are less severe than among Europeans. Thus, with the immense opportunity which we have had of seeing the disease, we have found the secondary lesions, as affecting the mucous membranes, in most cases very transient, and often wanting caries of the bones and other tertiary manifestations. We also regard as relatively infrequent the protecting influence of ancestral saturation with syphilitic poison, which may possibly explain this mild type of the disease in this country. The fact that, in former times at least, every case of primary syphilis was treated by thorough mercurialization, may account for the mildness of the tertiary lesions mentioned. In support of the former hypothesis we have the well known historical fact that the English soldiers, during the Peninsular wars, suffered much more severely from syphilis than the people of the country from whom it was contracted. We may mention in this connection that it is a popular opinion in Japan that small-pox is much more severe in its natural form in

* See my Report on Cholera Epidemics in Japan.

† See my Thesis on Beriberi, or the Kakké of Japan, in the Imperial Chinese Customs Report for 1880.

those whose parents had never had the disease, or who had been prevented from having it by vaccination. Even if our observations as to the mild type of syphilis in Japan be correct, it is impossible to believe that its effect on the whole people is not profound, and serves to explain in some degree the generally admitted fact of the physical inferiority of the race as compared with Europeans, and also the relative slow increase of the population thus favorably situated during the last two hundred years.

The Government have established lock hospitals in many of the larger towns, where weekly examination of all licensed prostitutes are made, and those diseased kept under surveillance. The effect on the prevalence of syphilis is not definitely known.

CAUSE OF DIPHTHERIA

In the Family of Samuel Crump, Esq., Montclair, N. J.

By J. W. PINKHAM, M.D.,

MONTCLAIR, N. J.

Although I saw but little of the cases referred to below, having had under my care only the fourth child after the third day of his attack, I have had an opportunity to collect some instructive facts connected with the matter, which I think will be of general interest.

Diphtheria in Montclair has been a thing of rare occurrence, only thirteen fatal cases having been recorded in the last fourteen years.

At the time the disease showed itself in Mr. Crump's family there were no other cases in town, and I believe there have been no cases since.

Mr. Crump's residence is situated on a hill-side, about three hundred feet above the sea level. The ground is dry and slopes toward the east. The house is exposed on all sides to the direct rays of the sun. The cellar is dry.

The plumbing in the house is confined to the kitchen, the laundry, the bath-room, and one bedroom on the second floor. Every waste-pipe is trapped and every trap is ventilated. The soil-pipe extends above the roof, and is supplied with foot ventilation. The cesspool is thoroughly ventilated. Nearly every room in the house is supplied with a separate ventilating shaft. In the opinion of experts the house could not have been unhealthy from sewer-gas nor from soil dampness.

The house is warmed by a hot-air furnace, called the Gould Hygienic Furnace, the peculiarity of which is that it presents a large radiating surface and thus does not overheat the air. Mr. Crump, in order still further to ensure himself against the evils of overheated air, caused his furnace (*i.e.*, the radiating surface) to be covered with a coating of clay; and, to prevent the air from becoming too dry, a large evaporating dish was placed in the hot-air chamber.

The household consisted of thirteen members, seven adults and six children. The adults were Mr. and Mrs. C., two lady relatives, and three servants. The children were all under eleven years of age. The family was an unusually healthy one, and no member of it, so far as can be ascertained, had been exposed in any way to the contagion of diphtheria. There had been no case of the disease in the vicinity of Mr. Crump's house for many years, so far as known. Twenty-seven feet from the cold-air box which supplies the above-mentioned furnace with air, is the fence which separates Mr. Crump's lot from the adjoining premises. This cold-air box was, previous to the attack, on a level with the ground, and presented in transverse section an area of two square feet.

On the eighth day of December, 1880, there were spread on the grounds of the above-named adjoining premises the contents of a cemented pit, which, during the summer, had received the waste from the stable and the kitchen. At the time it was spread, it was noticed that the odor was very bad, and it was particularly noticed by those who passed along the carriage-way between Mr. Crump's house and the place on which the refuse was spread.

Now, keeping in mind the relative position of the two places, viz.: that Mr. Crump's lies to the east and is somewhat lower, let us glance at the following table taken from the carefully kept meteorological record of William A. Whitehead, Esq., of Newark:

Dec., 1880	Temperature.			Wind.	State of Weather.
	Min.	Max.	Mean.		
8	14	27	20	N. N. W.	
9	11	12	11+	W.	
10	6	23	15	N.W.	
11	6	23	15	N. to W.	
12	19	37	28	W.N.W.	
13	32	39	35	W.S.W.	Cloudy.
14	30	40	35	W.	Fair.
15	32	39	35	W.S.W.	Clouds and rain.
16	32	38	35	W.S.W.	Clouds and rain.
17	21	30	25	N.W.	Fair.
18	23	32	27	W.N.W.	Fair.
19	19	33	26	N.N.W.	Fair.
20	23	31	27	N.	Cloudy.
21	27	32	30	N.E.	

It will be seen that the thermometer remained below the freezing point until the 13th, when it reached 39°. On this day it was cloudy and the wind was westerly. On the 14th the temperature was 40°+, with the wind directly west. On the 15th it was 39°+, wind westerly, with clouds and rain. On the 16th it was 38°+, wind westerly, with clouds and rain.

Thus, for nearly five days the temperature was considerably above freezing nearly all the time, the wind was constantly from a westerly direction, and during the two days when the temperature was highest there were clouds and rain. During these warm, moist days the odor from the refuse described above was very marked, and as its source was only twenty-seven feet from the entrance to Mr. Crump's cold-air supply-box, and as the wind was constantly in the direction toward Mr. Crump's house, the gases which made themselves so perceptible in the neighborhood must have been drawn into the furnace with the inflowing air, and must have been distributed to that part of the house heated by the furnace.

Mr. and Mrs. Crump and the children slept in bedrooms warmed by this heated air from the furnace.

The remaining five members of the family occupied bedrooms which were not so warmed. On the 22d of December, one of the children, aged six years, after two or three days' illness, presented unmistakable evidences of diphtheria, and died on the 26th. A second child was attacked on the 26th, a third child and Mrs. Crump on the 27th, and a fourth child on the 29th. The second and third child died on the 31st of December and the 1st of January respectively. Mrs. Crump and the fourth child recovered. In the course of seven days, of the eight persons who slept in the furnace-warmed rooms, five were attacked with diphtheria, three cases terminating fatally. The remaining members of the household, five in number, who occupied rooms not supplied with registers, all escaped.

It is worthy of notice that, of all the attendants, physicians, nurses, and friends, who were brought into close relation with the sick day and night for more than ten days, with possibly one exception, not a person contracted the disease.

The exception referred to was that of a colored nurse, the brevity of whose attack (two or three days) makes it fairly questionable whether it was diphtheria she had, or some affection which simulates it. Now, when we consider the immunity of so many people, for so long a time, and so fully exposed to the disease in so malignant a form, does it seem probable that one of these children should have contracted it from a person so slightly affected as to be unconscious of illness, or should have come in contact with the poison in a place where the disease did not exist, and have transmitted it in so short a time to so many members of the family?

On the other hand, when we consider the close proximity to the large cold-air box of a mass of putrefying animal and vegetable matter, the effluvia from which were, for five days, constantly mingled with the air which, in a continual stream, passed through the hot-air chamber of a furnace which heated it, we may fairly suppose, to a degree not too great to do otherwise than render more active the already poisonous gases with which it was loaded, when we take into account the large evaporating dish contained in this hot-air chamber, which supplied an abundance of moisture, and the still more important fact that, of those most exposed to this air from the furnace, five out of eight were seized with diphtheria in the space of one week, while the five who were least exposed all escaped, does it not seem probable, whatever views we may entertain concerning bacteria and specific germs, that we have in these poisonous effluvia the essential cause of the disease in this particular instance.

ANTISEPTIC LIGATURE OF RIGHT AND LEFT FEMORAL ARTERIES IN THE SAME SUBJECT, FOR DOUBLE POPLITEAL ANEURISM,

With Successful Result in both Instances.

By CHAS. K. BRIDDON, M.D.,

Surgeon to the Presbyterian Hospital, New York.

(A Paper read before the New York Surgical Society.)

For the histories of this case I am indebted to Dr. John F. Duffield, assistant surgeon to the hospital. George Rassmussen, aged thirty-two years, native of Denmark; married; sailor; admitted to Presbyterian Hospital July 15, 1879.

Family history.—Is uncertain as to whether his parents are living, but none of the other members of his family have been the subjects of disease such as that from which he suffers.

Previous history.—Has enjoyed very good health; had intermittent fever seventeen years ago, gonorrhœa three years ago, and contracted constitutional syphilis eight years ago.

Present illness.—Three weeks since patient noticed that the right knee became somewhat stiff, and that he could not move it as readily as the other; he kept on working, however, seeking relief from such domestic remedies as were suggested to him by his friends; pain of a dull, but sometimes shooting character supervened, and soon began to interfere with his rest at night, when he called in his family physician, who detected a swelling in the popliteal space and pronounced it aneurism.

On admission, presents a tumor in the right popliteal space about the size of a small lemon, deeply seated on the outer side of the inner hamstring; it conveys lateral pulsation to the hands placed on either side, which is synchronous with the heart, and which ceases on compressing the artery above; no bruit can be detected.

A series of successes in the treatment of aneurism by catgut ligature and the Lister dressing led the surgeon in charge (Dr. Briddon) to adopt this mode, without any preparatory compression or flexion.

July 17th.—The operation was made in the usual position in Scarpa's space, at the point where it is under cover of the sartorius; a catgut ligature (superfine violin string, E. No. 70) was used; of course the whole operation was conducted under a reliable spray, and the wound was dressed with all the antiseptic precautions; the leg was encased in a thick layer of cotton-wool which was maintained in position by a loosely applied muslin bandage.

July 29th.—Nothing of moment has occurred up to this date; there has been a very slight pulsation discernible in the tumor, but only such as is regarded as favorable to the more enduring processes of cure. There has been a slight show of discharge beneath the margin of the dressing, and it is changed under the spray; the incision was found nearly united by first intention.

August 1st.—Dressing removed, wound healed, tumor very much diminished and without pulsation.

August 13th.—Discharged cured.

Three months after leaving the hospital the patient presented himself at the office of Dr. Briddon, with a tumor in the left popliteal space. A week before some stiffness in the joint directed his attention to the part and he discovered a swelling about the size of a hen's egg. It pulsated, and the pulsations were synchronous with the heart, and were stopped by compression of the artery. Being anxious to make some provision for his family preparatory to entering the hospital, delay was considered justifiable, though his occupation as a longshoreman exposed him to some risk; and recognizing the lesion as due to the degeneration depending upon syphilitic sudarteritis, he was advised to be careful, to take increasing doses of iodide of potassium, and to present himself occasionally for observation. He took the iodide until the dose reached ninety grains a day, and this dose was continued for many months. At first there was an unmistakable diminution in size, and then the tumor remained stationary. In the month of August, during the absence of Dr. Briddon, he strained his limb, throwing it into the position of hyperextension. This was followed by pain and rapid increase in size of the swelling. He was confined to his bed and attended by his family physician, who prescribed such means as were likely to relieve his severe pain. He was seen by Dr. Briddon on the 9th of September, and was sent to hospital for immediate operation. The tumor was very large, filling the entire space, bulging the hamstrings on either side; there was some effusion into the cavity of the joint. The leg was considerably swollen, and he had not slept for many nights.

No remains of the aneurismal swelling could be discovered in the right space.

Careful measurements of each leg were taken at this time, as follows: left leg, eighteen inches in circumference over the patella, and seventeen inches in circumference three inches above the patella;

right leg, thirteen and three-quarter inches in circumference over the patella and thirteen and a half inches in circumference three inches above the patella.

September 13th.—An operation precisely similar to the one on the other leg was performed. The superfine violin string, E, No. 70, was employed in securing the artery as before; strict Lister precautions were observed throughout; the wound was dressed with the usual dressings, and the entire limb enveloped in cotton batting, secured by a loosely applied roller-bandage. Immediately after the ligature was applied measurement of the left knee showed its circumference to be, over the patella, seventeen inches, and three inches above the patella sixteen and a half inches.

September 14th.—A.M.: temperature, 99¾° F.; pulse, 92; P.M.: temperature, 102° F.; pulse, 104. No pulsation was discernible in the sac; no pain.

September 18th.—Temperature normal; pulse, 76. The highest temperature since last date was 93¾° F., on the evening of the second day after the operation. No pulsation has returned in the sac; no discharge has appeared through the dressings; no pain. Complains merely of the limb feeling "heavy."

September 25th.—Cotton removed from the sac. No pulsation or *bruit* whatever was obtained on the most careful examination. The tumor was markedly diminished in size, and its outlines could readily be mapped out.

October 1st.—The dressings, which had not been changed since the operation, were removed to-day, and the wound was found to have healed throughout by first intention. The cotton has been gradually removed from the entire leg. Rather less numbness; specific treatment renewed; ordered unguentum hydrarg. to be rubbed in the axilla every night; general condition excellent.

October 10th.—Measurement of left knee over the patella, sixteen and three-quarter inches; three inches above the patella, fifteen and a quarter inches; three inches below the patella, fifteen and a half inches. Says the left foot feels numb, though he feels the point of a pin when applied to any part of the foot.

October 12th.—The foot does not feel numb, and there is no pain in the knee; no recurrent pulsation has occurred; general condition good; appetite good; bowels regular.

November 7th.—Discharged, with swelling much diminished in size, and pulseless.

THE NEW BRIGHTON CODE OF SANITARY ORDINANCES.—We notice that in the very elaborate code of sanitary ordinances recently put in force at New Brighton, S. I., the following order is found: "Every householder or head of a family, in a house where any case of infectious disease may arise, shall report the same to the Board of Health within twelve (12) hours from the time of his or her first knowledge of the nature of such disease, under a penalty of ten dollars ($10) for omission so to do." By this order the responsibility of notifying the authorities is put upon the householder, not the physician. We have always contended that the state had no right to impose this responsibility on the physician without remuneration, and whether he wishes it or not. We shall watch with interest the working of these new sanitary ordinances. If they can be made practicable the very efficient President of the Health Board, Dr. Carroll, will surely make them so.

Reports of Hospitals.

PHILADELPHIA HOSPITAL, PHILADELPHIA.

SERVICE OF DR. EDWARD T. BRUEN,

ATTENDING PHYSICIAN.

THE SYMPTOMATOLOGY OF ACUTE MILIARY TUBERCULOSIS CONSIDERED IN REFERENCE TO THE DIAGNOSIS—A WARD CLASS DEMONSTRATION.

THE case you will analyze with me this morning is very typical of its kind, although its symptomatology, studied in detail, presents but a very few cardinal features. The disease is rare in the present form, but the observations I shall make to you are dictated by a study of nine cases of similar disease in which the diagnosis has been confirmed by autopsy. These cases all occurred in the wards of this hospital during the past eight years.

As we contemplate the case we notice that the respirations are quickened, that there is a dry, hard cough, attended by but little expectoration, and the complaint of our patient, a German, is that he has discomfort referred to the chest; thus our attention is directed to the examination of both the heart and lungs at the outset. When you examine the lungs you will find that the physical signs negative the presumption that any of the ordinary diseases of these organs are present. Yet you will be able to combine these vague physical signs so that you may erect them into a typical mental picture alone indicating the disease I shall endeavor to prove to you is present, viz., acute miliary tuberculosis. If on a journey two roads terminate at the same point, the traveller will usually prefer the shortest and most direct. In medical diagnosis it is well to seek to isolate the prominent features of a case, and thus often a rapid and sure diagnosis will reward you.

The patient, L. S——, says that for six weeks past he has had fever, sweating at intervals, dry cough, dyspnœa, and rapid breathing. He has been confined to bed and felt ill. The cough has not been attended by expectoration or hemorrhage; for the past week the sweating has increased; sometimes he has been drenched with moisture, and this has happened both in the daytime and at night.

As the salient features you will notice that the pulse is very rapid—144 per minute—and this rapid beat has been a sustained feature during the past week, the date of the patient's admission; it has been taken three times daily, and never has been found below 130. This persistently rapid pulse is a fundamental symptom of this malady, and is most unvaryingly present. Many writers allude to it, but the diagnostic prominence I assign to it has not been enforced; the pulse is also small, often it is thready.

Tubercle is described by Charcot as distributed in the tubular structures of the body—in the lungs. We find it in the sheaths of the arterioles, the sheath of the bronchial filaments, and in the lymphatic vessels. The lumen of the arterioles is diminished, the aëration of the blood is less perfect; hence, perhaps, the rapidity of the cardiac action for the left ventricle is illy supplied with blood. But we also, from this explanation, can understand a second symptom, viz., the dusky hue of the face, which at times is flushed, as in typhoid pneumonia, at times is quite pale; if this patient change his position the flush is seen to go and

come. The general surface of the body in the latter stages of these cases is also dusky, and often the appearance of the patient will forcibly remind one of the cadaver after death from a blood disease. Perhaps the interference with the circulation above mentioned may serve to explain this appearance of the body. The sweating and condition of the skin have always reminded me of the sweating of the death agony, and possibly a similar physiological explanation will serve us. The scanty sputa is readily understood when we reflect that the amount of catarrh of the bronchial tubes produced by the infiltration of miliary tubercle is slight. Now, we readily discover that no valvular heart disease exists. In a moment we shall demonstrate that pneumonia does not exist, even if the length of the sickness had not practically excluded acute inflammation of the lungs, for the patient says he has been sick seven weeks, and I ask you, Does not the individuality of the disease loom up? Now for the physical signs. All over the chest, on both sides, a vesiculo-tympanitic resonance is heard, though in one or two patches, the size of a silver dollar, posteriorly, slight dulness can be developed. Auscultation suggests an exaggerated inspiratory murmur, with feeble expiration, of the type heard in emphysema, or in supplemental action of a healthy lung when its fellow is disabled; nowhere is the breathing bronchial. With this you can hear, on inspiration alone, numerous fine, slightly moist râles. These are similar to the râles of pneumonia, but in this case they are heard at both apex and base of both lungs. They are somewhat like the fine râles of capillary bronchitis, but who of you has seen a case of this disease without some expectoration; and then this disease is apt to be associated with the chest and heart alterations of emphysema or the pre-existence of Bright's disease, and the temperature range is not similar. We also hear some dry sibilant and sonorous râles.

Recurring to the pathology of the disease, we can understand the development of râles as just described from irritation of the bronchial mucous membrane, and the catarrhal exudation in the finer tubes. There are also some dry pleural frictions, and a restricted movement of the right lung as compared with the left, indicating a tubercular pleurisy with plastic exudation, but yet both lungs expand and retract during breathing. In reflecting on the characteristics of the respiratory murmur, remember the vesicles of the lungs are truly hyperdistended with air as in emphysema. The respiratory act is imperfect because of the obstruction to the exit of air due to the catarrhal secretion in the finer bronchial tubes. You notice that the physical signs cannot indicate consolidation in any of its forms, and the *tout ensemble* of the case does not indicate the ordinary forms of bronchitis. Let such physical signs be appropriate to acute miliary tubercle when combined with the previously enumerated general symptoms.

The temperature is of value, but chiefly from a standpoint of prognosis. The range is from 100° F. to 103½° F. during the disease. The higher temperatures given by Wunderlich have a different significance, as I shall explain in a moment. In the week before death (for this disease is fatal) the temperature may fall to 97° F., to rise in the evening to 101° F.; but daily in that week it will be found below 99°. I regard this as very constant. The higher temperatures given by Wunderlich and Niemeyer I think may be understood to refer to acute miliary tubercle complicating advanced inflammatory phthisis, in which case, besides the older cheesy material, life may be prolonged till cheesy metamorphosis of the tubercle has occurred; whereas in the acute primary tuberculosis death occurs before much or any cheesy degeneration occurs. In other respects the symptomatology is essentially the same, save that in the primary disease there is no emaciation or evidence of the wasting of consumption always present in the secondary form; and in cases of general tuberculosis complicating consumption the physical signs of phthisis are present.

The duration of acute miliary tuberculosis is from seven to nine weeks, usually the shorter period. Let me allude to some interesting facts relative to this disease, apart from the study of this case, as representative of its class. You will, by inspection of this case, discover that he has had suppurative inflammation of the glands of the neck at some prior period. Search, then, for enlarged glands, note if they have suppurated, and whether scrofulosis or consumption are hereditary in the family; for the connection between these conditions and this disease is very intimate, and it is essential that some focus of antecedent inflammation, usually in a cheesy state, be present to form a nucleus for absorption and the lighting up of tuberculosis on the smallest provocation. In the group of physical signs you can hear a metallic tinkling râle and distant cavernous breathing at the right apex. I believe these signs indicate a cavity deeply situated. The cavity must be very small, and is probably the result of some prior attack of catarrhal pneumonia.

It is common to exclude typhoid fever in a theoretical diagnosis. The contrast is seen in the rapid pulse early in the case without the typhoid state, the cyanosis, the physical signs in the lungs, the evident respiratory disturbance, the sweating, the absence of characteristic rise in temperature, and the absence of prodromes from the history.

The ensemble is more that of typhus, for in this disease there is an early rapid pulse, a dusky hue of skin, and in the cases of typhus which occurred in this hospital a year ago, the temperature was similar, never very high. The history of the case, a minute analysis of the pulmonary symptoms, the typhus eye, the environment* from which the case developed, are, perhaps, the safest indications for diagnosis by exclusion, while the eruption, if it be characteristically present in typhus, is conclusive. It is only, of course, in large seaboard cities where this disease can be a source of confusion.

We met five days ago, and yesterday one patient died, as I foretold by consultation of the temperature chart. The entire tissue of both lungs can be seen studded with the most perfect translucent granulations, alone characteristic of miliary tubercle. Nowhere is the tissue of the lungs consolidated; on the contrary, they bulge with air, and yet they do not collapse, showing the tissue is more condensed than natural, and the lung feels as though infiltrated with fine particles of shot. In the right apex you will find a small cavity, the size of a small egg of a pullet, but the amount of retraction of the adjacent lung, and the proliferation of connective tissue in the neighborhood of the vomicæ, all show that cicatrization had progressed considerably, and justifies my previously expressed opinion that it would prove the result of some prior catarrhal pneumonia, possibly a

* The cases received into the Philadelphia Hospital during last winter, and so far in this season as well, have originated in widely distant sections of the city—so sporadic has been its development that environment has been of little value as a diagnostic aid, although the cases have originated among the poor.

year, possibly longer, before the last sickness. The entire pleura of the right side is adherent from antecedent pleurisies, and you can see the miliary tubercle from the present attack. The bronchial glands are much enlarged, and likewise the mesenteric. In both liver and spleen you will see tubercles, but none exist in the intestines or kidneys. In these cases the intestines often escape, and, even if involved, death happens before much, if any, ulceration occurs; so diarrhœa is not a symptom, excepting, indeed, in cases in which acute miliary tuberculosis terminates in phthisis, when follicular catarrh or ulceration of the bowel is frequently found. The membranes of the brain also enjoy an immunity in the adult quite the reverse of the history of similar cases of tuberculosis in the child.

In leaving the case, let me express the hope that if you approach the symptomatology of your cases of this malady as I have indicated, you will find the diagnosis comparatively easy.

Progress of Medical Science.

The Bloodless Method of Performing Surgical Operations.—Prof. Esmarch, of Kiel, again alluded to this subject at the Congress of German Surgeons in Berlin. (Reprint from *Langenbeck's Archiv*, vol. xxv.) He remarked that seven years had now elapsed since he had first advocated the use of the bloodless method for surgical procedures. Since then most surgeons had given his method a trial. Many eminent and experienced physicians had, however, abandoned it, on account of the secondary hemorrhage following the removal of the constricting bandage. This was to be regretted, for none could deny the great advantages to be gained by artificial ischæmia. Esmarch attributed to a defective *technique* the disadvantages claimed to be associated with his method. Nor did he think that the modifications variously suggested were calculated to obviate failures from this source. He had himself been occupied with further improvements, and had been so far successful that he performed most of his recent operations on the extremities with absolutely no loss of blood.

The present mode of procedure in the three principal varieties of operations on the limbs, *i.e.*, amputations, excisions, and sequestrotomies, was then described. In amputations all the visible vessels were carefully tied, but the constricting tube was not at once removed. The edges of the wound were then united by deep catgut sutures, after which a short drainage-tube, capable of absorption, was fixed at the most dependent portion of the wound; finally, a compressing retentive dressing (*comprimirender Dauer verband*) was applied, and then the constricting tube was removed, the limb being maintained in a vertical position. The patient, having been placed in bed, his stump was kept in the vertical position for half an hour longer, after which time it was placed horizontally. He had performed twelve amputations in this way, and in no instance was consecutive hemorrhage observed. The dressings remained in situ for two weeks. At the end of this time they were removed, and a narrow streak of dried blood was all that was found to correspond to the cicatrix.

In exsections he had formerly applied the dressing before removal of the constricting tube, but he had afterward abandoned this plan, owing to the occurrence of secondary hemorrhages in consequence of incomplete compression. Recently, however, he had again adopted this former method, because now he had improved the method of dressing. At present he secured the visible vessels after the operation, and proceeded in essentially the same manner as in amputations, the limb being secured to a suitable splint in the vertical position, and so held for about half an hour, after which time the patient was allowed to place it in a more comfortable position.

In this way, since 1878, he had performed fifty-six exsections, and in no case had secondary hemorrhage taken place. In thirty-three cases the dressings were left undisturbed for from three to four weeks.

As regarded sequestrotomies, he had abandoned his former method of plugging the osseous cavities with carbolized cotton, etc. At present his method was as follows: The bone cavity was thoroughly cleansed with solutions of carbolic acid and chloride of zinc, the edges of the wound were then united by deep catgut sutures, drainage-tubes capable of absorption inserted, and the constricting tube removed after completion of the retentive dressing. He had employed this method successfully in twelve cases, and in no instance had secondary hemorrhage necessitated an early renewal of the first dressing. Similar dressings were applied in a precisely similar manner, in such operations as the extirpation of tumors of the limbs, nerve-stretchings, etc. The results in all cases were very satisfactory, which he attributed to the absence of all hemorrhage, either primary or secondary.

Cannabis Indica in Migraine.—Dr. Lothrop, in a paper read before the Buffalo Medical Club, advocates anew the exhibition of this drug in persistent hemicrania. (*The Buffalo Medical and Surgical Reporter*, December, 1880.) After a short review of the subject, in which reference is made to an excellent article by Dr. Seguin (Medical Record, vol. xii., p. 774, 1877), the writer explains the principle of treatment as laid down by Greene. This was "to maintain, by the use of small doses of the agent, a constant influence upon the nervous system for a long time, the same as is required in epilepsy by the use of the bromides." It is stated as a matter of course, that at first no appreciable effect is observed, and that not until the use of the remedy is persevered in for many weeks, and the nervous system kept under its influence for a considerable time, will the patient find an appreciable diminution in the severity and frequency of the attacks. It is well to commence with one-fourth grain of the extract before each meal, for the first fortnight. The dose may be increased to the third of a grain for the second fortnight, to be augmented to a half grain at the end of four weeks. This amount will generally be sufficient, and should be continued for several months. Success here is only attained by persevering effort. A severe case of hemicrania, in which hereditary influences bore a prominent part, is described by Lothrop in support of these views on the efficacy of the prolonged use of cannabis indica.

Hydatid Cyst of Right Kidney—Treatment by Puncture and Injection of Tincture of Iodine.—Dr. Weinlechner, of Vienna, reports the following case (*Ber. d. Krankenanst. Rudolphstiftung in Wien vom Jahr.*, 1879): J. O., aged eighteen, was admitted to the hospital with an abdominal tumor, situated in the right side, and being about the size of a child's head. The tumor had been previously

painful, but showed no distinct tenderness on admission. Some fluid contents were withdrawn by exploratory puncture, but a definite diagnosis could not be made at that time. Later a large amount of fluid was removed by aspiration, and the cystic cavity immediately injected with two ounces of a solution containing equal parts of tincture of iodine and water, with the addition of a small quantity of iodide of potassium. The injected fluid was allowed to remain in the cavity. Subsequent examination of the fluid removed by aspiration, revealed the presence of the characteristic hooklets and scolices of the *echinococcus hominis*, or common hydatid. The seat of the sac was in the right kidney. No untoward symptoms followed the injection, and the tumor gradually diminished in size, until at length it could no longer be felt. Several months afterward the patient died from septicæmia, following exsection of the knee-joint. At the autopsy the remnants of the sac were found adhering to the lower extremity of the right kidney, and involving a small portion of its tissue. It still contained some collapsed hydatids and a small amount of yellowish fluid. Dr. Weinlechner observes that but for the untimely death of the patient, complete shrinkage of the sac would undoubtedly have taken place.

Excision at the Hip-Joint for Acute Infectious Osteomyelitis.—A recently published thesis by Driessen presents the personal views and experiences of Volkmann on the above subject. Two forms of this affection are recognized: 1, those which appear early, and, 2, those of later appearance. Under the first heading two varieties are described: First, those with but slight serous articular effusion, due to the irritation of the encroaching osteomyelitic process as it nears the joint. Such forms have a mild type, and spontaneous recovery is the rule. Secondly, those of a malignant character and diffuse ichorous inflammation, where the epiphysis is speedily involved in the destructive articular process. This variety is of frequent occurrence at the hip, and the course of the disease is commonly of such rapidity that an early death from septicæmia, as a rule, precludes the possibility of excision.

As regards the second form of osteomyelitis, that of later occurrence, several varieties may be distinguished. First, there are the chronic obliterating affections, without marked symptoms, which frequently result in cartilaginous, and, finally, bony anchylosis. Then there are the sero-purulent affections, which take a subacute or chronic course. They are produced in consequence of the extension of the osteomyelitic process beyond the line of insertion of the articular cartilage. As a rule, the cartilage is not destroyed, and the whole course of the disease is comparatively mild. Articular mobility may be preserved. The last variety belongs to a severer type, and takes a subacute or chronic course. Ulcerative destruction of the articular cartilage is the rule. Caries is frequently found. In these forms exsection is generally a necessary operative interference.

Suppurative osteomyelitic diseases of other joints may be amenable to different forms of treatment, but in the hip-joint the acuity of the whole process and the profuseness of the products of degeneration, together with the deep seat of the joint, generally justify, or even necessitate, excision. In fact, the operation frequently becomes a vital indication.

The immediate object of resection is to freely open the joint so as to preclude the possibility of purulent accumulations, and permit irrigation of the surrounding abscesses as well as the joint itself. Excision, of course, also does away with the deleterious effects sure to follow the pressure of the articular surfaces against each other. In case the incision has been carried through necrosed bone, the latter should be allowed to remain until a sequestrum has formed. Any diseased osseous marrow should, however, be removed by the scoop.

Cases running an extremely rapid course, with speedy destruction of the hip-joint, are seldom seen in hospitals. But after the first stage of infectious osteomyelitis has passed, or in cases of slow development, the patients, as a rule, recover after excision; at least this has been the experience of Volkmann's clinic. Recoveries were observed in cases of apparently unfavorable prognosis—the patients having high fever, being extremely emaciated, showing considerable anasarca, and containing in their urine a large proportion of albumen.—*Centralbl. f. Chirurgie*, October 16, 1880.

Aural Symptoms in Bright's Disease.—Continuous or intermittent deafness has been described as a comparatively frequent concomitant of chronic nephritis by Rosenstein and Rayer. More recently Dieulafoy has called attention to such aural complications. Pain in the ears and tinnitus aurium have been added to the list of significant precursors of uræmia by these authors. A separate thesis was lately published by Pissot, entitled *Les troubles auditifs dans le mal de Bright*. Hitherto, however, the nature of aural complications in Bright's disease has been regarded rather in the light of functional disturbance than anatomical lesion.

Dr. Gurovitsch, of Odessa, records a case of parenchymatous nephritis where aural disease became a prominent complication, and where definite lesions were found. The case was that of a soldier, aged twenty-two, who had been a chronic sufferer from malarial affections. On his admission to hospital he had an intermittent fever of an irregular type. He complained of pain in the right ear, and partial deafness. It was ascertained that he had parenchymatous nephritis. Soon a purulent otitis media was developed, and later the previously healthy left ear likewise became implicated. Facial œdema was superadded to the other symptoms, and this became more marked with the increased violence of the aural symptoms. When the latter showed an amelioration, the œdema also partially subsided. Gurovitsch is at a loss how to account for this coincidence. The patient died of pericardial dropsy and cardiac failure, and at the autopsy the aural lesions were found to correspond to the diagnosis of otitis media purulenta.—*Berl. klin. Woch.*, October 18, 1880.

A Simple Method of Compressing the Brachial Artery.—Dr. Zenker, of Schivelbein (*Berliner klin. Wochenschr.*, October 18, 1880), describes a very simple method for effectually compressing the brachial artery, which may be readily practised by the unprofessional as well as the professional men. He claims neither priority of invention nor even originality of procedure, stating merely that the method is not mentioned in the customary text-books.

In giving the method a name he has chosen the designation of costal compression, or, as he states more correctly, "humero-costal compression." As indicated by this name, the method consists in pressing the arm against the thorax, thus effecting the compression of the artery between the ribs and the humerus. This may be done in two ways, either by

pressing the arm against the body, the latter being held in fixation, or, *vice versa*, by the pressure of the body against the immobilized arm, *e.g.*, lateral decubitus, with the arm pushed under the trunk.

As regards the actual performance of the simple manipulation the following hints are given: The person may stand or sit, and his body is to be pushed against some resisting article of furniture. The forearm is held in supination, flexed at right angles to the arm, and the latter then passed against the trunk in the axillary line, by placing the hand upon the region of the external condyle. It is surprising how little force is required to stop the pulse in the radial artery. The same result may be accomplished on one's own person, if the shoulder and arm are pressed against some unyielding surface, such as the wall of a room, and an effort made as if to lift or move it. The desired effect is also produced if the person is made to lie upon his arm. If, in addition, his head be placed upon the arm, the stoppage of circulation in the brachial artery will be complete. The position thus assumed by a patient or wounded person is called the brachio-lateral decubitus.

Successful Removal of an Ivory Exostosis from the Frontal Sinus.—Dr. Knapp has reported (*Archives of Ophthalmology* for December, 1880) an interesting case of an ivory exostosis situated in the frontal sinus, and its successful removal. A patient forty-eight years of age, healthy, and free from any constitutional taint, sought advice for a slight drooping of his right upper eyelid, which, however, caused him no inconvenience. The inner part of the lid was slightly prominent; conjunctiva and eyeball normal; mobility unimpeded; vision and ophthalmoscopic condition normal. The tumor was nearly as large as a flattened hazel-nut, slightly uneven, abruptly rising from the orbital wall and in unmovable connection with it. Its periphery had a hard bony feel, but the apex appeared somewhat yielding. In three months subsequent to the first examination the tumor had increased, and was no longer confined to the upper and inner corner of the orbit, but extended down a few millimetres below the ligamentum canthi internum. The operation consisted in making a curved incision from the middle of the superciliary arch along the lower margin of the brow, down to the insertion of the inner canthal ligament. Cutting in the centre of the incision at once down to the bony basis of the tumor, the stretched periosteum parted on being divided, and exhibited the yellowish-shining surface of the tumor; the uniform hardness of which along the whole line of incision, at once revealed the character of an ivory exostosis. The bony tumor had a slight constriction at its base and gave the impression of an exostosis united to the orbital wall by a broad basis of more or less cancellous tissue, such as is common in ivory exostosis of the orbit. After the osseous surroundings of the tumor had been removed, an examination with the finger revealed the fact that the upper half of the os planum and the whole anterior upper and inner half of the roof of the orbit were absent. The dilated frontal sinus and the opened nasal cavity were free from other growths. After the bleeding had ceased, the wound was united by silk sutures. When the patient came to he could move his eye freely in every direction, saw well with it, and had no diplopia. The tumor removed was completely free from periosteum, and consisted of compact bone throughout. The bulk of the tumor, about two-thirds, lay in the frontal and nasal cavities, and one-third projected into the orbit. No cicatrix was left, notwithstanding the fact that all modern antiseptic precautions were disregarded.

Charcot on Secondary Degenerations of Cerebral Origin.—From Charcot (*Cincinnati Lancet and Clinic*, November 13, 1880) we learn that in secondary degenerations of cerebral origin the nerve-fibres which compose the pyramidal fasciculi originate in the gray cortex of the Rolandic convolutions, and that from this point of departure they descend as far as the cord without forming other relations than those of contiguity with the different parts of the encephalon and the bulb which they traverse. In the case of descending degeneration, the nervous motor-cell should be considered as the structure which arrests, in the gray substance, the work of degeneration, and prevents its propagation to the nervous tubes of the anterior roots, which physiology unquestionably shows have mediate relations with the fibres of the pyramidal fasciculi. This hypothesis finds a support in certain pathological facts appertaining to the history of descending degenerations. The following case is cited: A woman was attacked with left hemiplegia, subsequent to a focal hemorrhage in the right hemisphere. The members of the paralyzed side, which were seized very early with contraction, began to diminish in size two months after the attack. The muscular atrophy was uniformly spread in all portions of the paralyzed members, and was accompanied with a notable diminution of electrical contractility. This muscular atrophy progressed very rapidly, the patient died, and at the autopsy it was seen, in sections of the spinal cord, that, besides the sclerosed fasciculus, there existed in the anterior horn of the corresponding side an alteration, of which the most salient points were their atrophy and even the complete disappearance of a certain number of the motor cells. Similar facts have been observed by Hallopeau while in the service of Vulpian, also by Leyden and Pitres. From these facts, then, we learn that the terminal extremities of the pyramidal fibres are in relation, in some manner, with the nerve-cells of the anterior cornua. As a rule, when there exists a secondary degeneration of the lateral cord, the cells resist, by reason of their autonomy, the invasion of the morbid process, and protect, so to speak, the corresponding anterior roots. But, in certain exceptional cases, and probably less rarely than is commonly supposed, under the influence of certain inexplicable conditions, the cells are attacked also, become atrophied, and consecutively the corresponding roots submit to a degenerative alteration. The final result of this invasion of the centrifugal nerves is the atrophy and degeneration of the muscles to which the diseased roots are related. In the case of Pitres the descending degeneration of the pyramidal fasciculus presented no anomaly in its disposition in the neighborhood of the altered cornua. No sign of a direct extension of the lateral fasciculus into the corresponding anterior horn could be found. That observation supports the idea that the propagation is not made by the intermediation of the connective tissue, but by following the course of the nervous fibres, which, parting from the pyramidal fasciculus, gain the horns of the anterior gray substance.

Auscultatory Percussion.—Dr. T. A. McBride has devised an instrument for auscultatory percussion of the abdominal viscera and the contents of the thoracic cavity, and in the *Archives of Medicine*,

for December, 1880, the results of his experiments on the cadaver are given. The application, however, was made only to the mensuration of the anterior surfaces of the heart and liver. The instrument consists of two solid pieces of hard rubber, connected with a rubber hinge. The pectoral extremities of this solid stethoscope are three millimetres square, and can be placed in the intercostal spaces without touching the tips, and can be brought sufficiently near the sternum without being carried in contact with the cartilages or bones. In proving this method with the modification in the stethoscope, the *modus operandi* was as follows: In marking out the anterior surface of the heart, the pectoral extremities of the binaural wooden stethoscope were placed over the fourth and fifth intercostal spaces, close to the left of the sternum, and percussion was made from the periphery to the præcordia by the auscultator, with closed eyes, by means of the percussion hammer, or index and middle finger of the right hand, indifferently. As soon as a change in the pitch and intensity of the percussion note was observed, the pitch becoming higher and the intensity increased, the spot where this change occurred was marked, and a sharpened knitting-needle ten inches long was thrust in at that point. This was done in each intercostal space of the præcordia, to the right and left of the sternum, and in the right mammary line, at points which were supposed to correspond to the upper and lower borders of the liver, and also in the mid-sternal line at the point supposed to indicate the lower border of the liver. Dr. McBride believes that by this method of auscultatory percussion with this new instrument, the busy general practitioner will be able, by the exercise of some caution and patience, to mark out the heart and liver, and most probably the spleen and kidneys, with a remarkable degree of accuracy.

Muriate of Pilocarpine a Specific for Diphtheria.—Dr. Guttmann, of Constadt (*Berlin. klin. Woch.*, October 4, 1880), claims to have found in the alkaloid of jaborandi a new and reliable specific for diphtheria. Divested of its enthusiastic personal coloring, his report is certainly deserving the attention of the profession; and this especially at a time when the ravages of diphtheria continue to claim its victims in untold numbers. Of course the positive assurances of a single observer as to the efficacy of a drug in combating a disease, which in many instances appears to us indomitable in its virulence, are always to be received with extreme caution. Moreover, our faith in the vaunted power of specifics has received many a rude shock since the nature of certain maladies has come to be better known, and the physiological action of drugs is more perfectly understood. On the other hand, there can be no possible harm in giving a wide publicity to the results claimed to have been obtained by the would-be discovery of new specifics; for the experience of the profession at large will speedily lead to a proper appreciation of curative effects, and the final verdict will then be either the corroboration of what was claimed or a quick consignment of the whole matter to merited oblivion. Thus it was with the antiphthisical benzoate of sodium—we had almost said "boom." Countless patients have obstinately refused to illustrate, by an amelioration of their pulmonary symptoms, that the benzoate was, indeed, the long sought for specific in consumption. And so it may be with the muriate of pilocarpine in diphtheria. Meanwhile, whatever its ultimate fate, we may at present briefly indicate the plan of treatment with which Guttmann claims to have obtained such invariably excellent results for the past fifteen months. He administers the drug in conjunction with pepsine, since the latter may, as he says, have a solvent effect upon the diphtheritic membranes. In adults half a grain to one grain of the muriate of pilocarpine is exhibited in an eight ounce mixture. In addition to this ingredient, the solution also contains half a drachm of pepsine, and a few drops of muriatic acid. Adult patients are directed to take the medicine hourly in tablespoonful doses. As a necessary adjuvant toward a proper action of the remedy, the use of strong wine (half an ounce at a time, after each dose of the medicine) is insisted upon. Children are required to take proportionately less, both of the drug and the wine.

In no case did Guttmann observe unpleasant symptoms following the use of the alkaloid. Its sialogogue action was always promptly manifested. With the establishment of copious expectoration the febrile movement diminshed in intensity, and the local symptoms rapidly improved. The patients are said to have been cured in from one to four days. He observed recoveries under this regimen of patients who, under ordinary plans of treatment, must have been considered as hopeless cases.

So much for the author. It will be seen that he claims a great deal. But even if the experience of others should confirm only a tithe of the invariably good results which he so rapidly obtained, the muriate of pilocarpine must still be added to the list of drugs which may be potent for good in the treatment of diphtheria. In conclusion, it may be remarked that a new observer, Lax (*Allgemeine med. Cent. Zeitung*, No. 87, 1880), has already come to the front with the corroborative testimony of ten severe cases rapidly cured by Guttmann's method. In three additional cases of Lax large masses of diphtheritic membranes were discharged, partly by expectoration and partly by the nasal passages. Time and experience will soon show whether this novel method is destined to gain the firm footing of permanent usefulness.

Epidemic Orchitis.—Dr. Heller reports the epidemic occurrence of orchitis in a garrison where mumps was at the time a frequent disease. Twenty-nine cases were observed, and of this number twenty-six showed the characteristic symptoms of epidemic orchitis. In only eight cases mumps was ascertained to have preceded affection of the testicles, and in two cases both diseases were simultaneously developed. The course of the disease was different from gonorrhœal and traumatic orchitis. Marked constitutional disturbances were seen in ten cases. Ten cases were re-examined some months afterward, and five of these showed atrophy of the testicles. In one patient the organ remained tender for a long time, and four years after, the primary affection was found to be reduced to half its normal size, and was even then more sensitive to the touch than the healthy testicle. —*Berl. klin. Woch.*, September 20, 1880.

The first number of a new review, the *Archives d'Ophthalmologie*, has just appeared in Paris. It is said that Professor Ball and Dr. Luys contemplate publishing a journal of mental and nervous disease. It will be entitled *L'Encephale*.

Dr. Garrigues' Report on Ovarian Cyst.—In the report on an ovarian cyst, Record, January 1, p. 19, line 15, read *myxoid* instead of *mixed*.

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PROSPECTIVE MEDICAL LEGISLATION AT ALBANY.

THE medical profession in this state has already secured two of the most needed pieces of legislation: the establishment of a state board of health, and the regulation of the practice of medicine. It is not likely that anything of equal importance will come up during the present session of our legislature. Still there will be a number of questions introduced of more or less interest to medical men; and it may be well to direct attention to these now.

The State Board of Charities and the State Charities Aid Association, bodies whose action affects our hospitals and asylums, are expected to have some contention respecting their respective rights and official position. The Charities Aid Association, which has heretofore been dependent on and supplementary to the State Board, now aspires to an independent position, and would have the right of making its reports directly to the governor or legislature. This action is opposed by the older Board. Doubtless the sympathies of most will be with the Charities' Aid Association, since it has proved itself the more independent and vigorous body of the two. It is, however, unfortunate that there should be any antagonism, and, on general principles, it is certainly better to have but one body to supervise our state charities.

The report of the Senate Committee on Lunatic Asylums is to be made this winter, and the action taken upon it will be awaited with great interest.

As New York is one of the states in which pleuropneumonia largely exists, and one whose interests are greatly affected by that and other contagious diseases among cattle, some legislative action should be directed to the subject. The money lately appropriated for investigations of these diseases has disappeared without the securing any scientific results worthy of the name. It would be a wise and liberal measure for our state legislature to authorize a thorough investigation of diseases which so largely interest both science and live-stock owners.

It is like repeating an old story to ask for legal enactments regarding the sanitary inspection of our public schools and other institutions. Nevertheless, there is hardly any subject more worthy of legislation. The establishment of the "doctor in the school-room"—*i.e.*, of some system which would assure to children proper ventilation, freedom from danger of infections, and such provisions in the way of proper light, desks, and text-books, as would prevent the increase of myopia—would be a step forward in civilization.

With regard to medical education it is rumored that an effort is to be made to repeal the law that allows the establishment of medical colleges *ad libitum* in the present easy manner. Should this law be repealed special legislative enactment would be necessary before such colleges could be organized. This might furnish some slight check to the multiplication of institutions already too numerous in the state.

The extension of the medical night service to other cities may possibly take place. A bill for the establishment of such a service in Brooklyn has already been introduced.

The question of vivisection will undoubtedly be actively agitated by Mr. Bergh this winter. That eminent gentleman recently delivered an incendiary lecture on the subject, in which he urged his hearers to sign a petition praying for the abolition of the "hellish practice." We shall have occasion to refer to this matter again.

Attempts will be made by the Sanitary Reform Society to secure some special sanitary legislation, such as a law extending the supervision of city boards of health over plumbing, and a law suppressing the Hunter's Point nuisances.

It will be seen that there may be considerable in the action of our state legislation to attract the attention and interest of the medical profession.

A CAUSE FOR DIPHTHERIA.

Not long since the daily papers gave an account of a family in Montclair, N. J., that had suffered in a remarkable manner from diphtheria, a number of the children having sickened and died within a few days of each other. The affliction of such a visitation aroused the sympathy of the community, and the strange limitation of the disease excited the interest of the public. The latter interest was by no means abated when it was confidently stated that the house and surroundings were in a perfect sanitary condition. But that such a statement was far from correct is proven by the very interesting and instructive account by Dr. J. G. Pinkham, of Montclair, N. J., concerning the cause of the disease in Mr. Crump's

family. Naturally suspicious that there was some local cause for the malignancy of the disease, he was led to study the surroundings from a strictly sanitary point of view, and has been enabled to present some very suggestive and instructive facts. He has made out a very strong case in favor of decomposing matter as one of the causes of this dreaded disease. Seldom, indeed, do we find such straightforward testimony in favor of the point at issue. It would appear that every precaution was taken to keep the house itself in a cleanly and well-ventilated condition. The trouble was, however, on the outside, and the foul air from an adjoining manure pit was carried by the cold air supply-box directly into the bed-chamber occupied by those attacked with the disease. During the period of the greatest malignancy of the disease the wind was from the direction of the compost heap. Only such as slept in the room supplied by the vitiated air were attacked with the disease. These facts were ascertained by Dr. Pinkham in the face of positive assertions to the effect that the sanitary arrangements of the residence in question were above suspicion. How many other similar cases could be brought to light by equally careful examination of the houses which are well appointed and apparently healthy, but in which diphtheria is particularly malignant. It is to be hoped that the intelligent study of the cause of malignancy of the disease in the Crump family may encourage physicians having similar cases to search for like causes.

BERIBERI.

THE disease known as beriberi, or, in Japan, as kákké, has recently appeared in this country at San Francisco, and has been brought for almost the first time within the pale of civilization. This fact and the very interesting pathological characters of the affection make the monograph upon it, just published by Dr. Simmons,* a very timely one.

There have been some contributions to the literature of beriberi, especially by medical men of India, but none which can compare in exhaustiveness or thoroughly scientific treatment with the work just referred to. The various writers upon the disease have given very conflicting views regarding it. Dr. Simmons by no means reconciles all these discrepancies or clears up all obscurities in its pathology. But he has done much in this direction. The disease, however, seems to have somewhat different characters in different localities, and this makes it impossible for a study of it, as it occurs in one country, to answer perfectly for the affection in general.

It prevails in Japan, the East India Islands, South-east India, North-east Africa, and in Brazil. As defined by Dr. Simmons, it is a disease occurring during the summer months. Chronic as to form, but subject to varying degrees of severity, having for its characteristic symptoms anæsthesia of the skin, hyperæsthesia and paralysis of the muscles, anasarca, palpitation, cardiac and arterial murmurs (in the wet form), præcordial oppression, abdominal pulsation, and for its cause a miasmatic, specific soil-exhalation. It has two distinct forms, the wet and the dry, the latter being much the milder.

The investigations of the author referred to regarding the development and special cause of the disease led him to find close analogies between it and malaria. Heat, warmth, and moisture favor its appearance. It is endemic and epidemic in its character, and one attack predisposes to another. A peculiar feature is that it is more apt to attack the robust and healthy. In this it resembles not malaria, but anthrax. Malaria and beriberi often appear together. The utter uselessness of quinine in the latter disease, however, shows that the poisons are distinct.

Beriberi has a prodromal stage which is characterized by general malaise and various indefinite symptoms. This generally runs into the subacute stage. The first symptom here is anæsthesia of the skin over the anterior tibial region, the finger-tips, and around the mouth. This is followed by paralysis of the muscles under the anæsthetic regions, causing extension of the feet and a characteristic gait. Muscular tenderness, palpitation, cardiac and arterial murmurs develop. The disease now begins to show the characters of either the wet or dry form. In the former case œdema of the legs and arms, then a pretty general anasarca, appear. The feet and ankles, however, rarely swell up, and the serous cavities contain but comparatively little fluid. The temperature is normal, the pulse not increased in frequency, but in the wet form is full and compressible. The appetite is but little impaired, the bowels are sluggish, and the urine normal. In the dry form there is no œdema, and the symptoms are in every way milder. A pernicious character sometimes develops in the wet form of the disease, the symptoms then becoming greatly aggravated. Œdematous effusions clog the lungs, and fill up the pleura and pericardium, and death results. Malarial or typhoid fever may occur at the same time in the same patient.

The question of the true pathology of the disease has caused much discussion and has received careful study from Dr. Simmons. The view of most Indian writers is that the primary condition is one of anæmia. Dr. Hebersmith, in a report of the cases occurring at the Marine Hospital, San Francisco, asserts his belief that the primary changes are in the red blood globules which are more or less disintegrated and destroyed. Dr. Simmons gives no data regarding the condition of the blood. He is inclined

* BERIBERI or KÁKKÉ of JAPAN, by DUANE B. SIMMONS, M.D., Shanghai: Inspectorate-General of Customs, 1880.

to refer the pathogenesis of the various symptoms to an action of the specific poison on the vaso-motor and trophic centres. This causes the initiatory anæsthesia, then muscular degeneration and consequent myopathic paralysis. Examination of muscles revealed a degeneration in exact proportion to the extent of the paralysis. The œdema he explains by supposing a paralysis of the smaller blood-vessels, but he more especially attributes it to the dilated condition and muscular degeneration of the heart. The rapid development of these conditions imply that a disturbance in the cardiac nervous supply is a leading cause. Dr. Simmons makes out a stronger case against the anæmia theory than in favor of his own.

The morbid anatomy presents nothing which would not be expected from the symptoms. No positive characteristic changes in the nervous centres have been discovered.

About seventeen per cent. of the cases die and no drugs are known which have an especially marked effect in lessening this mortality. In the wet form cathartics, and even bleeding, are advised. Iron, quinine, and tonics are not useful.

An interesting experiment is now going on regarding the treatment of the disease at the Government Kappé Hospital at Tokio. The institution is divided into two equal parts; in one half, the patients are treated by the "foreign," and in the other by the Chinese system of medicine. The result so far is much to the discomfiture of the disciples of Hoang-ti.

RECENT VITAL STATISTICS OF NEW YORK CITY.

DURING the year 1880 there were in this city 27,536 births, 9,002 marriages, and 31,836 deaths. In 1879 there were 25,573 births, 8,446 marriages, and 28,342 deaths. It will thus be seen that the deaths largely exceed the births, and that our increase in population is due entirely to the influx from outside. The fact that over one-sixth of the deaths occurred in public institutions throws some light upon the cause of this excess in death-rate over birth-rate. A large number of persons just on the verge of pauperism, disease, or crime, drift into the city and speedily pass into the public charge. While there they, fortunately, can not propagate; they can only die.

The number of births to each marriage in 1880 was between two and three, and the per cent. of births to population was about 2.7. This is a much lower rate than should exist, or is generally found under good social conditions. In the English aristocracy, for instance, the birth-rate per family is over four. In all European countries, from which statistics are attainable, except France, the birth-rate is between three and four per cent. of the population. In France alone it is slightly less (2.6) than that of New York city. The proportion of deaths among children under one year of age is extremely large. According to Quatelet, we may expect one-quarter of the infants to die before the end of their first year. In this city, however, the per cent. is 29⅛, or nearly one-third. Nor, as we have asserted before, can this be attributed alone to the excessively hot weather, for the per cent. of these deaths upon births was slightly greater in 1879 than in the past year, the exact figures being .29⅝.

In the statistics given by Routh it is shown that about one-fifth of all deaths are among children under one year of age. In New York city, however, in the years 1879 and 1880 the proportion of these deaths was more than one-fourth.

The number of deaths from zymotic diseases was larger by two thousand in 1880 than in 1879. In this number the deaths from diphtheria are nearly doubled, being 1,459. This increase is offset, however, by a decrease of one-half in the deaths from scarlatina, the number being but 675 in 1880. There may be some significance in the fact that the increase in the mortality from croup kept pace with that from diphtheria.

Aside from sunstrokes, the greatest relative increase in mortality from any single disease was from diphtheria; but the greatest absolute increase, if we except consumption, was in diarrhœal diseases. Here the deaths in 1879 were 2,965, while in 1880 they were 3,960. Of these latter deaths, 3,487 occurred in children under five years of age. And here we see the effects of the hot weather and other causes of mortality that were so active last summer.

There were over 1,500 more deaths from consumption in 1880 than in 1879. The fact is a somewhat curious one, especially as there was no notable increase in deaths from other pulmonary diseases.

We have presented but a partial study of the vital statistics of the city. They have not yet been published in completeness or in official form. The figures, however, from which we have drawn our comments, are very suggestive. Some of them in a tabulated form will be found in another column.

HYDROPHOBIA FIVE YEARS AFTER INOCULATION.—M. Colin has related to the Academy of Medicine a remarkable instance of prolonged incubation of hydrophobia. The man died, after a sickness of two days, with all the symptoms of hydrophobia. Autopsy revealed no lesion whatever; but there were some small scars discovered on the wrist and chest. The man's history showed that he had been undoubtedly bitten by a mad dog five years before. It was said that he had never been bitten since then. How the latter fact could be positively ascertained, however, it is hard to tell. Supposing it true, the ideas suggested by some of M. Pasteur's recent experiments might be brought into use. He found that in chronic cases of fowl cholera the poison remained in some of the organs of the body. It did not enter the general system until by some accident it was led to a rapid development and escape into the blood. Death then followed at once.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Annual Meeting, January 6, 1881.

FORDYCE BARKER, M.D., LL.D., PRESIDENT, IN THE CHAIR.

Drs. Howard, M. D. Mann, Jacob S. Mosher, and J. N. Merrill were made non-resident Fellows.

The Report of the Trustees showed a balance in favor of the Academy of $6,584.

The President announced the reception of $500 from Mrs. John Jacob Astor, as a special donation to the Library fund. Resolutions tendering thanks to the donor, were offered by Dr. Wright, seconded by Dr. Weir, and unanimously adopted by the Academy.

DR. SAMUEL SEXTON then read a paper

ON FALSE HEARING AND AUTOPHONY IN SINGERS, SPEAKERS, AND PERFORMERS ON CERTAIN MUSICAL INSTRUMENTS (see p. 85).

The paper being before the Academy,

DR. D. B. ST. JOHN ROOSA said that he was embarrassed in attempting to speak upon this interesting subject, from the fact that he had had many friendly tilts with the distinguished author of the paper upon some of the points involved, and again because, from lack of time, the cases had not been read; therefore, he was unable to decide whether or not they sustained Dr. Sexton's theories. His remarks, therefore, were general with reference to the important subject. As to nomenclature, he thought "autophony" was an unfortunate name. He thought it did not fully express the symptoms of false hearing, double hearing, and muffled hearing, delineated more or less in Dr. Sexton's cases. However, that was a question for future decision by the profession.

Double hearing and false hearing, as many knew, had been very fully discussed by Sir Everard Home in 1800, who held the view now entertained by Dr. Sexton; namely, that the phenomena were chiefly due to morbid interference with the membrana tympani and the muscles attached to it. Mr. Home did not go so far as Dr. Sexton had in attaching so much importance to the ossicles; but even Mr. Home with a sweep brushed aside the semicircular canals, the vestibule and the cochlea, as having nothing to do with the production of the phenomena of false hearing and double hearing. Before attempting to define double hearing, Dr. Roosa remarked that he had been misunderstood if anything he had written had been interpreted as saying that the cause of this phenomena is entirely in the labyrinth; for he believed quite the contrary. He believed with Dr. Sexton that colds in the head, causing stuffing of the tympanic cavity, closure of the Eustachian tube, suppuration of the middle ear, etc., were the exciting causes of double hearing; but Dr. Sexton and he differed in opinion in this, Dr. Roosa believing that the phenomena are produced by pressure upon central organs rather than by the immediate effect produced by the inflammatory process upon the ossicles and the drum-head. For example: a physician who has disease of the middle-ear, himself an aurist, suddenly observed that he had double hearing in one ear. He had been in the habit of testing himself with the tuning-fork. As is well known, if a person has obstructed middle ear—any condition which increases its resonance—he will hear the tuning-fork better when it is placed against the mastoid process. On the other hand, the tuning-fork is heard worst upon the affected side when the acoustic nerve is affected, either by pressure or original disease.

As soon as this physician had double hearing he heard the tuning-fork worst upon his affected side, quite the reverse of his former condition. Dr. Roosa regarded the case as one favoring his side of the question, as did the gentleman who reported it in the *Archives of Otology*.

In Dr. Bumstead's last edition of his work on syphilis it is stated that if a man hears his own voice he *therefore* has no affection of the acoustic nerve. Dr. Roosa thought he could demonstrate that such is at least a doubtful statement. Take for illustration an example in ophthalmology. If a man is so blind that he cannot go about, yet has sufficient vision left to enable him to distinguish daylight from darkness, shall it be said that he has no affection of the optic nerve? Again, many persons will say that they can count fingers, but it is found that it is the ability to count the fingers upon *their own hand* of which they speak, but they cannot count fingers upon another person's hand. Dr. Roosa thought that some, in the same way, could deceive themselves concerning their ability to hear their own voice, and therefore he had felt that the argument based upon the belief that the lesion in such cases is not in the labyrinth is not completely trustworthy.

Dr. Roosa then cited, as an example of double hearing, a case in which a musician heard C sharp when C natural was sounded, and as his recovery went on the true and the false sound gradually approximated each other and finally became blended. That man had suppuration of the middle ear, but Dr. Roosa believed that this process in the middle ear produced pressure upon the rods of Corti and the basilar membrane, and thus gave rise to the phenomenon mentioned. He did not believe that this beautiful part of the human organism was unaffected in all these diseases. If so, it might be reasonably supposed that there is a part of the human organism which is superfluous.

DR. H. KNAPP thought it best to classify the various forms of false hearing known under the name of pseudocusis, or, more commonly, paracusis, *i.e.*, perverse hearing, according to the fundamental qualities of sound, which are: *intensity*, dependent on the amplitude of the vibrations; *pitch*, dependent on the number of vibrations in the second; and *clang-tint*, or *sound-color*, dependent on the form of the sound-waves. Abnormities of the latter had been mentioned by Dr. Sexton, but Dr. Knapp was unable to find them clearly defined, nor did he remember any well-marked example of this kind from his own experience.

The phenomena of increased or diminished intensity of sounds were caused by abnormal conditions in the sound-conducting apparatus. Autophony in particular was commonly referred to a closure of the Eustachian tube, as had frequently been proved by the demonstration of plugs of false membranes obstructing the tubes or their orifices. It is very common in acute catarrhal otitis, yet it may exist also with the opposite condition, namely, a permanent patency of the tube, as is found in atrophy of the mucous membrane in the so-called dry catarrh, and Dr. Poorten has produced the phenomena even experimentally by introducing a narrow catheter into

the Eustachian tube beyond the isthmus, as far as the osseous part. Some very interesting instances of reinforcement of high sounds from increased tension of the drum-head, and reinforcement of low sounds from paralysis of the stapedius muscle—concomitant with facial paralysis—have recently been reported (Lucæ Moos).

The anomalous perceptions of the pitch of sound cannot be explained by alterations in the conducting apparatus alone. The remarkable phenomenon of double hearing, called *paracusis duplicata* by Sauvages, or *diplacusis* by J. P. Frank—which he expressly mentioned, since the introduction of these words had erroneously been ascribed to him—may be observed in one ear alone, or during the simultaneous function of both ears, and in analogy with the same anomalies of vision he had called them *diplacusis monauralis* and *diplacusis binauralis*. The latter, the commoner and more marked variety, may be imagined as caused by a false tuning of one cochlea or part of one cochlea, so that the vibrating fibres of the membrana basilaris—which may be likened to a stringed instrument, for instance, the piano—are no longer in unison with the corresponding fibres of the other ear. Closure of one, either the good or the bad ear, makes the diplacusis disappear, just as by closure of one eye the binocular diplopia disappears. We may suppose that by an inflammatory process a fibre of one membrana basilaris is either tightened or relaxed, and instead of vibrating, for instance, 200 times in the second it now vibrates 180 times, carrying, however, to the brain the impression of 200 vibrations, as before. If the fibre normally corresponding to 180 vibrations is unchanged, the tone of 180 vibrations will sympathetically excite two fibres, one of which will convey to the brain the impression of the tone of 180 vibrations, the other that of the tone of 200 vibrations. This would be an instance of monaural diplacusis. It will persist when both ears are kept open, or when the healthy ear only is closed, but will disappear when the diseased ear is closed.

Confused hearing, muffled hearing, and the like, may be explained by defective isolation and damping of the fibres of the basilar membrane, when, for instance, the cement between the fibres is softened by imbibition.

All these phenomena relating to anomalies of pitch cannot be explained by abnormal conditions in the middle ear. He agreed with the speaker that they are noticed in cases of otitis media, but must assume that then the inflammation extends to the cochlea, which, in consideration of the vascular communications between the middle and inner ears, is certainly not impossible. These phenomena are, however, quite rare. If they originated in the middle ear we should notice them every day, for the diseases which they complicate are of frequent occurrence.

He agreed further with Dr. Sexton that the treatment should be directed toward the middle-ear trouble, and that the prognosis is favorable, for not only in all the acute cases, but also in the exacerbations of chronic inflammations of the middle ear that were accompanied by diplacusis, had he seen this symptom disappear. In one case the diplacusis lasted nine months, the longest persistence of this symptom that he had observed.

Dr. O. D. Pomeroy believed that, in general terms, the phenomena described by Dr. Sexton depended upon affections of the middle ear. There was no question but that the cochlea was functionally disturbed, and it seemed tolerably clear that middle-ear trouble or disease about the Eustachian tube, etc., was the primary cause. Most of the cases were accompanied by acute inflammation of the tympanic cavity, and recovery took place when the acute disease was cured. Dr. Pomeroy thought that our knowledge of the subject was almost as limited as the subject itself was vast. There was nothing more complicated than the labyrinth of the ear, and he believed that there was very little exact knowledge regarding its pathology. He believed most positively that there was defective tuning of Corti's fibres, and he equally believed that this condition was brought about in some manner connected with increased or diminished density of the fluids of the labyrinth. Dr. Roosa had stated, what every one knew to be true, namely, that we distinguish between deafness due to middle-ear disease and deafness due to affection of the nerve, by placing a tuning-fork upon the teeth; when, if the deafness is chiefly nervous, it will be heard best in the *good* ear; while, if the deafness is due to middle-ear disease, it will be heard best in the affected ear. But lately it has come to be known that there are numerous exceptions to this rule. Sometimes when the drum-head is very much sunken the patient will not hear the tuning-fork as well in the bad as in the good ear. Again, when any foreign substance, as cerumen, or more likely pus, etc., rested upon the oval, or even the round window, and produced pressure, it would cause the patient to hear the tuning-fork badly in that ear, but after cleansing the ear, and inflating in other cases by Politzer's operation, the hearing would be improved, and then very likely the tuning-fork would be heard in the bad ear according to the rule. Dr. Pomeroy believed that otologists had not yet reached a complete understanding of the subject under discussion.

Dr. Holcombe remarked that, in his own case, whenever he had been able to remove from the middle ear the mucus which sometimes collected there, the disagreeable sensation of double hearing had at once disappeared. Whether that fluid pressed upon the foramen ovale or the foramen rotundum he could not say, but his opinion was that the phenomena were due to pressure. At the same time the pressure was not necessarily the result of inflammatory processes; for the tension might be sufficient to press the drum-head toward those windows and produce double hearing. In a conversation, Purkinje, of Prague, had explained to him why the tuning-fork can be heard best on the occiput, and it was because the poles of the cochlea, if continued, will intersect each other at that point.

Dr. Sexton, in closing the discussion, remarked that it was difficult to establish the use of the organ of Corti, or why savages and many animals possess it. Does it separate compound tones? He rather thought that the mental act necessary to their perception and comprehension does not seem to require a cognizance of the separate elements of tones, as it probably receives them as a whole. The combinations, he believed, are made before transmission to the nerve of hearing takes place. He had reported several cases of sudden deafness from syphilis, where it was said by some that the cochlea was affected. That he could not believe as long as such patients could hear their own voice in singing, for even if they retained from habit the ability to sing correctly, the perceptive faculties could not appreciate such tones were they dependent upon the organ of Corti for a musical censorship. These theories regarding the organ of Corti had no better foundation than those attributed to the semicircular canals, where the equi-

librium of the body is said to be maintained. Respecting the latter—the semicircular canals—he had these structures from one ear in his possession, taken from a patient who yet lived and walked as well as any one.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, December 14, 1880.

DR. H. B. SANDS, PRESIDENT, IN THE CHAIR.

LIGATION OF BOTH FEMORAL ARTERIES WITH THE ANTISEPTIC CATGUT LIGATURE.

DR. BRIDDON presented a patient in whom he had ligated both femoral arteries for the cure of popliteal aneurisms (see p. 93).

THE ANTISEPTIC CATGUT LIGATURE.

DR. LEWIS A. STIMSON then read a paper on the above subject, of which the following is a brief abstract: "The general impression is now favorable to the use of the catgut ligature, and it has seemed desirable to ascertain, if possible, whether this general impression is supported by facts." His examination had been made in two directions, the clinical and the pathological. The first was intended to show the relative success of the catgut as compared with the silk ligature, and the other, to show its local effect upon the vessel to which it had been applied, and thus, perhaps, to indicate the cause of such difference as might be found to exist.

With reference to the first point, statistics were adduced concerning the results of the application of a *silk* ligature to different vessels in their continuity.

To obtain similar statistics of the use of the *catgut* ligature, he had obtained the integral statistics of certain surgeons, and the list was of cases furnished, with a single exception, by seven members of the society, and included 29, divided as follows: Common iliac, 1; external iliac, 3; femoral, 9; common carotid, 5; subclavian, in three parts, 3; brachial, 1, and lingual, 7. All the operations except those on the lingual and brachial arteries were performed for the relief of aneurism, and all the patients, except one, survived. In no case did secondary hemorrhage occur, and in only one case gangrene, which was dry in character.

The difference between the results obtained by the use of the catgut ligature, and those which followed the use of the silk ligature, was so extreme against the latter that it was thought unnecessary to tabulate them in detail. If the statistics given of the results of the use of catgut were sufficiently numerous to eliminate the chance of error arising from the possibility that a short series of cases might be exceptionally successful, it would scarcely be worth while to look for further proof of the superiority of this ligature; but, in view of that possibility, and also of some interesting cognate points, he referred to the anatomico-pathological details furnished by specimens from the human subject and by experiment upon animals. Those, he thought, showed that the probability of secondary hemorrhage was less because occlusion of the vessel was effected, not without its complete division, as had been claimed, but by a purely productive process of tissue-formation provoked by the minimum of irritation and unaccompanied by ulceration. Furthermore, as the presence of a blood-clot was not necessary to the safety of the patient under these circumstances, the proximity of a collateral branch did not add to the risk. The specimens bearing upon that point were *ten* in number.

Dr. Stimson's recapitulation upon these was as follows: "Here are three arteries completely divided by a catgut ligature without suppuration. Two of them present an appearance which indicates that if the patient had survived for a longer time they would have resembled the fourth, in which the continuity of the artery is apparently preserved. Therefore, the fact that arteries examined several months after ligation have preserved this apparent continuity is not a proof that they have not been divided. More than that, in the absence of microscopical proof to the contrary, these three specimens must be taken to show that the catgut ligature does, as a rule, divide the artery completely. This view is in accord with the one expressed by Mr. Bryant in a paper contained in the eleventh volume of the Clinical Society's Transactions, 1878, and supported by four specimens, of which he gives drawings.

"My own examination, which was made in ignorance of his paper, has only confirmed his opinion, and brought out some additional facts showing an intermediate stage in the process which explains the error to which specimens examined at a later period after the operation have given rise."

With reference to the ligature itself, and its mode of application, Dr. Stimson regarded it as a very important question whether or not the ligature should be tied with force sufficient to divide the inner and middle coats of the artery. He did not accept Mr. Barwell's view that the coats of the artery should not be divided; that the knot should be drawn with just force enough only to arrest pulsation beyond it, upon the theory that pressure of the ligature was sufficient to provoke an adhesive process that would completely unite the opposed surfaces of the inner wall of the artery, and that as the integrity of the coats was not destroyed the chance of the occurrence of secondary hemorrhage was diminished. For pressure did not always produce adhesion; nor was the integrity of the coats of an artery maintained under a ligature whenever the ligature was tough enough to maintain its pressure for a day or two. Finally, Dr. Stimson believed that we should still prefer the single round cord, applied with sufficient force to divide the middle and inner coats, because it was more certain to accomplish the object of the operation, and because the danger of secondary hemorrhage does not appear to be sufficiently great to make it worth while to incur the risk of failure to accomplish the principal object of the operation that is involved in the proposed modification.

DR. ERSKINE MASON referred to a case, additional to Pemberton's, quoted by Dr. Stimson, in which Dr. Stephen Smith ligated the carotid artery with an antiseptic catgut ligature that was cast off as is an ordinary silk ligature.

DR. R. F. WEIR referred to one point in which his experience did not accord with Dr. Stimson's, and it was with reference to the duration or solubility of the catgut ligature. In the earlier times of antiseptic treatment, his practice was to sew up wounds with catgut suture, and frequently had seen stumps gape from absorption of the suture within two or three days. Since then he had used the carbolized silk, though Lister, who suggested it, was yet experimenting to obtain gut that will endure longer in a wound.

Again, with reference to the absence of phlebitis after ligation of an artery, he had had a case in which he ligated the popliteal artery for hemorrhage

from a gunshot wound—ligaturing the artery above and below—and the vein let alone. Phlebitis ensued, and extended down the leg to some distance. The wound was dressed antiseptically.

Dr. Briddon had noticed a fact which he had not seen mentioned in any surgical work, namely, "if a large vein is exposed in a wound to atmospheric air for a short period of time, thrombus is formed in that vessel." He had noticed it repeatedly, without injury being done to the coats of the vein other than that attending the exposure.

Dr. Lange remarked that in operations on the neck and in the axilla, where large veins were exposed, sometimes for several inches in length, he had not observed the formation of thrombi, nor had he seen such an occurrence recorded.

Dr. Weir asked whether it was not conceded that the occlusion of arteries with acupressure needles was not due to adhesion and obliteration of the lumen of the vessel without division of the internal and middle coats.

Dr. Stimson replied that, so far as it had been tried, it was very seldom adhesion occurred.

When applied immediately after division of the vessel, as for example after amputation, adhesion did occur.

Dr. J. C. Hutchison remarked that he had experimented with acupressure upon sheep, and succeeded in occluding veins simply by placing their walls in contact without division. He had not, however, applied the needle in the continuity of an artery, and had seen it so applied only in one instance, and that was a case in which Dr. Little applied the needle to the femoral artery for the cure of a popliteal aneurism. The needle was kept in position *four* days, and when removed pulsation at once redeveloped in the tumor. After amputations he had applied the needle in many cases, and the vessel had uniformly been occluded. In several cases he had applied the needle in the continuity of an artery that had been divided, and with entirely satisfactory results. For example, in obstinate hemorrhage occuring after amputation of the breast, where the cut end of the bleeding artery could not be secured, pressure made at some distance from the point at which the hemorrhage occurred, arrested the flow of blood and the artery was occluded.

Dr. R. F. Weir called attention to the superior quality of the catgut ligature obtained in New York, when compared with that which is imported, especially when made, as suggested by Dr. Briddon, from E violin strings (No. 70) for ligatures, to be obtained at Sonntag's, 9 Park Place, or for smaller arteries or for sutures, from the Swiss catgut imported by Keller & Co., 64 Nassau street.

The President remarked that the slight mortality in the cases mentioned by Dr. Stimson was remarkably encouraging; yet, as the author of the paper had observed, the number of cases was too small to guard against possible fallacy. It would be interesting to ascertain, if possible, the causes of success. Some of the members, doubtless, would recall the statement made by the late Mr. Syme that he had tied the femoral artery thirty-three times in succession without accident. In these cases the freedom from accident was perhaps due to his superior skill in operating—disturbing the tissues no more than was absolutely necessary for the application of the ligature. The President thought it possible that one reason for the small rate of mortality in the cases referred to by Dr. Stimson might be found in the superiority of the catgut employed as ligatures.

In three cases in which Dr. Sands had applied the catgut ligature he had used the E violin string, as recommended by Dr. Briddon, and regarded this as superior to any other catgut ligature he had ever seen. It seemed to him that statistics were hardly necessary to prove that when properly selected and applied, catgut is superior to silk as a ligature, because, as Dr. Stimson had stated, a silk ligature always sets up an ulcerative process which must be attended by a risk of secondary hemorrhage that can never be exactly estimated, whereas the catgut ligature does not interfere with immediate and complete closure of the wound.

A case in which Dr. Sands ligated the carotid artery two weeks ago showed the superiority of the catgut ligature over silk, in the fact that there was no ulceration produced, and the healing process was very rapid and complete. The case was one of orbital aneurism. The operation was absolutely uncomplicated. Neither spray nor drainage-tube was used. The wound was washed with carbolized solutions and closed with silver-wire sutures. Primary union, both deep and superficial, took place, and not a drop of pus was observed. Two weeks after the operation he was able to distinguish the occluded artery as a firm, fibrous cord two inches long. Such a result as that would not have been possible after using a silk ligature, inasmuch as two weeks would have elapsed before the separation of the silk ligature, and in the meantime more or less ulceration and suppuration would have taken place. Dr. Sands thought that the greatest future success would probably be obtained by procuring a suitable animal substance for use as a ligature, one that would neither act as a foreign body, nor dissolve prematurely in the secretions of the wound.

Dr. Briddon had ligated the femoral artery fifteen times successfully. In ten of the operations he used the silk ligature, and it gave him a great deal of anxiety and trouble. In five of the operations he employed the antiseptic catgut ligature, and it had given him no trouble whatever. In only one of the five cases was more than a single dressing employed, which was done as a precaution rather than a necessity.

CARCINOMA OF THE FLOOR OF THE MOUTH.

Dr. Lange presented a patient and narrated the history of his case as follows: A German over sixty years of age, came with a tumor as large as a small hen's egg in the floor of his mouth, which Dr. Lange regarded as carcinomatous in character, originating in the sublingual gland, and proposed to operate for its removal. He first ligated both lingual arteries and then divided the lip and lower jaw in the middle according to the method recommended by Sédillot. The patient took chloroform badly; indeed after a few inspirations syncope occurred, the pulse disappeared, the pupils were widely dilated and it took half an hour to revive him, when ether was employed and the operation completed. A number of infiltrated glands were encountered in the submaxillary region, and he, therefore, prolonged his incision along the lower jaw to the border of the sterno-cleido-mastoid muscle. He then separated the soft parts from the inner surface of the lower jaw, and removed the diseased tissues as far as possible—glands and connective tissue, including a portion of the deeper tissue of the tongue. He united the bone according to Martini's method, by boring holes and joining the pieces over an ivory nail. He obtained neither first intention in the soft parts nor solid union of the bone.

There was considerable sloughing of the soft parts, probably due to debility of the patient's circulation, and on the eleventh day secondary hemorrhage occurred. Dr. Lange thought that it came from the lingual artery. Five days later he found his patient almost dead from loss of blood, which came suddenly and in a very large stream, and probably two quarts escaped from the bleeding vessel. He regarded it as a case of secondary hemorrhage due to erosion of the common carotid in connection with the extensive sloughing of the soft parts, and at once proceeded to tie the artery without administering ether. The vessel was situated very deep, due to the thickness of the neck and the pronounced curvature of the spine behind the sterno-cleido-mastoid muscle, and while securing it Dr. Lange injured the jugular vein, and for two inspirations he heard the disagreeable sound accompanying the introduction of air into veins. The opening in the vessel was closed with a ligature applied laterally. The patient gradually rallied, and was, at the time he was presented, in very fair general condition. The tongue was slightly adherent on the under side in front, and its movements were somewhat restricted. There was some necrosis of the lower jaw, and partial pseudo-arthrosis, and the lower jaw did not articulate correctly with the upper jaw, because of its diminution in size. While ligating the left lingual artery, he injured the hypoglossal nerve, and perhaps the difficulty in moving the tongue was due partially to that fact. The pulse had not returned in the temporal and maxillary arteries. There was no impairment of vision or intelligence, and there was no headache. There also was some enlargement of the glands at the angle of the jaw on the right side.

CYSTO-ADENOMA OF THE SUBLINGUAL GLAND.

Dr. Lange also presented a non-malignant tumor (cysto-adenoma) of the sublingual gland which he removed two years ago.

AIR IN THE VEINS.

Dr. Hutchison referred to a case in which air entered the median basilic vein in considerable quantity, and without bad effect either at the time or subsequently. That fact raised the question as to whether or not the danger from the introduction of air into veins had not been magnified.

The President referred to a case in which he lost a patient upon whom he was performing tracheotomy in Bellevue Hospital. He opened the left inferior thyroid vein in the midst of a cancerous mass overlying the trachea; the patient took two inspirations and then suddenly died. He supposed that the effect produced depended upon the amount of air inspired and the rapidity with which it was introduced.

LAPAROTOMY FOR THE RELIEF OF HERNIA.

Dr. Erskine Mason narrated a case as follows: On the 14th of November, 1880, he was called to see a woman sixty years old, with the following history: She had had double hernia for thirty years, had worn a truss most of the time, and at times had considerable difficulty in reducing the hernial tumors. On the 11th of November both masses came down behind the truss. They were about the size of a walnut and were readily reduced by the patient, who noticed nothing wrong in the operation which she had previously performed many times. In the afternoon of the same day she was seized with pain in the abdomen and some vomiting, which continued through the afternoon and evening, and, although it had abated somewhat, she sent on the next morning for a physician who saw her between eight and nine in the evening, when she complained of pain, constipation, and vomiting. A cathartic pill, morphia and atropia, and an enema were ordered. On the morning of the 13th there was less pain than on the previous evening, but vomiting occasionally occurred. During the day she took three cathartic pills, with occasional doses of morphine, and the enema was repeated. On the morning of the 14th her symptoms were unchanged, except the existence of tympanitis, and Dr. Mason saw her at 3 P.M., when he found her pulse 70, tongue moist, abdomen somewhat tympanitic, pressure over the iliac region elicited pain, more marked upon the right than upon the left side, and she was constantly regurgitating a greenish fluid. He was unable to detect the presence of any hernial tumor, and thought she was suffering from reduction of a hernia *en masse;* but which one he was unable to determine. Dr. Mason proposed laparotomy, which was readily accepted by the patient and her friends, and the operation was performed at five o'clock in the afternoon, assisted by Dr. Briddon.

An incision was made in the median line only sufficiently large to admit three fingers, which were passed down upon the left side, and nothing was detected. On the right side, however, just above Poupart's ligament, he detected a small mass which seemed to be held to the anterior wall of the abdomen by slight adhesions, and by very slight pressure the knuckle of intestine slipped as it were from under a band. The intestines were only moderately congested. He passed his fingers into the femoral sac from within and found that it was empty. The operation was done with full antiseptic precautions. The patient had a comfortable night, and on the following morning had scarcely any pain. Her temperature was 98½° F., pulse, 93, but the tympanites remained the same as before the operation. The urine was quite copious and was drawn several times. No movement from the bowels. Dr. Mason then noticed a slight twitching of one side of the patient's face, and of the arm of the same side, and slight vomiting still continued. In the evening the twitchings were more marked than in the morning, and affected the whole side. Vomiting ceased about ten o'clock on the night of the 15th. The doctor then drew off the urine, and found that its specific gravity was 1014, and it was also albuminous. The twitchings continued until the morning of the 16th, when the patient became comatose and died at 1.30 P.M. A few hours before death the bladder contained four ounces of dark-colored urine, which was albuminous. No autopsy could be obtained.

SCIATICA—NERVE-STRETCHING.

Dr. Lange narrated a case of sciatica, which had been treated in a great variety of ways without benefit, and the patient came to him for an opinion with reference to the operation of nerve-stretching. For purposes of diagnosis he resorted to forced flexion of the thigh upon the trunk, while the leg was fully extended upon the thigh and the foot flexed upon the leg. The manipulation gave the patient excruciating pain, which was described "as if a bullet had been shot from the sole of the foot through the limb to the hip." It was decided to resort to the operation of nerve-stretching, but the pain in the limb began to subside soon after the forced movement, and the patient was soon well. Dr. Lange thought that a kind of nerve-stretching had been

done by the manipulation, and suggested that the method might be adopted in other cases.

Dr. Weir referred to the statements of Mr. Hood, of London, who said that forcible measures of a similar kind would occasionally relieve pain.

Dr. Lange also exhibited an instrument devised for holding the foot in proper position while plaster or other dressing was being applied after tenotomy and *rétrécissement forcé*.

The society then adjourned.

Correspondence.

ANIMAL LIGATURES—A HISTORICAL NOTE.

To the Editor of The Medical Record.

Sir—In looking up another matter, in old journals, I came across the following item from the *Southern Journal of Medicine and Surgery* (September, 1847), which was to me, unacquainted with the literature of the subject, a revelation.

If you think it of any historical value, please give it circulation.

"Dr. W. S. Wragge, in a paper on the use of animal ligatures, states that he has been in the habit of using these ligatures for upward of ten years, and for several years he has used none but these. In the course of this period he has tied the arteries of the fingers, hand, forearm, arm, leg, and thigh, and he has never seen any symptom result from which he could infer that the knot had not been removed by absorption. From the facts he has observed he deduces the following inferences: 1st, that the deer-sinew ligature, if properly applied, will effectually arrest hemorrhage from vessels even of large size; 2d, that they produce less inflammation of the living tissues with which they are placed in contact, during the time they remain as foreign bodies in these tissues, than other substances; 3d, that they are susceptible of being absorbed and carried away by the action of the living parts in the midst of which they are placed."

John L. Neilson.

Brooklyn Naval Hospital,
January 5, 1881.

OVARIOTOMY WITHOUT ANTISEPTIC PRECAUTIONS.

To the Editor of The Medical Record.

Sir—In the October number of the *Am. Jour. of the Med. Sciences* Prof. Wm. Goodell furnishes an article on "Four Cases of Ovarian Tumor and one of Fibro-Cystic Tumor of the Womb operated on under the Spray."

It is evident that the author is thoroughly committed to the antiseptic method of treating wounds—so much so that failure of success is attributed more to the want of minute enforcement of "Listerism" than to any other one cause, or, perhaps (I infer), from all other causes combined. Were it not that such an eminent authority advocated such unreserved opinions, I should feel like leaving the questions of antiseptic or non-antiseptic treatment of wounds to the more certain judges, time and experience. But since facts, obtained from actual practice, are the best answers, I will briefly mention my experience for the past twelve years. I was also enthusiastic in my advocacy of the antiseptic methods of treatment, of all kinds of wounds, as proposed by Mr. Lister. I then believed that much of my success, or I should, perhaps, say the satisfactory issue of my cases, was due to the triumphant combat between atoms of carbolic acid and destructive (?) organic germs. I tried the method thoroughly because I believed in it. Now it is germane to ask why are my views quite opposite from those previously entertained? Because, in my experience, what I consider excellent results are not obtained under the antiseptic management. I have operated for removal of ovarian tumors of different textural arrangement twenty-six times, and of that number twenty have recovered. In six cases, in my early experience, when I used minute atomization faithfully, the mortality was three cases, or fifty per cent. After I discarded the "anti-germ" treatment the mortality, as is shown by the remaining twenty cases, became notably less.

Within the year just closing I have made five operations, one of which was for removal of a large fibro-cyst, and of the remaining four, two were multicystic, with extensive adhesions, and two large simple cysts. Two of the cases were operated upon before a class of two hundred students (many of whom were in daily attendance upon dissections). Recovery without a single complication. In the case operated upon six weeks since one of the attendants, upon being directed to obtain a blanket, unintentionally went to a part of the hospital where unwashed clothing was kept, and brought a blanket—which had been covered over a dead body—that was used as a covering in conveying the patient from the amphitheatre to the room for subsequent treatment. The other cases were operated upon in private, but in each instance physicians, numbering in one case fifteen, were not interrogated as to the kind of cases under treatment in their respective practices. No peritonitis—I mean general—occurred. It is understood that there must always be some inflammation at the part of the peritoneum compromised by the warmth and sensitive apparatus. In none of the late cases was any other local treatment employed than dry dressing and pressure, which was permitted to remain unremoved from four to eight days. The pedicle usually ulcerated and sloughed, the clamp in from fourteen to seventeen days. In three of the cases organic material (ligatures) was left within the abdomen. For a period of eight years I have both practiced and taught what I believe—the unsurpassed principles of dry dressings and properly administered pressure. In fact, I feel satisfied that the longer a wound can remain undisturbed, without the products of inflammation reacting upon the parts, the better will it be for the reparative process. Where the wound is from choice or necessity an open one, drainage outward into a *not* to be *frequently removed* dressing results, in the direction of speedy repair, will be obtained which cannot be imitated by the advocates of "frequent dressings" and "Listerism." Now, if my experience is correct, are not the exceptions too many to warrant Prof. Goodell, and those who believe as he does, to insist upon the universality of his rule? Yours truly,

W. F. Peck.

Davenport, Iowa.

LIME-WATER IN DIPHTHERIA.

To the Editor of The Medical Record.

Sir—I learn with some surprise from Dr. Jacobi's communication in to-day's Record, that he still fails to agree with me on the lime-water question. If I "deplore" this less than its intriusic importance

demands, it is because I yet have good reason to believe that the ink I have shed in the advocacy and defence of a valuable therapeutical measure has not been wasted.

With regard to the question between us of relative originality, I cheerfully accept Dr. Jacobi's claim to have "advised" the profession in 1875 "what" (drugs) "to use, and how often"—those drugs being the very ones which most of us had long been using, and the principle of frequency in their administration being then far from new, either to medical practice or literature. In 1876 I stated before the New York Academy of Medicine with what combinations of these common and standard remedies, with what modes of application, and with what principles of management of cases I had obtained excellent results, which results from which method have since been repeated and attested by very many other physicians. In the RECORD of February 23, 1878, I stated in reply to the same claim which Dr. Jacobi now reiterates, the fact well known to many physicians at the Demilt Dispensary and others, that I had employed and advocated the use of essentially the same method of treatment which I subsequently published for two years before Dr. Jacobi's paper appeared, and absolute proof that I had employed that exact method in all its details several months before that date.

If the profession, who certainly "have eyes," have failed to accept Dr. Jacobi's advice on the treatment of diphtheria at his own estimate of its relative importance and value, this may naturally account for the "wounded self-esteem" to which he so pathetically alludes; but it is hardly just that he should visit its results upon me, who have on all suitable occasions mentioned his paper with cheerful commendation.

If there has appeared in the little discussion which is now, I fondly trust, concluded, anything like a "quarrel" or disposition thereto, I can safely appeal to the readers of the RECORD that it has not been on my side. Dr. Jacobi now expresses his preference for the avocations of peace, which is, under the circumstances, both natural and commendable. Rejoicing to learn of this new point of agreement between us, I remain yours very truly,

C. E. BILLINGTON, M.D.

NEW YORK, January 15, 1881.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from January 9, 1881, to January 15, 1881.

MEACHAM, F., Capt. and Asst. Surgeon. Assigned to temporary duty at Ft. Niagara, N. Y., during absence, on leave, of Asst. Surgeon Price. S. O. 6, Department of the East, January 10, 1881.

PRICE, C. E., Capt. and Asst. Surgeon. Granted leave of absence for one month and ten days, to take effect on arrival of Asst. Surgeon Meacham at Ft. Niagara, N. Y. S. O. 2, Middle Division of the Atlantic, January 10, 1881.

COMEGYS, E. T., Capt. and Asst. Surgeon. Granted leave of absence for four months on surgeon's certificate of disability. S. O. 4, A. G. O., January 7, 1881.

BURTON, H. G., First Lieut. and Asst. Surgeon. Now awaiting orders at Boston, Mass., to report in person to the Commanding General, Department of the East, for assignment to temporary duty. S. O. 7, A. G. O., January 11, 1881.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending January 15, 1881.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Jan. 8, 1881.	0	14	179	6	30	168	20	0
Jan. 15, 1881.	0	12	171	6	36	129	10	0

HOSPITAL FOR THE RUPTURED AND CRIPPLED, FORTY-SECOND STREET AND LEXINGTON AVENUE.—A graduate in medicine is wanted to fill an unexpired term, as Junior Assistant, from February to June, 1881. Two vacancies in the Junior Assistantship will occur in May. Term of service two years, dating from June 1st. Only those who have served in a general hospital need apply. Applications can be made to Dr. James Knight, at the hospital, prior to May 1st, from 9 to 12 A.M.

EAST RIVER MEDICAL ASSOCIATION.—At the annual meeting, held at Dr. I. M. Lang's, 294 East Broadway, on Tuesday evening, January 11th, the following officers were duly elected: *President*, Dr. James R. Taylor; *Vice-Presidents*, Dr. T. C. Finnell, Dr. Martin Burke; *Recording Secretary*, Dr. Wm. I. Purcell; *Corresponding Secretary*, Dr. H. E. Crampton; *Treasurer*, Dr. Veranus Morse. Recent amendments to the constitution have greatly improved the efficiency of the Association. Its membership is limited to forty, and its ranks are full.

THE AMERICAN MEDICAL BI-WEEKLY.—This journal, which was formerly published in Louisville, Ky., and which had nearly reached the close of the eleventh volume when the severe and protracted illness of the editor compelled its temporary discontinuance, is now, on his entire recovery, restored to its position among the medical journals of this country. The editor, Dr. E. S. Gaillard, having made his home in New York, the Bi-Weekly is now published here. It is now a double-column medical journal, larger than the old Bi-Weekly, and is published at one dollar a year.

NEW YORK PATHOLOGICAL SOCIETY.—The following officers have been elected for the ensuing year: Dr. T. E. Satterthwaite, *President;* Dr. L. A. Stimson, *Vice-President;* Dr. Wesley M. Carpenter, *Secretary;* Dr. John H. Hinton, *Treasurer;* and Dr. John C. Peters, *Editor of the Transactions.*

DR. JOHN CLAY still clings to his Chian turpentine, and asserts that it will, better than any other drug, relieve pain, prevent hemorrhage, and, in some cases, stop the progress of cancerous growth or make it disappear entirely. He says that the two cases which he first reported in the *Lancet* are still living and have had no return of the growth, though it is now over a year since they left Dr. Clay's care.

ANOTHER SUCCESSFUL NEPHRECTOMY for pyonephrosis has been performed by Mr Cooper, the case being reported to the Hunterian Society of London. This

makes the third successful case that has been performed in England during the past year. The operation seems to be growing in favor. The most rational and successful method for most cases is the extra-peritoneal or lumbar, a transverse instead of longitudinal incision being made. Mr. Couper operated in this way.

THE CINCINNATI MEDICAL COLLEGES.—An attempt is being made to consolidate all the medical colleges of Cincinnati into one college, to form the medical of Cincinnati University. The attempt to do this has been made before, and although the present effort is a stronger and more serious one, it does not seem likely to be successful.

MEDICAL LEGISLATION IN MICHIGAN.—The Southern Michigan Medical Society, at a recent meeting, adopted two series of resolutions, one recommending the enactment of a law regulating the practice of medicine, and the other appointing a committee to memorialize the legislature on the subject of a supply of dissecting material.

FOOT-AND-MOUTH DISEASE is prevailing among English cattle. It is suggested that cremation be applied to all that die of the disease. It causes more injury to cattle than pleuro-pneumonia and splenic fever together.

FATAL ALCOHOLIC POISONING.—A man in this city drank, on a wager, three pints of whiskey at a sitting. Symptoms of collapse soon appeared, and he died in a short time.

THREE DEATHS FROM CHLOROFORM are reported as having occurred in November and December last. One of these was in Ballard County, Ky., one in Guy's Hospital, London, and one in Billroth's clinic, at Vienna.

PHILADELPHIA MEDICAL SOCIETIES.—The annual election of the College of Physicians of Philadelphia has resulted in the choice of the following officers for 1881: *President*, W. S. W. Ruschenberger; *Vice-President*, Alfred Stillé; *Secretary*, R. A. Cleemann; *Treasurer*, Chas. S. Wurts; *Curator*, T. Hewson Bache; *Librarian*, Robert Bridges; *Recorder*, J. Ewing Mears.

THE officers of the Philadelphia Academy of Surgery are: *President*, S. D. Gross; *Vice-Presidents*, D. H. Agnew and R. J. Levis; *Secretary*, J. E. Mears; *Treasurer*, William Hunt; *Recorder*, John B. Roberts; *Corresponding Secretary*, Thos. G. Morton.

CHIAN TURPENTINE.—The medical committee of the Middlesex Hospital have passed a resolution to the effect that as the result of prolonged and careful trial with Chian turpentine in the treatment of cancer, the drug has proved utterly worthless. This conclusion is in harmony with general experience elsewhere.

COMPARATIVE ANATOMY.—In *Science* for December 31st, is an interesting paper over initials which are not difficult to be interpreted as belonging to Professor Burt G. Wilder, relating to recent American papers on Comparative Anatomy. To those who have not followed the recent researches of Professors O. C. March and E. S. Morse a perusal of this paper is recommended, as the salient points are there given. The same writer also describes some recent papers by Dr. H. C. Chapman, of Philadelphia, on the "Placenta and Generative Apparatus of the Elephant," and on the "Structure of the Orang Outang." Dr. Spitzka also, in a letter in the same journal, raises various objections to the last paper, chiefly relating to the structure of the brain. As far as we can judge the chief point of difference between Dr. Chapman and his critic appears to be, viz.: 1, direction of the fissure of Sylvius; 2, relative position of the cerebrum and cerebellum, as described by Dr. Chapman, distorted by imperfect manipulation; 3, presence of convolutions in the Island of Reil of the orang; 4, general richness of gyri in the anthropoid brain; 5, comparative position of the fissure of Rolando in the anthropoids.

VITAL STATISTICS OF NEW YORK CITY FOR 1878, '79, '80.—The following table shows the causes of death in New York in 1880 compared with statistics for 1879 and 1878:

	1880.	1879.	1878.
Zymotic diseases	9,943	7,994	7,648
Constitutional diseases	7,218	6,416	6,436
Local diseases	11,367	11,079	10,213
Developmental diseases	1,978	1,848	1,701
Deaths by violence	1,360	1,004	1,010
Small-pox	37	25	2
Measles	478	244	270
Scarlatina	675	1,477	1,099
Diphtheria	1,459	671	1,007
Croup	946	522	499
Whooping-cough	285	577	582
Erysipelas	167	145	145
Typus fever	4	4	4
Typhoid fever	247	178	245
Miasmatic fever	550	590	561
Yellow fever	1	2	0
Cerebro-spinal meningitis	156	108	97
Diarrhœa diseases	3,960	2,965	2,945
Diarrhœal diseases in persons under five years old	3,487	2,592	2,598
Alcoholism	229	198	127
Rheumatism and gout	175	171	140
Cancer	686	572	570
Consumption	5,868	4,543	4,466
Bronchitis	1,441	1,293	1,184
Pneumonia	2,976	2,354	2,228
Heart disease	1,192	1,164	1,068
Marasmus and scrofula, etc	740	646	588
Hydrocephalus	623	609	604
Meningitis	642	568	612
Convulsions	746	646	691
Apoplexy	487	489	447
Insolation and prostration	116	41	52
Cerebral and nervous diseases	2,732	2,485	2,410
Bright's disease	1,473	1,348	1,161
Surgical operations	72	39	21
Drowning	256	149	185
Puerperal diseases	431	359	360
Suicide	155	117	142

VACCINATION IN NEW YORK.—Forty-five thousand persons were vaccinated last year by the officers of the Vaccinating Bureau, under the direction of Dr. J. B. Taylor. The vaccine is obtained from calves at Clifton, N. J., where from four to six calves are vaccinated every week.

The receipts from sales at the Vaccination Bureau during the month of December amount to more than $600. The virus is sent to every state in the Union and abroad. The points and crusts are wrapped in paper and sheet rubber, and are transmitted by post and express.

There is always enough virus at the Vaccinating Bureau to vaccinate from 5,000 to 10,000 persons, and an order for 10,000 "points" could be filled very quickly. The price charged for "points" is $1 for eight. Crusts are worth more. A discount is made when officers of health departments or institutions give an order. It is not possible to estimate the number of vaccinations performed last year by private physicians and individuals. In the Vaccinating Bureau the percentage of successful vaccinations is ninety-five.

MAN IS A PHYSIC-TAKING ANIMAL.—In England the patent medicines consumed would, if equally distributed, give over half a bottle or box to each in-

habitant annually. And to this must be added the pills and mixtures given by the faculty. In America the amount of drugs taken is even greater than in England.

Cod-Liver Oil and Bromides.—Dr. C. M. Jordan, of Fargo, D. T., writes: "Referring to the letter of Dr. Fairbairn in the Medical Record of December 11, 1880, permit me to say that the practice of using cod-liver oil in connection with bromides is not new. While pursuing my medical studies I was taught to place considerable stress upon the use of cod-liver oil in connection with mercurials, iodides, or bromides, when used as alteratives; not on account of its therapeutical value, but as a food to supply the deficiency produced by the action of the drug on nutrition, the oil not counteracting the action of the medicine as it affects the morbid condition, but prevents the appearance of symptoms produced by the medicine itself, indirectly, by restoring the tissue-waste caused by the long-continued use of the drug."

Dedication of a New Hospital for Children.—The new St. Mary's Free Hospital for Children, at Thirty-fourth street, near Ninth avenue, was dedicated with appropriate exercises, on Thursday, December 23d. It has been erected on a plot of ground formerly occupied by a smaller institution of the same character, in charge of the Protestant Episcopal Sisters of St. Mary. The new hospital has a frontage of fifty feet, and is sixty-five feet deep, exclusive of a rear extension measuring forty feet. It is four and a half stories in height, and built of pressed brick, and trimmings of light brown stone.

The entire interior is finished in polished ash, the flooring being of hard pine. Particular attention has been given to the plumbing arrangements throughout the building. The pipes leading to and from all closets, basins, and sinks have been left entirely exposed, so that when a leakage occurs, or anything in connection with the plumbing system gets out of order, the defect can be readily detected and remedied. Every floor is heated by steam. An elevator, enclosed in brick walls, runs from the basement to the attic. The hospital, which is exclusively intended for the care of sick children between the ages of two and thirteen years, is now open for the reception of patients. It has no permanent fund from which to derive an income, relying for support on the contributions of persons interested in the care of sick children whose parents or friends cannot give them proper attention.

Debate on the Treatment of Typhoid Fever.—An interesting debate upon the above subject took place recently before the Metropolitan Counties' Branch of the British Medical Association. Drs. Halvershon, Bristowe, Kerr, Ord, and others took part. As regards diet, the use of milk was urged to be of chief importance. Dr. Bristowe and Dr. Kerr thought alcohol only necessary in a few cases. Nothing especially new was said about the use of drugs. Dr. Broadbent recommended opium for the relief of tympanitis.

The point chiefly discussed was the utility of baths. Dr. Bristowe doubted their efficacy, and thought that he had had two cases of fatal pulmonary congestion attributable to their use. Dr. Broadbent was feeling a constantly increasing confidence in the utility of baths. Dr. Cayley read some remarkable statistics from the military hospitals in Germany in favor of the bath treatment. Dr. Collie had abandoned the bath treatment as not only useless, but even dangerous. He could not put faith in continental statistics, and thought that many cases of mistaken diagnosis were included in them. Dr. Collie said that out of one hundred cases of typhoid fever, seventy-five would get well with simply good nursing, fifteen would die, and the remaining ten might or might not recover. Dr. Ord had seen good effects from the tepid bath in selected cases of high pyrexia.

Dr. Mahomed spoke in favor of the cold-bath treatment.

The discussion, on the whole, did not much favor the cold-bath treatment in typhoid. It is not an established therapeutic measure in England by any means, and it is doubtful if it ever will be. It has met with scarcely any favor in New York, or this country generally.

Picrate of Ammonium in Malarial Fevers.—Dr. J. B. Wainwright, of Milltown, New Jersey, writes: "Not having seen any mention made in any medical papers of the above remedy, and its effects in malarial fevers, I take this opportunity to express my experience with it. For the past six months malarial fever in its various forms has existed in our community, and having had occasion of seeing and treating a number of cases, I concluded to give picrate of ammonium a trial. My manner of administering the remedy is in pill form, in doses of one to one and a half grains thrice daily, and if found necessary, increasing the dose to two grains. By its use there was a rapid decline in the temperature, a decided fall in the rapidity of the pulse, the tongue became moist, and finally the patient would break out in a profuse perspiration which would be the termination of the attack. In but a few cases did I find it necessary to repeat the treatment at the end of one week. If treatment be begun at the first appearance of the attack, it would most invariably put an end to the progress of the fever. If the ammonium is given in large doses and continued for a few days, the urine becomes of a yellowish-brown, the skin and conjunctiva become yellow; but this discoloration is transient, as it will disappear in a fortnight after the discontinuation of the remedy. There are several advantages to be claimed for it over quinine and other alkaloids of cinchona, inasmuch as it does not nauseate, neither does it produce any tinnitus aurium, and in no case, when the duration of the attack was protracted, did I find that well-known accompaniment, the ague cake.

Explosive Medical Compounds.—The medical and pharmaceutical journals have recorded a number of cases of explosions having taken place by the admixture of explosive substances. Among the prescriptions having given rise to such accidents we will mention the following: 1st. Mixture of hypophosphite of lime, 50 centigrammes; chlorate of potash, 3 grammes 75 centigrammes; lactate of iron, 30 centigrammes. 2d. Solution of glycerine, 8 grammes, in acid chromic, 4 grammes. 3d. Mixture of chlorate of potash, tr. ferri perchlorid. and glycerine has exploded in the pocket of a patient. 4th. Chlorate of potash mixed with catechu and used as a dentifrice, may explode in the mouth of the patient provided hard friction is used. 5th. Pills of oxide of silver (frequently used in England in affections of the stomach) have exploded in the patient's pocket. Pills of permanganate of potash and ferri reduct., pills of golden sulphur of antimony and chlorate of soda, may explode during or after their preparation. It is, therefore, essential to avoid associating glycerine, and, in general, substances easily reduced, with

such oxidizing agents as chromic acid, chlorates, permanganates, and certain organic acids.—*Bull. gén de thérapeut.*

Shock from Vaginal Injection after Labor.—Dr. W. T. Smith, of Hanover, N. H., writes: "I had recently a case of severe shock from a simple vaginal injection after labor. It was a surprise and a very annoying one to me, and I report it as a hint of caution. The injection, which was administered by an experienced nurse, was a weak solution of carbolic acid—one part in two hundred and fifty. The instrument was a fountain syringe, the nozzle having no central aperture. The injection had been used twice before; the first time with comfort, the second time with complaint of irritation near the ostium vaginæ, which I ascribed to incomplete solution of the carbolic acid, and I gave directions that it should be thoroughly mixed. The third time was on the fifth day after labor. The instant the bag of the syringe was raised, after the insertion of the tube, a shock took place. The patient felt "as if the top of her head would fly off." She became livid and greatly distressed, to the extreme alarm of the family. She went into a chill and did not recover for an hour and a half, and it was some days before she regained lost ground.

"The fluid doubtless entered the uterus. The nurse said that she inserted the nozzle, which was four inches long, as far as she could.

"The patient was a multipara, and the labor, though it was a case of twins, had been easy and without complications."

Fracture of Skull, with Exudation of Brain-Substance—Recovery.—We have received from Dr. E. L. Wilkinson, of Van Wert, Ohio, the report of a case which is interesting to surgeons as well as to those engaged in the study of cerebral localization. The patient, a woman aged twenty-four years, was shot in the head, the bullet tearing up a V-shaped portion of the scalp and making a quadrangular opening into the skull, through which the brain protruded. The fracture was situated about the middle of the right parietal bone at its sagittal margin. The protruding cerebral substance and some of the broken bone were removed, the wound dressed with lint, kept moist with a cold carbolized solution, and a mixture containing ten grains of potassium bromide, fifteen minims of the fluid extract of ergot, and two of the fluid extract of digitalis, given every three hours. The injury was followed by complete paralysis of both lower extremities and of the right upper extremity. The scalp suppurated and was kept open to allow the escape of pus. The paralysis gradually disappeared, first in the left lower extremity, then in the right upper extremity, motion returning before sensation. Fifteen months after the injury there was still some paralysis of the right lower extremity, but the patient walked with a slight limp. In conclusion Dr. Wilkinson says: "The old plan of treatment, of protecting the brain with a silver plate, was omitted, and I believe its omission to be a wise one. An unobstructed passage for the free evacuation of the pus accumulating in the wound and on the brain, through sinuses of its own formation, is one of the secrets of the recovery of this case."

St. Paul, Minn., Medical College.—Prof. Alex. J. Stone, President of the St. Paul Medical College, Minn., writes: "Friends of the St. Paul Medical College and of the causes of advanced medical education have been surprised to see, in two issues of your journal, insinuations that the St. Paul school has no students.

"The first item referred to was apparently founded upon an editorial in the *Medical and Surgical Reporter* of Philadelphia, which in itself bore evidences of malice, as it was undoubtedly written *before* the opening of our session, when we *could* have no students. The second notice—in your editorial of January 1st—speaks of our having 'few or no students.'

"While the charge remained buried where it was born, I did not deem it advisable to answer it; but now that it has been given life in your far-reaching columns, and had the honor of your name as sponsor, I am desirous of correcting it.

"The St. Paul College commenced its first year with little advertising, in a frontier state, with the highest requirements of any school in the country, surrounded by lukewarm friends, and a few bitter enemies, with a matriculation of eleven, which has increased to fifteen, with a prospect of further increase within a few days.

"The faculty received many more applications, which were declined unless the applicants would comply in letter and spirit with the regulations as advertised. Although the class is small, as compared with the present classes of eastern schools, yet I believe there are very few of the older colleges that can boast of so large a class during their first year. While we never expect a very large class, nor do we deem such of the greatest value to school or scholar, we do expect an intelligent one, gathered from men with fair preliminary education, and shall not wait for large classes and great pecuniary prosperity before taking another step in advance in the cause of medical education. Knowing your own extreme fairness, I am positive that you will gladly insert this correction. I only hope that other journals will copy this with a semblance of the eagerness with which they copied your charge."

Prof. Wm. Pepper, M.D., Provost of University of Pennsylvania.—Dr. William Pepper, who was, on Tuesday last, elected by the Board of Trustees of the University of Pennsylvania provost of that institution, has sent to the board a letter of acceptance.

Books Received.

Compendium der allgemeinen Pathologie. Von Prof. Dr. S. Samuel. Stuttgart: F. Enke. 1880.

Die Kinderernährung im Säuglingsalter. Von Dr. Ph. Biedert. Stuttgart: F. Enke. 1880.

Untersuchungen aus dem physiologischen Institute der Universität Heidelberg. Herausgegeben von Dr. W. Kühne, Professor der Physiologie, etc. Band iii., Heft 1 and 2. Band iii., Heft 3 and 4. Heidelberg: C. Winter's Universitäts buchhandlung. 1879, 1880.

Der Einfache und Diphtheritische, Croup, und seine erfolgreiche Behandlung mit Wasser und durch die Tracheotomie. Von Dr. J. Pinkus. Heidelberg: C. Winter. 1879.

Diphtheritis und Ozon. Von Dr. Ph. Jochheim. Heidelberg: C. Winter. 1880.

Sammlung Klinischer Vorträge in Verbindung mit deutschen Klinikern. Herausgegeben von Richard Volkmann. Leipzig: Breitkopf und Hartel. 1880.

No. 181. Die Peristaltische Unruhe des Magens. Von A. Kussmaul.

No. 182. Ueber den Scharlach in seinen Beziehungen zum Gehörorgan. Von Alb. Burckhardt Meran.

No. 183, 184. Ueber den Scheiden und Gebärmuttervorfall. Von A. Martin.

No. 185. Ueber die Neuropathologische Bedeutung der Pupillenweite. Von E. Raehlmann.

No. 186. Ueber den Anatomischen Zusammenhang Zwischen Orbitalen und Intracraniellen Entzundungen. Von R. Berlin.

No. 187. Ueber Erweiterungsmittel der Gebarmutter. Von Leopold Landau.

No. 188. Ueber Weibliche Nervosität. Von August Rheinstaedter.

Transactions American Medical Association, vol. xxxi. 1880.

Transactions Medical Society of Pennsylvania, vol. xiii. Part 1.

Transactions Louisiana State Medical Association. 1880.

Transactions State Medical Society, Wisconsin.

Account Books for Physicians, Pocket- and Day-Book, with Ledger. New York: U. L. Hitchcock. 51 West Twenty-ninth street, New York.

Original Communications.

ELECTRICITY A PARALYZING AGENT.

PROOFS FROM THE AUTHENTIC EXPERIMENTS.

BY THOMAS W. POOLE, M.D.,

LINDSAY, ONT., CANADA.

THE INTRA-POLAR CURRENT.

1. The action of the common galvanic current is to paralyze that portion of a motor nerve included between the poles or electrodes.

Experiment.—"If a frog be poisoned with strychnia, the characteristic spasms may be averted by subjecting the spinal cord of the animal to the action of a continuous galvanic current; or if these spasms have already made their appearance, they may be at once suspended by the same means" (Matteucci, quoted by Dr. C. B. Radcliffe, Lectures, etc., p. 64). The frogs die, of course, but without any symptoms of tetanus.

Under the same conditions of convulsive spasms from strychnia-poisoning, precisely similar results attend the destruction of the spinal cord. This was originally observed by Magendie and was confirmed by Dr. Pereira, who states, "the destruction of the cord by the introduction of a piece of whalebone causes the immediate cessation of the convulsions" ("Mat. Med.," vol. ii., p. 540). Here, then, *the action of the galvanic current on the spinal cord is equivalent to the destruction of the cord;* which is, surely, a striking proof of its paralyzing action. Other considerations suggested by this experiment will be discussed at a future time.

Experiment.—"If the spinal cord of a rabbit be included in the circuit of a voltaic battery, and the current allowed to pass for *a few moments, the part between the poles* may be cut, pricked, torn, or even exposed to the shocks of a coil machine, without giving rise either to pain or convulsion. . . . Whether the current was passed up the spine or down the spine the result was the same so far as *its paralyzing action* was concerned" (Matteucci, Radcliffe, Ib., p. 64. Italics mine). This is plain and direct proof of the paralyzing action of the galvanic current on that portion of the spine included *within the circuit.*

It cannot be said that these are the exceptional effects of currents of unusual strength. On the contrary, as the experiments show, they are the effects of ordinary currents, such as are commonly used on the human subject, to relieve pain by the "anæsthetic" and "benumbing" effects they produce.

Confirmatory evidence.—Drs. Beard and Rockwell, referring to the effect of the galvanic current on the spinal cord, state: "During the passage of the current no contractions are observed and *a paralyzing effect soon takes place.*" They also refer to the "anæsthetic" and "benumbing effects of electrization" ("Med. and Surg. Elec.," 2d ed., pp. 123-127).

Dr. Moritz Meyer writes: "Valentine was the first to assert that the constant current, so long as it traverses a nerve with a given intensity, renders it *incapable of transmitting contraction-producing stimulus.* . . . Matteucci attained similar results by a different species of experiments. . . . Later, Eckhard made some experiments to discover the effect of the electric stimulus on the nerves of the muscles, when a part of the nerve is subjected to the action of a continued current, and found that in this case contractions followed neither the mechanical nor chemical irritation, nor even the stimulus of the interrupted current. In other words *the nerve is paralyzed,* so long as any portion of it is subjected to the action of a continued current" ("Elec. in Prac. Med.," translated by Hammond, p. 62).

Dr. C. B. Radcliffe writes: "When a motor nerve is acted on by a galvanic current, the part of the nerve which is included between the two poles is very soon paralyzed by the current" (loc. cit., p. 77).

From the foregoing it is evident that the paralyzing effect of the galvanic current over the portion of motor nerve within the circuit, is just as firmly established as any other fact in experimental physiology.

THE EXTRA-POLAR CURRENT.

The motor nerve-trunk passing to a muscle may be subjected to the extra-polar influence of direct and inverse currents.

The direct current.—A long nerve with its muscle attached is prepared. Toward the end of the nerve farthest from the muscle, the poles of a galvanic battery are arranged for the direct current; that is, with the N. pole nearest the muscle.

The electric current itself actually traverses no more of the nerve than is within the circuit, that is between the electrodes. But the *effect* of the current traversing this portion passes down the nerve toward the muscle, a certain distance, proportionate to the strength of the current. The portion of nerve thus influenced (between the negative electrode and the muscle) is in the negative phase of electricity: (catelectrotonus) and *its irritability is said to be increased.* By this it is meant that this portion of the nerve is functionally excited, and in readiness to convey a more active impulse to the muscle whereby the latter may be made to contract.

Let us now see if this conclusion is proved by the experiment relied on for that purpose.

Experiment.—M. Eckhard (to whom this observation is due) ascertained, by repeated trials, the strength of a concentrated salt solution, which, applied near the middle of the nerve-trunk, would just fail to produce a contraction of the muscle. Then by means of a galvanic battery, the electrodes of which were applied to the end of the nerve-trunk farthest from the muscle, the influence of a descending (or direct) current was made to pass through the nerve. It was then found that so long as the current was maintained, and its influence continued to pass down the nerve—that is, during the continuance of catelectrotonus—the same salt solution which failed before now sufficed to produce a contraction of the muscle. Hence the inference that the irritability of the nerve is increased by the direct galvanic current.

In more recent experiments of this kind the poles of an induction battery are substituted for the salt solution, and it is found that an induced current which just failed before, succeeds in causing the muscle to contract so long as the nerve is subjected to the direct galvanic current, as in the previous case (Dr. M. Foster, "Handbook Phys. Lab.," p. 389). The principles involved in the two experiments are precisely similar, and the inference drawn, as stated above, is the same, namely, that by the action of the

direct current the irritability of the nerve is increased.

Now the facts of an experiment are one thing, and the inference which may be drawn from these facts is a very different thing. The facts, if carefully observed, are true and are immutable; the *inference* will depend very much on the theory, in the light of which the facts are viewed, and both may be entirely erroneous. A mere inference is of value only so long as no other inference equally justifiable is presented. If the facts warrant a different inference, on a basis equally intelligible, and which also serves to explain the phenomena, such an inference and the basis on which it rests are entitled to a respectful consideration, equally with the former one. Such an inference here presents itself.

It is quite as justifiable to infer that the vital activity of the nerve-trunk was weakened by the concentrated salt solution (or by the induction current), and wanted only an additional wave of paralysis, which the direct galvanic current supplied, to enable the salt solution (or the induction current) to so effectually interrupt the vital nerve action as to set free "the great property of contractility" which is "an inherent endowment of the muscle" (Drs. Todd and Bowman), and to produce a contraction accordingly.

So far as the facts of the experiment are concerned, they prove this inference quite as much as the former one. But this inference receives a confirmation which amounts to positive proof, from the following considerations: 1st, numerous facts show that muscle is most prone to pass into a state of contraction, not when its motor nerves are most "irritable," but when their influence is withdrawn (see Dr. C. B. Radcliffe's proofs of this, "Lectures, etc.," pp. 95–103); 2d, the fact, clearly proved, that the action of the galvanic current is to paralyze the portion of the nerve between the electrodes, is strong presumptive evidence that its more diffused effects along the nerve-trunk are of a similar character, and are paralyzing also. It would, indeed, be absurd to suppose of a purely physical force like electricity that it could produce a paralyzing effect in one portion of a nerve-trunk, and then, by a reversal of its mode of action, stimulate a contiguous portion. Such an opinion regarding a purely physical force is not for a moment to be entertained as a scientific deduction, and if not, then only one conclusion is possible, namely, that the action of the direct galvanic current is to paralyze that portion of a motor nerve-trunk between the electrodes and the muscle: the condition of catelectrotonus not being a condition in which the activity of the nerve is increased, but one in which it is temporarily abolished. (Here is a further barrier to the objection that it is only currents of extraordinary strength which paralyze. In this case the current is one which has been supposed to excite the nerve; and yet, as has just been shown, the facts, properly interpreted, show that its action has been really that of a paralyzer.)

Notwithstanding the inference referred to above, to which this conclusion is opposed, this is no novel doctrine in regard to this current. Thus, "according to Volta, both directions of the current are depressing in their effects" (M. Meyer, p. 57). Prof. Matteucci found that the "*direct* continuous current" not only "diminished the excitability of nerves," but produced in them "a temporary paralysis" ("Braith. Epit.," vol. ii., p. 661). Dr. W. B. Carpenter writes: "The direct current *weakens* and at last *destroys* the excitability of a nerve" ("Hum. Phys.," p. 351). Here "excitability" is only another term for irritability; and it is on the authentic records that "a nerve deprived of its irritability can neither receive impressions nor transmit them," and is accordingly paralyzed for the time being. Thus it is proved, both from the facts of experiment and from the testimony of leading authorities themselves, that *the ordinary direct galvanic current paralyzes the extra-polar portion of a motor nerve-trunk along which its influence extends* in the direction of the muscle.

The inverse current.—It has already been proved that the action of this current, equally with that of the direct current, is to paralyze the portion of the nerve included *within the circuit*—that is, between the electrodes. What we have now to consider is the extra-polar action of this current between the electrodes and the muscle.

Here the P. pole is nearest the muscle, and, as is well known, the extra polar portion of the nerve, between this electrode and the muscle, is said to be in a condition of anelectrotonus, or of *diminished irritability*. The proof of the paralyzing action of the inverse current is direct, and is palpably admitted in the phrase "diminished irritability," which means lowered vital activity, and is a degree of paralysis varying in proportion to the strength of the current. It is true of weak currents as well as of strong ones.

Experiment.—The two batteries are arranged as last indicated, with the induction electrodes in the middle of the nerve-trunk. Through these a sufficient current is sent to cause a contraction of the muscle. The influence of the inverse galvanic current is then made to pass along the nerve, the portion of which passing toward the muscle is in the anelectrotonic state. So long as the current continues, no contraction of the muscle can be produced by the induction current, which before sufficed for that purpose ("Handbook, etc.," p. 389). Hence the inference stated above.

Dr. Moritz Meyer quotes M. Eckhard for the observation that "*the paralyzing effect of the constant current* is more apparent when it is placed between the muscle and the induction battery than between the induction battery and the free end of the nerve" (p. 62)—that is, a reversal of the position of the batteries as indicated above.

Dr. C. B. Radcliffe states of M. Eckhard: "This very able physiologist has ascertained that so long as the inverse galvanic circuit is closed it is impossible to produce contraction of the muscle by pinching, pricking, or otherwise acting on this part of the nerve . . . . which is consequently in a state of suspended irritability" (Ib., p. 75). *This is a state of paralysis*, because "a nerve deprived of its irritability can neither receive impressions nor transmit them" (p. 78).

While some theoretical conclusions of M. Eckhard as to the varying effects of the direction and intensity of currents on the irritability of the nerve have been corrected by Pflüger, the foregoing facts of simple observation remain unchallenged, and are fully borne out by the authentic records of the experiment in the hands of Dr. M. Foster, as well as others.

Thus, here also, both from the facts of experiment and from the evidence of the experimenters, the ordinary *inverse galvanic current is proved to exert a paralyzing action on the motor nerve submitted to its influence.*

INFLUENCE OF CURRENT DIRECTION.

It is proper to remind the reader here, in the words of Drs. Beard and Rockwell, that "in regard

to the differential action of the ascending and descending currents there has been an almost infinite amount of shallow observation and impulsive writing." These authors offer ample evidence that the effects in question are due, *not to current direction*, but to *the physical effects of the poles*, at one of which acids accumulate and alkalies at the other. "The differential effects of the poles can be differentiated in various ways . . . . the differential effects of current direction, if it be not entirely a myth, is, to say the least, undemonstrated" (pp. 115, 265, 266).

STRONG AND WEAK CURRENTS.

Some reader may be disposed to exclaim: "Oh, all this may be true of very powerful currents of electricity which paralyze, but the reverse is true of moderate currents which merely stimulate." Is such an assertion a scientific deduction, and if so, where is the proof?

What would be thought of the philosopher who should assert that the process of combustion going on in our grate is an essentially different process from that taking place in a conflagration which burns our houses? Is it true that the addition of any number of sparks to the battery spark alters its character, and modifies—nay, even reverses its mode of action? If this is too absurd for serious thought, then just as the lightning flash is inimical to life, so also is the battery spark, in proportion to its power. The difference is one of degree, not of character or quality. As representing differences in the power of action of the same physical force, there is a physical necessity that both shall tend to the same goal. Given a sufficient aggregation of battery sparks and the goal is reached. If the single spark does not reach it, this is not due to any change or reversal in its mode of action, but simply to its lack of power and to the counteraction of other opposing forces.

But, besides this, the currents of electricity here referred to, are in general of the most moderate strength; such, in fact, as ordinarily excite a simple muscular contraction, or, when used for medical purposes, as "benumb" a painful nerve. Those very currents here shown to be paralyzing are the precise counterpart of the currents which have been held to "excite" nervous action and to increase nerve "irritability." Both on this ground, therefore, as well as on the former, the popular notion that weak currents stimulate, while only strong currents paralyze, falls to the ground as unscientific and untenable.

THE INTERRUPTED CURRENT.

When Matteucci found that an interrupted current tetanized a muscle, while the constant current produced a simply negative or passive state of the muscle (owing to the conductivity of its nerve being arrested), and regarding these states of paralysis and tetanus as opposite conditions, he naturally enough concluded that, since the two currents produced antagonistic conditions, they must themselves be opposites in their mode of action.

There was here a double fallacy. The most persistent contracture of muscles is found associated with the most profound paralysis of nerve, a fact which shows them to be not opposite conditions, but in reality different degrees or stages of the same pathological condition: the paralysis representing the separation of the muscle from the influence of the nervous centres; the tetanus representing the divorce of the muscle from nerve-restraint, exercised through and by the motor nerve-trunks and their end-plates and terminal branches. The production of conditions so closely related, by the two phases of the electric current, argues for their similarity rather than otherwise; and this, indeed, is very generally conceded now by electricians. The interrupted current also produces "anesthesia," and its "benumbing effects" are equally on the authentic records. It would be tedious and unnecessary here to detail in how many respects they agree; and it may suffice to quote the opinion of Drs. Beard and Rockwell, that "the essential distinction" in their effects "on the body is mainly of degree." Just as "light is light, be its waves longer or shorter, ... so electricity is electricity, however generated, or however modified by the medium through which it moves" (p. 297, etc.). It would be folly to doubt or deny that the same general character—be it stimulating or paralyzing—which attaches to the galvanic current, attaches also to the faradic or interrupted current; and as the former has been proved to be a paralyzing agent, the same quality of general action must also be attributed to the latter.

I would gladly end here; but justice to this subject requires a brief reference to a singular inaccuracy still perpetuated in our text-books, in the experiment known as that of the rheoscopic frog.

THE RHEOSCOPIC FROG.

Every one is familiar with the interesting experiment in which two frog's legs are prepared by denuding them of skin, and leaving a portion of their chief nerve-trunk attached. If the nerve of one of these, B, be laid across either the nerve or muscle of the other, A, and if near the central end of the nerve A, an induction current be applied, a contraction is produced in the muscles of both: the wave, or impulse, which produces the secondary contraction in B, being transferred from the nerve or muscle of A, with which the nerve B is simply in contact.

Dr. M. Foster (following M. Becquerel) explains that the secondary contraction in B "can only be due to the electrotonically increased natural [electrical] nerve-current in A, acting as a stimulus to the nerve B, when the [natural electrical] circuit is closed by a portion of B, and so causing a nervous impulse, just as the closing of any other galvanic current would" ("Handbook Phys. Lab.," p. 395).

Since this explanation was first offered, the elaborate experiments of Prof. Trowbridge, of Harvard College, have thrown the utmost discredit on the supposed natural currents of electricity in nerve and muscle. It has in fact been conclusively shown that in the previous experiments the electric currents which the galvanometer indicated, originated, not in the nerves and muscles experimented on, but in the extraneous appliances of the apparatus employed. Consequently, this part of the explanation, if not entirely fallacious, can at least be no longer regarded as resting on any substantial basis.

The other part of the explanation, in which the electrotonic state of the nerve is referred to, is manifestly erroneous. Dr. M. Foster's directions are to use an "induction coil" and "the interrupted current" at the central end of the nerve A. Now the induction current does not produce electrotonus, this being a condition of chemical action which attaches only to the galvanic current. That the effect produced is not due to the electrotonic state is further shown by the fact mentioned by Matteucci, that pinching or otherwise injuring the nerve A will also cause the desired contraction. Pinching a nerve, of course, could not produce electrotonus.

This is a fair example of the slipshod style in which many conclusions are arrived at, and handed on from one author to another in the records of physiological experimentation.

It is quite evident that the contraction of the muscles of either nerve cannot be due to the *direct* influence of the battery current, because this current actually traverses no more of the nerve-trunk of A than is within the circuit—that is, between the electrodes; and also because ligaturing either nerve-trunk prevents a contraction of its muscle. A ligature would not prevent the electric current from passing, but it would arrest a nervous impulse. Whatever is done to the nerve by the battery current, or by the pinch, burn, etc., is of a character to modify the nervous impulse; and as electricity has been shown to be a paralyzing agent to nerve-tissue, it is fair to conclude that the impulse is a paralyzing one, and momentarily sets the muscle free to contract. Thus, there is nothing at all in this very interesting experiment antagonistic to the theory which so many facts combine to support, since a paralyzing impulse may as readily pass from A to B as a stimulating one. That electricity is here present in these moist tissues, is very probable. The denuded muscles continue to respire—that is, they absorb oxygen and give off carbonic acid (Prof. Kuss). Here are all the conditions for chemical change, and wherever chemical action takes place electricity is developed. But whoever asserts that this agent has anything to do with the life-work of nerve and muscle will have to enter *de novo* on the task of experimentation in order to prove his thesis.

CONCLUSION.

Around this great central fact of the paralyzing character of electricity all the minor facts of electrical experimentation will be found to arrange themselves in perfect harmony. There is no space here to refer to these, but some of them have been alluded to in former papers, and the reader can readily supply the omission.

Is there any valid ground on which to challenge the conclusions here drawn? I know of none. The plain facts of simple and uncomplicated experiments have been allowed to tell their own story in a natural and straightforward manner. There has been no suppression, concealment, evasion, or false induction. Indeed, for the latter, the simple character of the experiments affords but little scope. The experiments themselves are of undoubted repute, and have passed into universal acceptance.

Nor is the conclusion here arrived at either novel or unheard of. It has been cropping out in the writings of every experimenter during the hundred years which have elapsed since Galvani made his first discovery. Volta, Valentine, Matteucci, Eckhard, and many others whose names are less familiar, had proof of it. Even Dr. Moritz Meyer qnotes "Dr. Brown-Séquard's experiments on the enervating effects of the electric current."

This great truth has been crying out for recognition during a hundred years, but the cry has been ignored, and the penalty is being paid for that neglect. In the absence of the light which this truth would have thrown on physiological experimentation, medical scientists have been driven to *invent* an entirely imaginary system of nervous centres and nerves wholly unknown to the anatomist, to "inhibit" the functions of nerves known to exist, in their attempts to explain the phenomena of the organism. And even then without success. As each new difficulty presents itself, new hypothetical centres or nerves are invoked (among the latest being "a sweat centre," provisionally located in the spinal cord), till the huge and complicated system threatens to be ruined by its very complexity and unwieldiness.

Perhaps no branch of the medical art has suffered more in this way than therapentics, and this result is in great part due to erroneous conclusions regarding physiological inquiry directly due to the suppression of this truth.

Will it be recognized now? That were too much to expect, for reasons which it is needless to enumerate. All great truths have had their periods of suppression, of denunciation, and then of recognition. Doubtless this one will furnish no exception to the rule.

THREE GALL-STONES

REMOVED FROM THE GALL-BLADDER THROUGH THE WALLS OF THE ABDOMEN.

BY CHAS. WM. CALHOUN, A.M., M.D.,

TRIPOLI, SYRIA, TURKEY IN ASIA.

HANNIE MAKROMALIE, aged twenty-one years, married at fourteen years of age. Has two children. Menses regular. Bowels in excellent condition. Appetite always good, and in every way the picture of health. She presented herself July 9, 1880, with the following history: Two years and nine months ago she had a paroxysm of intense pain in the "belly," extending over the right side, and lasting one hour. It "broke her back." The pain passed off of itself, leaving her weak, pale, and sweating. This paroxysm was preceded by light pain in "flashes" for six or seven days. She has never had any icteric hue, diarrhœa, or clayey stools, either then, before, or since, and the color of her urine has always been normal. Jnst one year after the first attack she had another similar to it, followed in three months by a third. She tried various measures to remove the pain, but said "it did not go away till it got ready to leave." With the third attack she was frightened to find a "lump" the size of "a child's head" "inside of her," which remained this size for six months without causing any inconvenience. She did all her housework herself. This "lump" was just below the free border of the ribs on the right side.

At this time (the end of the six months) the tumor began to get red, and felt heavy and hot. She therefore poulticed it, and awoke one morning to find it had opened during the night while she slept. She felt relieved. There were four or five pin-hole openings, all contained within a circle having a diameter of one inch. They all closed except the central one. The discharge was not yellow (bile suspected), did not smell bad (pus suspected), but was "like the white of an egg," and about four ounces in quantity. It has been open one year, during which period the tumor has decreased in size, and she has had but one attack of "that pain" since. The discharge has been constant, somewhat profnse, and as clear as "sugar and water."

She showed me a fistulous opening in the abdominal walls, surrounded by a slight blush, and located in the right lumbar region, 4¾ inches from the umbilicus, 2½ inches below the free border of the ribs, and 5 inches from the right anterior superior spinous

process of the ilium. A tumor the size of a fist could be grasped through the abdominal walls with difficulty, owing to their thickness. The sinus admitted the probe only to a distance of 1½ inch, the diameter being only sufficient to admit the probe. I dilated the sinus, and the next day the probe entered to the distance of four inches. I thought I felt a stone, but did not succeed in finding it again. In one of my post-mortems I found the cystic duct occluded and the gall-bladder distended with a stone, surrounded by clear mucus. Remembering this made me almost sure that this sinus led to a stone. I continued to dilate, but it was not till July 19th that I was positive of a gall-stone under my probe, when my friend Dr. Mareeya fully confirmed my diagnosis. The next day I operated, assisted by Dr. Mareeya. I introduced a probe-pointed bistoury and carefully enlarged the sinus, cutting upward and inward through the inflammatory induration till I could introduce my index finger. I found a constricting ring about three inches from the surface of the abdominal walls, which I divided, and entered a chamber containing only mucus (and blood from the operation). This chamber extended downward about 1½ inch. I then felt in the opposite wall of the chamber a small opening or constricting ring, which I enlarged with a hernia knife, and on introducing my finger found the stones in the gall-bladder, which seemed to be drawn downward and to the right, so that my finger entered it near the fundus and at an obtuse angle with its long axis. I removed, with uterine-dressing forceps, two stones 4½ inches from the surface of the abdominal walls. The stones together weighed thirty-one grains, and, on analysis, proved to be composed of cholesterine and a very small amount of bile-pigment. I introduced a large drainage-tube, gave the patient quin. sulph., gr. x., morph. sulph., gr. ¼.

July 21st.—Patient slept well. Found the tube protruding, and on carefully probing found a stone presenting three inches from the surface of the abdomen. I readily removed it with the uterine forceps, causing only slight pain. It weighed 13½ gr., and was precisely like the other two. I used the forceps as a searcher, but found nothing more. The forceps went in about six inches. My delight at removing two stones at the time of the operation was the reason, probably, that I did not make thorough enough search, and so remove the third at the same time with the other two. 3 P.M.—Temperature, 102¼ F., but she seems very comfortable. Ordered quin. sulph., gr. x., morph. sulph., gr. ¼.

July 22d.—Slept well; eats well; very comfortable.

July 31st.—Came to my office to have the wound washed. The only dressing is a one in twenty solution of carbolic acid. The wound has closed rapidly.

August 30th.—The patient feels she must go home, a distance of four or five days' journey, though there is still a slight discharge of clear mucus, and the fistula, though very small, has not closed. The discharge is so much less than formerly that she is satisfied with the result of the operation.

November 1, 1880.—I am told by her friends that the fistula has closed, but shall not feel sure till I see the patient myself.

The interesting features of this case seem to be the entire absence of any icterus, any clayey stools, any discoloration of urine, any pus during any portion of the entire period, and the youth of the patient.

A CASE OF

DISLOCATION OF THE HUMERUS, WITH MULTIPLE FRACTURE OF THE SCAPULA, WITH REMARKS.

By WILLIAM E. BRANDT, A.M., M.D.,

LATE A. A. SURGEON, U.S.A., HANOVER, INDIANA.

On the night of the 20th of last October, I was summoned to the country to attend a young man, J. S., aged twenty years, who had fallen a distance of fifty feet from a tree while coon-hunting. I learned from the messenger that the patient was rendered insensible by the concussion, and that he remained unconscious for a quarter of an hour or more. After regaining consciousness he had considerable hemorrhage from the lungs or throat. I reached him three hours after the accident, and found him suffering severely from shock. The right shoulder was enormously swollen and contused, he having fallen upon the anterior portion of the head of the humerus and sustained a subcoracoid luxation. Owing to the excessive tumefaction that had taken place, it was with some difficulty that I was able to diagnosticate the rare complication which existed; that is, fracture of the acromion process and fracture of the spine of the scapula, the line of fracture being downward through the body of the bone,* splitting the scapula almost into two nearly equal halves. Having the broken scapula well supported by assistants, I with some difficulty, not having an anæsthetic with me, with my heel in his axilla,† reduced the dislocation. I then, with the aid of compresses and a large roller-bandage, secured the fractured bones in as perfect apposition as was possible, bound the arm and forearm to the anterior part of the chest, and supported them in a broad sling. Ordered morphia sulph. to quiet pain and secure rest. Next day, on my return, found patient still suffering from shock, and unable to sit up to have dressings readjusted without syncope. He had, during this and the succeeding day, several attacks of hæmoptysis, probably due to congestion of the lungs. I ordered morphia sulph. and stimulants, and purgative at night. In a few days I omitted the opiate, gave him generous diet, kept him in bed a week or more, and as soon as the inflammation began to subside I instituted gentle friction and passive motion of the scapulo-humeral joint—fearing, if I waited as long as some of our authorities direct, I would have false anchylosis, and the subsequent history of the case proves that I was right in thus departing from the usual method of waiting a month or more before beginning passive motion, and that I gave my patient the best chance for a useful arm. For within one month's time of the receipt of the injury he could move his arm in nearly all directions, and in six weeks had all the overhead movements nearly as perfect as in the sound arm. Of course there is some flattening in the deltoid region and slight deformity of the scapula, and a tense condition of some of the muscles of the axillary space, which does not cause him any pain or discomfort. This latter condition can only be felt when the arm is moved in certain directions, and I think it will disappear by exercise and massage, and when complete osseous union takes place.

Remarks.—I trust that the following desultory thoughts and fragmentary jottings will not be con-

* See Gross' Surg., vol. i., p. 960, fifth edition, for a similar case.

† See Hippocrates on Articulations, p. 571, vol. ii. Sydenham Society, Adams' edition, London, 1849.

sidered irrelevant, taken in connection with the above case. Dislocations, complicated with fractures in the vicinage of the shoulder-joint, are confessedly among the most difficult to diagnosticate that ordinarily come under the observation of the surgeon. This fact is clearly stated by Gross, Hamilton, Ashhurst, and Erichsen, and other authorities. Dupuytren says that all solutions of continuity of bones in the vicinity of joints give rise to numerous errors of diagnosis; and the remark applies with peculiar force to injuries which occur about the scapulo-humeral articulation. Doubtless every surgeon of a few years' experience can recall to memory cases of injury of the shoulder which taxed his greatest skill in determining the exact nature of the accident.

Sir Astley Cooper, in his classic work on Dislocations and Fractures of the Joints,* in the chapter on Fractures of the Shoulder-Joint liable to be Mistaken for Dislocations, treats of fracture of the acromion and fracture of the neck of the scapula, by which he means fracture through the narrow part of the bone, immediately opposite the notch of the superior costa. Of this latter accident he gives three cases, and he states its diagnostic marks to be three: first, the facility with which the parts are replaced; secondly, the immediate fall of the head of the bone in the axilla, when the extension is removed; and thirdly, the crepitus which is felt at the extremity of the coracoid process of the scapula, when the arm is rotated. The mode of discovering the crepitus is stated to be, for the surgeon's hand to be placed over the top of the shoulder, and the point of the fore-finger to be rested on the coracoid process of the scapula. When the arm is rotated the crepitus is then distinctly perceived, because the coracoid process, being attached to the glenoid cavity, and being broken off with it, although itself uninjured, the crepitus is communicated through the medium of that process. This theory of Sir Astley Cooper on the differential diagnosis of fracture of the neck of the scapula is criticised by Malgaigne,† who declares his disbelief in the statement that the glenoid cavity can so easily fall into the axilla, the coracoid process being suspended to the clavicle and to the acromion by ligaments of such great solidity; and if it did, an infinitely more certain sign would be had in the movements of elevation and depression alternatively communicated to the coracoid apophysis, without omitting the projection in the axilla of the angular sharp, or at least irregular inferior fragment, and which would be readily distinguished from the head of the humerus. As to the very insufficient signs of Sir Astley Cooper, he continues, they appear to me to correspond better with luxation downward with fracture of the glenoid cavity than with any other lesion."

Dr. M. Schüller, of Greifswald, contributes a paper‡ on "Rules for Diagnosis between Fracture and Dislocations at the Shoulder," which, on account of its value, I will quote *in extenso*. In the first place he alludes to the difficulty occasionally experienced by surgeons in the differential diagnosis between fracture of neck of the humerus, in which the lower fragment, the shaft of the bone, is displaced inward and into the axilla, while the upper fragment, the head of the bone, remains in the glenoid cavity.§ In this form of injury, which usually consists in fracture of the surgical neck of the humerus, the long axis of the arm runs obliquely inward toward the coracoid process, the elbow stands away from the side of the trunk, and the deltoid muscle is flattened, or even concave on its outer surface—all signs of forward dislocation of the head of the bone. In many instances a fracture may be readily diagnosticated, partially through crepitation, partially from a determination of the characteristic form of the end of the lower fragment, and of the presence of the upper fragment just below the acromion. Occasionally, however, a precise diagnosis of this injury may be rendered impossible through much effusion of blood, absence of crepitation, and the small dimensions of the upper fragment. Attempts at reduction performed again and again are in such a case always followed by an immediate return of the abnormal condition of the shoulder. Sometimes it happens that in one of these attempts at reduction the surgeon is able to make out crepitus, and then assumes that he has himself produced the fracture through the application of too much force. The author holds that, under ordinary conditions, it is impossible to produce fracture of the neck of the humerus in an attempt to reduce a dislocation at the shoulder. It often happens, however, that in a case of old fracture of the neck of the humerus, mistaken for, and treated as, a case of subcoracoid dislocation, the fragments are again separated in an attempt at reduction. The author does not altogether disapprove of the administration of chloroform in cases of doubt, but holds that, apart from the fact that there may be cases in which the doubt cannot thus be cleared up, it would be more desirable to have some means of making the diagnosis surely and safely without anæsthesia. The method suggested, as very simple and ready in its application, is that of measuring the injured extremity, and especially the distance between the acromion and the point of the epicondyle. In every case of fracture of the neck of the humerus this distance is shorter on the injured than on the sound side, and this shortening is greatest in those cases which most resemble subcoracoid dislocation of the head of the bone. In this latter injury the distance between the above-mentioned anatomical points is increased. The author does not agree with Malgaigne,* who held that this increase in the length of the arm is not constantly met with in cases of dislocation. There is no difference of opinion, however, as to shortening in every case of fracture of the neck of the humerus, with displacement of the shaft inward. Shortening, which in this injury is usually considerable, is, as was acknowledged by Malgaigne, never met with in cases of dislocation. The author, when measuring the distance between the acromion and the external epicondyle, takes care that the arm is abducted, and the forearm flexed at a right angle. The round extremity, when measured, is placed in a similar position. The tape is then carried to the external condyle from the same point of the acromion on each side, and from either its anterior or posterior angle. The words of the celebrated secretary of the Royal Academy of Surgery, Louis, prefixed by Smith to his valuable memoir on the diagnosis and pathology of fractures of the neck of the femur, cannot be held too much in remembrance, and are apropos: "Among all the parts of the art of surgery the science of diagnosis holds the first rank, and it is

* Sixth London edition, p. 418.

† Traité des fractures et des luxations

‡ Berliner klinische Wochenschrift, No. 37, 1876.

§ See Norris' Contributions to Practical Surgery, 1873, Phila., p. 144; also Surgical History of the War of the Rebellion, vol. ii., p. 473, S.-G. O., Washington, D. C.

* Loc. cit.

the most useful and the most difficult of them all. Without an exact and precise diagnosis theory is almost always faulty and practice often incorrect." I well remember, though a decade has elapsed, that my old surgical master, Dr. David W. Yandell, of Kentucky, the most accomplished *clinicien* I ever listened to, used to dwell with great eloquence and force upon the importance of *accurate anatomical knowledge*, as the only sure foundation for *correct surgical diagnosis*.

Sir Astley Cooper, in his monumental work,* has well said: "A considerable share of anatomical knowledge is required to detect the nature of these accidents, as well as to suggest the proper means of reduction, and it is much to be lamented that students neglect to inform themselves sufficiently of the structure of the joints. They often dissect the muscles of a limb with great neatness and minuteness, and then throw it away without any examination of the ligaments, cartilages, or ends of the bones; a knowledge of which, in a surgical point of view, is of infinitely greater importance; and from such negligence arise the errors into which those novices fall when they embark in the practice of their profession, for the dislocations of the hip, the elbow, and the shoulder are scarcely to be detected but by those who possess accurate anatomical information. It is, therefore, proper that the form of the extremities of the bones, their mode of articulation, the ligaments by which they are connected, and the direction in which their most powerful muscles act, should be well understood.' *Verbum sat sapienti.*

THE CHANCROID—WHAT SHALL WE DO WITH IT?

By C. A. BRYCE, M.D.,

EDITOR OF SOUTHERN CLINIC, RICHMOND, VA.

Of late years the term chancroid has been used to designate a venereal sore, which by many very prominent members of the profession is regarded as a simple sore, the result of impure sexual congress—but non-syphilitic in character and never followed by constitutional contamination.

The treatment of this affection will therefore depend upon the individual views of the prescriber: if we regard it as a non-syphilitic lesion, our remedies will be directed simply to the healing of a sore upon the genitals and the prevention of its local ravages; if, on the other hand, we regard this chancroid as a peculiar manifestation of syphilis, which is often followed by the very worst constitutional disturbances, we will treat the trouble promptly as we would early syphilis, with a view of preventing constitutional contamination. Failing, therefore, to recognize any difference whatever between *chancroid* and *soft chancre*, either physically or in their remote effects upon the system, we are led to regard chancroid or soft chancre as the local manifestation of genuine initial syphilis as much as we do the Hunterian chancre. This belief, founded upon quite an extensive clinical study of these affections, is our excuse for offering a few suggestions in regard to the treatment of chancroid?

Now, in support of the views which we hold in reference to the syphilitic character of chancroid, we would invite the attention of our readers to the following observations:

1. A very respectable portion of the profession will be able to recall a number of cases of chancroid in their practice *followed by constitutional syphilis*; and the number of cases of this kind is entirely too large to explain upon the ground of accidental inoculation. I can now remember a number of such cases in my own practice in which this lesion was not only followed by syphilis of a general character, but also in which (in two cases) the disease was given to the wives of the parties, and they had first *soft chancres*, and afterward constitutional syphilis!

2. The advocates of the non-syphilitic character of chancroid lay peculiar stress upon the fact that it is seldom or never followed by general infection. We admit that it is followed by general contamination *less frequently* than chancre of the indurated variety, and the explanation of this fact is satisfactory to our minds, for we know that the absorbing power of the tissue is lessened, and in many cases entirely destroyed by a high grade of inflammation. This is familiar to every physician. We know that the little operation of vaccination is often rendered inert by the local inflammation at the seat of puncture—the bite of a rabid dog may be neutralized by the prompt onset of inflammation after the use of the actual cautery—and the local severity of the inflammation and rapid destruction of tissue in chancroid is a safeguard in many instances against further trouble.

The difference in the *period of incubation* of chancroid and chancre is regarded by those who deny the syphilitic character of chancroid, as a point of diagnostic value. We think it strengthens our position, for we regard this as an evidence of the extreme violence of the syphilitic poison—it does not wait, but locally destroys the tissues at once, and, as we have said before, thus in many instances protects the system from further damage.

3. Again, we find chancroid occurring much oftener among negroes and filthy whites than among the better class of whites who pay attention to the cleanliness of their persons, and live in better hygienic conditions, thus showing us that we may expect it oftener where filth and other depressing agencies would have a tendency to increase the virulence of the secretions.

As the tendency of the present is to regard chancroid as a benign affection and non-syphilitic, and as our convictions and experience clearly impel us to the belief that chancroid is *genuine initial syphilis*, we feel it our duty to enter a protest against the neglect of specific treatment in this form of syphilis—and would urge our professional brethren to look well to this questionable lesion, which has already been too negligently treated by the profession of late.

* Loc. cit., p. 26, 6th London edition, 1832.

Dr. Levin Smith Joynes, LL.D., one of the most prominent physicians of Virginia, died in Richmond yesterday at the age of sixty-two years. He graduated as A.B. from Washington College, Pennsylvania, and pursued his medical studies at the University of Virginia and the University of Pennsylvania, graduating as M.D. at the former, and subsequently spent two years in continuance of his medical studies in Paris, Dublin, etc. He became Professor of Physiology and Legal Medicine in the Franklin Medical College of Philadelphia in 1846, returning to Virginia in 1849, and continued in practice until 1855, when he was elected Professor of Institutes of Medicine and Medical Jurisprudence in the Medical College of Richmond, with which institution he was connected in various high positions until his death. He became a member of the American Medical Association in 1847, and of its judicial council in 1873.

A CASE OF

COMPLETE AND PROLONGED LOSS OF THE SENSES OF BOTH TASTE AND SMELL.

RAPID RECOVERY UNDER THE INFLUENCE OF GALVANISM.

BY A. D. ROCKWELL, M.D.,

ELECTRO-THERAPEUTIST TO THE NEW YORK STATE WOMAN'S HOSPITAL.

IT is within the experience of all of us that the sick not unfrequently promise blessings in case of recovery; if, however, our therapeutics prove futile, they are on the other hand too often ready to do the other thing. Happy then, is the man who, instead of a curse can command a blessing, and thrice happy he who has aided in a recovery, the conditions of which are such that he is blessed three times a day. Those unfortunates who simply "eat to live," might not perhaps be so appreciative as the patient whose case is here given, and who sent word that she blessed me three times a day; but the wise and happy who combine both purposes, and, like the hero in Charles Lamb's essay "On the Origin of Roast Pig," "live to eat" as well, could hardly fail to be equally grateful. The literature of the neuroses of the nerves of special sense is not very extensive, but anosmia, or loss of the sense of smell, is not unfrequently met with.

I have seen quite a number of such cases of a chronic character, and have reported a number of recoveries. Complete loss of the sense of taste, however, is very rare, and in ten years I have met with but two such cases, the first of which occurred in a patient sent to me by Dr. A. N. Brockway. Permanent recovery followed treatment.*

The second case was a young lady from Wilton, Conn., who came to me January 12, 1880, through Dr. W. W. Rodman, of New Haven, Conn. The sense of taste had been so completely lost for ten months that it was the same to her whether she partook of what was most bitter and disagreeable, or of the most attractive and delicately flavored dishes. In January 1879, the patient suffered from a sudden and severe attack of influenza, followed by fever. In March a second attack came on, resulting not only in a loss of the sense of taste, but in a loss of the sense of smell also. It was evident that all the gustatory fibres were involved, for, however completely the various portions of the tongue and surrounding mucous surfaces were tested, it was impossible to elicit the slightest suggestion of the existence of this special function. To the influence of the galvanic current, the vital function of the nerve responded but faintly, so faintly, indeed, that it was hardly recognizable to the sense of the patient. After two or three applications, however, the metallic taste was very quickly and distinctly appreciated, and in about two weeks the lost function was quite restored and still remains normally acute, after a lapse of nearly a year.

A NEW MEDICAL COLLEGE IN PHILADELPHIA.—It is stated that there will soon be organized a new medical college in Philadelphia, under the charge of members of the regular profession. A charter of one of the colleges existing before the war has been resurrected, and a location near Broad and Market streets selected for the new institution.

* The case is detailed in Beard and Rockwell's Med. and Surg. Electricity, p. 684.

EXTREME OPISTHOTONOS IN A CASE OF HYSTERO-EPILEPSY.

BY J. SOLIS COHEN, M.D.,

PHILADELPHIA, PA.

AN hysteric girl, eighteen years of age, of German parentage, has been under my care, in hospital service, for the past three months, with some unusual features of this disease. She has had continuous tremors of the left hand and arm for more than a year, with marked anæsthesia of certain portions of that limb. Some five months ago, while swinging to the utmost extent of the apparatus now in common use at fairs and picnics, she was taken with her first epileptic seizure; since which she has been subject to repetitions at irregular intervals of from a few days to a fortnight, when under the influence of large doses (120 grains per diem) of one of the bromides, and as frequently as every day, when she is allowed to recover, at intervals, from their influence. (It may be parenthetically mentioned, that the use of cod-liver oil in association with the bromide, has, for weeks together, prevented any objective indications of hyperbromidism.) A strong induction current to the limbs, pressure upon the ovary, and other similar expedients, will immediately stop any one paroxysm, of a series, through which she is passing; but the effect is only momentary. There is also in this case some susceptibility to the influence of certain metals placed upon anæsthetic portions of the skin. These spots are no longer confined to the tremulous limb, but exist along the entire side. For proper study and presentation, this case has been brought by me to the notice of a professional friend deeply interested in studies of the nervous system; and the chief object of this communication is to record the extent of the opisthotonos, which occurs during the epileptoid seizures.

As soon as the patient rests upon her heels and occiput, as in usual extreme examples, the head continues to rotate slowly backward until the occiput rests upon the dorsal vertebræ; and the patient then *remains supported by her face and her heels.*

The paroxysm can be induced at will, by pressure on the sensitive cervical regions, or upon certain hyperæsthetic spots in the temporal and parietal regions. The general nutrition of the patient is excellent. She can sew well with the tremulous hand, and complains only of extreme muscular fatigue after her paroxysms.

LOCATION OF THE VASO-DILATOR NERVES.—MM. Dastra and Morat announce that they have discovered in the great sympathetic in the dog the vaso-dilator nerves, which have been long sought in the cerebro-spinal nerves, viz., the dilators of the ear in the dog, rabbit, and goat; the cutaneous dilators of the upper and lower limbs and the buccal dilators.

LITHOLAPAXY IN GERMANY.—The operation of litholapaxy by Bigelow's method has been the subject of extended debate among the surgeons of Vienna. Billroth reported six cases in which he had employed the method, each time with success. Dittel related twelve successful cases. All the other surgeons who took part in the debate, and who had had personal experience in the operation, spoke in its favor. It may be asserted that litholapaxy has become an accepted part of surgical practice in Vienna.—*Chicago Med. Rev.*

Progress of Medical Science.

Argyria Following the Frequent Pharyngeal Application of Nitrate of Silver.—A woman, aged forty-six years, noticed a bluish discoloration of the entire cutaneous surface, following repeated pharyngeal cauterizations with the silver nitrate stick. Similar cases have been recorded, one by Krishaber, and a second in the *Gazetta medica Italiana* (1862). The absorption of the silver salt takes place in part from the mucous surface of the cauterized portion, but principally from the intestinal surface, the products of cauterization being conveyed to the alimentary canal.—*Archives méd. Belges*, September, 1880.

The Resuscitation of Animals Subjected to Intense Cold.—It has been generally assumed that the safest method of revivifying apparently frozen bodies was to subject them to a very gradual elevation of temperature. The experiments of Beck, Horwat, and Jacoby, however, seemed to show that the speedy application of considerable heat was more beneficial. In order to determine the truth of the matter, Lapschinski (*Centralbl. für Chir.*, No. 15, 1880) instituted a series of experiments upon dogs, the results of which have led him to present the following conclusions: 1. The quickest way to resuscitate dogs which have been submitted to the influence of severe cold (the effects of which were measured by a thermometer placed in the rectum) is to rapidly produce an elevation of their temperature. This is most readily accomplished by plunging them into a hot bath.

2. Even in cases of intense congelation, where the method of gradual heating fails to revivify, a hot bath will have a life-saving effect.

3. When partially frozen dogs are rapidly warmed by being plunged into a hot bath, their subsequent febrile manifestations show a less degree of intensity than when the animals are gradually heated.

4. An examination of the blood of the animals subjected to cold, showed the corpuscular elements to have assumed polymorphous shapes. Many red blood-globules had also become colorless, and frequently the plasma had assumed a yellowish red tint. The latter appearance evidently resulted from the loss in hæmoglobin of the blood-disks. When blood was taken from the dogs during the process of resuscitation by heat, these conditions of the blood were less marked. Animals which died in spite of the use of the hot bath, showed, in many cases, no morbid alterations of the blood.

5. The muscles were found changed only in the more superficial parts, where the action of the cold had been most intense. Thus, certain opacities were discovered, some fibrillæ had lost their transverse striation, and others showed varicose protuberances. When the dogs were gradually warmed, the rectal temperature would continue to sink two to three degrees in spite of chafing, rubbing, etc. The author finally asserts that the action of the hot bath is to restore the vitiated vital functions, and that cardiac activity is stimulated by warm blood.—*Med. Chir. Rundschau*, October, 1880.

Hypodermic Injection of Water for the Relief of the Cough of Phthisis, and other Symptoms.—Prof. Landouzy states (*Le Progrès Médical*, No. 48, 1880) that the distressing cough of phthisis may be effectively relieved by the subcutaneous injection of a syringeful of distilled water. The injection may be made at the neck, near the larynx, in the infraclavicular region, or in an intercostal space, accordingly as the patient points out one or another of these localities as the starting-point of the irritation. It appears to be of some importance to hide the nature of the fluid from the patient's knowledge, and for this reason a few drops of aqua laurocerasi may be added to the water. The author also alludes to the good results obtained by similar procedures in cases of neuralgia, which have been described by Dieulafoy, Potain, and others.—*Allg. med. Cent. Zeit.*, December 8, 1880.

Dr. Raymond Tripier has for several years past employed the same measure in order to stop the vomiting of patients suffering from phthisis. He also adopts this line of treatment in certain cases of dyspeptic vomiting, especially when the patients are nervous women who stand in dread of morphia. The site of injection was always the epigastric region. Cold water appeared to be the most reliable and serviceable.—*Lyon Médical*, December 12, 1880.

The Transmission of Equine Glanders to Rabbits.—At a recent meeting of the *Académie de Médicine*, M. Colin read a paper with the above title which contained an analysis of the virulence of glanders. In his experience the disease might prove fatal without producing any visceral lesion. The inoculations might lead to deep ulcerations. In some instances the experimental inoculation had been followed by the development of pulmonary tuberculosis in the rabbits subjected to the experiment. In other cases no appreciable effects were produced. Glanders did not appear to be a malady with a uniform type of occurrence, nor did the disease always progress toward a definite end. It seemed rather to consist of different morbid elements, which, by successive addition, produced the cumulative effect of the typical and complete affection. An arrest of progressive development might occur at almost any time, thus leaving the disease in an unfinished condition.

Virulence was neither a constant nor yet a necessary element of glanders. The formation of tubercle was not an inherent property belonging to the poison. In conclusion, M. Colin pointed out that in all probability there existed many other diseases which resembled glanders in this respect, viz., that although of common origin and identical in nature, they would appear as distinct maladies in different animal species. For this reason, in seeking to determine the identity of diseases by experimental means, animals should be avoided in whom the disease assumed new or different aspects, or did not reach the ordinary termination.—*Le Progrès Médical*, December 4, 1880.

Inoculation for the Prevention of Carbuncle.—At a meeting of the Paris Academy of Medicine, M. Bouley read a paper on the above subject. He referred to a previous communication of Toussaint, to the effect that the latter had succeeded in producing, by inoculating sheep, the immunity from carbuncle. Renewed investigations had confirmed the truth of these assertions. For purposes of inoculation, carbolized or, otherwise purified serum had been employed. The direct virus of the malignant pustules had not been used. A few of the inoculated animals had died, but the remainder had acquired a subsequent immunity from the disease. At least they survived inoculations with the unchanged virus

taken from recent cases of anthrax. Whether natural infection would kill them remained to be seen.

Chauveau had also found that the young born of animals, which had acquired the disease by inoculation in the latter months of pregnancy, remained invulnerable. Successive inoculations appeared to be indicated, just as human re-vaccination should be universally practised.—*Archives génér. de méd.*, November, 1880.

Æsthesiogenous Properties of Certain Kinds of Wood.—The alleged efficacy of metallotherapy, as demonstrated by Despine, Burg, and Dumontpalier, have led M. Dujardin-Beaumetz to institute a series of experiments with bits of wood. He found that in hysterical patients cutaneous sensibility may be considerably modified by the application of certain kinds of wood. Xylotherapy is the new word which denotes this kind of wooden treatment. The author concludes: 1. That certain kinds of wood possess evident æsthesiogenous powers. 2. Cinchona bark appears to occupy the first place in this connection. Sanderac, rosewood, etc., follow. 3. The wood from other kinds of trees is inert. The poplar, oak-tree, sycamore, etc., belong to the latter group.—*Bull. gén. de thér.* in *Archives méd. belges*, September, 1880.

Severe Disease Caused by Intestinal Parasites.—The long thread-worm (*Trichocephalus dispar*) is generally held to be an essentially harmless parasite, inhabiting principally the cæcum and colon, where its presence causes no morbid symptoms. A case was recently observed by Burchardt (*Deut. med. Wochenschrift*, November 27, 1880), where this parasite became the occasion of serious trouble, producing alarming symptoms and even threatening life. The patient, aged eighteen years, had suffered from worms in his childhood. In April, 1873, without known cause, persistent vomiting came on. Soon diarrhœa developed, and after an apparent temporary improvement, those symptoms returned with increased violence. Constitutional disturbances likewise appeared. Organic lesions could not be made out. At length an examination of the patient's fæces revealed the abundant presence of ova of the tricocephalus. The number of these worms was computed to be very great. Vermifuges, drugs, and other modes of treatment did not effect the desired cure. Partial peritonitis developed, and the patient vomited bloody matter. In June, however, an amelioration of his symptoms took place, the patient daily drinking Carlsbad water. Several months later, a second attack of peritonitis occurred. At this time he also lost his voice, though the aphonia left him a few months afterward. Finally the patient made a good recovery. Although the complete absence of parasites was not positively ascertained, he remained cured. Upon examination, it was found that several persons inhabiting the same house in which the patient had formerly lived, also had similar intestinal worms, but in apparently smaller numbers. These persons showed only very slight symptoms, such as headaches, vertigo, diarrhœa, etc. The aphonia of the case in question was explained as a reflex symptom.

Case of Villous Growth of the Bladder—Removal by Perineal Incision.—At a meeting of the Clinical Society of London, Mr. Davies-Colley reported a case of villous growth of the bladder, and its successful removal by perineal incision. The patient, a young man aged thirty-two years, had suffered from hæmaturia for eight years. When admitted into Guy's Hospital he was fairly nourished but very anæmic. His family history was good. There was a continual desire to micturate, and a feeling as if something always remained behind in the bladder. Blood was passed, sometimes at the beginning, sometimes at the end of micturition. No stone could be detected, and all efforts to find villous masses in the urine failed. No tumor could be felt per rectum. The operation for lateral lithotomy was then performed, and upon examination, a slight projection was discovered on the left side of the fundus, and a cord-like process running from it; to this was attached a soft pinkish white tuft of villi, which was removed with the forceps. No other growth could be felt. There was but little hemorrhage during the operation. The patient made a rapid recovery, and in two weeks the urine ceased to flow from the perineum. Two months after the operation there had been no return of the hemorrhage; the irritability of the bladder had ceased, and he was in the enjoyment of perfect health. The tumor grew from the posterior wall of the bladder, at a point about three inches from its neck, and one inch to the left of the middle line. It consisted of a fibrous stalk one-sixth of an inch thick and two inches long, terminated by branching filaments from half an inch to three-quarters of an inch long. These filaments contained capillary loops, invested by many layers of epithelium of a cylindrical type.—*Med. Press and Circular*, December 15, 1880.

Case of Cholecystotomy.—An interesting case of cholecystotomy, performed for dropsy of the gall-bladder due to impaction of a gall-stone, has been reported in the "Medico-Chirurgical Transactions," vol. lxiii., by Dr. Lawson Tait. The patient was a female who had enjoyed good health until the summer of 1878, when she complained of severe spasmodic pains in the right side, which were aggravated by walking or by lifting even slight weights. In September of that year she noticed a swelling at the seat of pain, and this slowly increased. She then began to lose strength and flesh rapidly, and on admission to the hospital presented an emaciated and almost cachectic appearance. She suffered from incessant headache and obstinate constipation. When examination was made, a heart-shaped tumor was detected at the seat of pain, directly over the right kidney, which was perfectly movable and extremely tender to the touch. No decided diagnosis was made, but in consultation it was determined to open the abdomen, as recommended by Drs. Hanfield Jones and J. Marion Sims, in order to ascertain the nature of the tumor. An opening was therefore made in the abdomen in the middle line, to the extent of four inches, the umbilicus forming the centre of the incision, when it became evident at once that the tumor was a distended gall-bladder. After withdrawing some twelve ounces of a white, starchy-looking fluid, the gall-bladder was opened at the point of puncture, and a large, round gall-stone removed, weighing 4.2 grammes. On further search another of larger size was found, impacted at the entrance of the duct. This was difficult to seize, and was subsequently found adherent to the mucous surface. To remove the impacted stone without tearing the walls to which it was attached was accomplished by a very careful and protracted lithotrity, when the nucleus was discovered and removed. The cavity was then washed out thoroughly, and the wound in the gall-bladder stitched to the upper end of the wound in the abdominal wall by continuous sutures,

leaving the aperture in the bladder quite open. The abdominal opening was then closed in the usual way. The operation was performed with complete antiseptic precautions. The patient rallied subsequently, and continuing to improve, left the hospital in one month, free from pain and all her former symptoms.

Morphia and Chloroform in Producing and Maintaining Surgical Anæsthesia.—Dr. Alexander Crombie has contributed to the *Practitioner* for December, 1880, his experience at the Mistford Hospital, Dacca, Bengal, on the combined use of morphia and chloroform in producing and maintaining surgical anæsthesia. The expedient suggested by Claude Bernard had led the doctor to experiment on the human subject, and from his observations we have deduced the following: the advantages derived from the combination are, first, the prolongation of the anæsthetic effect of the chloroform, once it has been established; and second, the small quantity of chloroform required to keep it up afterward. The first advantage is most conspicuous in operations about the mouth and face. The prolongation of the anæsthesia originally induced in this way is often so great as to enable the surgeon to perform operations of the first magnitude without being interrupted by the necessity of recommencing the inhalation of chloroform on account of the patient returning to consciousness in the middle of it. Vomiting in some cases occurs very early and often before anæsthesia is complete, but in the later stages of an operation, or after removal to the ward, it is very rare indeed. Chloroform-asphyxia, says the doctor, has practically ceased to form part of his experience of the dangers of that anæsthetic. The preparation used is the common liquor morphiæ hydrochloratis freshly prepared. Twenty minims are injected into the cellular tissue of the upper part of the front of the abdomen immediately after the patient has become anæsthetized. The towel or napkin for the administration of chloroform is discarded for a metal cup with a perforated bottom, and with a piece cut out of the side for the reception of the nose. The chloroform is sprinkled on a piece of sponge which occupies the bottom of the cup. The whole fits loosely over the nose, mouth, and chin; so loosely that it is impossible for the most careless administrator to prevent the freest admission of air to the nostrils at each inspiration. As soon as there is complete anæsthesia, the condyle of the lower jaw is pushed forward out of the glenoid cavity on to the eminence in front. If this displacement of the lower jaw forward is properly carried out, there will not be the least stertor or other sound of impeded passage of air to and from the windpipe during the whole continuance of a long operation performed in a condition of the deepest insensibility. If, during the operation, there is the least noise in the breathing, we know that this traction on the root of the tongue is not being efficiently maintained, and a word of warning to the assistant charged with watching the anæsthesia suffices, by directing his attention to it, to restore that free and noiseless respiration, which must be insisted upon throughout operation. Of the other great risk of chloroform—paralysis of the heart—Dr. Crombie has had no experience either before or since he has adopted his present practice. The advantages of chloroform over ether in point of convenience, are so great, that only the admitted greater safety of the latter could have led to the present partial abandonment of chloroform as an anæsthetic in surgical practice. In India, where, ordinarily, they perform operations with a temperature of the air at, or a little below, the boiling-point of ether, they have had no choice.

A Form of Diabetes Associated with Disease of the Pancreas.—In 1877 M. Lancereaux read a note at the *Académie*, in which he demonstrated the existence of a form of diabetes mellitus, found in conjunction with pancreatic lesions. This, he claimed, constituted a special and distinctive variety of diabetes, characterized by a "*début brusque*," considerable emaciation, with polydipsia and polyphagia, by peculiar alvine evacuations, and especially by a very rapid evolution.

The study of Lancereaux has been made the basis of further investigations by M. Depierre, which have led to the discovery of new facts in this connection. Various kinds of pancreatic alterations may be regarded as leading to this kind of diabetes. They may be primary lesions, or they may be the secondary result of the presence of calculi, or else they may be caused by compression of the ducts due to neoplasms. In all such cases there appeared to be a complete abolition of the pancreatic function. This suppression of a digestive function is revealed by special symptoms, thus constituting a variety of diabetes (called by the author "emaciating diabetes") which differs greatly in its clinical aspects from ordinary polyuria. In the latter disease there is said to be, as a rule, an initial stage of obesity, or at least of apparent health, thus rendering the progress of the malady slow and insidious. In pancreatic diabetes, on the other hand, we notice along with the absence of embonpoint a quite sudden explosion of symptoms. These ordinarily consist of grave intestinal manifestations, vertigo, vomiting, and jaundice. True, these symptoms after a while disappear, but they leave the patients in a condition of profound debility. Soon the essential symptoms of the disease put in their appearance. Sometimes, indeed, they occur from the very beginning, without any previous indications of morbid changes. They are polydipsia, polyphagia, polyuria, and autophagia (the latter probably meaning tissue-waste and emaciation). This combination of symptoms is rapidly established, reaching an acme in a few weeks or months, and it is this very point which appears to afford pathognomonic indication of the existence of this variety of diabetes. The habitual presence of diarrhœa is also noted. Sugar is voided in great abundance with the urine. Pulmonary phthisis is also a frequent complication. Emaciation is rapid. In a few months the patients lose successively their physical, intellectual, and genital powers. Then complete prostration and profound marasmus set in, to which there is superadded hectic fever, with the symptoms of consumption. The average duration of the sickness is about twenty months, though it may end in half a year, or last even three years. Greasy or creamy stools may afford a clue to the establishment of the diagnosis of pancreatic diabetes, but it must be remembered that they occur also in other affections of that organ. Another point which must be considered is the deficient digestion of nitrogenized substances in atrophic conditions of the pancreas. Thus, pieces of undigested muscle found in the stools of patients, may awaken a suspicion of this disease. Besides the ordinary treatment of diabetes mellitus, the administration of pancreatine suggests itself as affording a possibility of artificially supplying the lacking aids to digestion.—*Journal de méd. et de Chir. prat.*, December, 1880.

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GEORGE F. SHRADY, A.M., M.D., Editor.

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SHALL WE CHANGE THE CODE OF ETHICS?

At the next meeting of the Medical Society of the State of New York, to be held the coming week, the recommendation of the Medical Society of the County of New York for a revision of the Code of Ethics will be presented. That the time has come for bringing to an issue the question as to the advisability of such a measure, is admitted, not only by the members of the county society in question, but by many members of the medical profession throughout the country.

The experience of the county society, during the past few years especially, has shown that many sections of the code are susceptible to such liberal construction as to be practically valueless as guides for conduct or as means of discipline. At present it seems to be impossible to draw a line between such as wilfully disobey the law and such as only innocently err. A code which is subject to such varied construction is oppressive only to such as conscientiously strive to follow its letter and spirit, while to others who are otherwise disposed, it is a cloak for unmanly conduct and hypocritical pretension.

The various committees on ethics of the New York County Society have proved time and again that it is almost impossible, under existing circumstances, to secure a conviction of some of the most flagrant offenders against even the letter of the code, simply because such offenders presume upon what they term their high positions in the profession. From what we can learn, this experience has been repeated by committees on ethics, not only of the minor societies, but of many of the larger ones, not omitting the very fountain-head of discipline, the American Medical Association itself. Hence, a belief has gained currency among the profession that the code, as at present constituted, is nothing more than a convenience for the strong, and little else than a means of discipline for the weak.

Any doubts regarding the truth of this statement can be set at rest by a perusal of the able report of the committee of the county society already referred to. The committee endeavored to call the attention of members to violations of the code regarding advertising. Almost without exception, the guilty parties began to make excuse. One prominent offender stated that the profession was safe in his hands, and that he should continue to do as he pleased. In the same connection is a letter from a medical gentleman withdrawing his membership from the society, on the ground that the code is not equal in its application to the larger and smaller men. He very properly does not believe that a man, merely because he may be a professor, has a right to advertise himself any more than a more obscure individual. The committee appear to be unable to reconcile the apparently opposite situations, and wisely ask the society for help in the matter.

We cannot be expected at this time to go into exhaustive detail as to other reasons for revision of our ethical laws. By so doing we would be repeating a very old story. We can only urge the necessity of revision on general considerations. Laws which cannot be respected and enforced are useless. The progress of civilization has made it necessary that laws be modified to suit the times. Many of the conditions that existed during the period when the laws were framed are so changed as to render many of the provisions virtually obsolete, and their enforcement ridiculous. This is due to the fact that the relations of the profession to the public have changed very much during the last few years. The people are better educated than formerly, and better appreciate their wants. The tendency of the age is toward liberality of thought and feeling. The medical profession cannot afford to stand aloof from these influences, and must not trammel itself with inconsistent rules of action, or absurd lines of conduct. Its culture and influence are sufficient to enable it to be thoroughly liberal on all matters relating to the health and welfare of the community. This being the case, the time appears to have arrived when the State Society can take intelligent action in revising its code. Its action in the premises will be viewed with great interest over the country. That body should feel the responsibility thrust upon it, and should be ready and willing to act promptly and efficiently. The matter should be referred to a committee composed of men of large experience, commanding influence, and unquestioned integrity. To such, the task of revision may become a simple affair. Their principal work would consist in pruning. The nearer the code can be made to accord with the golden rule the more perfect will it become. From this standpoint there is room for improvement in all directions, and a great deal can be said in very few words.

THE DOOM OF THE SPRAY.

It cannot be disputed that the results obtained under the Lister method of treating wounds have been at least equal to those secured with other surgical dressings. But while Listerism has led to improved surgical therapy, the intrinsic merits of the method are, perhaps, more than counterbalanced by certain imperfections and disadvantages which cling to its strict enforcement. Its spread and progress, at first slow and fitful, soon assumed astonishing dimensions. For a time opposing voices were drowned in the universal clamor asserting its vast superiority over all other known methods. When a surgeon failed to achieve a brilliant result, when the wound did not promptly and properly heal, the ever-ready excuse was that some precaution had been neglected, some antiseptic detail omitted, in fine, that carelessness or oversight on the part of the surgeon were alone responsible for the mishap.

Such unreasoning acquiescence in the details of a practice, which was based on largely theoretical deductions, was especially noticeable in Germany. There the complicated system became almost a universally accepted religion, and strict orthodoxy was henceforth demanded of its followers. More than this, some enthusiastic Listerites discovered additional details of treatment, so that in Germany, the paraphernalia of the new creed were reinforced by further antiseptic minutiæ. Some who worshipped at this newly erected altar even uttered the proud boast that Lister would soon have to visit Germany in order to study the complete modus operandi of perfected Listerism. Could the unfettered supremacy of such a dogma last? As a matter of fact it has not lasted.

In other countries, while due cognizance was taken of the new departure, the enthusiasm which it kindled in the mind medical lacked the intensity of German feeling. Nevertheless, England may also be said to have accepted the method (not its principles) as the dominant one. This was done rather reluctantly, but none the less universally.

In France, Listerism did not spread with epidemic contagiousness. The French mind, despite its tendency toward enthusiasm, paused before venturing to pronounce a definite conclusion. Nor has the new method won a universal acceptance from the calmly deliberating and practical American surgeon. That antiseptic practices possessed elements of importance, was admitted to have been proven by abundant testimony, and the conjoined experience of hospital and private treatment. But the spirit of impartial investigation was rife within us, and inquiries were directed toward the separation of essential measures from superfluous details. In a previous issue of the RECORD, our own position in the matter was fully explained, and the grounds set forth for an opinion then held. What was at that time expressed as a well-founded conviction, has not been weakened or modified since. On the contrary, it has gained strength from the additional experience of renewed observations and accurate statistics. We found at that time in perfect cleanliness, in complete rest, and in thorough drainage, more important adjuvants of successful wound-treatment, than in the continuously increasing paraphernalia of antiseptic Listerism so-called. Concerning the beneficial action of the spray we were especially sceptical.

It is with some feeling of justifiable gratification, therefore, that we have lately noticed a decided movement of opposition among the heretofore staunch advocates of Listerism. We refer, of course, to the German surgeons. This opposition is directed mainly against the use of the spray. With the roughness characteristic of Teuton energy, when once roused, the facts are demonstrated and conclusions drawn which tend to establish that the use of the spray is of doubtful utility, if not of positive harm.

Three principal articles have issued from the German medical press in very rapid succession, and while in every case the author's aim has been to show that the spray can and should be dispensed with, the ways in which this proof is established vary somewhat and deserve a brief notice. Trendelenburg (*Langenbeck's Archiv*, vol. xxiv.) and v. Bruns (*Berliner klin. Woch.*, No. 43, 1880) present irrefutable statistical data, showing that the spray is, to say the least, a surgical pleonasm when ordinary antiseptic precautions are observed; or perhaps we might say, when rigid cleanliness is enforced. Since the spring of 1879, v. Bruns alone performed one hundred and forty-four severe operations, among the number of which there were sixty-two amputations and twenty-six articular exsections. In not a single instance did a fatal termination mar the gratifying excellency of his surgical successes. The record of Trendelenburg is similarly brilliant. In no case was the spray employed. Certainly its use could not have improved the results, but we may question whether it would not have made them worse.

Mikulicz (*Langenbeck's Archiv*, vol. xxv.) has gone a step farther. Starting with the fact that the alleged germicidal action of the spray must be the result either of chemical or mechanical action, he first shows that, as regards the former, careful irrigation is a better, safer, and more efficient procedure. Then, by direct experimentation, he proves that particles of dust, germs, etc., suspended in the air, are caught in the current of the spray and precipitated in vast numbers upon the exposed surfaces. Such argumentation speaks for itself. Hence, to borrow the title of v. Bruns' article: "Away with the spray!" If, then, the purifying power of the spray becomes a mere untenable assertion, the one essential feature of his method, which has been em-

phasized and insisted upon above all others by Lister and the Listerites, falls to the ground, and with it the principles upon which it is based. Antiseptic surgery, however, will stand the test of time, because antiseptic surgery is but a convenient expression, to denote what we have always regarded the essential factors of successful wound-treatmeut, viz., a scrupulous cleanliness, complete rest, and thorough drainage.

STATE AND NATIONAL MEDICAL LEGISLATION DURING THE SEASON.

TWENTY-FIVE state legislatures began their regular sessions during the present month. As there are a number of measures in medical legislation which ought to be carried out this winter, it behooves the profession not to forget that the opportunities are before them now.

We have already referred to the matters that are likely to come before the legislature at Albany; but measures of much more importance are to be urged in the legislatures of other states.

At the annual meetings of many of the state medical societies, last spring, resolutions were passed and committees appointed looking to the securing of laws creating state health boards or regulating the practice of medicine, and we may expect that in a number of states there will be great efforts to secure the legislation desired.

A specially strong movement is on foot to obtain a law regulating the practice of medicine in Pennsylvania. The medical press of the state has urged the measure, and it will not be creditable to the energy or influence of the profession there if they do not succeed. Bills to secure a similar object were introduced into the legislatures of Massachusetts, Iowa, and Maryland last winter, but they failed. Attempts were also made to improve the medical registration law in Kansas, which is now worse than none at all. These attempts are to be renewed. If the recommendations of state medical societies is any index of what may be expected in legislation, there are a large number of other states where laws, medical and sanitary, will be advocated. The success, up to the present time, of the New York registration law will encourage efforts to extend its application.

In Congress some results of interest to pathology may be expected, if a national cattle commission is created. The appointment of such a commission has been recommended by the Secretary of the Treasury and by a national convention of live-stock owners. It is opposed only, as far as we can learn, by the Commissioner of Agriculture, who believes that his department is competent to take charge of the matter. This commissioner has shown much energy in encouraging the cultivation of sorghum; but the work of his veterinary experts, though praised as better than none, has been crude in character, and, to those most interested, very unsatisfactory. We venture to side with the Secretary of the Treasury and of the *National Live-Stock Journal* in the opinion that a cattle commission ought to be established.

The National Board of Health has, on the whole, justified its existence, and ought to be continued with its present powers. It costs, we believe, somewhat over $100,000 annually. It would gratify that very large part of the profession which is reminded of the board's beneficent existence only by its *Bulletin*, if the pages of that immortal weekly were enlivened with matter of greater sanitary interest and scientific value. With an income of $100,000 something better might be published than the condition of the subsoil in obscure southern districts, or the mortality rate on the North African coast.

A measure that greatly deserves the attention of Congress is that of putting the Marine Hospital Service on a thoroughly non-political basis. A bill for securing this object, by obliging the officers to be appointed by the President and confirmed by the Senate, was introduced and favorably reported upon at the last session of Congress. The bill was not reached in the regular order, however. The Marine Hospital Service does much more medical work than is performed in either the army or navy, and its officers, as professional men, deserve the security and position which a commission would give them. The bill has been so widely indorsed by the medical profession, and is so manifestly just, that we cannot doubt its ultimate passage.

ANOTHER REPORT ON THE ADULTERATIONS OF FOOD.

UNDER instructions from the National Board of Health, Dr. Charles Smart recently undertook an investigation to determine the prevalence of adulteration in food. The results of his work have appeared in a supplement to the *Bulletin of the National Board of Health*. The substances which he examined were tea, coffee, sugar and syrups, flour and bread, cream of tartar and baking-powders, confectionery and spices. Seven hundred and thirteen samples were examined. Of these, three hundred and four were from reliable and four hundred and nine from suspicious sources. Of the former number 7.89 per cent. were adulterated; of the latter number 44.74 per cent. These percentages, however, indicate little, because most of the adulterations were in ground spices, while the more important food-products were quite pure. The investigator states that with such exceptions as alum in bread and baking-materials, sulphate of lime in baking-powder, the debasement of milk by dilution, and the poisonous pigments used in confectionery, the adulterations cannot be considered deleterious. They affect the pocket of the individual rather than his health. If repressive laws are to be enacted, therefore, they must be ad-

vocated, we are told, on commercial and ethical rather than on sanitary grounds.

These conclusions of Dr. Smart are very much like those of other investigators in the same line. The report, indeed, though it shows much industry and judgment, is a somewhat commonplace one. In the investigation of teas and coffees, for example, the same old method of buying samples, examining, analyzing and reporting percentages, is adhered to. A few hours spent among the establishments of New York brokers would astonish the learned gentlemen who make the annual adulteration reports to health boards. The raising low grade teas and coffees to higher grades is a large industry both in this and other cities. An investigation which would show whether the various dyes, clays, bleachings, sweatings, etc., which teas and coffees get during their evolution from low-priced to high-priced articles, might be of some sanitary value as well as scientific interest. The author of the report before us, however, states that he did all that was possible in the time allotted to him; he cannot, therefore, be blamed for deficiencies. This is the third report from the National Board of Health, which has only ordinary, or less than ordinary, merits. It would be well for an organization that stands so prominently before the public to see that its special investigations, if made at all, be more worthy of the body that authorizes them.

Reviews and Notices of Books.

Medical Diagnosis, with Special Reference to Practical Medicine: a Guide to the Knowledge and Discrimination of Diseases. By J. M. Da Costa, Prof. Pract. Med., Jefferson Medical College, etc., etc. Fifth edition, revised. Philadelphia: J. B. Lippincott & Co. 8vo, pp. 924.

The fifth edition of this work shows, by the careful revision it has received, that its author has been fully alive to his responsibilities, and has spared no pains to keep up the work to its former high standard. Many chapters have been virtually re cast, and some have been almost re-written, particularly those on the blood and nervous system. The general plan of the work is the same. The salient points of a disease and their dependence upon modifying conditions are studied in a manner to help the practitioner to understand the principles upon which diagnosis is founded, and to apply these principles to the requirements of individual cases. The work may now be considered to comprise the entire field of medical diagnosis, and to give the results of the rare and ripe experience of an accomplished medical scholar.

Account-Books for Physicians. U. L. Hitchcock (51 West Twenty-ninth Street, New York).

Mr. Hitchcock has published, on a somewhat novel plan, a set of account-books for physicians. The day-book is divided into twelve separate parts representing the respective months. Each part is suitably ruled horizontally with double daily lines for the credit and debit account of each patient, and a corresponding account of respective totals is footed up at the end of each month for each patient. These little books are mere pocket-sized pamphlets with stiff cover, and can be conveniently carried in the smallest possible compass. With this set is an office journal of large size, which is for the office table. Its general plan of arrangement is the same as that of the day-book. At the end of each month the accounts are posted in the ledger, double horizontal lines being allowed for the credit and debit accounts of each patient. Blanks are left for balancing at the end of each quarter, and the account of each patient from quarter to quarter throughout the year can be told at a glance. Altogether the set is very simply systematised, and will serve a useful purpose to every physician who desires to be his own bookkeeper. They are so arranged as to last a physician in ordinary practice for six or eight years—a very commendable feature in books of this sort.

A Treatise on Diphtheria. By A. Jacobi, M.D. New York: Wm. Wood & Co., 27 Great Jones Street. 1880.

This compact and readable little volume appears to contain about all that we need to know just now on the literature of diphtheria, and it is certainly gratifying to find that out of this confusing mass of conflicting statements and opinions some important items of progress can be hammered out.

For the last twenty years or more the author has been an active contributor to the subject of diphtheria, and no one certainly is so well provided with the information and acumen necessary for giving us a judicial survey of the field as it stands at present. Accordingly, we turn with pleasure to his brief but decisive statements on the topics which have occasioned so much controversy. Are "croup" and diphtheria identical? he disposes of in the affirmative, by showing that the alleged points of difference rest upon so slender a foundation, clinically, that one could not safely base a diagnosis upon them, while the pathological findings are precisely the same. The microphytic theory of the disease, as propounded by Oertel and others of the German school, is simply not sustained by recent investigations, so that the verdict of "not proven" forces them either to offer better arguments or withdraw the theory altogether. The author evidently inclines to the idea that diphtheria is a disease of local origin with secondary septic manifestations, and in support of this view he adduces the facts: first, that treatment addressed to the site of the lesion on the mucous membranes is calculated to abort the disease; and second, that experiments on inoculated animals indicate that the results are similar to those produced by the inoculation of any organic matter. Again, fibrinous exudation can be produced by any local irritant of the mucous membranes capable of producing intense inflammation, and it may be diphtheritic membrane, ammonia, cantharides, or other substances. The inoculated disease in rabbits, according to Wood and Formad, Curtis and Satterthwaite, produces either an acute septic disease, or a more chronic tubercular, with little or no tendency to exudation in the respiratory tract. We would suggest at this point the desirability of prosecuting further experiments on dogs rather than on rabbits. The former have the idiopathic disease; it may be a question whether the latter are ever so affected. In this connection it is interesting to observe that the author

cites quite a number of instances in which the disease has prevailed among cattle, and alludes to the possibility of its being communicated from cows having "mammitis" or caked bag (garget), as claimed by Power, of London.

Dirt and filth, according to the author, are not causes of diphtheria, but active factors in its production. They are the "breeding-places," and as such should be guarded against, because lending vitality and force to the contagious principle. In treatment, alcoholics are important, and the patient may take from two to twelve ounces daily, according to circumstances. Chlorate of potassa is dangerous, and its indiscriminate use has led to attacks of nephritis as indicated by the appearance of albumen and hyaline casts in the urine. Chloride of iron is warmly recommended, and a child one year old should take a drachm a day, in divided doses at frequent intervals Local treatment, however, is of the first importance. Laryngeal diphtheria is fatal in almost all cases unless tracheotomy is performed, though then the mortality ranges from about 90 per cent. to 40 per cent. When the epidemic has a septic character the average mortality of such cases is greatest. The poison of the disease cannot be neutralized by antiseptics taken internally. An amount necessary to overcome the poison would certainly be fatal to the unhappy subject.

THE DESCRIPTIVE ATLAS OF ANATOMY. Containing five hundred and fifty figures. Phila.: J. B. Lippincott. London: Smith, Elder & Co. 1880.

THIS is an atlas of somewhat imposing appearance, and contains ninety-two royal quarto plates with five hundred and fifty figures. It is without any descriptive text, and has no author's name upon the title-page. The object of the work, as stated in the preface, is to afford the student an opportunity of seeing at a glance the arrangement and relation of the different organs, the names of the latter being printed upon the same. The figures themselves are correct in drawing, but are evidently very old or else badly printed, presenting a heavy, blurred look, which is far from artistic or inviting. In many instances the names of the organs on different parts of the figures are so indistinct as to be unintelligible. Altogether, we think the work falls far short of the intentions of the publishers.

LECTURES ON THE SURGICAL DISORDERS OF THE URINARY ORGANS. By REGINALD HARRISON, F.R.C.S. Second edition. London: J. & A. Churchill. 1880. 8vo, pp. 394.

THE present edition of Mr. Harrison's work has been considerably enlarged as compared with the former edition, and contains a proportionate amount of valuable material bearing upon the treatment of genito-urinary disorders. Compared with the former edition, it embraces a larger field, and hence has a more extended area of application to the wants of the practical surgeon. The arrangement into lectures gives the author a latitude for expression and an ease of style which he uses to the best advantage in presenting each subject in a very plain and very practical light. The subject of stricture in all its forms is admirably set forth, the diagnosis of different forms is clearly made, the treatment suited to each intelligently given and illustrated by many interesting cases. The same may, in a general way, be said of the author's remarks on retention, suppression, lithotomy, lithotrity, and litholapaxy. The lecture on surgery of the kidney will particularly repay perusal. Tumors and ulcerations of the bladder are treated respectively in the twenty-seventh and twenty-eighth lectures, while treatment of the deformities of the penis and of varicocele close the volume.

Altogether it is a very readable, practical, and instructive work upon this branch of surgery, and cannot fail to be of great value to every one called upon to treat diseases of the genito-urinary organs. The book is in keeping with Churchill's publications in being elegantly printed.

PHOTOGRAPHIC ILLUSTRATIONS OF CUTANEOUS SYPHILIS. Forty-eight plates from life. By GEO. HENRY FOX, A.M., M.D. New York: E. B. Treat. 1880. Parts 1, 2, and 3.

This work, which will consist of twelve parts, may be considered as a continuation of the photographic illustrations of non-syphilitic eruptions lately completed by the author. It is intended to make in the present series a complete set of representations of the characteristic skin-lesions of syphilis, and accompany the same with explanatory text. The first three numbers of the work are before us. They are printed on fine paper, royal quarto size, and each number contains four beautifully executed hand-colored photographs of some of the varieties of syphiloderma, principally from the erythematous and papular groups. Each illustration is sharply defined, carefully colored, and represents the leading features of the respective forms. The descriptive text is practical in character, presenting chiefly those points bearing more particularly on diagnosis and treatment. If the work continues as it has commenced, it will be invaluable to every practising physician, but more especially to such as are deprived of clinical advantages.

TRANSACTIONS OF THE AMERICAN MEDICAL ASSOCIATION. Vol. xxxi. Philadelphia. 1880. 8vo, pp. 1,153.

THIS volume, larger than usual in size, contains the proceedings of the meeting of the association held in New York last June. The papers published, of which there is a large number, comprise every department in medicine or surgery, and give the volume a varied, if not always an interesting feature. It is impossible to review the volume in detail, as space will not permit; but, viewed as a whole, the published transactions can hardly be claimed to represent the recent progress in American medicine, or be considered as the exponent of the advanced thought of our pioneer workers. We do not remark thus for the purpose of detracting from the value of many excellent and practical papers to be found in this work, but rather as a general criticism applicable to the doings of the association, more especially during its recent meeting. It is not fair to blame the Committee of Publication for any shortcomings as regards the general make-up of the volume, as they are, as a rule, very discreet when they are allowed to exercise their judgment. But in the vast majority of cases the association, or its sections, deliberately order the papers published in full, without knowing their value, and thus swell the transactions to an unwieldy bulk, while not adding an iota to their value. There is altogether too much wholesale ordering for publication of papers, which must be stopped if the transactions would be made what they ought to be.

Then, again, there is too much lack of system in the presentation of papers at the different sections, and too little regard paid to the real value of said

papers. The consequence is that much worthless material appears upon the minutes, and many really trashy papers actually find their way into the yearly volume. The present volume suffers considerably on these accounts, but it has enough of good about it to save its place upon the shelves of the working practitioner, and be consulted by him with profit. It is published in the usual style and contains the usual appendix, in which is the code of ethics, list of members, plan of organization, etc.

Ringworm: its Diagnosis and Treatment. By Alder Smith, M.B., Lond. Philadelphia: Presley Blakiston, 1881.

Dr. Smith devotes the most of the space in this very complete monograph to a discussion of the treatment of ringworm. In recent stages the use of some vesicant, or of carbolic glycerine, is recommended; later in the disease oleate of mercury, or the artificial production of kerion by use of croton-oil, has to be resorted to. The author's experience makes his recommendations authoritative, and his book must be considered a very useful contribution to dermatology.

Rocky Mountain Health-Resorts. An Analytical Study of High Altitudes in Relation to the Arrest of Chronic Pulmonary Disease. By Charles Denison, A.M., M.D. Second edition. Boston: Houghton, Mifflin & Co. 1881.

Dr. Denison's work on the Rocky Mountain Health-Resorts was the first attempt to make any thorough scientific study of the therapeutic effects of high altitude in this country. The work was fairly well done, and it deserves the popularity it has gained.

In its first edition, however, it was deficient in scientific and clinical data, and was far from settling satisfactorily the real therapeutical value of the Colorado climate. There are no additions or changes in the present edition.

Yellow Fever. Its Ship-Origin and Prevention. By Robert B. S. Hargis, M.D. Philadelphia: D. G. Brinton, M.D. 1880.

We have in this monograph a forcible presentation of the view that yellow fever is a nautical disease—a view that has now some very strong supporters.

Drainage for Health, or Easy Lessons in Sanitary Science. By Joseph Wilson, M.D. Philadelphia: Presley Blakiston. 1881.

Dr. Wilson presents the subject of drainage in as pleasant a manner as possible, and his book will no doubt prove a useful one, especially to the non-medical public.

On the Construction, Organization, and General Arrangements of Hospitals for the Insane, with some Remarks on Insanity and its Treatment. By Thomas S. Kirkbride, M.D., LL.D. Second edition, with revisions, additions, and new illustrations. Philadelphia: J. B. Lippincott & Co. 1880.

This work, now in its second edition, has established itself as high authority on the subject which it discusses. The principles in hospital organization and construction which it recommends, are, for the most part, based on the recommendations of the American Association of Insane Asylum Superintendents, and they partake of the conservatism of that body. The matter of the book in general consists of that which a hospital superintendent needs to know, and should be capable of writing upon. There is little that indicates any special medical knowledge. Indeed, Dr. Kirkbride rather scoffs at medical accomplishments in an insane asylum superintendent.

The illustrations and general typographical appearance of the book are very superior. The book must be quite essential to all engaged in constructing, organizing, or conducting insane asylums.

On the Use of the Cold Pack, Followed by Massage in the Treatment of Anæmia. By Mary Putnam-Jacobi, M.D., and Victoria A. White, M.D. New York: J. P. Putnam's Sons. 1880.

Whatever be the practical merits of the mode of treatment described in this book, the manner in which the subject has been worked up by its authors cannot but excite admiration. A careful study of symptoms, a laborious investigation into the physiological changes that took place in the patients under treatment, and an exhaustive discussion of the meaning of these changes, are the features of the book. It is, in spirit at least, a model of the style in which a problem in physiological therapeutics should be studied. At the same time there is a good deal in the way in which the subject is presented that will arouse the reader's impatience. There is a lack of clearness and directness in the discussion of the problem. The author has the tangential habit, and lacks the faculty, of keeping the argument strongly before the reader. Side-issues are, in the form of suggestions, contingent possibilities, exceptions, and reservations, crowded into the foreground. We do not say that the author is obscure in any of her details, but the monograph as a whole has the fault that at the end it leaves the reader in great doubt as to the exact line of thought he has been following, so many different lines have been brought in. The author pauses to observe that intestinal atony may affect the (hypothetical) peristalsis in the muscular fibres surrounding the (undemonstrated) canals in the villi, thus diminishing absorption. This is almost the pedantry of science.

Again, we find the writer (who is Dr. Jacobi) involved in a discussion of what causes the increased secretion of urine after the pack. This is attributed in part to the consumption of carbo-hydrates and fat. Considering the fact that the bodily weight increases, and the total daily amount of urine is not affected under the pack, while the variation in excretion of carbonic acid was not measured, such an hypothesis is only, by an intrusive speculation, a kind of thing which pervades the book too much for a therapeutical treatise. We regret, with the author, that that particular instrument of precision, the hæmitometer, which would have been most useful in a scientific study of anæmia, was not employed.

In a final summary we are told that the cold pack meets the following indications in the treatment of anæmia: 1, it first stimulates the peripheric nerves; 2, it causes an oscillation of the blood, first from without inward, and then the reverse; 3, the radial pulse is slackened and the tension lowered.

A large number of other physiological changes are brought about, and conclusions regarding them are presented; but the great indication in anæmia, an increase in the hæmoglobin, is only inferentially established. There are, however, a number of clinical histories given which show that the method is capable of producing excellent results.

Our criticisms regarding this work would lose much of their weight if its title were "the physiological effects of the cold pack and massage;" for the book is a physiological monograph essentially,

and as such, in spite of a tortuous style, it cannot receive too high praise. Few readers can fail to be instructed and interested by its rich display of physiological and therapeutical knowledge, as well as by the full acquaintance with the methods of scientific research which it shows. It is by studies like the present one that scientific medicine is to be advanced; and we can only regret that American medical literature contains so few of them.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, December 22, 1880.

DR. T. E. SATTERTHWAITE, PRESIDENT, IN THE CHAIR.

CANCER OF THE BREAST—ABSENCE OF LOCAL DISSEMINATION—SECONDARY DEPOSITS IN THE LUNGS, PLEURÆ, LIVER, AND INTESTINES.

DR. E. C. WENDT presented a specimen of the above with the following history: Mrs. J. B——, aged forty years, admitted to the St. Francis' Hospital November 19, 1880, in the service of Dr. Howe. The patient's previous history and clinical record were devoid of special interest or importance. About three years ago the left breast was invaded by a cancerous neoplasm, which began to ulcerate last April and was removed piecemeal by an irregular practitioner. She developed symptoms of metastatic deposits in the internal organs, and died of exhaustion on the 20th of December.

At the autopsy the site of the mammary tumor appeared as a flat, open surface, without distinct ulceration. At the periphery of this rounded spot recurrent nodules were seen. The clavicular, axillary, and cervical lymphatic glands were found unaltered. The costal and parietal pleuræ showed numerous hard deposits of various sizes. On the left side, however, the portion of the pleura immediately beneath the former tumor was quite free from these nodules, and this immunity from disease extended for some distance beyond the boundaries of the mamma, leaving a large smooth surface. A similar area, with absence of secondary nodules, was not elsewhere found. The lungs contained numerous carcinomatous nodules, but they were found in much greater abundance on the right side, the mammary tumor having been on the left.

The liver showed many tumors, and its left lobe was unusually enlarged by a hard, cancerous mass.

In the other organs marked changes were not discovered, except in the omentum, mesentery, and serous coats of the intestines, which were sprinkled over with small cancerous granules.

Mammary cancer usually progressed by peripheral invasion of adjacent tissues and extension along the lymphatics or blood-vascular sheaths. In the present instance it appeared that a more circuitous route had been chosen. Local infection was the rule, but in this case it seemed to be entirely absent, except in the skin around the place occupied by the tumor. The absence of glandular contamination in the vicinity of the tumor, together with the fact that widespread and large metastatic deposits were encountered elsewhere, made this case an interesting and exceptional one.

CIRCUMSCRIBED EMPYEMA—GANGRENE OF THE LUNG.

G. D——, aged twenty-seven years, Ireland, clerk, was admitted into the Presbyterian Hospital, under the service of Dr. Alexander Hadden, December 6, 1880. The patient, though denying syphilis, had been intemperate and an inmate of an inebriate asylum, which he left in order to enter the hospital. Six months previously he was attacked with an obstinate diarrhœa, which lasted two months. Previous to the present attack had never had any pulmonary trouble. Three days before admission he was taken with nausea and vomiting, but there was no rigors, though the temperature subsequently rose, and there was excessive prostration. After twelve hours, severe dyspnœa set in, with lancinating pain in the right axillary line. Cough was accompanied by expectoration, which was muco-purulent for twelve days, and subsequently bloody.

On admission, his temperature (axillary) was 101.3° F.; pulse, 120; respiration, 48. During the subsequent illness the temperature-curve presented great variations, falling on three occasions nearly to the normal. Respirations, however, never fell below 32. Dyspnœa at this time was great, and the pain in right side was increased by coughing and a full inspiration; voice very feeble; normal resonance over left lung, anteriorly and posteriorly; slightly exaggerated resonance over the whole anterior surface of the right lung; dulness, amounting nearly to flatness, below the fourth rib posteriorly, and below the third rib in the axillary line, with absence of voice and breathing-sounds. Under the use of dry cups, febrifuges, and sedatives, the dyspnœa abated somewhat, and the cough was less annoying, and on the day following (December 7th) there was also less pain. The expectoration now became very profuse, and had a prune-juice color. No permanent amelioration of the symptoms was effected, however, and on December 11th, the sixth day of treatment in the hospital, he had fallen into a typhoid state. There was muttery delirium, involuntary passage of urine and fæces, with sordes upon the gums, and a brown tongue. On the 16th, four different attempts were made to draw off some of the fluid from the pleural cavity, but they all failed. The patient died on the 18th, at 3.30 P.M.

At necropsy, twenty-one hours after death: rigor mortis well marked; body well nourished. *Thoracic cavity:* one drachm of fluid in pericardial sac. Heart-substance and valves normal; weight, nine ounces. On examining the right pleural sac a circumscribed collection of matter was found walled in by a thick layer of plastic material. The superior limit of the cavity corresponded to a line drawn obliquely from the seventh rib in the median line to the angle of the fifth, the lower limit being the diaphragm. Over the second, third, and fourth ribs, just interior to their angles, there was a large circular ulcerated spot involving the pleura, but not the underlying tissues. It measured two inches in diameter. From the purulent collection a sinus led into two gangrenous cavities located in the lower lobe of the lung. There was no continuity between the process in the pleura and that in the lungs, and the latter appeared to be produced mechanically by a bursting of the pus through its wall, thus seeking an exit by the respiratory passages. The lower lobe of the right lung was consolidated, "hepatized." Microscopical examination of the most consolidated portion around the gangrenous cavities showed the vessels to be distended with blood, the air-vessels filled with cellular

elements, and the interstitial tissue deeply pigmented, apparently with carbon pustules. The left lung was normal. *Abdominal cavity: spleen* normal in appearance; weight, five ounces. *Kidneys* weighed, right, five and a half ounces; left, six ounces; capsule thin and slightly adherent. Both were congested, the right more than the left. Cortical substance fatty, especially the right. On microscopical examination, a slight increase in the interstitial tissue was detected with fatty degeneration of the epithelia. *Liver:* weight, fifty-eight ounces; a little fatty. *Brain:* vessels of the meninges filled with blood; dura mater, at convexity, adherent; brain-substance pale.

In answer to a question from Dr. Satterthwaite, Dr. Porter stated that the pneumonia was of the croupous variety.

AMORPHOUS DEPOSITS IN AMNIOTIC SEPTUM.

Dr. Partridge presented a specimen of the secundines of a twin pregnancy, and called attention to several amorphous deposits in the amniotic septum. These deposits averaged three-quarters of an inch in diameter, and were from an eighth to a quarter of an inch in thickness. They were examined microscopically by Dr. Peabody, who pronounced them to be the remains of a recent clot. The question of interest was how a clot could have found its way in that locality. During the third month of gestation the patient was threatened with a miscarriage, and it might have been during that period the effusion occurred. Some of the deposits were situated quite a distance from the edge of the septum, were apparently isolated, and contained a considerable amount of coloring matter.

Dr. Partridge presented a second specimen which consisted of the products of gestation at the period of eight weeks. It showed the reflection of the amnion upon the umbilical cord; also the remains of the umbilical vesicle, and the commencement of the formation of casts of intestine.

DISSECTING ANEURISM.

Dr. Peabody exhibited the upper part of the femoral artery removed from a patient whose thigh had been amputated in consequence of a railroad injury. The lower third of the thigh was severely crushed, and a false aneurism resulted necessitating removal of the limb on the second day after the injury. The internal and middle coats of the artery were ruptured in one situation, and the external coat in another, causing a dissecting and diffused aneurism in the neighborhood of the injury.

CURIOUS DEFORMITY AFTER COMPOUND FRACTURE OF LEG.

Dr. Peabody also presented a specimen of curious deformity after a compound fracture of the leg. The patient was an engineer who fell from the elevated railroad with his engine, striking upon the pavement. The tibia and fibula were broken in several places, and the soft parts were extensively injured. The patient did not come under observation until a considerable time after the accident. It was then impossible, on account of the condition of the soft parts, to attempt to bring the bones in position. The result was a striking deformity caused by the faulty union of the fragments. Amputation was performed ten months after the accident.

On dissection of the limb the tibia was found to have been broken in three places, and the middle fragment was united at right angles with the other two. The fibula, also broken in three places, was united by its upper and lower fragments, while the middle fragment was joined by its lower extremity to the side of the lower fragment, and by its upper extremity to the middle fragment of the tibia. The leg was shortened about six inches.

The society then went into Executive Session.

NEW YORK NEUROLOGICAL SOCIETY.

Stated Meeting, January 4, 1881.

Dr. T. A. McBride, President, in the Chair.

A case was presented by Dr. W. J. Morton, showing the effect of

MAGNETS IN THE TREATMENT OF HEMIPLEGIA.

The patient, a woman aged twenty-two years, had had an attack of cerebral hemorrhage two years before. This had left her with greatly impaired motion and an almost complete loss of sensibility on the left side. The left arm and hand had become flexed and capable of but little motion. The toes dragged in walking and she could not put the heel on the ground. One magnet was applied on the leg over the stocking, and another on the upper arm. They were kept on for about an hour, the treatment not being repeated. The patient speedily felt a return of sensibility, and in a short time it was almost completely restored. Motion was not affected by the magnets, but was improved by the use of electricity.

The paper of the evening was then read by Dr. W. J. Morton, the title being

THE TOWN OF GHEEL, BELGIUM, AND ITS INSANE.

The town of Gheel, according to tradition, became a resort for the insane so early as the seventh century. The patients first came in order to worship at the shrine of St. Dymphna, which had acquired high reputation for its cures. As the fame of the town grew, the insane flocked to it in greater numbers, and the inhabitants gradually adopted the custom of taking into their houses and homes the afflicted persons who came to pray for cure at the sacred shrine. Definite knowledge of Gheel, as a home for the insane, dates from the twelfth century. Since that time its reputation has never waned, and in the past century has steadily increased.

Gheel is a commune in Belgium, numbering about 12,000 inhabitants, who are a mixture of Germans and Gauls. It has no special industry, but the population is principally occupied in agriculture, domestic lace-making, and caring for the insane. They are frugal and industrious, and the general spirit of the town is peaceful and calm, without being exactly behind the age. Most of the population is centred in a town, about which hamlets are scattered the distance of about a mile. Among the 12,000 inhabitants there are about 2,000 domiciles, of which nearly 1,000 receive insane patients. All classes of the insane are received at Gheel, except such as require continual restraint, and those who are suicidal, homicidal, or incendiary. The insane population numbers now about 1,600, and is steadily increasing. At the beginning of the century it was 400; in 1868 it was 1,035; in 1876, 1,383.

Of this insane population seven-eighths are Belgians, and the rest Hollanders, Germans, French, and English. About 200 are paying patients; the rest are paupers.

The Gheel insane had no regular medical service

until the year 1851, when the Gheel system was thoroughly reorganized, and placed under government control.

THE ADMINISTRATION.

of all the affairs of the insane now rests in the hands of a "superior commission," composed of: 1, the governor of the province, or his delegate; 2, of the attorney-general; 3, of the judge of the canton; 4, of a physician appointed by the government; 5, of the burgomaster of the commune; and 6, of five members nominated annually by the minister of justice. This commission has a salaried secretary, who has very important duties. He makes the reports, conducts the correspondence, has charge of moneys and the books, and is steward of the central infirmary. Any outside towns or asylums having twenty-five or more patients at Gheel may be represented by a delegate. The medical inspector also has a consulting voice. The real working part of the commission is made up of the five appointed members mentioned last. These meet once a week, receive reports, disburse money, distribute the patients, and see that the laws and regulations regarding the care of the insane are carried out.

NOURRICIERS AND HOSTS.

Those families which are willing to receive patients must be duly registered, and must have shown evidences of good moral character and ability to provide proper accommodations and food for their insane charges. The families that receive paying patients are called hosts; those that receive paupers are called "nourriciers," or nurses. No family takes more than two patients. Great care is taken to see that these patients are put in surroundings as much like those they were previously accustomed to as possible. A great many precautions are taken to see that the patient is not overworked, and is well cared for in every way. Thus there are four "section guards," who patrol the special districts assigned them, and make daily reports to the medical inspector.

THE MEDICAL SERVICE

is under the charge of a medical inspector, Dr. Peeters, aided by three physicians, who have charge of the three separate sections into which the town is divided. Each section physician visits the curable patients at least once a week, and the incurables once a month, their visits being registered in a book. He makes a monthly report to the medical inspector, who in turn reports to the superior commission. The medical inspector makes visits whenever asked, and must, in any event, visit every patient at least three times a year.

THE INFIRMARY

resembles in its main features the ordinary closed asylum. Its purpose is to afford the usual hospital treatment to patients attacked with incidental diseases; to care for the very infirm, and to take a brief charge of cases that suddenly develop a condition of excitement which requires for short periods continuous and special watchfulness and restraint. The patient's stay in the building is expected to be temporary. The business management is under the direction of a steward, the secretary of the commission. The medical duties are entirely distinct from the executive, and are performed by the medical inspector. There were, at the time of Dr. Morton's visit, thirty-seven patients in the building out of an insane population of 1,603. No mechanical restraint was employed.

THE INSANE IN THEIR HOMES.

The liberty which patients apparently have in their homes is really hedged in by carefully considered restrictions, and by systematic care and watchful restrictions. Not only is each patient cared for by his own particular village guardian, but the whole community co-operatively act as voluntary guardians In a place where nothing is concealed, abuses are not likely to thrive. Public opinion and open dealing are the patient's safeguards. And to this traditional relation between villager and patient must be added the surveillance of regularly appointed officers. The speaker believed that the assertions of Dr. A. M. Shew, in his pamphlet on Gheel, that there was an absence of medical care and an almost unlimited opportunity for the abuse of patients, were entirely incorrect. Abuse was in reality impossible, and the medical care was very skilfully directed. The insane are classified into the "dirty," the "half-dirty," and the "clean." For the first class is paid about nineteen cents a day; for the second, eighteen cents; and for the third, sixteen cents.

About four-fifths of this money goes to the villager; the rest is for medicines and medical attendance. These rates are lower than at any other establishment in Belgium.

The speaker described an inspection which he made of a large number of houses, with especial view to seeing the quarters provided for the patients. These he in every case found to be clean, well ventilated, and supplied with a good bed. The statement of Dr. Shew, that the patients were in many cases stowed away in garrets, lofts, and out-of-the-way nooks and corners, was not corroborated by the speaker's observations. A little book is kept by the nurse or host, in which is a record of the patient's history and of the visits paid by the doctor.

Dr. Morton related several cases taken from the records of Dr. Peeters, showing the good effects of the Gheel system upon insane patients brought to the colony.

The number of escapes range from seven to twelve annually. The villager in charge is responsible for his patients, and has to pay for the expense of capture. Patients who escape are quickly captured and returned.

Acts of violence are comparatively rare. Only three instances are known. One of these was a homicide committed in 1840. The other two were acts of personal violence, not resulting seriously. Three suicides have occurred since 1875. Offences against morality are almost unknown.

THE HAMLETS.

In the suburbs of the central town, in every direction, there are groups of farmer's houses. Here a good many of the insane are also domiciled. These houses are not as well kept as those in town, but they make comfortable and healthy houses. The peasants themselves are fine specimens of physical health. Dr. Morton did not agree with Dr. Shew that the houses were damp, and the peasants overworked and under-fed. Everything showed care and kindness on the part of the peasant attendants. To look after their charges seemed to be a settled part of their daily lives.

It is difficult to get a fair estimate of the per cent. of cures at Gheel, for the proportion of incurables is very large. Thus, of 313 patients admitted in 1879,

seventy-three were received from other asylums, and all but two were absolute incurables. Reckoning, however, upon the admissions from 1853 to 1870, the per cent. of cures was 24. On the other hand, the proportion, based upon the probably acute cases admitted, was from 79 to 89 per cent.

THE "GHEEL IDEA."

The main characteristics of the Gheel system are its comparative freedom, occupation, and the family life. Gheel is probably an ideal which can never be repeated by any other nation, for the simple reason that there is but one village of Gheel removed from the world's traffic and turmoil, where the inhabitants, by reason of centuries of inheritance, have learned a patience sublime in its simplicity, a tact in management born of affectionate regard for their charges, and an absence of timidity impossible to realize until witnessed.

But though the "Gheel idea," the family system, may not be repeatable, the essence of the idea, *i.e.*, a large and reasonable liberty, healthful and sufficient employment, and accustomed and congenial surroundings, is repeatable, though not certainly in any of our great asylum buildings. Gheel teaches us the possibilities that lie in the treatment of the insane, and how woefully wide our advanced civilization is from the mark it might attain in this direction.

At the close of the reading of the paper, DR. E. C. SPITZKA presented a case of

CEREBRAL ASYMMETRY

in a monomaniac, a man aged forty-five years. His delusions had developed within the past few years. The cranium was markedly asymmetrical. In the less developed side of the face there were disturbances of motility. The point made was that the delusions and motor disturbances might lead to a suspicion that the case was one of general paresis. The disturbances, however, were undoubtedly due largely to the asymmetry, and the patient would never develop into a paretic.

Correspondence.

MORE FACTS CONCERNING THE USE OF THE METRIC SYSTEM.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR—In the MEDICAL RECORD of Nov. 27, 1880, under the heading "Facts Concerning the Use of the Metric System," a gentleman from Massachusetts criticises some statements made in a letter on "The Americanized Metric System," published some weeks before.

Judging from his criticisms the gentleman has gone far astray in his idea of the metric system in general, and has particularly misunderstood my idea in publishing the Americanization of it. I thank him, therefore, for the opportunity given me "to rise and explain," and hope that I may be able to make myself clear.

The first statement made to which the gentleman takes exceptions is: "Most physicians appreciate the advantages of the metric system." In contradiction, he writes that not one physician in ten "*are*" using the original or "Americanized" metric system. I wrote that most physicians appreciate (and a large number are using) the metric system because my investigations warranted the statements. I have found that most physicians acknowledge that it is a model system, but nevertheless, having become accustomed to prescribing in the old way, they are unwilling to make the slight exertion necessary to a change. It is probably true that not one physician in ten is using the metric system, but even with that small proportion we have a large number using it.

However, the mere fact that not one physician in ten "*are*" using the original or "Americanized" metric system should cut no figure in the case. The principles of the metric system are either right or wrong, and unless the gentleman has better grounds for condemnation than not one in ten "*are*" using it, let him hold his peace.

Besides the two arguments which the gentleman brings up, viz., that its use is limited, and that a change is unnecessary, I have heard a third which may be well noticed here. Certain gentlemen, some of them standing high in the profession, object to the system because they say that the *standard* is wrong. When the French scientists took the $\frac{1}{10000000}$ part of the earth's quadrant, it is charged, although not proven, that they made an error, and therefore the model system which they formed on this standard is all wrong. Think of the calamity, ye who appreciate the fact that every standard of length is, to a certain extent, arbitrary!

The second statement to which the gentleman takes exception is: "The majority of the pharmacists . . . are anxiously waiting the day when they can discard the time-honored drachm and ounce,"—and in contradiction he writes: "The result of inquiry in different Eastern States is, that most druggists who have procured new apparatus have done so at the request of one or more of their patrons, and not because of any desire on their part to do away with the old system of weights and measures." The result of inquiry in different Western cities is that the druggists have procured the apparatus because they needed them to fill prescriptions written in the metric system, and having once used them and familiarized themselves with the system, they *are* anxiously awaiting the day when they can use it exclusively. One object in Americanizing and simplifying the system is to assist druggists in becoming familiar with the system, and prevent the staring of the country druggist, of which the gentleman speaks.

Again, your correspondent of Nov. 27th, misconceives, in my belief, the whole idea of the metric system when he writes "many physicians are using the new system with the honest intent of advancing science." Although the general adoption of the metric system would advance the interests of science, of art, of morals, and of medicine, yet the primary reasons why we urge its adoption by individuals are its simplicity and decimal progression. Gentlemen sacrificing themselves in "advancing science" should make a ten minutes' *study* of the system, and thereafter use it for convenience.

To the statement that others of the profession use it to appear scientific and superior to their brethren who prefer to deal with *facts* rather than hypotheses, I have nothing to reply except to say for the gentleman's benefit that the metric system is a plain, simple, and substantial fact, comprehensible by a child, and not, by any process of reasoning, an hypothesis. In answer to the question "If the 'Americanized' plan would not interfere with the original intent (?) of the system, viz., an international system of weights and measures," I will say that

several European nations (Germany and Austria) recognizing the fact that names do not constitute a system, have changed the terms in a manner similar to that suggested in the Americanization.

Not only has "the authoritative voice of the American Medical Association spoken in favor of the new system," but the Marine Hospital Service is *using* the new system to the entire exclusion of the time-honored drachm and ounce. Not only this, but the system has been adopted or recommended after mature deliberation by the National Academy of Sciences, the American Meteorological Society, the American Association for the Advancement of Science, the American Society of Civil Engineers, the United States Coast Survey, the Congress of Ophthalmologists, by the largest state and local medical societies, by leading medical schools and journals, by numerous boards of education, faculties of colleges, scientific societies, and by progressive men in every branch of science and art, and Congress has taken occasion to throw "the cloak of conservatism" around it by publishing a book of two hundred and eighteen pages, which gives a complete history of the movement in this country.

I may be an enthusiast concerning the use of the metric system, but I became one only after I had thoroughly canvassed its advantages and overcome prejudices less deeply rooted, I am happy to say, than they seem to be in your correspondent.

In my letter of Oct. 23d I did not enumerate nor attempt to demonstrate the advantages of the metric system. I will not trespass upon your valuable space to do so now. Suffice it to say, that the letter on the Americanized Metric System has been received by those who appreciate its designs; *i.e.*, the simplification of the matter, with marked favor, as the following extracts from letters to the writer will show:

Prof. Oscar Oldberg writes: "Your prescriptive blank, it seems to me, is an excellent one. The terms used in France to designate the units of the system do not constitute the system, and hence it seems to me to be quite proper to Americanize them, if thereby we can popularize the introduction of this admirable system and yet retain the one term gram to make plain its identity."

Dr. F. R. Fry, of St. Louis, writes: "I wrote last year about 5,000 recipes in this system, and can testify to its advantage; but think that the whole advantage is due to the fact that it is a decimal system. I like your idea first-rate for a unit; fifteen grains, or one-fourth drachm, is more convenient for translation from the present system."

Now, sir, in conclusion, allow me to state that I have no desire to traduce the time-honored drachm and ounce. They are good weights and measures; but having found in the metric system a simpler, and, therefore, better method of prescribing, I shall adhere to it until convinced of my error by arguments other than your correspondent has brought forth.

I forget, perhaps, that my lot has been cast and my inquiries made in the benighted West, while the gentleman "has charge of the health and life of the American people," residing among the spokes of the Hub, with its Bureau for the Promotion of Meteorological Knowledge.

Geo. N. Kreider, M.D.

Springfield, Ill.

A New Hospital is soon to be erected in this city, in connection with the Sheltering Arms.

RECORD OF SOME INTERESTING CASES IN PRIVATE PRACTICE.

I. Two cases in which morphine was used hypodermically to control the spasms of young children.

II. Secondary post-partum hemorrhage, controlled by a bandage of adhesive plaster.

III. Large abdominal abscess cured by two aspirations. (Abscess of broad ligament?)

To the Editor of The Medical Record.

Sir—As the hypodermic use of morphine to control the spasms of young children is somewhat new, I should be glad to record two cases in which it was successful.

Case I.—I was called to see a strong boy of three years, in terrible convulsions. Pulse rapid, breathing irregular, occasional twitching of muscles between the spasms, which came on every four minutes. His bowels had moved. He had vomited. He had been placed in warm mustard bath, but his spasms still continued and were most terrible. It was late, and not deeming it advisable to send for chloroform, I gave the boy a hypodermic injection of one minim of Majendie's solution of morphia. It had no effect. I gave him another minim, and waited. The convulsions were moderated, but not entirely controlled. I gave him another minim and a half. His convulsions ceased, his breathing became regular, and he lay in a gentle sleep. His pupils were not contracted. I ordered his bowels to be freely opened, and directed a mixture of bromide of potash and fluid extract hyoscyamus to be given in suitable doses as soon as he became uneasy or awoke from his sleep. I saw the boy daily for some time, and he had no return of the convulsions. I may state that his second passage contained some undigested substances.

Case II. was a boy aged seven years. He was subject to convulsions following scarlet fever three years before. I ordered a hot bath before I saw the boy, and when I reached the house he had vomited, but the spasms were still terrible. His mother said they were worse now than ever before. I immediately resolved upon morphine injections, and in gradual doses and at regular intervals gave the boy between sixteen and seventeen minims of Majendie, when his convulsions were at last controlled. I may state that this solution of Majendie contained some atropia. The boy's pupils did not contract to any appreciable extent, and as he even now had some slight contractions of the fingers of his left hand, when moved, I ordered a full castor and turpentine injection to be given, and followed by bromide and chloral by the rectum, and directed that a diuretic mixture should be administered when he regained consciousness. I did not see the boy again; but directing his mother to send for her own physician that day, and asked her to inform me as to his state that night. She called next day, and said the boy was doing well. I suppose my medicine was continued, but I heard no more of the case. I believe there is a marked tolerance of morphine in all spasmodic attacks of children, and especially when the convulsions are dependent upon renal trouble.

Secondary post-partum hemorrhage—three cases.—By this I mean a state of affairs as follows: The uterus after the delivery of the placenta contracts firmly; but in from half an hour to two hours the patient complains of a warm flow, and her napkin is found to be wet with fresh blood. This, if not at-

tended to at once, may end in a severe internal hemorrhage, due in measure to the uterus, by slight, but frequent relaxations, becoming filled with clots, then not having power to expel them, the womb is held open while the blood rushes forth from its sinuses. It follows then that the womb, even after firmly contracting, frequently relaxes, and in certain cases, where the blood does not easily coagulate, this relaxation causes a small but persistent flow, which in many cases ends in death. The first case of this character I ever saw was a lady, who, after giving birth to twins, was suffering from an intermittent flow of blood all day. The womb contracted, indeed, but it again and again relaxed. The delivery took place at 12 mid-day, and at two o'clock next morning I was called to assist my father and the medical gentleman who had delivered her. The patient had a faint, rapid pulse. Her womb on being held firmly in the hand contracted like an india-rubber ball; but after holding it from three to five minutes, you felt it becoming soft and, although after a little rubbing on the fundus it again contracted, blood was continually flowing during these intervals. Ergot had been given. Electricity had been used, and was being used at that moment. In fact it was easy to cause contraction, but thus far impossible to hold it. Finally, on my father's suggestion, a graduated compress of adhesive plaster was prepared. This was placed upon the womb, which was then crowded backward and upward on the brim of the true pelvis, and to the right of the middle bone of the sacrum, and held by a bandage of adhesive plaster about four and a half inches broad, and which was made to girdle the body as firmly as it could be drawn. We were happy to find that all hemorrhage ceased, and did not again return.

Case III. was a case of similar character. The woman had been delivered, and the same kind of flow had been taking place all day. The battery was used. Iron had been injected. The flow still continuing, the patient's husband had become alarmed. After using the battery for half an hour, and finding that a small but dangerous flow was still occurring, I advised the use of the adhesive bandage and compress. It controlled the hemorrhage.

Case IV. was my own. I feared hemorrhage, and although the womb contracted well, I waited an hour, when, to my alarm, the blood commenced to flow and the womb to intermittently contract and relax. I tried hot water, but not succeeding in making the womb contract for any length of time, I used the bandage, and all hemorrhage ceased. I may mention that in this case I used ice, conjoined manipulation, and hot water, all of which secured contraction, but none secured a permanent contraction.

Abscess of broad ligaments.—A lady called upon me last summer who just twenty-three days before had been confined. She complained of a swelling of the abdomen. Her pulse was rapid and her pallor extreme. Her history was as follows: Four days after delivery she had a chill, and from that period she began to swell. She at no time had much pain, nor had she much to complain of now save her rapidly increasing size and loss of appetite. I suspected dropsy, and putting her on some simple remedies, I examined her urine. It was normal. She said she had never used stimulants. By waiting a few days, it was found her size increased by as many inches. My father, Dr. John Burke, saw her with me, and it was resolved to aspirate. The needle was introduced midway between umbilicus and the pubes on the middle line, and in the middle of a flatness which was distinctly localized but which was of enormous extent. A thin pus flowed through the needle and it continued until we had drawn off two gallons of pus. The very courageous patient bore it all without flinching, and so great was her joy at being relieved that five days after the operation she got up, contrary to orders, and had another chill, when the abdomen commenced to swell again. I again aspirated, and drew off a gallon of pus of the same character. She was now put upon quinine in large doses and firmly bandaged. In aspirating a second time I could easily feel the walls of this abscess going down into the pelvis, and when the fluid flowed more slowly, the needle on being pressed downward and backward caused the flow to increase. Two weeks in bed sufficed for a cure. There has been no return of the trouble up to the present time.

MARTIN BURKE, M.D.

147 LEXINGTON AV.

THE ORIGIN OF ENTERIC FEVERS IN ISOLATED RURAL DISTRICTS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR—Under the above caption, Dr. R. Bruce Low has an article in the *British Medical Journal* of November 6, 1880. The doctor writes "as a country practitioner in an isolated and thinly-populated rural district."

In discussing the mode of infection, the writer rules out contaminated milk and water, sewer-gas, and specific infection. Of one other sanitary condition he speaks as follows: "The system of excrement disposal in these parts is the old-fashioned garden-privy. In many cases this is neglected and allowed to remain unemptied for long periods. Accumulations of filth, level with the seats, were often found when inspecting the back premises of the houses where enteric fever had appeared."

Now, let us take the doctor's Case I., and draw the inferences therefrom.

"A young tailor, aged nineteen years. For a year previous to his illness from fever he had suffered from occasional attacks of diarrhœa, the last attack being three months before he took to his bed with typhoid. With the exception of a few days at home with diarrhœa, he had been steadily at work. The work-room was close and ill-ventilated. Here he worked with two other apprentices, having his meals with his master, but going home to sleep. The lad was dirty in his habits, sometimes not washing his face for three or four days at a stretch. He became ill and unable to work.

"The medical attendant was called in, and diagnosed typhoid fever. A second medical man also saw the case, and confirmed the soundness of the first opinion. The patient died on the twenty-first day, after the disease had run a typical course, but with severe abdominal complication. He had not been away from home for months; no strangers had visited at the house. There was no fever in the district, the last case having occurred eight months previously in a sequestered valley eight miles away. With this previous case there could not have been any possible communication.

"The water-supply was pure and abundant; it was piped from a distant spring to the house, but the tap had been out of order for some months, during which time water was obtained from a neighbor's tap, in whose house there had been no fever.

"There were no drains nor channels of any kind

to carry off slop-water. The slops were taken by hand across the road, and thrown into the rapid stream which ran in front of the house. The cottage was damp, dirty, and overcrowded. The garden-privy was in bad repair, the filth level with the seat. The smell was very bad. The habits of the inmates of the house were in keeping with the surroundings.

"I have seen a tubful of soiled napkins (from a child eighteen months old), with the excrement adhering to them, placed in the pantry where all the eatables and dishes were kept. This tubful of filth, I was told by one of the family, was allowed to stand for days.

"The house at all times smelt close and dirty. The child just referred to took typhoid fever after the death of the lad."

I believe it has long been accepted as a fact that the dejections of typhoid-fever patients, and especially if any putrefactive changes are going on, are capable of specifically infecting all susceptible subjects coming within their range. Based on this, I have for years gone a step further. I believe that many cases of typhoid fever, and especially in the country, are due to decomposing excreta. I have seen cases that can be explained in no other way. The case of Dr. R. Bruce Low seems to me perfectly clear. Country people are particularly neglectful of their privy vaults.

I have no doubt but that the majority of country practitioners have had cases where they have looked in vain for the cause in the drinking-water, in the milk, in the family larder, and in the pig-sty, when a visit to the privy might have explained it at once. It may be asked, how can decaying, *healthy* fecal matter produce typhoid fever? All I can answer is, how does sewer-gas produce it? *Quien sabe?* Yet it is accepted as a fact.

If country practitioners in general will only come forward and give the condition of the privy-vaults in cases where the other supposed causes of typhoid are wanting, it will not be long till we have made another stride in solving the problem of cause in typhoid fever. If clinical observers would only be half as prompt in giving their experience as pathologists are, all doubts as to medicine and science would soon disappear.

Let the readers of the MEDICAL RECORD speak, and we shall have much light.

CHARLES ANDERSON, M.D.,
Assistant to the Chair of Surgery, Medical College of Ohio; Act. Asst. Surgeon U.S.A., etc.
CAMP ON SNAKE RIVER, KY.

HYOSCYAMIA IN SUBSULTUS TENDINUM.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR—Allow me to direct the attention of the profession, through the MEDICAL RECORD, to hyoscyamia as a remedy for a train of nervous symptoms which I met with in a case of typhoid fever.

In the latter part of November last I was called to attend a young farmer of good habits, who presented the ordinary symptoms of commencing typhoid fever. The only symptom unusual to create anxiety was a very marked subsultus tendinum, which at my first visit was so strongly marked in the carpal tendons as to make it difficult to accurately count the pulse or estimate its quality, though the young man did not regard himself as ill enough to be confined to his bed.

For the first twelve days there was nothing more than ordinary in his daily condition, except this one symptom, which steadily became more pronounced from the first. There was slight delirium at night—a range of temperature of 100° to 101½° in the morning, with 102° to 103° in the evening. A pulse that varied but little from 68, regular and of good strength. He took an abundance of milk, which he relished, and which seemed to be appropriated.

On the twelfth day (Friday) he began to hiccup. This was continuous and very distressing from the first. It deprived him of rest and sleep. Every known remedy was tried faithfully. After exhausting my own experience and reading in combining antispasmodics and nervous sedatives without avail, I invited a counsel. Some changes were made in the plan of treatment, with the hope of controlling this distressing condition, but all to no purpose. The hiccup continued, without intermission, except a few hours at one time, when complete anæsthesia with chloroform was produced; until Tuesday evening following—four days—other unpleasant symptoms became more marked. The delirium was noisy and constant. Restraint was required to control the patient. The temperature increased to 100°, though cold sponging was practised hourly and half-hourly. The pulse increased to 120, and was feeble and irregular in rhythm. The subsultus became general—every part of the body was in a state of constant tremor, and speedy death seemed imminent.

I had obtained of Dr. John P. Grey, of Utica, a solution of hyoscyamia for hypodermic use in quieting the mental excitement of the insane, and having watched its effects in calming their excitement, it seemed to me that so potent a nervous sedative might prove of service here. I began its use in the manner advised by Dr. Grey, in his paper to the State Medical Society of last winter. The effect was marvellous. While the influence of the remedy lasted (from eight to twelve hours) there was no hiccup, subsultus, or delirium; but instead the patient slept quietly and naturally most of the time, and when awake was quiet and semiconscious. But he had become too much exhausted by the prolonged loss of rest and nervous strain to fully rally. He died at midnight on Friday; but to the last he readily responded to the effects of this remedy, so that all the distressing symptoms were relieved to the end.

Had the hyoscyamia been tried earlier, and the exhaustion of hiccup and delirium and loss of sleep been thus avoided, it seems to me more than probable that his strength thus husbanded would have carried him through to ultimate recovery.

I commend the further trial of this excellent remedy, used in the mode suggested by Dr. Grey, in the varied nervous conditions attending exhausting disease.

H. D. VOSBURGH, M.D.
LYONS, N. Y., January 5, 1881.

CREMATION IN FRANCE.—Coincident with the efforts of the British Medical Association to popularize cremation in England, a society for the furtherance of this mode of mortuary observance has been organized in Paris. The object of the society is to secure government recognition of cremation as a legal form of burial. The society has already received enough promise of support to ensure its success. The annual subscription is ten francs for the first year and five francs after that.

New Instruments.

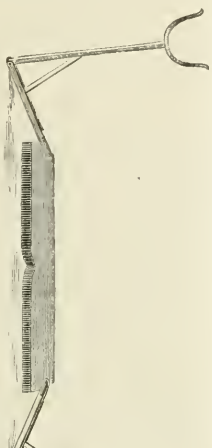
THE GYNAPOD.

By HUGH HAMILTON, M.D.,

HARRISBURG, PENN.

THE growing practice of gynecology has invented numerous specula to examine the mouth of the uterus, and other instruments to explore the interior of it, being purely mechanical, depend upon the position of the woman.

Specialists have office furniture permitting adjustment to suit their needs; but when the individuals must be attended at their homes, a bed seldom allows the patient to be placed in an accurate position. The difficulties experienced in this matter of women presenting themselves for examination on soft hair-mattresses or feather-beds prompted this apparatus or instrument.



The name gynapod, from the Greek Τα ποδι γυναικος, signifying *for the feet of a woman*, from which, by transposing and condensing, a short term, GYN-A-POD, expressive of its use, is coined.

Description.—It consists of a board having a notch in it; at each end there is an arm of forged crucible steel, fixed by a pivot admitting horizontal motion. This arm is formed of two lengths: the first, or one nearest the board, being two pieces of flat steel parallel and edgewise; at their extremity a second or crutch-shaped length is fastened, held in position by a brace—the whole folding into the first length, like the blade of a pen-knife.

Use.—The woman should lie on her back with a low pillow under her head. Direct her to sit upright, place the gynapod's notch close to the nates in a line with the anal fold, extend the arms and then have her lie down upon the board, the sacrum should be on it; erect the crutches and draw them near the thighs, then flex the knee upon the abdomen by taking the ankle in your hand until the plantar surface of the foot can be placed in the crutch; always place the limb farthest from you first—the other leg is treated similarly. The feet should be encased in slippers. This manipulation can be done under a sheet by drawing it well down, and wrapping each ankle in a corner without the slightest personal exposure. It is claimed that the gynapod puts the female in a constantly accurate position with ease to herself; permits the use of valvular or cylindrical specula; demands less stooping on the part of the physician; is of simple construction, small compass, hence portable; weighs *two* pounds, occupies 16x4½ inches; can be readily used upon a lounge or bed in the office or residence.

December 20, 1879.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from January 16, 1881, to January 22, 1881.

BAILY, Jos. C., Major and Surgeon. His leave of absence granted him in S. O. 188, December 13, 1880, Military Division of the Pacific and Department of California, extended one month. S. O. 13, A. G. O., January 18, 1881.

COUES, E., Capt. and Asst. Surgeon. Having reported in person, is assigned to temporary duty in the office of the Medical Director of the Department. S. O. 1, Department of Arizona, January 3, 1881.

GIRARD, J. B., Capt. and Asst. Surgeon. To be relieved from duty in Department of Texas, by Commanding General thereof on receipt of this order, and then to report in person to the Commanding General, Department of Arizona, for assignment to duty. S. O. 14, A. G. O., January 19, 1881.

TAYLOR, B. D., Capt. and Asst. Surgeon. To be relieved from duty in Department of the East, by Commanding General thereof on receipt of this order, and then to report in person to Commanding General, Department of Texas, for assignment to duty. S. O. 14, C. S., A. G. O.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending January 22, 1881.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro spinal Meningitis.	Measles.	Diphtheria.	Small pox.	Yellow Fever.
Jan. 15, 1881.	0	12	171	6	36	129	10	0
Jan. 22, 1881.	0	8	185	4	54	108	20	0

MEDICAL SOCIETY OF STATE OF NEW YORK.—The annual meeting of this society will be held at Albany, commencing Tuesday, February 1, 1881.

CHEMICAL EXAMINATION OF DRINKING WATER.—The National Board of Health announces that a careful study of the chief methods in use for the chemical examination of potable water, so far as organic matter is concerned, has been undertaken.

A THERAPEUTICAL SUMMARY OF THE PAST YEAR.—New remedies have been many and various, some (few) good, many bad, most indifferent. Worthy of mention, however, are "Tonga," invaluable in facial neuralgia; sulphide of calcium in suppuration, its action being marked and reliable, grain-doses being those now admitted; the nitrites of potassium and sodium have very lately been advanced as milder in their action than amyl nitrite, but producing similar effects; ergot has been found serviceable in diabetes; pilocarpia has been found useless in hydrophobia.

which still resists all treatment; this same agent has been tried for numerous affections also, but with only meagre encouragement to rely on its influence; benzoate of soda has been recommended in scarlet fever and gonorrhœal ophthalmia. Salicylate of soda has had this said about it by Dr. Greenhow, a high authority: "Treatment of rheumatism with salicylate of soda neither prevents nor diminishes the frequency of complications in rheumatic fever." It may do a positive injury to the heart. Salicin is inefficacious; salicylate of quinine is recommended highly by Dr. Hewan. The value of cold baths in typhoid fever has become more than doubtful.—*Medical Press and Circular.*

Nostrums and the Clergy.—We are glad to notice that the *Independent Practitioner* has attacked the practice of advertising quack nostrums in religious journals. It says: "The late Dr. Thomas E. Bond, of this city, became a minister of the Methodist Church, and for several years ably edited a religious newspaper here; but he established a rule to exclude patent medicines and nostrums from the advertising department of his paper entirely. He did this, too, in several cases, at large pecuniary loss to his enterprise. But such was his determination to keep his hands and conscience clear in the premises, that he permitted no price to change his purpose of keeping all secret nostrums from the columns of his paper. This stand against quackery was taken several years after he had given up the practice of his profession. Here was an example that all clergymen would do well to follow. He not only declined to countenance secret nostrums in every way, but manfully refused to allow the endorsements of them by others to appear for pay in the advertising columns of his religious publication. There are several strong lights in which this nefarious business for extorting money from a credulous public can be seen, and in most of them the endorsing clergy occupy an unenviable position, but we must close our remarks for the present."

Humero-Costal Compression of Brachial Artery.—Dr. J. W. Howe, of this city, writes: "In the last edition of the Record you credit Dr. Zenker, of Schivelbein, with developing a '*simple method of compressing the brachial artery*' by 'humero-costal compression.' I beg leave to state that humero-costal compression of the brachial artery was first advised by me in my work on 'Emergencies,' published nine years ago, chap. i., p. 15."

Medical Books in Great Britain.—*The Publishers' Circular* states that the number of *new* books upon medicine and surgery published in Great Britain the past year is 148, the number of *new editions* 54.

Congress and Food-Adulterations.—The House Committee on Manufactures gave a hearing on the 21st inst. to George L. Angell, of Boston, upon the subject of poisonously adulterated articles. Among the subjects discussed by Mr. Angell were drugs, poisonous articles of clothing, and wall-papers. He offered evidence to show that from one-third to one-half of all the wall-papers now sold, in a great variety of colors, contain arsenic to a degree that renders their use dangerous. He pronounced against the use of glucose and oleomargarine products, and gave numerous illustrations of the danger incurred in using canned fruits, meats, and vegetables, when put up in tin. In conclusion, Mr. Angell urged the importance of providing a committee or commission to investigate the subject. Subsequently the committee adopted Mr. Beale's bill "to prevent the adulteration of articles of food and drink." This bill was reported to the House a few days later.

The Hospital Fund.—Mr. Charles Lanier, Treasurer of the Hospital Saturday and Sunday Association, has submitted the following report of the amounts received from the churches, subscription lists, and the boxes deposited at railway stations, ferries, drug-stores, &c.: For general fund, $23,611.22; designated gifts from churches, lodges, and individuals, $15,240.89; designated gifts sent to hospitals direct, $4,357.68; total, $43,209.79. The total expenses to be deducted from the general fund, including charges for advertising, printing, and the manufacture of 700 tin boxes, $1,396.46, will reduce the amount to be distributed among the hospitals to $41,813.33. This amount is nearly double that of last year, and the increase is very encouraging to those who have been interested in the success and permanent establishment of a Hospital Saturday and Sunday.

Plain English and the Metric System.—Dr. S. P. Hubbard, of Taunton, Mass., writes: "In your journal of Jan. 8th is an article from Dr. Eames, highly recommending the metric system as a universal standard of weights and measures for the physician and pharmacist. This all looks well on paper, but the thing cannot be demonstrated. The absurdity of the system has been shown up by able scientific men and the greatest of all; we might as well compel medical men to learn and use the French language, as to compel them to use the metric system in prescriptions and compounding medicines. This brings another thought on the writers for medical journals, viz.: it seems as though they were very desirous of showing they had a smattering knowledge of Greek and French, by their compound words made up of a combination of Greek, Latin, French, Spanish, with a sprinkling of Dutch and Indian thrown in. I think the medical lexicon is quite sufficient to cull medical terms from. It seems to me no mark of science to use such arbitrary terms. The best medical writers use *plain English*, and when they use a medical term it is one that can be found in almost any medical lexicon. *A little learning is a dangerous thing.*"

Genital Malformation.—Dr. H. R. Porter, of Bismarck, D. T., sends the following note: "My attention was called recently to a curious case of malformation of the genital organs, viz.: Maggie ———, child three years old, has the external appearance of a well-formed female, with the exception of a penis where the clitoris should be. Penis is about one inch long, and looks like the penis of an adult, the foreskin being drawn back and remaining so all the time. On separating the labia, no vagina is seen. There is none, but upon close examination a testicle on either side of the penis; they are hardly perceptible to the sight, but can easily be felt under the skin. No sign of any scrotum. The whole thing looks exactly as if an inch had been cut off a man's penis and stuck in between the labia of a little girl's privates. Urine passes from the penis. Parents and child healthy."

Scottish Medical Schools.—Medicine is a very popular study in Scotland, if we may judge from the size of the classes in the medical schools. That at Edinburgh has 600 students; the Glasgow Medical School has 557 students, and the University of Aberdeen has 284 students. In spite of this, however,

according to statistics furnished by the *Medical Press and Circular*, the medical profession is by no means overcrowded, as compared with this country. Thus, in Glasgow, which is such a medical centre, there are 500,000 inhabitants, and only about 300 doctors. The abuses of medical charity, however, limit greatly the number of paying patients. It is calculated that 200,000 persons receive gratuitous medical treatment during the year. Efforts to establish provident dispensaries are to be made.

Dr. John Curwen has been removed from his position as superintendent of the Pennsylvania State Lunatic Asylum, a position he had occupied for thirty years. The cause was his alleged extravagance and unwarrantable assumption of authority. His successor is Dr. J. C. Gerhart, who has been first assistant at the asylum for eleven years.

Quack Advertisement.—The *Detroit Lancet*, referring to quack advertisements in religious journals, says: "Doctors, to a man, are agreed upon it as an evil. The people, including the clergy, are utterly ignorant in the matter. They need light. Who will give it to them?"

The Medical College of the Pacific at its last annual commencement graduated a class of only seven. This was due to the operation of an honest carrying out of the three years' system of study, etc. This school deserves the admiration and indorsement of all who believe in the best class of medical training. Rigid demands for anything will tend to diminish medical classes. The largest schools are those with the most elastic regulations for conferring the degree of M.D. Notoriously what the average student wants is not medical knowledge, but a degree. The medical profession support this vicious principle by patronizing and extolling the schools with the largest classes.—*Detroit Lancet.*

Dr. C. R. Estabrook, Chief of Staff of the Charity Hospital on Blackwell's Island, tendered his resignation yesterday to the Commissioners of Charities and Correction, who accepted it. The resignation will not take effect until March 31st.

The National Government and Contagious Diseases Among Cattle.—A bill has been introduced into the United States Senate, by Mr. Williams, of Kentucky, to prevent the introduction, dissemination, and exportation of diseased cattle. It authorizes an absolute embargo against the exportation of animals from states known to be infected to states free from disease, except under the precautionary regulations of the National Board of Health. It also extends the powers of that board over animal as well as human sanitation, furnishes the board with a veterinary staff, and gives the Federal Courts jurisdiction, and requires them to punish violations of the law. Mr. Williams recently made a speech in favor of the bill, showing the possibility of now exterminating pleuro-pneumonia, and the dangers of allowing it to continue unwatched.

Upon conclusion of his remarks, a select committee of five was appointed on pleuro-pneumonia and other contagious diseases of cattle and other domestic animals.

Another bill on the same subject has been introduced by Mr. Kirkwood.

At a recent meeting of the New York State Agricultural Society, a resolution was passed, calling upon Congress to take measures to stamp out pleuro-pneumonia.

Treatment of Sciatica.—In a clinic given by Dr. Da Costa, ten cases of sciatica were treated with deep hypodermic injections of chloroform daily, near the seat of pain. After a few days, if improvement is not marked, a mixture of ten grains of iodide of potassium with two drachms of ammoniated tincture of guaiac was ordered.

Compound Comminuted Fracture of the Third Toe.—Dr. John N. Upsher, of Richmond, Va., writes: "I was called early on Sunday morning, November 28, 1880, to see the Rev. Mr. ——, who had fallen down a flight of steps leading to the basement of his house, and fractured *the third toe of his right* foot, and receiving some slight contusions besides. His statement was that his wife had called him about 5.30 A.M. to let a dog out of the room. He got up and started (bare-foot) to the front door, but in the dark got too far across the hall, and thus was precipitated down the steps. I found the third toe fractured in its *first phalanx, a little above* the centre of the bone, the bone projecting through the skin (the laceration T-shaped), the flesh drawn forcibly back under the bone, and the internal corner of the bone broken off. The foot was badly bruised as high as the instep, and a space bounded by a line drawn from the internal border of the second toe and the external border of the fourth toe. With some difficulty I succeeded in making extension, and with the flat part of a probe passed under the tissue reduced the fracture. It was retained in place by means of a small pasteboard splint applied on each side of the toe, and a broad splint of binder's-board under the sole of the foot, a small roller being placed under the toes to preserve the convexity. It has been ten days since the injury was sustained; there has been no *suppuration*, the patient very comfortable, and rapidly progressing to complete cure.

"The injury is a most unique one. Many of the best authorities only allude to the injury as liable to occur from the passage of some heavy weight over the toes, and state that the great toe is the one most often injured, and that fractures of the toes, *especially* when *compound, as a rule*, require amputation. The subject of this injury is a young man about thirty-five, with no vice of constitution, in good health, certainly is not a subject of fragilitas ossium, and has never had a broken bone before. Everything goes to show that the toe was broken by the fall, the resistance coming upon the end of the toe, or certainly the extremity of the bone. This is certainly a very rare cause, a very large proportion of authorities stating that fractures in this region occur from a crushing weight *falling upon* the toes. Persons falling from a height, as this patient did, are more likely to sustain fracture of the bones of the leg. 'In 8,667 fractures, 172 involved the bones of the foot, 91 of these were unclassified, and *only* 9 were of the phalanges' ("Agnew's Surgery," vol. i., p. 997).

"It may be urged that I have been too hasty in so soon reporting this case, but repair has progressed to the point where there is no danger whatever of any complication, and where recovery is assured, it being a well-known fact that injuries to the hands and feet, when recovery takes place, advance rapidly to perfect amendment."

The Prodromata of Diphtheria.—Dr. J. R. Brandt, of Robinson, Wis., writes: "I wish to state, for the benefit of the profession, that in examining children in families suffering from diphtheria, I have found in several of those most afflicted, a notable

fall of temperature from one-half degree to one degree, and a very noticeable slowness of pulse, an irregularity in the action of the heart, and a loss of a beat every fifth or ninth, from twelve to thirty-six hours before the child showed any other sign of the disease. Such cases have always proved to be malignant. I am desirous to hear from other members of the profession as to their experience, if any, on these points."

Dislocation of Atlo-axoid Articulation (?).—Dr. Chadwick sends us the history of a case of *dislocation of the atlo-axoid articulation*. The patient, a German, aged thirty-eight, had been thrown over his horse's head while riding on horseback, and fell on his forehead. He was insensible for about ten minutes. Dr. C. was not called to see him till five days after the accident, when he found him cyanotic, with œdema of the lungs, and in an apparently dying condition. The respiration was abdominal; the chin was midway between the sternum and the right shoulder; the posterior part of the neck was swollen and very painful. The immediate danger was relieved by the application of dry cups and mustard to the chest, and the use of digitalis, whiskey, and ammonia internally; catharsis was established by epsom salts. An attempt to reduce the dislocation by the use of as much force as was deemed safe was only partially successful. He was placed in bed, on his right side, with his head high and his shoulders resting only lightly on the bed. During the night he awoke with a start, throwing his weight upon his head, and it slipped back into place with a snap. The recovery was perfect, except that the head was somewhat thrown forward. In conclusion Dr. Chadwick says: "I am aware that the critic will say, Why not reduce the dislocation at once, as it was the cause of the pulmonary œdema? But not seeing the patient till five days after the accident, and not knowing whether the pressure on the cord was due to clot, inflammatory effusion, or bone, and as the man was apparently in a dying condition, I did not care to increase his chances for a necropsy, especially in this city, where malpractice suits are quite fashionable."

Good Whiskey and Bad.—The *Louisville Medical News*, which may be presumed, from its geographical position, to be a high authority on the subject, publishes an interesting article upon good and bad whiskey.

Genuine whiskey, it says, is the product of the distillation of several grains—barley, rye, Indian corn, etc.—either singly or mixed in varied proportions. Originally it contains, besides its alcoholic basis, a mixture of fusel *oil*, which takes its character from the particular grain distilled. This at the outset is rank and perhaps poisonous, but with advancing age it breaks into fragrant ethers, which give flavor and smell to the liquor in which it is contained. No process of art can force the changes in the fusel oil into a much more limited space of time than nature has demanded. In two years whiskey is drinkable, but its better qualities are not developed under five years, and it continues to improve, if kept in wood, so that the air may come in contact with it, for a much longer period. As good whiskey must have a certain age, so it must originally have come from good grain and been distilled in a skilful manner. Age will not make bad whiskey good.

Spurious whiskey is obtained in a number of different ways. The alcoholic basis may be had from the distillation of spoiled or inferior grain, rotten potatoes, and other decayed vegetable matter. Such a product, however, has to undergo manipulation before it can be put on the market. It may be rectified, passed through charcoal, or redistilled.

It comes out as rectified or cologne spirits and is then pure. But it is not whiskey, nor is it drinkable in this state. To change it into an imitation of whiskey, it must be mixed with some of the genuine article, or various compounds are added, some secret, some known to the trade at large, such as burnt sugars, prune-juice, various essences, tobacco, creosote, strychnine, and what not.

These delectable substances may not only change cologne spirits into whiskey but they do actually change it into three-fourths of the French brandies, Holland gins, which flood the markets.

Chemistry is not always able to detect the genuine from the spurious whiskey. Spirits may be chemically pure and yet not drinkable. So that published analyses do not count for much. The best test is the taste and smell. Genuine whiskey diluted with twice or thrice its bulk of cold water gives off a delicate and characteristic perfume. Imitation whiskey similarly treated gives off five or six coarse, nasty smells which struggle with each other for pre-eminence until that of rectified spirits gains the day; and it tastes like what it is, a discordant mixture of ill-assorted flavors.

Kentucky or Bourbon whiskey, which it has been difficult of late to get pure, is, we are told by the *News*, now being manufactured with great care again, and to a larger extent than ever.

Dinner of the Alumni Association of the Medical Department of the University of the City of New York.—The tenth annual dinner of this association was held on Tuesday evening, January 25th, at Delmonico's. The occasion was an exceedingly enjoyable one, the attendance was large, menu unexceptional, and the post-prandial speeches numerous, entertaining, and brilliant. A band in the gallery of Delmonico's large hall discoursed choice selections during the evening. The table was tastefully decorated, and the walls were hung with portraits of the Chancellor, of the late Professors C. A. Budd, Valentine Mott, and Martyn Paine. The President of the association, Professor D. B. St. John Roosa, occupied the chair, and made a happy and humorous address, after which he introduced the speakers of the evening in his usual felicitous style. The following were the toasts, with their respective respondents: "The University of the City of New York," by the Rev. Dr. Howard Crosby; "Our Alumni," by Dr. A. E. Macdonald; "The Medical Department," by Professor J. W. S. Arnold; "Sister Colleges," by Professor J. M. Bryant; "The Bar," by R. O'Gorman; "The Press," by W. Winter, who recited a poem entitled "Hesperides;" and "Woman," by Professor Montrose A. Pallen. George Fawcett Rowe gave a recitation entitled "The Quid."

Subjoined are the names of the officers announced as elected to serve during the year 1881:

President, Theodore R. Varick; *Vice-Presidents*, William A. Hammond, John R. Dickson, J. W. S. Gouley, W. E. Ford, Stephen J. Clark, A. E. Macdonald; *Secretary*, Frederick R. S. Drake; *Treasurer*, C. Dixon Varley; *Executive Committee*, F. Le Roy Satterlee, Edward L. Pardee, Andrew Otterson, R. A. Witthaus, Newton M. Shaffer, J. H. Hobart Burge, H. B. Conrad, R. A. Murray, B. D. Carpenter, Lewis Fisher, George K. Smith, and F. D. Weisse.

Original Lectures.

ON THE BENIGNITY OF SYPHILIS:

BEING A STUDY OF THE DISEASE, ESPECIALLY AS IT AFFECTS SEAMEN.

AN ESSAY TO WHICH WAS AWARDED THE ANNUAL PRIZE OF THE MEDICAL SOCIETY OF THE COUNTY OF NEW YORK, FOR THE YEAR 1880.

By CHARLES L. DANA, A.M., M.D.,

PROFESSOR OF PHYSIOLOGY IN THE WOMAN'S MEDICAL COLLEGE, NEW YORK.

The question of the actual amount of harm which the syphilis of the present day inflicts upon the human organism is one which is by no means exactly settled. It is a question, moreover, of interest to medical science, and of importance to the sociologist and legislator. It is known that the disease runs its course with varying degrees of severity; so much so that a classification has been based upon the fact. It is asserted to affect certain nations mildly, and that the races which it reaches for the first time suffer with especial severity from its ravages. It is believed to affect different persons with different degrees of severity, according to the condition of their health, their idiosyncracies and personal habits, or, possibly, according to whether they have received a hereditary protective influence. It is known that the disease will sometimes run its course and apparently exhaust itself, even when the person receives no treatment. It is furthermore asserted, that the disease is not so virulent now as it was during the century when it first conspicuously appeared. And it is asserted, also, with confidence, that, especially during the present century, its severity has abated.

It is in regard to this last assertion, and in regard to the question of what is the exact amount of injury which syphilis inflicts upon the human constitution, that the accompanying statistics are given.

While assistant surgeon in the U. S. Marine Hospital Service, being stationed in New York, I had an opportunity to see and get the personal history of nearly 2,500 seamen. It was not long before I was struck with the fact that despite the extraordinary frequency of a past history of venereal sore, very few presented any evidences of the serious ravages of syphilis. Determined to make more exact inquiries, I questioned every applicant for medical relief at the office for a considerable period of time. Notes were made of his age, nationality, past history, and present condition. These histories, for the sake of easier study, have been put into tabular form and accompany the present paper.

The sailor, as a rule, does not have any hesitation in saying that he has had a venereal disease, if such is the case. Where all venereal disease is denied, therefore, I have taken the statement of the case as true. Still, there was, no doubt, a certain amount of deception, especially among native Americans; therefore the per cent. of venereal disease is rather underestimated than otherwise.

With regard to the diagnosis of what the affection really was in the past, whether a chancroid or chancre, I have acted on the following plan: If the patient stated that he had had a sore some time previously, with no suppurating bubo, and with a partial history of secondary syphilis, the case was put down as "hard chancre," with an interrogation mark after it. If, with a history of a sore, there was given a good history of secondary symptoms, the case was marked as "hard chancre." If there had been a sore with suppurating buboes, and no subsequent symptoms, the case was marked "soft chancre." If, with the history of a sore and suppurating buboes, there was an indefinite history of secondary syphilis, the case was marked "soft chancre," with an interrogation mark after it. Such was the general rule. But in addition to this, there were often other evidences, such as statements of previous attending physicians, the length of time which the sore had lasted, its period of incubation, etc., all of which often helped in making the diagnosis of the previous disease more certain. It might be said that some of the alleged chancres were only abrasions or herpetic eruptions. This possibility was borne in mind when getting the histories. Besides, non-specific sores are rare among seamen, as the Marine Hospital reports show. So that the tables closely approximate accuracy.

A synopsis of the facts furnished by a study of the cases is here given: total number of cases, 378; total number of cases having or having had venereal disease in some form, 279; per cent. of cases having or having had venereal disease in some form, 72.81; number of persons with a past or present history of syphilis, 149; number of persons with a *past* history of syphilis only, 106; cases presenting secondary symptoms, 31; cases presenting *hard chancre*,* 12; per cent. on whole number of cases having a *past* history of syphilis only, 28.09; persons presenting or having had soft chancre, 123; persons presenting *soft chancre*, 12; per cent. of syphilis, past and present, on whole number of cases, 37.

Cases of gonorrhœa, past and present, 166; cases of gonorrhœa, present, 23; per cent. of gonorrhœa, 43.93; per cent. of persons having or having had hard chancre, 39.18; per cent. of persons having or having had *soft chancre*, 26.19; per cent. of persons having or having had chancre (hard or soft or both), 65.60.

Estimated total number of American seamen, 170,000; estimated number having or having had syphilis, 40,000 to 50,000; ratio of hard to soft chancres, 12 to 12; ratio of histories of hard chancre to those of soft, 149 to 123; ratio of gonorrhœa to hard or to soft chancres, 23 to 12.

It is believed that the above figures represent very fairly the condition of things as regards the prevalence of venereal disease among the whole body of seamen. The histories specially obtained corresponded closely with those incidentally noted before and after the investigation. The inquiries were discontinued indeed, because of the monotonous sameness of the replies. The sailors, it is to be remembered, were not especially of New York. The sailor has no home; and the prevalence of venereal disease among the seamen of the great lakes and rivers of the west is even greater in some parts than it is in the east. This is shown by the statistical tables of the Surgeon-General U. S. Marine Hospital Service,† and the fact is confirmed by the medical officers of the service with whom I have conversed.

* The terms hard and soft chancre are used in preference to "initial lesion of syphilis" and "chancroid," because they are more convenient, are well understood, and are in accordance with the nomenclature of the British Medical Association.

† See table, p. 142.

It will be seen from the figures given above, that of the 378 patients treated, 279 (about 73 per cent.) had had, or still presented, some form of venereal disease. The number of cases presenting hard and soft chancres was equal, there being 12 of each. The number of cases giving a partly probable but mostly certain history of syphilis was 149, while that of soft chancre was 123. This represents an excess of syphilis over chancroid which is rather unusual, but the fact is not to be doubted. It is known that the ratio between hard and soft chancres varies in different years and under different conditions. This has been illustrated at the Hôpital du Midi, where the ratio has varied from 1 to 8, to 4 to 1. It is asserted, though on no strong statistical evidence, that chancroid is more frequent than hard chancre among the lowest classes. However this may be, I am convinced that there are often more cases of syphilis than of chancroid among seamen. In reported tables of the U. S. Marine Hospital Service, 1880, the proportion of hard to soft chancres is about as 1 to 3. The proportion of soft chancres to primary and secondary syphilis shows syphilis to be a little in excess. I refer to this point in order not to be accused of unwittingly exaggerating the amount of syphilis among the men examined.

Now as regards the effect of syphilis upon these men. Notes were made of their physical condition when presenting themselves at the office. In only four cases was the condition really very bad. In one of these the patient had lost an eye from a syphilitic iritis. Another was crippled with rheumatism, and he had had severe spinal pains and a muscular atrophy previously, symptoms which had been attributed to syphilis. The other two were anæmic and weak, but were not at all seriously run down. Some of the remaining cases had obstinate rheumatic pains, some showed anæmia; there was an occasional obstinate leg ulcer or painful node.

There were 106 who presented themselves with a previous history of syphilis, but who had no primary lesions or secondary symptoms at the time—except in some cases rheumatism, a disease which is the bane of the sailor, whether syphilitic or not. There were none, either in the 378 cases reported, or in the 2,000 others seen by myself, who were suffering from bad necroses, or tumors. Nor were there any cases of malignant or "galloping" syphilis. I have never heard of this latter form of the disease among seamen. The sailor himself, as a rule, does not regard the chancre as meaning very much, and is not disturbed by the idea that there are any terrible sequences to it. If asked whether he has ever had "venereal," he may say "No," at first, and then add: "Nothing but a chancre a good while ago; but I got all over that." Now if the chancre did carry serious troubles in its wake, the fact would be known and appreciated. For, though the average American seaman (being often a foreigner) is a somewhat dull and insensible being, yet the crew of a vessel rarely fail to discuss their physical condition among themselves, and often to interchange advice or remedies. The terrors of "secondary" or "tertiary" would be known if they existed. But it is the *sore*, or the *bubo*, that annoys them. And I believe it would be found that suppurating buboes, as a rule, lay the sailor up longer than "primary," "secondary," or "tertiary" symptoms do altogether.

The course of the disease is not often much modified by any treatment that he gets. The sailor will generally go to the doctor to be treated for his chancre. As soon as this is well, or is improving, he ships again. Then, if secondary symptoms break out while on ship-board, he gets from the captain an inevitable dose of salts. This may be followed by a little potash; and occasionally the captain salivates him—to prevent the accusation of indifference. But any regular or intelligent treatment he does not receive until he gets back to port. Then he will perhaps go under an antisyphilitic treatment for a short time till he feels better, when he ships again. But even this amount of treatment is not always obtained. There were 106 persons, as before stated, out of the 378, who presented themselves for the most part for other troubles than the syphilis of which they gave a history. This gives a per cent. of 28.09 upon the whole number. It would be a low estimate to suppose that this represented the per cent. of syphilis among seamen generally. As the total number of American seamen is about 170,000, the number who have had syphilis, or (to make the estimate free from any possible exaggeration) the number who have it or have had it, would be from 40,000 to 50,000. Now the total number of syphilitic cases treated in all the marine hospitals during a year is considerably less than a thousand. These facts tend to confirm the statement that seamen do not as a rule get any regular or thorough treatment for the secondary symptoms of syphilis.

In reaching this conclusion it is to be remembered that many sailors get some treatment outside the Marine Hospital Service. But they never have money enough to pay for such outside medical care very long.

In regard now to the effect of syphilis upon the mortality of seamen. I present, first, a table showing the total number of cases of diseases treated in the different marine hospital districts during 1878 and 1879, the number of cases of secondary syphilis treated, and the number of deaths from the same.

Districts.	Total number of cases.		Number of cases of secondary syphilis. †		Deaths from secondary syphilis.	
	1877-78.	1878-79.	1877-78.	1878-79.	1877-78.	1878-79.
North Atlantic..	1,195	1,168	30	49	0	0
Mid. Atlantic*..	1,660	1,779	99	103	1	1
South Atlantic..	897	1,540	69	59	3	1
Gulf.....	1,649	1,839	64	63	1	0
Ohio.....	681	1,129	125	100	0	0
Great Lakes...	703	1,573	73	104	1	0
Mississippi....	1,504	1,491	126	96	1	3
Pacific...	1,014	1,688	37	58	0	0
Total.....	9,304	11,412	617	652	7	5

It will be seen that the proportion of syphilis in the District of Ohio is greater than it is in the Middle Atlantic District, which includes New York; also, that the mortality in the former district is *nil*.

It is undoubtedly the case that some of the alleged deaths from secondary syphilis were due to complications, in causing which syphilis may have played but a small share.

Such error is perhaps balanced by deaths produced by syphilis indirectly.

But furthermore, the total number of cases given represents only those treated in hospital. A little less than half as many more were treated as out-

* This district includes New York.

† Tertiary syphilis is not recognized as a separate form by the Marine Hospital Service, whose nomenclature of diseases is modelled after that of the British Medical Association.

patients, and among these there were no deaths from syphilis reported. The ratio of deaths to the total number of cases of secondary syphilis treated, is, therefore, much less than appears from the table. It may be safely estimated that the ratio of mortality among the 20,000 seamen treated in 1878–79, is not over one death to 800 cases of secondary syphilis. Even this is a much larger estimate than would be made from the statistics of Dr. King, given later.

Bearing upon the case is given another table, compiled from the annual reports of the Marine Hospital Service:

Year.	Number of cases.	Total deaths.	Deaths from syphilis.
1873–74	11,832	646	5
1874–75	12,939	462	6
1875–76	13,303	434	7
1876–77	15,175	434	7
1877–78	18,223	324	7
1878–79	20,922	387	5
Total	92,394	2,687	37

Among 20,000 seamen treated in 1878–79, the per cent. of mortality from syphilis was one-fortieth of one per cent.

Through the kindness of Dr. C. Henry King, Physician-in-Chief to the Seamen's Retreat Hospital, Staten Island, further statistics as to the mortality from syphilis have been obtained. It will be seen that in five years no deaths whatever were attributed to syphilis in a hospital devoted exclusively to the care of seamen: *

Year.	Total number of cases.	Number of cases of syphilis.	Deaths from syphilis.
1873	1,593	220	0
1875	692	94	0
1877	728	116	0
1878	991	179	0
1879	1,131	218	0
Total	4,916	727	0

But, in addition to the above facts, pointing to the mildness of the syphilitic virus, is another. Sailors live, in large part, under bad hygienic conditions. Their life ashore is a succession of "sprees," from which they recuperate between times in crowded, dirty, and ill-ventilated boarding-houses. When on ship-board their quarters are close, their food poor; they are often insufficiently clothed, and they are constantly exposed to all kinds of weather, so that rheumatism is extremely common among them. For these and other reasons, the physical condition of the sailor is at as low an ebb, perhaps, as that of any class of workmen.† Yet in spite of this, syphilis does not attack them malignantly.

As this essay assumes to be only a contribution to the subject in hand, and not a comprehensive survey of it, no historical details or further comparison of the views of others will be given.

It would be natural, however, to seek an explanation of this apparent mildness of syphilis in seamen. It might be attributed to national peculiarity, only the American sailor is of *all* nationalities. Of the 378 cases recorded, there were: Americans, 183; Scandinavians, Finns, Danes, and Russians, 94; Irish, 51; Germans, 26; English, 13; French and Italians, 7; West Indians, 4.

The Danes, Finns, Swedes, and Norwegians make up a larger part of our merchant service than would be inferred from the above figures. They make up the majority, often, of the crews of our sailing-vessels; while the Irish go almost altogether on steam-vessels. Now the Irish are certainly more severely affected by syphilis than some of the other nationalities. On the other hand, the theory which has been applied to the Portuguese may do for the nations on the north coast of Europe. This theory is, that a race, after generations of exposure, becomes at last too barren a pasture for the syphilitic poison to flourish in. A large proportion of the populations of Scandinavia, Denmark, and Finland has always followed the sea and been exposed to the accidents of that kind of life. It might be very plausibly argued, that as succeeding generations came on, an immunity was secured.

Many believe that the mildness of syphilis is due, in a great many cases, to the improved treatment it now receives. But the life of the sailor does not permit of his regularly getting such treatment.

The conclusions then are:

First.—That syphilis, as a rule, runs a very mild course indeed, among American seamen, and physically incapacitates them less than either soft chancre or gonorrhœa with their complications and sequelæ.

Second.—That it runs this course, often without regular treatment, and almost always in spite of irregular living and unhygienic surroundings. These two conclusions, it may be added, tend to confirm the views of those who believe

(*a*) that syphilis is curable, and, furthermore,

(*b*) that it very often has a tendency to spontaneous cure:

(*c*) that this present benignity of the syphilitic poison is due in part to treatment, in part to a gradual change, either in the character of the poison itself, or in the organism it feeds on, or both.

If any credence can be put in the recent experiments of Koch, Buchner, Toussaint, Pasteur, Greenfield, and others, then we may believe that the characters of the germs of even specific diseases (*e.g.*, chicken-cholera, anthrax) can be modified and even totally changed by artificial manipulations and cultivation. And, in the light of the assertions made by these experimenters, it is no mystery that the syphilitic virus should be modified in its characters. Not much can be inferred, however, from pathological theories regarding acute diseases.

The question of benignity or virulence of syphilis, as it attacks other classes than sailors, is left untouched, and the term "benign" is used only as indicating that the disease is not malignant nor fatal, nor, as a rule, severe.

I would certainly not have it thought that I am advocating the view that syphilis, in general, is an innocent disease. It is only comparatively speaking that the term benign is used.

And furthermore, if it does affect the sailor with comparative mildness, it is, for all that, sufficiently bad and disabling. And this, with the other venereal diseases, and his mode of life, makes his physical condition, as has been said, a very poor one. Nearly

* I also append certain statistics, bearing on the mortality from syphilis, compiled by Dr. J. Birkbeck Nevins, of London, from the Registrar General's return of births and deaths in England from 1848 to 1872 (vide appendix).

† See Annual Reports Seamen's Retreat Hospital. By C. Henry King, M.D., 1875 et seq.

three-fourths of American seamen have or have had some form of venereal disease. In every form the man is disabled for the present and runs a risk for the future. It may be pertinent, therefore, in conclusion, to inquire whether anything can be done to prevent this vast amount of infection and disease.

There are several directions in which philanthropic effort might be directed.

First.—The improvement of his "environment," of his social and sanitary surroundings when on shore; the getting him out of the clutches of boarding-house keepers and others who fill him with bad liquor, entice him into brothels and rob him of his money. If his social condition were bettered, his moral improvement would surely follow or go with it. Something is being done in this direction.

Second.—The regulation of prostitution. That this would benefit him to some extent there can be no doubt. But the system of regulation would have to be comprehensive and very efficiently carried out. It would have to be applied to the whole municipality, and its adoption involves the general question of the regulation of prostitution, which this is not the place to discuss.

Marriage, so far as it is possible, is a help to the sailor. Of the 378 men examined, there were not thirty who were married. The sailor is a celibate. But among these 351 celibates there were 272 cases of venereal disease. On the other hand, of the 27 married seamen, 14 never had had any venereal disease, and 21 never had any during the period of their marriage. Of course, matrimony is often impracticable or unwise, but celibacy is also more frequent than it need be.

As the sailor's sanitary, social, and moral condition improves, the possibility of and desire for domestic life will increase, and will do its share to improve his physical condition.

APPENDIX.

There are some interesting facts, obtained from the accompanying record of cases, which do not bear directly upon the subject of the essay. They do relate to it indirectly, however, and are therefore inserted here.

It is curious, not to say startling, to learn the number of times which the same person has had gonorrhœa, syphilis, or chancroid, one or all. In 149 men there were histories of infection with chancre 156 times; in 91 men who had had chancroids there were histories of 121 infections; in 166 men who had had gonorrhœa there were histories of 284 attacks.

As illustrations: E. Hayes, aged thirty years, native of Sweden, had had gonorrhœa 5 times; chancre, 1. Present condition good.

Jas. Bell, aged thirty-six years, Ireland; gonorrhœa, 3; chancres,* 7. Present condition noted as good.

Patrick Downey, aged thirty-five years, New York; gonorrhœa, 4; chancres,* 4. Present condition good.

Jas. King, aged thirty-five years, United States; gonorrhœa, 4; chancres,* 4.

Chas. McCannon, aged fifty years, Ireland; gonorrhœa, 8; chancres,* 4. Present condition good.

Wm. Mosher, aged thirty-eight years, New York; gonorrhœa, 12; chancres, 3.

Michael Malloy, aged forty-two years, New York; gonorrhœa, 14; chancres, 2.

None of the above cases showed a seriously impaired constitution.

* Hard and soft.

There were seven cases (Nos. 24, 98, 167, 175, 236, 328, 346) in which the histories pointed to a second infection of syphilis. In all except the last two, however, there was more or less element of doubt. Nos. 328 and 346 gave a good history of a second infection.

MORTALITY FROM SYPHILIS IN ENGLAND AND WALES.

Only 1 infant dies yearly under one year old from hereditary syphilis in a population of 24,500 persons.

Only 1 child dies yearly between one and five years old from hereditary syphilis in 273,334 persons.

Only 1 person dies yearly from syphilis between fifteen and fifty-five years of age in a population of 78,000 persons.

The total deaths from every cause are 448,829 yearly.

The total deaths from syphilis at every age are 1,201 yearly.

The deaths from syphilis, both hereditary and self-contracted, are therefore only 1 in 374 deaths.

So far for the *actual mortality* from this disease.

When *compared with* that from *other diseases* the following is the result: There are 25 causes of death which are so *frequent* and *important* that they occupy 419 pages in the supplement to the Thirty-fifth Annual Report of the Registrar-General—but *syphilis is not once alluded to.* There are 20 diseases which are supposed to be so *preventable* that they are specified in the form supplied by the government to every "Medical Officer of Health" in England that he may inform the government of their prevalence—*but syphilis is not included among them.*

The published reports from 188 of these "Medical Officers of Health" have been obtained, and *only two of them* mention syphilis at all in their reports. (Evidence Select Committee, 2-350.)

When compared with some other diseases syphilis shows the following mortality on the average of 25 years (omitting decimals):

Syphilis.		*Other diseases.*	
Syphilis	6	"Thrush"	7
Syphilis	1	Rheumatism	3
Syphilis	1	Measles	10
Syphilis	1	Whooping-cough	11
Syphilis	1	Scarlet fever	20

There are 60 diseases tabulated in the order of their fatality by the Registrar-General.

In 1868 syphilis stood 42d in the list—Thirty-first Annual Report, p. 227.

In 1872 syphilis stood 45th in the list—Thirty-fifth Annual Report, p. 244.

On the average of 25 years it stood 53d in the list, computed from tables, pp. 138 and 149.

From a return to the House of Commons of all the deaths from syphilis in the *workhouses* in England and Wales during the year 1875, it appears that the deaths from syphilis, at all ages, in the workhouses—that is, among the lowest classes of society—are only 8 per million inhabitants. And the deaths from syphilis, at all ages, in the workhouses even of Middlesex, Surrey, and London, are only 10 per million inhabitants. In the case of workhouse deaths there is no inducement to conceal the real cause, and the above, therefore, represents the true mortality, if any returns are to be accepted as true; and the proportion of deaths is even lower than that recorded for the general public by the Registrar-General.

Tabular Record of the Histories of Three Hundred and Seventy-eight Seamen—*March to June*, 1880.

O = no venereal; X = disease present or past.

Names.	Age.	Condition.	Nativity.	Whether they had: Gonorrhœa.	No venereal.	Chancre, hard or soft.	Number times the person has had gonorrhœa.	Chancre with suppurating bubo.	Chancre, with indolent bubo.	Chancre, without noticeable bubo.	Soft chancre.	Hard chancre.	How long ago.	Previous treatment, if any.	Remarks. Present condition as regards general health.
1. Frank S	27		Virginia		O										Muscular rheumatism.
2. C. A	37		New York			X				1		1	1872		Otitis media; condition good; some secondary symptoms followed, 1872.
3. C. L	22		Maine	X		X	3			1	1?				Gleet.
4. W. E	36		West Indies	X			1								Gastralgia.
5. James H	22		Ireland												Sciatica.
6. J. B	38	Unmarried			O										Eczema of hand.
7. A. T. K	24		New York	X		X	1			1	1?				Condition good.
8. S. W	25		New Jersey			X			1			1	1877		Chancre, followed by secondary; present condition good.
9. J. E	30		Finland			X				1	1?		1877		Rheumatism, chronic.
10. M. McM	20	Married	United States		O										Ague.
11. A. J	28		New Jersey		O										Rheumatism.
12. S. McC	40		New York			X				1		1?	1868		Since then has been tolerably well, but has had, and has now, rheumatism.
13. —— ——	40	Married (unmarried when he had venereal).	Ireland	X		X	6	1			1		1865		Healthy; pleurodynia.
14. William J	23	Unmarried	Maine	X			1								
15. P. M	26	Unmarried	Ireland			X	1		1			1?	1877		Been well except for slight rheumatism; now has orchitis.
16. Charles W	35		New York	X		X	1			1			1860		Well until six months ago, when he developed heart disease, hyperæmia, and aortic regurgitation.
17. J. W. C	21		New York	X		X	2			2	1	1?			Good; gonorrhœa now.
18. Nils N	22		Norway	X											Pityriasis versicolor.
19. Andrew L	32		Norway		O										
20. C. V	34		United States	X		X	2			1		1	1878		Rheumatism had, subacute, with atrophy formerly.
21. R. S	45	Married since	New York			X		1					1865		Well; sinus in arm.
22. I. A	26		Finland	X		X	1			1			1872		Good; rheumatism and cough.
23. C. G. S	24		New York			X				1		1 (shows scar.)	1878		Well; has prurigo.
24. John A	34		United States	X		2	1		1	1		1 (2d hard chancre?)	1870, 1880		Was well, and is now, except for hard chancre.
25. P. M	40		Ireland		O		1								Contusion of eye.
26. M. W	22		West Indies	X		X	1		1			h. chancre			Now has secondary symptoms.
27. G. S			United States			X				1			1878	Treated in S. R. Hosp.	Well; herpes penis.
28. J. G	40	Unmarried	Germany		O										Subacute myelitis.
29. Joseph H	31		Boston			X				1		1	1871	Treated in Bellevue H.	Well till now; has rheumatism left knee.
30. John D	38		Ireland		O										Dysentery.
31. K. S	21		Norway	X			1								
32. Mike D	33		Ireland	X			2								Abscess axilla.
33. Robert B	24		Sweden			X				1		1	1878		Has had iritis and lost one eye; now well, except for occasional rheumatism.
34. John M	43	Married since	Belgium	X			1						1865		Ague.
35. Ernest O	28		Sweden			X		1			1?		1879?		Abscess of groin; well otherwise.
36. Edwin B	27	Unmarried	Norway		O										Phthisis.
37. Andrew B	29		Ireland	X			1						1877		Rheumatism.

TABULAR RECORD OF THE HISTORIES OF THREE HUNDRED AND SEVENTY-EIGHT SEAMEN—*March to June*, 1880—*Continued.*

O = no venereal; X = disease present or past.

Names.	Age.	Condition.	Nativity.	Whether they had			Number times the person has had gonorrhœa.	Chancre, with suppurating bubo.	Chancre, with indolent bubo.	Chancre, without noticeable bubo.	Soft chancre.	Hard chancre.	How long ago.	Previous treatment, if any.	Remarks. Present condition as regards general health.
				Gonorrhœa.	No venereal.	Chancre, hard or soft.									
38. Harry S	33		France		O										Contusion of head.
39. J. T. H. (p. ex.)	30	Married	Norway		O										
40. J. O'N	22		Maine			X				1		1	1880		Hard chancre now.
41. Charles V	25		Massachusetts		O										Venereal warts.
42. George M	24		United States	X			1								Now has gleet and fistula in ano.
43. R. T. W	56		United States		O										Injury to spine.
44. James B	23		New Jersey	X		1									
45. Michael C	22		Ireland	X		1						1?	1879		Now has secondary?
46. William M	22		United States	X		1									Now gonorrhœa and epididymis.
47. Jesse R	33		United States	X											Eyes affected.
48. Robert A	23		New Jersey			X				1					Soft chancre now; well otherwise.
49. William S	31		Germany			X			1			1	1879-80		Had slight rheumatism; now sunstroke.
50. John L. (phys. ex.)	30		Sweden		O										
51. Martin S	25		Germany	X			2								Venereal warts.
52. John R	25		Massachusetts			X				1		1	1879		Now has eruption, but is tolerably well.
53. Joseph S	48		New York			2				2	1	1?			
54. Harry W	23		Sweden		O										Well until one month ago, when lumbago and incontinence of urine appeared.
55. P. W. M	25		United States			X				1	1		1878		Been well; now has pneumonia.
56. William W	21		Denmark		O										
57. H. F	36		Germany	3		X	3			1		1	1870		Had suppurating buboes in 1872; has had debility and occasional pains since hard chancre, but is well preserved; now has gonorrhœa.
58. William P	37		Maine		O										Mitral presystolic.
59. E. H	30		Sweden	X		X	5		1			1	1877		Well till now: has eruption and sores; well preserved.
60. J. E	28		Sweden			X				1		1	1876		Been well; now has suppurating buboes.
61. C. S	32		United States		O										Whitlow.
62. John W	30		Sweden		O										Hernia.
63. John P	27		England	X			1						1877		Sprain.
64. Harry W	30		Finland	X			1								Boils.
65. Capt. James D	47		Massachusetts		O										Boils.
66. Henry B	26		England		O										Phthisis.
67. Edw. B	30		New York		O										Whitlow.
68. M. D	35	Married	United States			X				1		1			Been entirely well since; hernia.
69. Robert S	48	Married	United States		O										Sciatica.
70. James B	56		Ireland	3		7	3		1	6	6	1			Had buboes once only; had rheumatism occasionally, otherwise well; is not anæmic.
71. John Z	22		Scandinavia			X						1			Now has hard chancre.
72. Charles G	26	Mar	United States	X			2	1	1		1	1?	1879-80		Now slight rheumatism; well preserved.
73. T F	29	ried	New York		O										Periostitis.
74. William W	21		Denmark		O										Sprain, ankle.
75. Philip M	28		United States		O										Phthisis.
76. James M	38	Married	United States			X				1		1?	1865		Phthisis; well since 1865, until lately.
77. Joseph V	35		United States	X			1								Conjunctivitis.
78. James B	25		United States	X			2								Gonorrhœa.
79. William J	32		United States			X				1		1	1876		No treatment; had slight sore throat; hair thinned; no rheumatism; now has psoriasis of face.
80. James W	32		Norway	X		X	1			1		1			No medicine; now has gleet; condition good.

81. A. B	45		Germany		O								Contusion of shoulder.
82. C. M	21		Sweden		O								Rheumatism.
83. John M.	29		England	X		X	4		1		1	1879, 9 months before.	Now has gummy tumor of iris; otherwise well.
84. Sylvester H	26		Ireland		O								Contusion of side.
85. Peter G	40	Unmarried	Scotland		O								Subacute rheumatism.
86. Victor H	37		New York	X			2						Epididymitis.
87. John S	24		Ireland	X			1						Gonorrhœa.
88. John S	24		N. Y. (Ireland)	X			5		1		1	1878	Since then has had rheumatism, sore throat; now looks strong, though somewhat anæmic; has bronchitis and malaria.
89. John G	24			X			1		1 for 7 weeks.		1	1874	Now has secondary and two suppurating buboes.
90. William H	20		New Jersey	X		X	1		1		1	1874	Had slight eruption after the chancre; then well until four months ago, when he had sudden hemiplegia without coma; no heart-lesion or headache; now well.
91. James C	22		Ireland	X			5				1	1878	Now has gleet and traumatic epididymitis; healthy.
92. Charles S	27			X			2						Now has gleet and epididymitis.
93. S. J	26		Holland	X			2						Healthy.
94. F. A. A			United States	X			2						Measles.
95. Jesse H	41		United States	X			1						Healthy; contusion of foot.
96. O. H				X			2						Stricture.
97. Isaac I	21		Sweden	X		X	2				1	?	Has suppurating bubo and old split-pea induration.
98. Patrick D	35		N. Y. (Ireland)	X		X	4		4	2	*2 (1 ?)		Healthy; has had no rheumatism or evidence of secondary.
99. R. S	36		Finland			X			1		1 ?	1872	Had 2 slight attacks of rheumatism; has one now; healthy.
100. Paul W	36		Finland	X		X	1		1		1 ?	1860	Had slight attacks of rheumatism, otherwise well; now has small ulcer of foot.
101. Thomas L	36		New York	X		X	1	1			?	1865	Has been well, except for eczema, which he has now.
102. William H	40		Virginia	X			3	2			1 ?	1 ? 1875, 1880	Had his second chancre three weeks ago; now has muscular rheumatism.
103. Daniel G	23	Unmarried	Massachusetts		O								Abscess of hand.
104. F. S	25		England	X		X	1				?	1879	Has had indolent bubo, but no chancre; now gonorrhœa; always been healthy.
105. William M	59	Married	Missouri		O								Cataract.
106. James K	35		United States	X		X	4	1		3	3	1	1875, and previously.	Has been well, except for neuralgic headaches, one of which he has now; no venereal while married.
107. Joseph D	46	Married	United States	X			1					1868	Phthisis.
108. Peter P	30		Norway			X			1		1	1879, 1 year ago.	Nodes and rheumatism; healthy.
109. William S	39		United States	X			1						Had gleet and stricture; no other venereal; phthisis.
110. Henry S	40		United States			X			1		1 ?	1860	No secondary; now has enlarged glands of subclavian region and paroxysms of left sterno-cleido-mastoid.
111. John G	21		New Jersey	X			1		1		1 ?	1879, 9 mos. ago.	No symptoms now except enlarged cervical glands; now has gonorrhœa and epididymis.
112. Frank H	53	Unmarried	Louisiana			X			1		1 ?	1860	Has been well; now has rheumatism.
113. G. A. C	38	Married	U. S. (Maine)		O								Ague.
114. Charles O C	22		New York	X		X	1	1	1		2	1	Now has hard and soft chancre; feels well.
115. Antonio G	35		West Indies			X						1	Healthy.
116. August O	30		Norway		O								Healthy; ague.
117. Joseph V	31		France	X		X	1		2	1	1 ?	1878	Has soft chancre now; been well.
118. J. H	50	Married; well since.	United States	X			1					1850	Chronic articular rheumatism.
119. M. O	43	Unmarried	Ireland			O							Worms.
120. Albert R	43	Unmarried	Norway			O							Worms.
121. Carl O	33		Sweden	X			1						Dyspepsia.
122. James D	38		United States			O							Rheumatism.

* Two hard chancres: 1 certainly, 1 possibly.

TABULAR RECORD OF THE HISTORIES OF THREE HUNDRED AND SEVENTY-EIGHT SEAMEN.—*March to June, 1880—Continued.*

O = no venereal; X = disease present or past.

Names.	Age.	Condition.	Nativity.	Whether they had: Gonorrhœa.	No venereal.	Chancre, hard or soft.	Number times the person has had gonorrhœa.	Chancre, with suppurating bubo.	Chancre, with indolent bubo.	Chancre, without noticeable bubo.	Soft chancre.	Hard chancre.	How long ago.	Previous treatment, if any.	Remarks. Present condition as regards general health.
123. Gus L.	33		Norway	X			1						1876		Healthy.
124. T. C. M.	22		New York	X			1								Gleet.
125. Joseph G.	34		Ireland	X			2								Sciatica and dyspepsia; has secondary?
126. G. W. H.	35	Married	Maine		O										Healthy.
127. John S.	31		Denmark	X			2					?			Had a suppurating bubo; now has piles.
128. James S.	40		United States		O										Gleet.
129. P. M. J.	28		Sweden				5			1		?	1879, 1 year ago.		Been and is well; pruritus ani.
130. George E.	35		United States			X				1		1	1871		Now has soft chancre; has been healthy.
131. Lubbeck B.	30		Norway			X	1			1	1	1?	1875 (hard chancre), 1880.		Now has soft chancre; has been healthy.
132. Richard S.	28		New York	X			1						1879, 6 mos. ago.		Healthy.
133. George I.	40		United States	X		X	2, each, lasting 18 months.			3	2	1?	1865–66–67		Had no secondary symptoms, except rheumatism; healthy.
134. Andrew B.	29		United States		O										
135. George L.	45		United States		O										Now has secondary; anæmic.
136. James G.	26		United States	X			5			1		1			Now has indurated buboes.
137. P. N. M.	24		United States			X				1		1?	1879;		Ague; anæmic; no other symptoms.
138. William L.	28		England			X						1	5 mos. ago.		Tumor of scrotum.
139. Ellis B.	48	Married	United States		O										Now has acute muscular pains in side and front of left thigh.
140. Michael Q.	37		Ireland			X				1			1875		Had the "whole business," and has been well since; now suppurating bubo.
141. William B.	57		United States	X		X	1	1			1		1875		Had the "whole business," and has been well since; now suppurating bubo. Muscular rheumatism.
142. W. O. K.	56	Married	United States		O										Hard chancre now.
143. Daniel O'C.	26		United States	X		X	2					1			Bright's disease.
144. John R.	48	Married	Ireland		O										Well since.
145. Frank J.	48		United States	X			1						1848		Nothing since; had always visited a brothel inspected twice a week by doctors.
146. Harry S.	53		United States	X			1						1860		
147. Joseph T. (phys. ex.)	17		United States		O										Had suppurating buboes one month after connection; six months later rheumatism; since then well; now tonsilitis.
148. A. T.	28		United States			X		1				1?	1879		Suppurating buboes only.
149. J. W. B.	45		United States	X		X	6	1			1		1880, 6 wks. ago.		Got chancre of Chinese woman in Shanghai, who was smothered a week later; now has venereal warts and rheumatism.
150. C. O.	25		Norway	X		X	1	1			1	1	1880		
151. William L.	38		United States	X			1						1874		Rheumatism.
152. C. W.	21		United States	X			2								Gonorrhœa.
153. C. Y.	26		Norway	X			1						1878		Bubo.
154. C. A.	30		Norway	X		X	1					1?	1872		Gleet and rheumatism.
155. E. B. E.	23		Germany			X						1	Jan., 1880.		Rheumatism; otherwise well.
156. M. F.	38	Married	United States		O										Lumbago.
157. Harry P.	25		Norway	X			1						1879, 6 mos. ago.		Gleet; ague.
158. George S.	19		Germany		O										
159. Martin G.	37	Married	Ireland		O										
160. Franz D.	22		Denmark	X			2			1	1		1880		Gonorrhœa and soft chancre.
161. John N.	23		Finland		O										Remittent fever.
162. Thomas McD.	50		United States	X		X	1			1	1?		1855		Well after chancre; frozen hands.
163. John A.	26		Norway	X		X	1		1			1	1880, 6 mos. ago.		Secondary.
164. Charles R.	53	Married	New York	X			1								

165. Abraham G	45	Unmarried	Finland		O						1	1	1878, soft chancre; 1879, hard chancre.		Rheumatism. Secondary.
166. George N	45		Scandinavia			X									
167. Albert A	25		Norway	X		X	2			2		*2 (1 ?)	1876; 1880, 9 mos.	Burnt	Had the chancre seventeen and twenty-two days after connection; no secondary, except a scaly eruption, which he now has.
168. Theodore D	25					X				4	3	1 ?	1872, 1877, 1879, November.	Mercury	In 1877 had rheumatism and sore throat; now has rupia and slight sore throat.
169. Gust. N	23		Scandinavia		O										
170. Harry McG	36		United States			X			1			1	1879, 1 year ago.		Chancre healed in a month; now well; burns.
171. William C	36	Married	Ireland		O										Ulcer leg.
172. C. S	42	Married till 1872.	New York	X		X	1			1	1 ?		1876		Has been well; acute bronchitis.
173. Jacob M	34	Married 11 yrs. No venereal then.				X				2	1 ?	1	1865; 1876, hard chancre.		Since 1876 has had some rheumatism and loss of hair; now has node.
174. Curt R	20		Germany		O										
175. Henry M	30		Germany			X		1		1	1	2	1877; 1879, soft chancre and hard chancre, 6 months ago.		Now has secondary; last chancre came on two days after connection, and had suppurating bubo with it.
176. C. W. S. (phys. ex.)	18		United States		O										Gonorrhœa.
177. C. F. R	27		Massachusetts	X			6								
E. H. G	27		United States	X		1									Chronic rheumatism.
178. Arthur C	34		United States			X		1		X		1 ?	1872		Had a suppurating bubo eighteen months after chancre; healthy.
179. Eugene A	29		United States			X					3		1879 and previously.		Paralysis of inter-osseous nerve from pressure.
180. John M	27		Ireland	X			1								
181. E. H	56		United States		O?										
182. John L	22		Scandinavia	X			1						1878		Gleet.
183. Henry M	30		United States			X				1		1	1878		Had a suppurating bubo nine months after chancre; slight rheumatism.
184. Philip K	28		Europa		O										Had no connection for two years.
185. Vincent C	24		Italy	X		X	1			1			January, 1880.		Well since; gonorrhœa.
186. William E	23		England			X		1			1				Soft chancre.
187. John J	24		Norway			X				1		1	December, 1879.		Venereal warts; well.
188. James C	21		Ireland	X			1						1879, 1 year ago.		Gleet.
189. Thomas S	39		Ireland					1			1 ?		1864		Well since chancre, except occasional rheumatism.
190. Fred O	47		Sweden	X			1						1873		Well.
191. Thomas P	26		United States		O										Chronic epididymitis.
192. Michael M	30		Ireland			X		1				1	1879, 1 year ago.		Chancre appeared one month after connection; now has bubo and rheumatism.
193. Samuel B	42		United States	X		X				1		1	1 year ago.		Secondary; well; didn't know it when he had the sore; thought he only had gonorrhœa.
194. Andrew M	28		Ireland			X				1		1	10 days ago.		Hard chancre.
195. Robert C	34		United States	X			1								
196. C. M. S	26		United States	X			1								
197. J. M. L	41		England			X				1		1	1862		Well since 1862, except rheumatism in 1874; now has rheumatism.
198. Frank B	29		United States	X		X	1			1		1			Hard chancre and gonorrhœa.
199. James B	33		Scotland			X		1				1	3 months ago.		Rheumatism.
200. Andrew W	40		Ireland	X			1								Rheumatism.
201. John M	23		United States			X				1		1	3 months ago.		Well.
202. F. M	23		Ireland			X		1				1 ?	5 months ago.		Pains in legs and insomnia.
203. S. G. B	36		United States	X			1								Laryngitis.
204. Fred H	35		Germany	X		X	1			1		1 ?	1866	None	Well, except for a stricture four years old.
205. A. F	32		United States			X				1		1 ?	1866		Had a chancre for one week; since then occasional rheumatism; now amaurosis.
206. T. K	30		Germany			X		1		1	1	1 ?	1877, hard chancre; 1880.		Suppurating bubo.
207. Peter B	55		Sweden			X				1		1 ?	1877		Had some rheumatism since; pain in penis.

* One hard chancre certain, 1 hard chancre possible.

TABULAR RECORD OF THE HISTORIES OF THREE HUNDRED AND SEVENTY-EIGHT SEAMEN—*March to June*, 1880—*Continued.*

O = no venereal; X = disease present or past.

Names.	Age.	Condition.	Nativity.	Whether they had: Gonorrhœa.	No venereal.	Chancre, hard or soft.	Number times the person has had gonorrhœa.	Chancre, with suppurating bubo.	Chancre, with indolent bubo.	Chancre, without noticeable bubo.	Soft chancre.	Hard chancre.	How long ago.	Previous treatment, if any.	Remarks. Present condition as regards general health.
208. G. T.	44		Norway			X				1		1?	1856		Been well till now; has ulcer of leg.
209. Alfred N.	25		United States			X		1				1?	1873		General debility; stiffness of joints.
210. D. M.	22		Ireland		O										
211. Louis M.	22		France			X				1		1?	1875		Had chancre five days after connection; since then well, but has eczema of chest and bronchitis.
212. Ernest B.	23		Denmark		O										
213. Karl P.	35		Sweden	X		X	1			1		1	1873		Since 1873 slight sore throat and rheumatism.
214. Peter J.	23		Sweden		O										
215. William D.	45	Married	United States		O										
216. John C.			Ireland			X				1		1?	1873		Since 1873 slight rheumatism; bronchitis.
217. Isaac G.	33		United States			X		1				1?	1879, 1 year ago.		Has had bubo open ever since; sore throat; no rheumatism; suppurating bubo now.
218. Thad. B.	25		United States	X			1								Gonorrhœa.
219. James S.	36		United States			X		1				1?	1865		Chancre and bubo lasted two months; has had rheumatism since, and has it now.
220. John J.	29		Sweden	X											
221. John M.	35		Ireland			X				3	2	1	1875, hard chancre; 1878, soft chancre; 1879, soft chancre.		Hard chancre followed secondary, lasting eight months; then well; now has secondary symptoms.
222. Alex. O.	38		Norway			X			1			1	1874		For two years has had myelitis, and now has leg ulcer.
223. Alex. H.	31		United States		O										
224. William W.	39		United States			X				1		1	1879, 1 year ago.		Now indurated bubo and rheumatism.
225. Edward Y.	31		United States		O										
226. Edward C.	25		Ireland			X						1	8 months ago.		Secondary sore throat; anæmia.
227. C. W.	45		United States		O										Has an organic stricture; denies gonorrhœa.
228. August H.	25		United States	X			1								Gonorrhœa.
229. Edward M.	34		Ireland			X		1				1	1866		Had secondary eruption and suppurating bubo, but well since; ulcer of leg.
230. Charles S.	24		United States	X		X	1		1		1		1 year ago.		Gonorrhœa.
231. Louis S.	36		Germany			X				1		1	1864		Well, except occasional rheumatism; now has leg ulcer seven years old.
232. J. B.	21		Ireland			X			1			1	4 months ago.		Just over secondary coryza.
233. J. A.	39		Scandinavia			X		1				1	1877		No secondary symptoms; had suppurating buboes nine years ago.
234. T. W.	29		Norway			X		1				1	1880		Suppurating buboes; feels well.
235. J. R. R.	56		New York			X		1				1	1854		Had buboes and eruption; been well since, until six years ago heart disease came on.
236. Alexandor H.	26		Norway			X		1		1		*2 (1?)	1 year ago; 1 month ago.	1	Had slight sore throat after first chancre; now has suspicions one.
237. Michael McG.	38		Ireland			X				1	1		1 year ago.		Healthy.
238. James B.	33		United States			X				1		1	1876		Had occasional rheumatism and sore throat since; now well except for acute ostitis and occasional vertigo.
239. J. G. F.	32		Ireland			X				1	1?		1875		No sequelæ after chancre; now is debilitated.
240. J. W. G.	48		United States			X			1		1?		1854		Has been well; now has irritable bladder; sleeps four hours a day only.

241. John D	31		Ireland			X				1		1?	1872		Had no sequelæ, but now has a pain ces orbitis of tibia and small sore.
242. John S					O										
243. Thomas McD	22		United States	X		X	1		1			1	1873		Had secondary; now is well, but debilitated; gleet.
243. William J	28		United States	X		X	1		1			1			Hard chancre.
241. H. C. D	38	Married lately, and no disease since.	United States			X			1			1?	1865		Had only skin disease following his chancre.
245. Thomas E	31		Norway		O										Inspissated wax.
246. C. J	34		Norway			X			1			1	1880		Hard chancre; five weeks' incubation.
247. A. C	31		Germany		O										
248. William S	55		United States			X				1	1?		1850		No secondary jaundice.
249. C. O. J	26		Sweden		O										
250. John L	29		Finland			X			1			1	1876		Had secondary eruptions; since then well.
251. A. B	36		New York			X			1			1	18 months ago.		Rupia; general condition not very good.
252. C. H. C	42		Maine			X			1			1	½ year ago.		Secondary; condition fair.
253. Charles R	87	Unmarried	Maine		O										
254. J. D	32		Ireland			X			1			1?	3 months ago.		Rheumatism.
255. J. S	33		Sweden			X			1		1?		1860		Since then well; now has ununited fracture.
256. William G. M	25		United States	X		X	2	1			1		1878		Cont. wound.
257. Israel S	23		United States		O										Hæmaturia.
258. John H	25		Ireland	X		X		1			1		1877		Been better since he had the chancre.
259. Charles P	25		Ireland	X			2								Bronchitis and post-nasal catarrh.
260. Gilbert McF	26		Scotland	X			1								Frost-bite.
261. William S	45	Widower	New York		O										Gleet.
262. Peter D	23		Ireland		O										Subacute rheumatism.
263. Thomas K	34		Ireland			X			1	1	1	1	1870, hard chancre; 1874, soft chancre.		Had secondary after the hard chancre; since then well; now has a pain in side, otherwise well.
264. Philip R	38		United States	X			1								Bronchitis.
265. Edward S	55	Widower, no venereal when married.	Connecticut	X		X	1			1	1?		1850		Healthy; conjunctivitis and coryza.
266. Robert McC	23		Ireland	X			1						1877		Muscular rheumatism.
267. James T	40		Ireland	X		X	3	1			1		1877		Gonorrhœa.
268. Frederick C	56		Germany			X				3	2	1?	1863, 1865, 1870		Has been well, and is now; no buboes.
268. William P	43	Married	Maine	X		X	2	1		1	1?	1?	1805, no bubo; 1867, bubo.		Has been well, but now has pains in the bones.
267. Freeman H	21		New Jersey			X				1		1	1½ year ago.		Condition good.
268. John C	48		United States			X		1		2	†2 (1?)	1	1858, soft chancre, buboes; 1861, soft chancre; 1876, hard chancre.		Had secondary in 1876; been well; cough now.
269. J. P	22		Norway	X		X	1				1	1	Now.		Has hard and soft chancre.
270. William H	23		United States	X			1								Gleet.
271. Andrew C	50		United States	X		X	1			1	1?		1865		Well since 1865; alcoholism.
272. Hudson O. G	22		New Jersey	X		X	1			1		1	¾ year ago.		Secondary followed; now has bronchitis; condition fair.
273. C. A	38		Sweden			X				1		1	5 months ago.		Secondary.
274. John R	34		United States	X		X	1			1		1	8 months ago.		Secondary; condition fair.
275. John B	25		Germany	X			1								Catarract.
276. A. J. L	23		United States	X		X	1	1	1		1	1	1876, soft chancre; 6 mos. ago, hard chancre.		Secondary; anæmic, but works.
277. G. F	28		United States			X						1	½ year ago.		Secondary.
278. J. D	30		United States		O										Rheumatism.
279. Carl B	45		Germany			X				1	1?		1865		Pleurisy.
280. Carl J	45		Norway			X		1				1	8 months ago.		Buboes with chancre; now has secondary pretty bad.
281. Thomas S	34		United States			X				1	1?		1870		Well; prolapsus recti.
282. C. J. L	45		Germany			X		1		1	1?	1	1875, hard chancre; 1870, chancre.		Had secondary, and since then well; now has slight rheumatism and conjunctivitis.
283. J. E. S	35		Denmark	X		X	1	1			1		1865, soft chancre.		Been well; bronchitis and rheumatism.

* One hard chancre certain, 1 herd chancre possible.

† One soft chancre certain, 1 soft chancre possible.

TABULAR RECORD OF THE HISTORIES OF THREE HUNDRED AND SEVENTY-EIGHT SEAMEN—*March to June*, 1880—*Continued.*

O = no venereal; X = disease present or past.

Names.	Age.	Condition.	Nativity.	Whether they had: Gonorrhœa.	No venereal.	Chancre, hard or soft.	Number times the person has had gonorrhœa.	Chancre, with suppurating bubo.	Chancre, with indolent bubo.	Chancre, without noticeable bubo.	Soft chancre.	Hard chancre.	How long ago.	Previous treatment, if any.	Remarks. Present condition as regards general health.
284. George D.	68		France			X				1			1860		Been well; hernia.
285. John S.	35		Maine		O										Ceryza.
286. A. B.	23		Denmark			X				1		1?	1½ year ago.		Had no sequelæ, except occasional sore on penis, and now has abscess of leg; condition good.
287. S. C. B.	23		Denmark		O										Hernia.
288. —— Christianson	24		Sweden	X			1								Abdominal aneurism.
289. P. C.	23		New York			X		1		1		*2(1?)	7 months ago; 1 month ago.		Soft chancre and bubo now.
290. Carl L.	26		Finland	X			1								Abscess axilla.
291. James F.	28		New York	X			1								
292. Frank N.	23		Sweden	X			1								
293. Frank E.	23		United States		O										Gleet.
294. L. J.	30		Norway			X			1			1?	1874		Neuralgia.
295. C. S.	38		Denmark		O										Had slight eruption; otherwise well; contusion.
296. Henry G.	39		Nova Scotia	X		X	1			1	1				Dyspepsia.
297. Daniel O'N.	37		Newfoundland		O										Asthma; has been well.
298. John W.	23		United States	X		X	2		1			1?	4 months ago.		Paralysis of deltoid.
299. Capt. —— ——	50		United States			X						1	1850		New rheumatism.
300. F. L.	22		United States		O										Has had a painful node for years; otherwise well; relieved by protiodide.
301. John J.	37		Finland		O										Colic.
302. Olof H.	20		Norway			X				2	1	1?	2½ years ago; 2 months ago.		No bubo; been well, and is now so, except for inflamed prepuce.
303. Anton. A.	21		Antilles	X			1								Gleet.
304. Thomas N.	23		Ireland			X			1			1	½ year.		Secondary.
305. William S.	30		Massachusetts	X		X	1		1			1	1876		Now has secondary symptoms, but condition good.
306. Samuel E. (colored)	45		Pennsylvania	X		X	4		1			1	1876		Well, but now has gonorrhœa and stricture.
307. E. P.	27		Germany	X		X	2			3	3 (+1?)		1874, 1875		Been well, and is now.
308. A. Z.	38		France		O										Diarrhœa.
309. Ch. M. C.	50		Ireland	X		X	8			4	3 (+1?)	1?	1850, 1862, 1869, 1879.		Had no bubœs except with genorrhœa; no history of secondary; appears healthy, and has only a little pain in arms at night.
310. Samuel M.	30		New York			X			1			1	½ year ago.		Secondary; condition good.
311. Peter D.	34		Germany		O										Rheumatism.
312. William S.	24		South Carolina	X		X	2	2			1	1	1876, s. chancre. 1879, h. chancre.		Secondary.
313. Edward H.	33		Ireland	X			3								Stricture cured; otitis media.
314. A. P.	29		Russia	X			1								Gonorrhœa.
315. N. W.	23		Ireland		O?										Ulcer of leg (very bad).
316. P. G.	40	Married	Sweden		O										Rheumatism.
317. Robert McG.	42		United States			X				1		1?	1860		Well since; now has muscular rheumatism.
318. W. H.	28		New Orleans	X		X	1	1		4	4 (+1?)	1	1871, and on to 1880, hard chancre.		Had first chancre in 1871, followed by bubo and rheumatism; no other bubo; has had a little rheumatism and eruption, but been tolerably well; now has hard chancre; condition good.
319. C. H.	35	Unmarried	New York		O										Bright's, from working in lead?

320. John L	24		Finland			X				1		1	16 months ago.		Secondary.
321. L. E	40		United States		O										
322. H. W	34		England		O										Rheumatism.
323. William H. M	43		United States			X				1	1		1871		Well since; boils.
324. A. F	30		Santa Cruz			X		1		1	1	1?	1873, soft chancre; 1877, hard chancre.		Has had a little rheumatism; now has bronchitis; is tolerably well.
325. Charles E	30		Sweden			X				1		1	18 months ago.		Now has phthisis, which followed tolerably soon after chancre.
326. N. P. W	28		Sweden			X					1?		1875		Bronchitis.
327. Frederick M	23		Russia	X		X	1			1		1	3 months ago		Gonorrhœa and secondary.
328. Frank L	37		Ireland	X		X	1 in 1863		1	1		‡2 (1?)	1865, no bubo; 1874, indolent bubo.		Both chancres were followed by secondary symptoms, the last by eruption and rheumatism; now has ulcer of leg; condition good.
329. Joseph H	48		Ireland	X		X	2		1		1				Soft chancre and rheumatism.
330. James G	22		New Hamphire	X		X	1	1	1		2		1877, 1880		Soft chancre and whitlow.
331. Daniel O. H	33		United States	X		X	1	1			1				Soft chancre.
332. Henry T	41		Nova Scotia	X		X	1	1			1				Soft chancre and gonorrhœa.
333. William M	40		Scotland		O										Rheumatism.
334. Thomas D	40		Ireland		O										Bronchitis.
335. John S	55		Germany			X		1			1				Soft chancre.
336. William J	40		Virginia			X		1			1				Arthritis.
337. H. K	23		Germany			X		1			1?		1874		Night-blindness.
338. Edward N	28		New York		O										Erysipelas.
339. John G. C	34		Massachusetts	X			2								Gleet and subacute rheumatism.
340. A. P	48	Married	France			X				2	1	1?	1860, 1880		Soft chancre; has been well.
341. John A	23		United States		O										Contusion.
342. C. A. M	38	Unmarried	United States		O										Dyspepsia.
343. Syl. F	22		United States		O										Irritable heart.
344. Peter R. (colored)	27		New York	X		X	1			2	*2 (1?)		1878, 1880		Now soft chancre.
345. James H	32		Rhode Island	X			3								Gonorrhœa and rheumatism.
346. William M	33		New York	X		X	1? (last in Nov., 1879, cured).			3	1	§ 2 (1?)	1876, 1879, 1880		Had typical secondary eruption, sore throat, ulcers; got over it under treatment; now has two shallow sores near frenum of glans; gray indurated bases; has had connection; condition good.
347. Jacob J	24		Finland	X		X	1		1			1	1878		Had secondary (rheumatism, sore throat, eruption) after the chancre; in 1879 had sixty feet of tape-worm; now has severe rheumatic pains, gleet, and some debility.
348. William W	21		New York	X		X	1			1	1				Gonorrhœa.
349. Patsey G	25		United States	X		X	1	1			1		1878		Gleet and stricture.
350. Thomas McK	34		England	X		X	1		3		2	1	6 mos. ago a hard chancre; others previously.		Now has stricture and secondary.
351. Felix B	25		New York	X			3								Bubo, idiopathic now.
352. —— C	28		Maine	X		X	1			1		1	1876		Now has a two-year-old leg ulcer; has been well except for ulcer.
353. P. H	21		Sweden	X			1								Prurigo.
354. Thomas L	19		United States	X		X	1			1		1	6 months ago.		Secondary; feels well.
355. C. B	47		United States			X			1			1	1874		Had chancre, followed by rheumatism, etc.; then well; now has a bad boil.
356. Ira Van S	47	Unmarried	United States		O										Necrosis of os calcis.
357. T. E. W	25	Unmarried	United States	X		X	3		1			1	18 months ago.		Had a little rheumatism and eruption after the chancre, but has been pretty well, and is so now; has gonorrhœa.
358. Andrew L	33		Norway			X				1	1?		1870		Cellulitis.
359. Carl O	30	Unmarried	Sweden		O										Jaundice.
360. John M	22		New York		O										Phthisis.
361. Ceron J	29		Sweden	X		X	1	1			1?		1877		Well since chancre; now nasal catarrh.
362. O. W	23		Germany	X			1						7 months ago.		Nervous debility.
363. C. B	45		Holland			X				1	1?		1860		Since 1860 well.
364. John M	26		Finland	X			2								Gonorrhœa.
365. Robert F	25		United States	X		X	2			1	1?				Stricture.
366. William K	39		New York			X				1		1	1864		Been well till now; has nodes.

One soft chancre possible, 1 soft chancre certain. † One soft chancre possible, the rest certain. ‡ One hard chancre certain, 1 hard chancre possible. § One hard chancre possible, 1 soft chancre certain.

TABULAR RECORD OF THE HISTORIES OF THREE HUNDRED AND SEVENTY-EIGHT SEAMEN—*March to June*, 1880—*Continued*.

O = no venereal; X = disease present or past.

Names.	Age.	Condition.	Nativity.	Whether they had			Number times the person has had Gonorrhœa.	Chancre, with suppurating bubo.	Chancre, with hard tricho-	Chancre, without non-treable bubo.	Soft chancre.	Hard chancre.	How long ago.	Previous treatment, if any.	Remarks. Present condition as regards general health.
				Gonorrhœa.	No venereal.	Chancre, hard or soft.									
367. John S.	24		Norway.			X				1	1?		1876		Been well; now suppurating bubo.
368. Peter W.	45		Canada.			X				1	1?		1870		No trouble since; facial erysipelas.
369. Lieut. Thomas M.	35		United States.	X			1								Chronic laryngitis.
370. P. K.	42		Ireland.	X			1						1845		Bilateral sciatica.
371. George B.	30		Vermont	X		X	1		2	2	3	1?	1874		Has had several inducated bubo. Previously had soft chancre (?) three times; has been pretty well, and now has some rheumatism and a suppurating bubo.
372. Michael M.	42		New York	X		X	14			2	1?	1?	1866, 1872		After 1872 had light chancre; now has ulcer on groin; condition good.
373. Lewis B.	50		Canada.	X		X		1			1?		18—		Been healthy; gonorrhœa.
374. Otto B.	36		New York.			X	2				2		1850 and before.		Inguinal hernia.
375. Thomas B.	36		Norway.	X			2								Gonorrhœa.
376. Timothy C.	38		Ireland.	X		X		1				1	1876		Has had legulcers; has been well otherwise.
377. William W.	26		Norway.	X		X	1	1				1			Hard chancre and suppurating bubo.
378. Martin F.	40		Norway.			X				2		1	1861, hard chancre; 1875, soft chancre?		After 1860 had secondary; has been well for eighteen years; now has severe genital pains and weakness.

Progress of Medical Science.

BROWN-SÉQUARD'S EXPERIMENTS ON THE APPLICATION OF CHLOROFORM TO THE SKIN.—Brown-Séquard has given notice that he intends to publish some recent experiments on the cutaneous application of chloroform. Meanwhile we learn something of the nature of the results he has obtained from communications both by himself (*Gaz. méd. de Paris*, December 4, 1880) and his assistant, Henocque (*Gaz. Hebdom.*, November 10, 1880). It appears that the application of the anæsthetic to the skin rapidly produces well-marked changes in the organic functions of nerves and muscles. Moreover, these modifications are of constant occurrence, and have not been hitherto observed or described. He was accidentally led to undertake these investigations by noticing the peculiar effect produced upon a guinea-pig by drops of chloroform inadvertently falling upon the region between the shoulder and neck of the animal. The effect alluded to was the almost instantaneous production of an epileptic attack. When chloroform was poured on the necks of other guinea-pigs profound anæsthesia resulted. Similar results were obtained with dogs, cats, and rabbits, and, although certain differences were noticed, the prime fact of the production of profound anæsthesia remained the same. The animals experimented upon gradually recovered consciousness and activity. In some instances there remained a condition of cutaneous hyperæsthesia, or inflammation occurred if the experiments were repeated and much chloroform employed. Sometimes the experiments proved fatal.

The stimulation of nerves and muscles showed these organs to have become unusually excitable. Brown-Séquard also observed a persistence of this irritability after death, in a considerably higher degree than is commonly seen in healthy animals killed by opening the chest. In certain cases it was found that the phrenic nerve on the side opposite the one to which the chloroform was applied, showed a diminution, or even the complete absence of its galvanic irritability. The author thinks he has for the first time observed the loss of muscular excitability as the result of remote irritation. The rectal injection of chloroform, and its absorption by the lungs, neither produces similar phenomena nor yet prevents their occurrence. Brown-Séquard has classed all these phenomena in a group designated phenomena of inhibition.

At a recent meeting of the Biological Society of Paris, he also explained that these inhibitory effects appear in guinea-pigs on which venesection of the cervical portion of the spinal cord had been practised. But they only appeared provided the chloroform were applied on the same side with the spinal lesion, and behind its site. If applied on the other side, the chloroform remained inert. Other experiments upon frogs and guinea-pigs have made it clear that the cutaneous action of chloroform takes place through the irritation of the nerves of the skin. In certain other experiments it was ascertained that the cutaneous application of chloroform, as well as its action on the broncho-pulmonary surface and other parts, brought about an inhibition of reflex symptoms, and other manifestations of cerebro-spinal activity. Moreover, this took place even if the circulation was completely suppressed. The effects were the same as if the anæsthetic had been absorbed

by the blood and carried to the nerve-centres. Hence the author concludes that the chloroformic irritation of nerve-terminations in the skin and mucous membranes may lead to effects which resemble those due to the inhalation of the anæsthetic, as well as others which have been observed in cases where large quantities of chloroform were taken by the mouth.

Orange-Colored Pus.—The occurrence of a yellowish or orange discoloration of purulent discharges is known to be rare, and its pathological significance is a point not yet definitely settled. Prof. Verneuil (*Archives générales de médecine*, December, 1880) has just published a somewhat lengthy contribution to our knowledge of the subject, from which the following is gathered: Delore, of Lyons, in 1854, first called attention to the matter in an interesting inaugural thesis on pus. This author, however, was able to collect only eight cases of orange pus, although he expressed an opinion that such a complication was not very rare. He thought that it was a symptom of grave import, denoting either the actual presence of pyæmia, or else its gradual approach. The eight recorded instances proved fatal without exception. In 1855 Zeis (*Bull. Soc. biol.*, 1855, p. 148) read a paper on the subject, which embodied the results of his studies regarding the nature and composition of the questionable pus. Verneuil himself was able to confirm the observations of Delore, in 1870 and 1871, for at that time he saw such cases, and almost without exception the patients died. In addition he found, that orange pus was apt to appear in subjects having a constitution vitiated by some systemic condition, such as alcoholism, diabetes, phosphaturia, etc. In a case of depraved health, following the abuse of morphine, the symptom was also seen, and likewise proved fatal.

According to Robin, whose histo-chemical researches are very complete, the orange color is due to the presence of large quantities of hematine or the formation of crystals of hematoidine. Besides these elements, an ochre-colored amorphous substance, representing the molecular detritus of anatomical structures mingled with destroyed red blood-corpuscles, is generally present. M. Nepven has also made an examination of the questionable pus, and he holds the same opinion concerning its chemical nature. The investigations of Broca led him to discredit any notion of a possibly parasitic nature of the orange coloration.

Verneuil never saw this symptom before the third or fourth day, and ordinarily it was a temporary affair, persisting only in certain very grave cases. He found, moreover, that there existed certain local predispositions to its development, such as exposed fractures, contused wounds, superficial gangrene. But this alone would not suffice to bring on the phenomenon under consideration, otherwise its greater frequency of occurrence would have more generally attracted the attention of surgeons. When, however, such conditions were associated with constitutional disturbances, then orange pus was likely to be seen. Among the already observed dyscrasias, he mentioned morphinism, alcoholism, diabetes, and phosphaturia, but in malarial intoxications, renal or hepatic diseases, the same thing was liable to occur. Thus it appeared that a double order of pathological states was necessary, or, at any rate, favorable to the production of the symptom. A satisfactory explanation of the proximate cause could not yet be given.

Although Verneuil saw many patients with orange suppuration die from pyæmia, he was, nevertheless, inclined to regard the two in the relation of accidental coincidence rather than causal connection. Notwithstanding all this, the appearance of orange pus should come as a warning to the surgeon, since it probably indicated constitutional disturbance. The sum of the whole matter was that in such cases treatment was to be conducted according to general indications.

The Peritoneal Transfusion of Blood by Ponfick's Method.—The well-known experiments of Ponfick have conclusively shown that blood may be allowed to flow into the abdominal cavity without causing unpleasant symptoms, and that it will be absorbed from the peritoneal surface and thus enter the system. In the few recorded instances, where this method has been tested in the light of a life-saving or life-prolonging measure in the human being, the actual results have justified or even exceeded the anticipations of the operators. Of course the immediate benefits of vascular transfusion are sufficiently evident from the fact of its more rapid action, so that in acute cases the older method will probably not be supplanted by the more recent one. Yet, even here the danger may possibly be tided over by invoking the aid of auto-transfusion, and then, in the lull after the momentary crisis, proceeding to perform peritoneal transfusion. Dr. Kaezorowski (*Deut. med. Wochenschrift*, November 13, 1880) has reported five new cases, which are well calculated to illustrate the good results obtainable by abdominal transfusion. In one of the five which he gives, some tenderness at the sight of injection was noticeable for several days after the operation. But in the other four it was exceedingly well borne, and in all instances a marked improvement of the patient's condition was observed.

Such encouraging results will not fail to stimulate the profession to future trials. One very apparent advantage of the new method is its great simplicity. For the performance of this simple manipulation there is required neither surgical skill nor a special apparatus. Any ordinary appliance for piercing the abdominal walls, and injecting a sufficient amount of fluid, will answer for the purpose in hand. Of course we would not be understood as indiscriminately advocating the adoption of this method, nor would we wish to see intravascular transfusion banished from grace by this new-comer. Nevertheless, the latter may be tried in what appear to be suitable cases, when its proper sphere of utility will doubtless soon be discovered. From a consideration of the cases hitherto reported it would appear to be specially indicated in those prolonged febrile affections, where cardiac failure from insufficient blood supply is a dreaded consummation. Intractable chronic anæmia seems to furnish another indication for its employment. And certainly if future experience should continue to bear testimony to the innocuousness of the measure, the conditions justifying the performance of the operation will speedily increase in number. Finally, as regards the technique of the manipulation, it may be stated, that a curved trocar was plunged into the abdominal cavity by the linea alba, and the defibrinated blood (on the average about one pound and a third) allowed to flow in by means of a rubber tube connected with a glass funnel.

"Creamery Butterine" is the name of a new artificial butter. It is made by mixing ordinary butter with other fats, and is much more palatable than oleomargarine. It is difficult to distinguish it from real butter.—*The Analyst.*

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

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MYOPIA IN THE SCHOOLS OF DIFFERENT NATIONS.

THERE have been several contributions of late upon the subject of ocular hygiene in schools.* These have been accompanied with numerous statistics which cannot fail to excite much attention.

A most interesting side to the facts that have been thus given is that which shows the variations in the per cent. of myopes among different nations. So far as investigations have gone they show that myopia scarcely prevails at all among uncultivated people. Dr. Macnamara states that he never met a case of short-sightedness among the Bengalese, and that the disease scarcely exists among the lower classes of India. Among several hundred colored school-children examined by Dr. Callan, of New York, only 3 per cent. of the pupils were myopic.

Such results as these are perhaps what might be expected. But it does not follow that myopia increases in proportion to the intelligence and education of a people, for the English have very little of it despite the fact that so large a proportion of their schools are in dark and smoky cities.

There seems to be very little myopia among the Irish; there certainly is very little among those who have emigrated to this country.

The Americans rank very near the English and Irish in their freedom from myopia, though it exists largely in our cities. In the schools of Detroit, according to Dr. Lundy, among the pupils of seven or eight years of age—pupils who had attended school for one or two years—there was no myopia whatever. In the highest grade of ten high-schools it was only 12 per cent. In the highest grade of the Cincinnati schools, the per cent. is 16, while in the New York College and in the Brooklyn Polytechnic it rises to 30 or 40 per cent.

These last high figures are undoubtedly due, in part, to racial influences, for it has been found that in the same schools and same classes the per cent. of myopia among Germans is 24, while that among Americans is 19, and that among Irish only 14 per cent.

Russia is not a nation that has ever been noted for its educational work, or that has been characterized by any widespread cultivation or scholarship, yet there is a high per cent. of myopia in its city schools. This per cent. runs from 13.6 in the preparatory classes to 41.3 per cent. in the highest classes.

It is in Switzerland and Germany that the most alarming amount of myopia has been found. And, in addition to the large percentage of myopes, there is the fact that the percentage increases with great rapidity in ascending from the low to the higher grades in the schools. This is a peculiarity in which, so far as statistics show, the German and Swiss schools differ from the Russian, American, and English. Thus, in Lucerne, among the school-children seven years old there was no myopia; among the students who had reached their majority the per cent. was 61.5. In Breslau the percentages ranged from 0.4 per cent. among first half-year scholars, to 63.3 per cent. among those in the highest classes.

Drs. Loring and Derby found that in New York the range was from 3.5 per cent. in the youngest pupils to 26.78 per cent. in the oldest. The range of percentage in the St. Petersburg schools we have already given.

With regard to these facts of racial difference in the prevalence of myopia, it is impossible as yet to assign the exact cause. The Germans have the greatest application, and the worst print and script of all the European nations. On the other hand, the English are the best printers in the world, and they unite much vigorous out-door exercise with their study. The excessively rapid development of myopia among German school-children shows that they are subjected to very active exciting causes. Dr. Cohn condemns the German letters severely, and recommends the use of short-hand as a substitute for the ordinary script. He asserts that much writing causes a great strain on the eyes, which induces myopia.

There is no positive evidence that the forcing an education upon a previously uncultured people induces an excessive amount of myopia. On the other hand, the Germans have a high per cent. even when under the best hygienic conditions. We are inclined, therefore, to assign a very important place to hereditary predisposition in the production of myopia.

But, whatever the causes, there is certainly something very pitiable in the fact that out of ten children who, at the age of seven, have normal eyes, six at the age of twenty-one will have myopia. And

* Address of Prof. H. Cohn, at Danzig. St. Petersburgher med. Wochenschrift, No. 38.

The Function of Vision, by Dr. Giraud-Teulon. London: Bailliere, Tyndall & Cox. 1880.

Light in the Public Schools, by C. J. Lundy, M.D. Report of Michigan State Board of Health.

myopia, it should be remembered, means more than simply a defect in the range of vision. There is, in a large proportion of cases, a loss of visual acuity also.

Dr. Giraud-Teulon has shown that in myopiæ, ranging between 0 and $\frac{1}{12}$, 1.25 per cent. are, for industrial purposes, "lost eyes." In myopia ranging between $\frac{1}{4}$ and $\frac{1}{6}$, there will be per hundred cases 4.34 of "lost eyes." This ratio increases with the increase in the myopia, until, in cases where the defect exceeds $\frac{1}{2}$, the per cent. of those having no useful vision is 28.48.

Such nations as Switzerland and Germany, therefore, may well look upon the progressive increase of myopia in their schools as a national calamity; and it is an evil that cannot be too carefully guarded against in every country.

It is not our purpose, however, just now, to discuss this branch of the subject. The causes and remedies for myopia in schools have been frequently dwelt upon in these columns. Still, we would not lose the opportunity here of calling attention to one of the necessities of modern education—that of having the "doctor in the school-room."

Whatever the special measures adopted for the ocular hygiene of schools, the assistance and supervision of competent medical authority is the essential measure that should be at the bottom of all attempts at systematic hygienic reform.

QUACKERY IN THE RELIGIOUS PRESS.

Several of the religious papers have attempted to defend their course regarding the publication of quack advertisements. The burden of their argument appears to be that the editors of these periodicals do not pretend to judge whether or no this or that medicine is what it is represented to be in the advertisement. So long as there is nothing morally wrong in the wording of the quack's card, nothing in it that would jeopardize the spiritual welfare of the readers, it is allowed to take its place among announcements of purely religious wares. From every other form of wickedness, except quackery, the readers of these papers appear to be protected. Every other kind of questionable advertisement is rejected to keep these papers respectable.

The excuse of want of knowledge of the real character of the quack advertisement is an exceedingly lame one for any intelligent editor to make. He cannot absolve himself from the responsibility on such a plea. As a matter of fact, there is not an editor or publisher of a religious paper in the land who does not know that he is doing wrong by giving the quacks a respectable hearing. The quacks understand this, and are willing to pay more for an advertisement in a religious paper than in any other.

From a business point of view, these frauds understand that every announcement that appears in a religious paper bears the stamp of Christianity. The editors of these journals virtually guarantee this. At least, the Christian people over the country are taught to think so. Thus it is that, while these Christian men are supposed to be sowing the good seed, they are being paid by the enemy to allow the sowing of tares also. But, unlike the enemy in the parable who came by night, the quack walks in broad daylight in company with the sower himself, and with his free permission plies his damnable trade.

It is useless for these Christian editors to argue that the public should know of these things and judge for themselves. The public, through them, have a right to know only of such things as are guaranteed to be pure, good, and true. If the editor is not certain that such is the case he is bound to ascertain. The members of the medical profession who are subscribers to these papers will gladly enlighten any of these journalists. At least they can leave no other excuse for the religious editors than that they are paid well for serving the devil in the livery of heaven.

THE MEDICAL AND SURGICAL HISTORY OF THE WAR.

The medical profession has placed itself fairly on record as endorsing the value of "The Medical and Surgical History of the War." This is as it should be. The government has been generous to the profession in placing such a work within reach of a fair proportion of medical scholars. The editions have been reasonably large and have been rather lavishly distributed. Of course, a goodly number of medical gentlemen do not possess the volumes, and are willing to obtain them gratuitously. These are they who are constantly writing to friends in Washington, asking for copies. The failure to supply free copies has somehow or other given the impression that there is a necessity for extra editions. The truth, however, is, that there are plenty of these volumes which are not appreciated by such as originally received them from Congressmen, and which can be obtained at comparatively low figures at the various book-stands over the country. We say this much by way of announcing that a bill has been introduced in Congress which authorizes the public printer to reprint, from the stereotype plates, an edition of 50,000 copies of each of the four volumes heretofore issued from the government printing-office. Should the bill become a law, these books will be for gratuitous distribution by members of Congress.

On behalf of the profession we can inform the public that there is really no necessity for such an appropriation. It is quite evident that the profession is being made a cat's paw in this business. Under the circumstances it cannot, nor will it endorse the measure. The medical man wishes to have his rights, but he does not ask the government to squander money for what it does not need. We are confi-

dent that this measure is not intended for the benefit of the profession. If the bill should by any artful legislative dodging be passed, it is safe to say that the comparatively few numbers will be distributed to the profession. At best the passage of the bill would be a shameful waste of the people's money. We ask our readers to be cautious how they sign any petitions which may be circulated with such a view.

THE ETHICS OF CONSULTATIONS.

Such as are interested in the study of the ethics of consultations will find some new points brought out in a letter in another column. The case is stated with great clearness, the logic of the correspondent is sound from beginning to end, and the consultant is clearly shown to be in the wrong. The latter committed a gross breach of etiquette by his cautionary advice to the attending physician, in the presence of the patient, regarding the defects in the catheter. The excuse for such behavior, which was made by an appeal to natural tendencies, is quite novel, although not entirely satisfactory. Under such circumstances the attending physician is always compelled to act on the defensive, by firmly declining to be placed in a false position to his patient. Our correspondent will have the sympathy of all who have been placed in similar relations.

THE BENIGNITY OF SYPHILIS.

We have devoted considerable space in the present number to the paper by Prof. Dana. The subject of which he treats is one of much interest, and as such will doubtless commend itself to the progressive and thoughtful practitioner. The tables are so arranged as to give at a glance the history of each of the large number of cases, and furnish the data upon which the conclusions are based. It appears quite evident, from the study of these cases, that syphilis often runs a mild course without classical treatment, and despite unhygienic surroundings; that it frequently has a tendency to spontaneous cure, and that its present benignity appears to be due to a gradual change in the poison itself.

Unless we are prepared to admit that seamen as a class have a peculiar immunity from syphilis, the conclusions will have a much wider range than the author originally intended for them.

Dr. Clark McDermott died recently at his residence in Dayton, O. During the war, Dr. McDermott became very prominent, being appointed Medical Director of the Army of the Cumberland, and subsequently being in charge of the Nashville Hospital, the largest in the army. After the war he was made Surgeon-General of Ohio. Dr. McDermott had established a high reputation for his surgical skill, and he was greatly beloved for his social qualities. He lived in New York city for a few years, and is well known by the older surgeons here.

Reviews and Notices of Books.

A Practical Treatise on Tumors of the Mammary Gland; embracing their Histology, Pathology, Diagnosis, and Treatment. By Samuel W. Gross, M.D., Surgeon to and Lecturer on Clinical Surgery in the Jefferson Medical College Hospital, etc. Illustrated by twenty-nine engravings. New York: D. Appleton & Co. 1880. Pp. 246.

Dr. Gross has taken a step in the right direction, and his able monograph on mammary neoplasms will not fail to stimulate the earnest student to further efforts in the path thus marked out. American pathology is still in its infancy; the practical bearings of this science are little understood and less appreciated. Perhaps this is partly the fault of the pathologists; certainly no blame can attach to the science of pathology. Books like the present sow a plentiful seed, and if the mind of the profession but furnish a receptive soil, the planted grains are bound to grow and blossom. Then, indeed, we may look forward to the time when the cultivation of this science will find its proper reward by a just appreciation on the part of the profession of its past endeavors and the high aim of its future objects.

There is enough to criticise in the book before us, but we cannot explicitly set forth when and how Dr. Gross might have improved the quality of his work. The tendency of the volume is so good that the critic for once feels justified in abstaining from pointing out the nether side, with its imperfections, errors, and deficiencies. Work of the kind before us should receive the encouragement of just recognition of its intrinsic value and general meritoriousness, rather than have its prompting ardor checked or even cooled by the proclamation of discovered mistakes or insufficiencies.

The author states that he has sought to harmonize structural with clinical observations, and in this way he appeals directly to the interest and judgment of both pathologist and surgeon. In this way also his pathology loses the flavor of an abstract science, pursuing ends of its own, which are entirely distinct from the objects of practical every-day treatment. This may be considered a concession on the part of high science to mere art, but in our country and at the present day it is a *sine qua non* of a book intended for the use of the practitioner.

Gross' classification of mammary growths corresponds in all essential respects to that of Virchow, as modified by Lücke. Tumors springing from tissues of the connective group, including fibroma, myxoma, lipoma, chondroma, and sarcoma, are distinguished from neoplasms of epithelial origin, viz., adenoma and carcinoma. Angioma and neuroma, which represent complex structures, are again placed in a separate class. With much diligence the author has collected various statistical data illustrative of the life-history both of the tumors themselves and of the patients who carry them. We doubt, however, whether the many tables of percentages invariably possess a high value and justify general inferences, not because statistical evidence is not the safest guide to knowledge, but because often the number of cases observed by Gross was too small to make numerical deductions therefrom permanently valuable. Gross is partial to foreign sources of information as regards the record of other than personal cases. There appears to be no good reason for this

predilection, for American medical literature contains descriptions which are fully as good as those of the average European observer. Early surgical interference is warmly advocated, and we hope not in vain. A timely hint concerning the axillary lymphatic glands is given. They should, according to the author, be first attacked when constituting a hard and knobby tumor, because it appears useless to attempt interference with the primary growths until it is ascertained that they can be removed. On the whole, it may be said that the work of Gross contains much valuable information, partly original, and in part compiled from other works; that the woodcuts are, with some exceptions, very mediocre productions, and that the book has not, as its author would have it do, filled the void of a "systematic and strictly accurate treatise." No book on pathology could come up to such a standard.

Diagnosis and Treatment of Ear Diseases. By Albert H. Buck, M.D., of New York, Aural Surgeon New York Eye and Ear Infirmary; Instructor in Otology, College of Physicians and Surgeons, New York. Wood's Library of Standard Medical Authors. New York: Wm. Wood & Co. 8vo, pp. 411.

This work is a record of individual experience chiefly, as the preface tells us and as a perusal of it shows; but the record is of an experience so rich in material and so well digested that the result is a very complete text-book upon the subject.

It is eminently a practical work, especially adapted to the practitioner who is already familiar with anatomy and pathology, and its title shows the real character of the book, which is treatment of the diseases of the ear. At the same time it is not dogmatic, and the views of others with whom the author differs are recognized briefly, and generous credit is given where the labors of others have been drawn upon.

Beginning with a sketch of the physiology of the ear, the methods of examination are given, and the rest of the book is taken up with diseases of the auricle, of the external auditory canal, of the middle ear (non-purulent forms), of the middle ear (purulent forms), fractures of the temporal bone, diseases of the mastoid process, miscellaneous conditions of the drum-membrane, ossicles and tympanic cavity, and aural disease in which the labyrinth is believed to be involved.

A knowledge of anatomy, physiology, and histology is presupposed, as the short chapter devoted to physiology, although written in a very interesting and concise style and with excellent illustrations, can hardly be regarded as complete. In the chapter upon examination of the ear it seems to us that a little too much stress is laid on certain instruments and not enough upon the principles which determine their use; probably many practitioners would take exception to the remarks upon the various forms of specula and upon the choice which is made by Dr. Buck; but when one knows what one is to look for, but little can be said in favor or against any one of the modern forms.

Whether the methods advised for the removal of cerumen by instruments rather than by syringe will will prove as safe and effectual a means in the hands of the average practitioner, who will necessarily have but little practice in such manipulations, is quite a question; in expert hands it is safe. But the use of caustic potash for such a purpose, as quoted from another author, cannot be too severely condemned, and the quotation had better have been omitted.

The chapters on acute purulent inflammation of the tympanum are excellent, the treatment of the subject being clear, systematic, simple, and thoroughly efficient; they are just what the general practitioner requires for help in this most important and serious disease. Boracic acid would probably have received a more favorable notice if the author had been so fortunate as to have tried Morson's pulverized acid, which is literally an impalpable powder.

In the references to perforations of Shrapnel's membrane, an article in the *Boston Medical and Surgical Journal*, for March 26, 1874, is as worthy of mention as the first upon the subject published on this subject.

On the whole, we can say that we have read the book with both pleasure and profit, and can pronounce it sound, practical, and safe, destitute of irrelevant theories, and without the attempt to be encyclopedic, which renders so many works uninteresting.

Reports of Societies.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Adjourned Stated Meeting, January 10, 1881.

A. E. M. Purdy, M.D., President, in the Chair.

The special order of the evening was the reading by Dr. Charles L. Dana of his prize essay, which was entitled:

ON THE BENIGNITY OF SYPHILIS; BEING A STUDY OF THE DISEASE, ESPECIALLY AS IT AFFECTS SEAMEN.

When the reading of the paper was concluded, Dr. F. R. Sturgis, being called upon by the Chair, remarked that it was a difficult one to discuss in an intelligent manner, since it dealt to so large an extent with statistics. If he understood the writer properly, the essay had been confined principally to the consideration of secondary syphilis, and he thought that almost every one would concede that the disease was undoubtedly benign in its early stages.

Dr. Dana here interrupted Dr. Sturgis to explain that the latter had misunderstood him on this point, since he had used in his paper the nomenclature employed in the United States Marine Hospital Service, which was that of the English authorities, who excluded the term tertiary, and included in the general term secondary syphilis both the secondary and tertiary manifestations of the disease as generally understood in this country.

Dr. Sturgis then went on to say that the great danger in syphilis was from the late developments of the affection. Although he believed with the writer that in the vast majority of cases the disease was benign, yet there was a certain proportion in which, either directly or indirectly, it proved fatal, and in preparing any statistics of the disease (as he had himself found by experience) it was extremely difficult to sift these cases, to which other causes of death were likely to be assigned. He did not think that syphilis was especially benign in sailors, but rather that in all classes at the present day the proportion of cases in which the late manifestations were of a serious character was comparatively small; while he agreed, with Dr. Dana, that, as a rule, such venereal troubles, as gonorrhœa, chancroid, and in-

flammatory bubo, really caused more disablement than syphilis proper. This result might, perhaps, be due to the better treatment which was now employed.

With regard to the matter of nomenclature, he could not but object, though with all due reverence, to that used by the English authorities, who still used the terms hard and soft chancre, while they excluded the tertiary stage of syphilis altogether, regarding what are understood as the tertiary manifestations as mere sequelæ of the disease. It was a fact that these late symptoms were just as amenable to the effects of mercury as the early ones; and he believed that the opinion was steadily gaining ground that mercury was of the greatest possible service in tertiary syphilis. After a few remarks on heredity in this connection, he said that he thought the true way to get at the complete facts as to the gravity of syphilis was to compare the total mortality with the whole number of cases of syphilis extant.

Dr. George H. Fox said that, apart from the improved methods of treatment now employed, he believed that in New York, at least, syphilis was in the vast majority of cases at the present day a benign disease. Those who had not given much attention to the subject still believed that a large number of the cases met with are characterized by the terrible features which were described so graphically in some of the older books; but experience proved this to be a great mistake. Viewed from a social point, indeed, syphilis was one of the greatest scourges of humanity; but from an individual point of view it was not of so much consequence. He had no doubt that there were a number present who were familiar with the affection as it was now generally met with, who, if allowed the choice, would actually prefer inoculation with syphilis to suffering from chronic rheumatism or malaria. Among his patients at the New York Dispensary he had sometimes met with those who were prejudiced against the use of mercury, and in such instances he had often been surprised to observe what a normal course the disease usually pursued, even when no mercury was resorted to, and how well the patients remained after three, four, or five years. At the same time he was a very strong advocate of the use of mercury in syphilis, and he was in the habit of employing it in almost every instance. He believed, however, that the hygienic condition of the patient was too often neglected, as well as the resort to other remedies which were also of decided service. Thus, he regarded iron as but little inferior in value to mercury itself; and he believed that iodide of potassium should be given more largely than it was, especially in the early stages. In those whose health was otherwise broken down, syphilis occasionally resulted very seriously; but in those who were in good health, regular in their habits, and surrounded by proper hygienic conditions, it almost invariably ran a benign course, and he was glad for one that the benignity of the disease had thus been prominently brought before the profession.

Dr. H. G. Piffard thought that the statistics which had been presented were somewhat puzzling. His impression, in regard to English soldiers and seamen at least, was that they were disabled to a considerable extent by venereal disease, and that in them syphilis was rather less benignant than in civil life. The accounts of the disease as it existed a hundred, or even fifty years ago, were somewhat startling; and although we occasionally saw duplicates of its severer manifestations as then met, they were certainly very rare at the present day. This tendency toward benignancy he believed to be due to the improved methods of treatment which had been adopted, whereas, fifty years ago, he thought the disease was frequently aggravated by the treatment resorted to. Sometimes syphilis now ran its course in two years without treatment, and was purely benign throughout; but the majority of cases would not pursue this benign course if left to themselves. Formerly it was thought necessary always to salivate the patient with mercury; but at the present day salivation was regarded as injurious instead of beneficial. He was of the opinion, however, that too much iodide of potassium was now given, particularly in the early stage of the disease. In common with Dr. Sturgis, he believed in the use of mercury early and late, and in giving as little iodide of potassium as possible. It seemed to him that cases which would have done well on mercury alone frequently did not progress favorably if the iodide was used. The patients were subject to constant relapses, and these relapses were very difficult to control. It was this class of cases that were often met with in our hospitals, suffering from tertiary syphilis.

He regretted that the term tertiary syphilis had been expunged from the nomenclature used in England and adopted by the United States Marine Hospital Service. Mr. Jonathan Hutchinson had called the tertiary manifestations merely sequelæ of the disease; but one thing was certain, viz., that such conditions were never met with unless the patient had first had syphilis. In the marine hospitals we did not know whether the serious lesions occurred or not, since in fatal cases death took place from asthenia, which might be produced in many different ways. In all hospitals, be believed, there was a certain mortality which could be traced to the effects of the syphilis, which it was customary to set down to other causes.

Dr. Thoms said that he was familiar with the disease as it occurred among seamen, and that the conclusions of the writer accorded, in the main, with his own experience. At the same time, it was well to bear in mind that there was a great mortality from other causes among seamen; and it might be possible that a certain proportion of this was due to the remoter effects of syphilis. Thus, in the Seamen's Retreat, on Staten Island, as well as in the United States Marine Hospital here, there was a large mortality from disease of the lungs, and it seemed to him that this was increased by syphilis.

Dr. Morrow had not arrived in time to hear the essay, but he doubted whether the term "benign" could be applied with propriety to a disease like syphilis, which impressed the system so profoundly that outbreaks of it were liable to occur ten, fifteen, or even twenty years after the appearance of the initial lesion, and in regard to which it was still a mooted question whether it could really be cured or not. The statistics of the French hospitals, he thought, demonstrated that it was not a benign affection, and he mentioned particularly those of Fournier, who found that, out of 167 pregnancies, no less than 145 of the offspring were born dead, either prematurely or at full term. The more we learned of syphilis, he said, the more likely were we to consider it a severe disease. Many years ago Fournier had followed Ricord closely in his method of treatment, and had announced about six months as sufficient to maintain it. Twelve or thirteen years later, however, he had laid down a set of rules for the treatment of syphilis, in which it was taught that it was absolutely necessary to use mercury for two or

three years; while still more recently he had expressed the opinion that four years was the minimum period during which the treatment should be kept up.

Investigation had demonstrated, he continued, that a great many diseases which had been formerly regarded as severe were in reality directly attributable to syphilis. It was an affection characterized by marked anæmia, and among its results were amyloid degeneration of the liver, kidneys, and other organs, while it also had a tendency to produce diseases of the lungs, eye, brain, and spinal cord. According to the best and most recent authorities, syphilis was answerable for an immense number of affections of the nervous system.

Dr. Bangs differed somewhat in his opinion from the last speaker, and thought it was altogether appropriate that the term "benign" should be applied to a disease which was evidently so much less severe than it had formerly been, a result which he believed, in common with some of those who had preceded him, was due to a great extent to the improved methods of treatment which had been employed during the last few years.

Dr. Bulkley, on the other hand, was not willing to let a paper in which syphilis was characterized as a benign disease go forth from the society without a protest. It was much more widespread in its effects than many of those who had spoken seemed to realize. In his own public practice one-tenth of all the cases of skin diseases which he met with were of syphilitic origin, and when it was remembered that one-third of the whole number were cases of eczema, it could readily be seen how large a proportion of the remainder were syphilitic. In private practice he had found that one-sixteenth of the cases were syphilitic, and here eczema constituted rather a larger percentage of cases than in the other class of patients. From facts like these he thought it altogether wrong that syphilis should be allowed to go out in the community with the endorsement of a learned body like this as to its being a benign disease.

The later manifestations of the disease were the ones of greatest danger and severity, and especially syphilitic affections of the nervous system, of which there were a great variety. Grave lesions of the eye also were very apt to occur late in the course of syphilis, and he mentioned two cases of this which had come under his own observation. In one of these (where one of the eyes was entirely lost from choroiditis, and the other only saved with difficulty) the trouble appeared nearly twenty years after the original chancre from which the syphilis had developed. He also mentioned the case of a lady who had come to him to be treated for tubercular syphilitic ulceration about the lip, which had been pronounced epithelioma and lupus by other physicians, and which readily yielded to antisyphilitic treatment. The husband of this lady had suffered for a long time from persistent neuralgia, and this also was removed by the same kind of treatment. He certainly thought it was a mistake to apply the word benign to a disease which frequently gave rise to such grave disorders as amyloid degeneration of the liver and kidneys, and he believed, notwithstanding the assertion of one of the previous speakers, that every gentleman present would hesitate very decidedly before he accepted syphilis in his own person in preference to rheumatism or malaria. It was undoubtedly true that many of the severe features of late tubercular syphilis were due either to improper treatment or the unfavorable physical condition of the patient, but at the same time it was unfortunately a fact that we very frequently met with the loss of the nose or with grave disease of the bones in syphilitic subjects. These cases were, indeed, exceptional; but there were a sufficient number of them still to be seen to convince us that the disease giving rise to such conditions was of no light order. The fact also that syphilis caused so many still-births and so many diseased offspring (as had been before remarked) was enough to demonstrate that it was a malignant, and not a benignant affection. Since it was such a serious trouble, therefore, the treatment was of the utmost importance, and mercury, the use of which had formerly been abused to so great an extent, was undoubtedly the most useful agent that we possess for the eradication of syphilis. At the same time, he believed also in giving iodide of potassium, in small doses, and considered iron an adjuvant of the utmost value.

Dr. Sturgis remarked that a protest such as Dr. Bulkley seemed to advocate would reflect seriously upon the committee on prize essays, and he could not but believe that the great majority of the members of the society were in harmony with the general sentiment of the paper as to their opinions upon syphilis. He thought Dr. Bulkley's experience as regards the frequency of the loss of the nose and other serious consequences was very exceptional, as neither his own nor that of many of the largest observers in this city was in accordance with it.

Dr. Fox suggested that syphilis might be both a benignant and a malignant disease. Thus, mumps was regarded by all authorities as belonging to the former class of affections, and yet it was well known that occasionally a malignant case did occur. There was no doubt whatever that syphilis did sometimes occur in a malignant form—and occasionally despite the best treatment; but this did not alter the fact that in the great majority of cases the disease ran a benign course. He wished to enter a protest, also, and that was against looking at syphilis from an exclusively dermatological point of view, as Dr. Bulkley seemed to be inclined to do. The cutaneous manifestations of syphilis constituted only one of the many features of the disorder, and he thought it was the experience of all that syphilitic skin-troubles were among the most amenable to treatment in the whole list of cutaneous affections.

After further remarks by Drs. Petzold and Piffard, the writer of the paper brought the discussion to a close. He explained that he had only aimed in his essay to show that, as a rule, in seamen the disease syphilis ran a course which was mild in character; and of this fact he was, from quite extended observations, very positive.

As to the mortality from the disease, Dr. Dana stated that he believed that not very many deaths occurred from it among sailors. In his experience he had never known a man to die from syphilis in the institution with which he had been connected, which was the largest in the United States Marine Hospital Service. There were also remarkably few affections of the nervous system in connection with syphilis in seamen; and the same was true, so far as his observation went, of Bright's disease, and amyloid degeneration of the liver and other organs. Chronic diseases of lungs he found to be extremely infrequent in those sailors, the Scandinavians, who had syphilis the most. He did not deny that the disease affected seriously the offspring of syphilitic parents; but, at the same time, it was true that such offspring either died when very young, or else got rid of the effects of the dis-

ease as they grew up. He thought, therefore, that Dr. Fox had been right in regarding syphilis in general as a great deal milder than many chronic diseases; and he had seen many cases of it in which it was not much worse, as regards its disabling effects, than an ordinary attack of measles. In conclusion, he advocated a pure mercurial treatment in the early stages, as preferable, in the great majority of instances, to what is generally known as the "mixed treatment."

CANDIDATES FOR MEMBERSHIP, WITH NO LEGAL AUTHORITY TO PRACTISE, EXCEPTING A DIPLOMA FROM A HOMŒOPATHIC OR ECLECTIC COLLEGE.

Before the society adjourned Dr. Ellsworth Eliot presented the following resolution:

Resolved, That our delegates to the State Medical Society be instructed to obtain a decision from the State Society whether candidates who have no legal authority to practise physic and surgery, excepting a diploma from a homœopathic or eclectic college of this State, should be admitted to membership in county medical societies which have the right of representation in the State Society.

After a brief discussion the resolution was referred to the Comitia Minora, to be reported upon at the next meeting of the society.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, January 12, 1881.

DR. T. E. SATTERTHWAITE, PRESIDENT, IN THE CHAIR.

DR. SATTERTHWAITE presented a specimen, with a written history, for a candidate.

DR. J. W. HOWE exhibited a lipoma weighing three pounds and twelve ounces, removed from the scapular region of a female fifty years of age. The tumor had been growing twenty years. The principal part of the wound united by first intention.

EPITHELIOMA OF PENIS.

Dr. Howe also presented specimens of epithelioma of the penis, removed by operations from patients aged respectively fifty-four and seventy years.

The first specimen was removed from the older patient. The disease was confined to the glans penis. The wound healed promptly, but the patient subsequently died of œdema of the lung.

The second specimen was one of cancer of nearly the entire penis. Amputation of the organ was performed in the usual way, and the wound healed without trouble. It was found, however, after the patient was able to get about, that his urine spattered over the inside of his thighs, and produced extensive excoriations. Dr. Howe, in order to remedy the difficulty, performed a supplementary operation, which consisted in splitting the urethra in the median line under the pubes, and sewing the edges of the mucous membrane to the corresponding edges of the integument. By this procedure the parts were made to imitate the labia minora in the female, and served the purpose of directing the urine in a continuous and solid stream clear of the thighs.

ACUPRESSURE SAFETY-PINS.

Dr. Howe also called attention to a device which he had used to advantage in controlling the oozing from the severed corpora cavernosa. It consisted of two diaper safety-pins, constructed for this purpose, which were applied to either side of the stump in such a manner as to perform acupressure.

DR. B. A. WATSON, of Jersey City, presented a specimen of gunshot wound of the transverse colon, followed by acute general peritonitis. The points of interest in the case were the almost complete absence of shock, the absence of tympanites for the first four or five days, and the comparatively low temperature during the whole course of the disease.

The society then went into Executive Session.

Correspondence.

THE ETHICS OF CONSULTATIONS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR—Believing that the following narration, bearing upon medical ethics, will not be without interest and profit, I venture to ask for a brief space in the columns of the RECORD.

Dr. A., the attending physician in a case somewhat tedious but not serious, was requested by the patient to have Dr. B. meet him in consultation the following day. At the same time he was informed that Dr. B. had already been there, but learning that another physician was in attendance, declined service, except as consultant. Circumstances which are not pertinent to the story caused Dr. A., at first, to hesitate, but he finally consented.

The physicians met. Dr. B., on approaching the bed, saw on the table a Jacques' catheter which had not the "velvet eye," but which was in perfect condition. He examined it, commented on its defects, and suggested how to render it free from danger by rounding off the margins of the eye with a hot glass rod. Then turning to the patient, who had been listening to his cautionary advice, he proceeded with his examination, during which he remarked, disjointedly: "Well, you are not as bad as you might be;" "the seminal vesicle is greatly distended;" "the prostate is not enlarged;" "the doctor and I will put our heads together, and if I can suggest anything that will hasten matters I will do so."

After the examination the two doctors retired to an adjoining room for further consultation. Dr. B. stated that he did not know that he had anything of special value to suggest, that the patient would undoubtedly be well in a few days, but that a certain remedy might hasten the result. He had previously endorsed the diagnosis and treatment of Dr. A. The suggestion was declined by Dr. A. on account of the manner in which Dr. B. had acted in the presence of the patient, and because neither physician believed the remedy to be of essential value, and, furthermore, because such a course would, under the peculiar circumstances of the case, unjustly injure the attending physician. After a free interchange of views, Dr. B. withdrew his suggestion, and said he was willing to let the treatment go on unaltered.

The following day Dr. A. received a note from Dr. B., in which he stated: "I accepted the criticism of my remarks to the patient due to a manner for which I am no more responsible than I am for the shape of my nose or the color of my hair." He then proceeded to criticise the action of Dr. A., and submitted the following propositions: "My argument is this—I submit it in the best spirit, without a shade of ill-feeling: 1, a patient, even when doing well, has a perfect right to demand a consultation; 2, his physician must accept or decline; 3, accepting the meeting the physician is bound to follow any reasonable suggestion offered by the party called in."

To the first and second propositions Dr. A. gave his unqualified assent. To the third he assented, if by "reasonable suggestion" be meant one which, in the judgment of the attending physician, would materially benefit the patient; otherwise he claimed the right to dissent, and pointed out that the code of ethics clearly defined the manner in which differences should be settled. He fully admitted that the attendant was bound to carry out any suggestions offered by the consultant, that were *agreed upon in the consultation*, but that beyond this, duty did not require him to go.

Two points in the above narrative seem to me worthy of serious consideration. I refer to them in no vindictive spirit, but because I believe them to be the munitions behind which many are seeking to defend themselves from the shafts of a foe nearer home than those whom they have injured. I contend for a principle and not against the man. First, it is astonishing that a physician, capable of occupying a position of marked prominence in the profession, should consider himself no more responsible for the manner described in the above not over-tinted picture, than he is "for the shape of his nose or the color of his hair." Further comment is needless. Secondly, it is surprising that he should so far misunderstand the code of ethics as to believe that it would sanction the dogma that an attending physician "is bound to follow any reasonable suggestion offered by the party called in."

Permit me, in conclusion, to offer the following proposition, as a comment upon the above dogma, which, after all, is the salient point at issue:

I hold that in consultations "the responsibility must be *equally* divided between the medical attendants; they must *equally* share the credit of success as well as the blame of failure;" that differences "should always be avoided, if possible, by mutual concessions, as far as they can be justified by a conscientious regard for the dictates of judgment;" that the consulting physician "should observe the most honorable and scrupulous regard for the character and standing of the practitioner in attendance; the practice of the latter, if necessary, should be justified, as far as it can be consistently with a conscientious regard for truth, and no hint or insinuation should be thrown out which could impair the confidence reposed in him or affect his reputation."

PRACTITIONER.

NOTE ON A HOUSE-EPIDEMIC OF "FALSE DIPHTHERIA OR SPREADING QUINSY,"

ORIGINATING IN LOCAL CAUSES, AT AN ISOLATED HOUSE, AND NOT SPREADING BEYOND THE MEMBERS OF THE INFECTED FAMILY.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR—In September, 1879, I was called to see a sick family residing in a small house on a range of hills back of and above the junction of the Snake and Clear Water Rivers of Northern Idaho.

In an old abandoned claim shanty, built of rough lumber, raised but a few inches from the ground, ten feet by twelve in dimensions, lighted by a window but sufficiently large to meet the requirements of the U. S. Land Office, I found a family consisting of three (3) adults and four (4) children, sick with what was supposed to be diphtheria. A few moments before my arrival a boy ten years old had died. A second boy, seven years old, was in articulo mortis, and died a short time later. The father, who had been the first attacked, was convalescent, the other members of the family were in various stages of the disease.

A careful examination of these cases determined that there was an acute inflammation of the tonsils, accompanied by great swelling and induction. That in each case the pharynx was more or less involved. That there was a considerable accumulation of a tenacious mucus upon the inflamed surfaces, *but no diphtheritic membrane*. In each case the febrile symptoms were pronounced, the pulse was full and hard, the skin was dull and entirely free from any eruption.

The entire family gave evidence of being broken down by long exposure to unhealthy conditions. Their persons, clothing, and surroundings were filthy. The surface of the ground about the house was covered by débris of all kinds, including human excrement and the droppings of animals. The house was so small that much of the household effects stood in the open air. At night the two adult males slept in a wagon-box, leaving the house to the use of the mother and children. A scanty supply of water was obtained from a shallow pit a few feet from the house.

The locality was one of almost absolute isolation. The nearest house was six miles distant, the surrounding country being an open cattle range, through which no public road passed. The house was reached by a long drive over the rough prairie, which has an elevation of at least 800 feet above the bed of the Snake River. The soil of this prairie is thin, over-lying a gravel bed. It is covered with short bunch-grass. On it there is no decomposing vegetation or standing water. The season was hot and dry; there had been no rain for many weeks.

The family were at once removed to a larger house, some miles distant, where they could command an abundant supply of pure water, and a thorough system of domestic policing was instituted. An immediate improvement took place, and all made satisfactory recoveries, save a boy four years old, who, while apparently progressing to convalescence, died suddenly.

In but one case did any sequela of the disease occur; in the person of a girl, twelve years old, a submaxillary abscess formed and was discharged. In no case were there any symptoms of paralysis.

This seems to have been an outbreak of a "filth disease," which had its origin in the insanitary conditions in which the family had lived. They had occupied this house for upward of a year. The women and children had not been away from home for months. The men had worked as harvest hands, and the father was taken sick while from home; but there had been no sickness upon any of the farms on which he had worked, and the disease did not spread in his family until a week after his return home. There had been no diphtheria on the country side, and no cases of similar disease occurred in other families, although the sick and dead of this infected family were cared for by several good men and women, themselves the heads of large families.

These cases seem to be corroborative of the statements made by Dr. C. B. Fox in the *British Medical Journal* for December 7, 1878.

ELY MCCLELLAN,
Major and Surgeon U. S. Army.

December, 1880.

New Instruments.

IMPROVED HYPODERMIC SYRINGE.

By SAMUEL WHITALL, M.D.,
NEW YORK.

The accompanying cut represents a hypodermic syringe I have been using for about a year; and the hope that it may prove of equal value to others, who, like myself, have had frequent occasion to be annoyed by the piston syringe refusing to work when most urgently needed, has prompted me to call attention to it.

The idea was suggested to me by having seen the description of Dr. Holden's syringe published in the RECORD some years ago. His plan was to attach the needle directly to a rubber bulb of a given capacity. Such a syringe is open, however, to many objections, the most serious of which are, that one cannot tell when the fluid is all injected, and the rubber bulb will enlarge with use. At first I modified the doctor's syringe by attaching a bulb to the barrel of an ordinary syringe, but, although it worked very well, it was awkward to manage.

The construction is so simple as to require little explanation. A piece of rubber tied over the expanded end of the barrel supplies the place of the piston.

To charge the syringe, depress the rubber with the index finger, and insert the needle, previously attached, into the solution to be injected, and then remove the finger. Atmospheric pressure at once fills the syringe to the required point.

To inject, proceed as with an ordinary syringe, depressing the rubber slowly with the index finger till the injection is completed.

It is better to take up just the quantity of solution required for the injection, which can readily be accomplished by removing the syringe from the liquid the moment it is charged to the desired point. Air at once enters the syringe and the fluid gravitates to the needle end.

One rubber will last for months, and the instrument is always in working order. Should the rubber give out it is but the work of a moment to tie a new one on.

It works better with a somewhat coarser needle than those commonly used.

Sometimes a bubble or two of air may enter the connective tissue, but the emphysema is harmless.

Two points must be remembered: to keep the needle end of the syringe downward while injecting, and not to remove the index finger from the depressed rubber till the needle is withdrawn from under the skin.

The syringes are made by J. Reynders & Co.

COLOR-BLINDNESS.—A bill to appoint an international commission, to agree upon standard tests for color-blindness and visual power in navies and merchant marines, has been introduced into Congress.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from January 23, 1881, to January 29, 1881.

GREENLEAF, C. R., Major and Surgeon. His leave of absence, granted him in S. O. 158, series 1880, from A. G. O., extended to May 1, 1881. S. O. 20, A. G. O., January 26, 1881.

WILLIAMS, J. W., Major and Surgeon. Par. 9, S. O. 2, C. S., A. G. O., relating to him is revoked. S. O. 20, C. S., A. G. O.

BENTLEY, E., Major and Surgeon. Announced as Acting Medical Director of the Department until the arrival of a medical officer his senior. G. O. 2, Department of Arkansas, January 17, 1881.

TAYLOR, B. D., Captain and Asst. Surgeon. The operation of Par. 4, S. O. 14, C. S., A. G. O., so far as it relates to him, suspended until March 1, 1881. S. O. 20, C. S., A. G. O.

GARDINER, J. DE B. W., Capt. and Asst. Surgeon. Relieved from duty at Camp Herachuca, and assigned to duty at Fort Mojave, A. T. S. O. 7, Department of Arizona, January 15, 1881.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending January 29, 1881.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Jan. 22, 1881.	0	8	185	4	54	108	20	0
Jan. 29, 1881.	0	6	170	12	41	121	26	0

THE DAILY AMOUNT OF URINE, according to Dr. E. S. Wood, ought to be carefully ascertained in order to make sure a diagnosis of Bright's disease. A knowledge of this, and also of the daily amount of urea, is often of as much service as an examination of the urine for albumen and casts. These latter Dr. Wood has found in the urine of patients with acute rheumatism, who have been taking salicylic acid.—*Boston Medical and Surgical Journal.*

IN CHRONIC ARSENICAL POISONING the liver is the organ apt to contain the most of the drug, while the brain and nerves contain the least, if the preparation used is the oxide.

POISONOUS PIGMENTS.—From a study, by Dr. P. Grondhomme, of the effects of the various materials used in preparing aniline dyes (*Chicago Medical Review*), the following conclusions have been reached: Benzol is poisonous, its vapor producing dizziness, tinnitus, nausea, and drowsiness. Naphthalin is harmless. Anthracin has only a somewhat irritating effect on the mucous membranes. Nitro-benzol produces dyspnœa, dizziness, drowsiness, tonic and clonic convulsions, ending often in general paralysis and death. These symptoms may not appear until twenty-four hours after the poison has been taken.

Forty-four cases of acute poisoning by nitro-benzol have been reported, fourteen being fatal. Aniline is undoubtedly poisonous. Of the dyes that are prepared from it, rosaniline, magenta (contrary to general belief), and alizarin are known to be harmless. At the factory of Meister & Co., in Germany, where over a thousand operators are employed, not more than three per cent. of the sickness is caused by the coal-tar products. It is quite probable, on the whole, that the clothes dyed in aniline colors are, as a rule, not at all dangerous.

The Last Illness of "George Eliot."—The *Lancet* gives an account of the last illness of George Eliot. She was feeling quite well up to five days before her death. On December 20th she was taken ill, however, and Mr. G. W. Mackenzie being called in, found her suffering from a laryngitis and fever. The next day the laryngitis was better, but she still had fever, and complained of pain in the right iliac and lumbar regions. In the evening, though these symptoms abated, she was not so well. Her breathing was frequent, and she was restless and uneasy. On the next day, December 22d, she was still worse, there being a dyspnœa and general prostration. No local complication could be discovered, however. In the evening, Dr. Andrew Clark visited the patient in consultation. She was then still worse. She lay on her back, with the shoulders raised. The eyes were closed; the face was of an ashen gray color, the lips livid, the breathing hurried, and the pulse small, irregular, and frequent; a loud pericardial friction-sound was heard over the heart. Attempts were made to give brandy and food, but without avail, and the patient rapidly failed. Although George Eliot died thus suddenly, she had not been well for eight years. In 1873 Dr. Clark diagnosed a renal calculus. In 1874 she had several attacks of renal colic, with hæmaturia; in 1876 she had an attack of cystitis. From that time she had suffered, at intervals, with renal colic and hæmaturia. In 1880 the urine had steadily decreased in density, and had, at times, contained pus or albumen. In October last she had a slight attack of calculous pyelitis. During the last few years she had visibly failed in health and strength.

¶ Typhoid Fever Carried by Milk.—Another instance of the probable carrying of the typhoid fever infection by milk has been brought to light at Portsmouth, England. The history of the cases show that the milk that carried the disease was from a dairy in which there had been a case of typhoid fever. The person who attended the typhoid fever case milked the cows, and the stools of the patient were carried through the room where the milk stood.

Vivisection—A House Divided against Itself.—At the late meeting of the Scottish Society for the Prevention of Cruelty to Animals, held in Edinburgh, a suggestion was made that the society direct its attention to the question of vivisection This project was strongly opposed by Councillor Sloan, who declared that the saving of a single life was of more importance than the lives of all the cats and dogs put together. (Loud hissing and cries of "Shame.") He heard ladies hissing, but he repeated that a human life was not to be compared with that of all the cats and dogs that are nursed and pampered in the New Town of Edinburgh. (Cries of "Shame," and the Rev. Mr. Fisher—"Life is God's gift to animals as well as to you.") He did not wish to sanction cruelty, but were the discoveries of Dr. Keith and others to be balked by mere sentiment? He was sorry to see people who, before they would give up wheezy, pampered brutes for scientific purposes, would rather give up their domestics. (Hissing and great interruption). In spite of these remarks the society agreed to act against vivisection.

Medical Legislators.—There are thirteen doctors in the Tennessee Legislature.—*Nashville Med. Jour.*

Homœopathic Achievements.—A homœopath, of the name of O. B. Bird, is collecting an epitome of homœopathic achievements. The first "achievement" which we see recorded is this: "Diphtheria, 1856, Dr. P——, Washington, 100 cases, 3 deaths. Under allopathic treatment two-thirds of all cases died. Franklin County, N. Y., Dr. H——, 1860–62, treated 1,000 cases of diphtheria, lost 8 per cent.; best allopath lost 25 per cent. Lowell, Mass., severe epidemic dysentery: allopaths lost 10 per cent., Drs. H—— and S——, homœopaths, lost 1½ per cent.," etc. And yet homœopathy is losing ground.

Medicine a Trade.—The *Lancet* is exercised over the fact that in the London Post-office Directory, medical men are put down under the head of "Commercial." Lawyers have a separate section.

A Natural Bone-Setter.—Madame Dal Cin, the Italian bone-setter, of whose history and methods we gave an account about a year ago, has returned to her native country. She was a skilful *masseur* and a discreet employer of marsh-mallow poultices. She made a great impression upon some of our Brooklyn neighbors.

Skin-Grafting.—Dr. James E. Pilcher, in the *Annals of the Anatomical Club*, describes the latest methods of skin-grafting antiseptically. Warts are preferable if they can be obtained. Grafting wherever there is loss of integument secures the following results:

1. A more perfect cure in all cases.
2. A cure where in many cases there would otherwise be a permanent and annoying ulcer.
3. A cicatrix more soft and mobile, and less liable to destructive ulceration than in the ordinary process.
4. Entire absence of contraction or deformity.

To Abolish Vivisection.—Mr. Henry Bergh has begun his campaign against vivisection again by introducing a bill at Albany for its prevention. It is the same bill that was defeated a year ago.

St. Louis Medical Colleges.—According to the *Missouri Republican* there are in St. Louis seven medical colleges, four irregular and three regular. Each of these has a right under the law to admit its students to the clinical advantages of the city hospitals. The City Health Commissioner has written a letter saying that this privilege has become a huge nuisance to the hospital officers as well as to the patients. Some legal measures to check the abuse are said to be necessary.

Attending Medical Societies.—There is, after all, but a small proportion of the profession that attends with any regularity the meetings of the societies. And there is a very good reason for this. Although occasionally there are excellent papers and discussions, this is not the rule, and whether the paper is good or not, there is a large amount of talk that is simply inane following it. Societies are haunted by a few persons for whom age or accident secure respectful hearing, and who insist on using their privileges of the floor, whether they have anything to say

or not. Now it is not profitable to listen to discussions upon the value of whale-oil in pleurisies, for instance. Nor can one be aroused to enthusiasm by a two-hour oration on the habits of the tape-worm. Society meetings illustrate the curious physiological fact that when any accident, prenatal or otherwise, arrests the development of the cerebral mass, the posterior part of the third left frontal convolution generally remains intact, or may even be the seat of an extra molecular activity. There are a certain number of persons, generally, but not always in the decline of life, who will get up and talk, whatever may be the subject, and one could easily experience the idea of eternity by listening to them, we will say for a day. . . . . On the whole, a person is hardly to be blamed for staying away from most society meetings, since he runs an excellent chance of being bored, and since what is best in the proceedings can be found later in the medical journals. This is, of course, only one way to look at the matter. From a higher standpoint it might be considered a duty to go and do some work to make the meeting better. Furthermore, there is no doubt that if a New York medical society sets out to have a good meeting, as occasionally happens, there can be nothing more instructive.—*New York cor. of Chicago Medical Journal.*

Learning Obstetrics at Vienna.—In a letter to the *Philadelphia Medical Times* concerning the Medical School at Vienna, Dr. Robert W. Johnson says: "Few courses humiliate a beginner more than obstetric operations on the cadaver, and few are so satisfactory. The books, so glib about the application of forceps, the simplicity of turning, dwell rightly on the horror of craniotomy; but mere black and white does not impress one with the difficulties in the same way as an endeavor before a watchful instructor to deliver the dead woman, *per vias naturales*, of one of the numerous still-born children that are utilized. The man who takes two courses, at least, on this important topic, from different assistants, will glean a variety of opinions as well as experience that he will never forget. One thing, however, it is to be hoped, he will never obtain, and that is the alacrity with which students and instructors leave the dead-house for the lying-in room to make examinations with hands imbrued with the blood of the dead, and, it may be, consciences dyed with the blood of the living. I cannot but think that the awful inroads of puerperal fever, and the numerous deaths thereby, arise largely from this criminality in attempting to satisfy the meagre sentiment that foreigners generally have for women by a paltry wash of carbolized water after post-mortems on even puerperal subjects. It requires more than a basinful of the 'multitudinous seas, incarnadine,' with permanganate of potash, to rub out the 'damned spot' so acquired, and, God knows, Americans had better stay at home than learn abroad to carry, under the badge of their healing office, desolation to the hearth of a confiding family. Much as I respect these Viennese teachers for their attainments, and the good they have done in advancing obstetrical science, I cannot help looking on them as guilty of something near homicide while they permit or advance such criminality." Dr. Johnson speaks in much the same way of the vulgarity and brutality of the instructors in venereal diseases.

Mr. Tennyson on Doctors and Nurses.—Mr. Tennyson's new volume of poems contains one poem which, says the *Medical Press and Circular*, might have been written in the interests of the treasurer of Guy's Hospital, its chief end and aim being the glorification of the nurse and the abasement of the medical practitioner. The poem, entitled "In the Children's Hospital—Eminie," is supposed to be spoken by a nurse who is nothing loath to exhibit her own exquisite sensibility, which stands out all the more brightly against the dark, rough background of medical callousness and cruelty which she coincidently depicts.

The spirit of this anti-medical lyric is revealed in the first verse:

Our doctor has called in another; I never had seen him before,
But he sent a chill to my heart when I saw him come in at the door,
Fresh from the surgery—Schools of France and of other lands,
Harsh red hair, big voice, big chest, big merciless hands!
Wonderful cures he had done; oh, yes! but they said too of him
He was happier using his knife than in trying to save the limb,
And that I can well believe, for he looked so coarse and so red,
I could think he was one of those who could break their jests on the dead,
And mangle the living dog that had loved him and fawned at his knee—
Drenched with the hellish Dorali—that ever such things should be!

"To say," continues the journal referred to, "that the description which we have quoted is the very opposite of the truth is to fall far short of condemning it in deserved terms. It is not only outrageously false, but, taken in connection with the rest of the poem, it is obviously a malicious libel on a profession that has in some way incurred Mr. Tennyson's displeasure, which he vents in no measured language. Again and again a bitter animus against medical men comes to the surface."

We have read the poem criticised so fiercely by our English contemporary. Except in the verse quoted, however, we did not find any especial evidence of malignant feeling against the medical profession. At any rate, the profession will not be likely to suffer very much in reputation or prosperity from the utterances of Mr. Tennyson. Mr. T. is a great poet, but chiefly a ladies' poet, and he has a wonderful power of melodious expression, but it generally serves the cause of a moaning sentimentality (*vide op. cit.*). Besides, Mr. Tennyson has been losing some sixty grains of brain-tissue for a number of years. And *he* doesn't know it.

Statistics of Medical Education in the United States.—The Report of the U. S. Commissioner of Education, for the year 1878, contains some interesting statistics regarding the medical, dental, and pharmaceutical schools of the country.

The number of these schools reported to the Bureau during the year was 106. These had 1,337 instructors and 11,830 students. The regular school of medicine and surgery reported 64 institutions (the number now is 69); 915 instructors; 8,279 students; 2,506 graduates; 46,065 volumes in libraries; $1,685,250 in grounds, buildings, and apparatus; $214,347 in productive funds, yielding an income of $13,186; and tuition receipts to the amount of $289,398. The eclectics reported 6 institutions; 51 instructors; 448 students; 211 graduates; 3,000 volumes in libraries; $161,000 in grounds, buildings, and apparatus, and $8,960 receipts from tuition. The homœopathists reported 11 schools; 158 instructors; 1,215 students; 363 graduates; 39,800 volumes in libraries; $349,000 in grounds, buildings, and apparatus, and $95,471 receipts from tuition fees.

The dental schools report as follows: number, 12; instructors, 161; students, 701; graduates, 218; volumes in libraries, 505; value of grounds, buildings, and apparatus, $68,000; receipts from tuition fees, $60,734.

The pharmaceutical schools number 13; instruc-

tors, 52; students, 1,187; graduates, 380; volumes in libraries, 5,175; value of grounds, buildings, and apparatus, $155,000; receipts from tuition fees, $25,487.

The medical degrees conferred in course were 3,814; honorary degrees, 4. There were, during the same year, conferred in course 222 degrees in theology; 1,000 in law; 6,367 in arts.

The total amount of educational benefactions during the year is $3,103,289, of which schools of medicine received $8,762. Of this sum, however, regular medical schools received only $4,662, one of these schools being the New York Medical College for Women.

The increase in medical students over the previous year (1877) was 615, the total number being 11,830. The increase of the previous year was 1,082.

Treatment of Otorrhœa.—The following plan is employed by Dr. H. Gradle (*Chicago Medical Review*). The applications should be made by the physician himself. If there is any fetor in the discharges, the ear is cleansed and a five per cent. solution of carbolic acid, warmed, injected. The meatus is then plugged with vorated cotton. Next day the fetor has generally disappeared, and the discharge is thinner and less copious. The well disinfected ear is then dried with absorbent cotton and powdered boracic acid is poured in through the speculum while the head is inclined on the other side, until the meatus is half filled. The ear is then plugged with clean cotton. The powder absorbs all discharge and keeps it from decomposing. The application may not have to be renewed for three or even eight days. A lessening and finally a stoppage of the discharge occur rapidly in most cases. In some cases where the boracic acid did not act promptly iodoform was an efficient substitute.

Dangers of Chlorate of Potassium.—Attention has been called to the danger from the excessive use of this drug, by Dr. A. Jacobi and other physicians in this country. The subject lately received prominent attention from the Society of Physicians, at Vienna. In a debate before that body, Dr. Th. Billroth related a case of sudden death following the administration of gr. cl. of the drug, in two doses. The drug was being used for vesical catarrh. Billroth stated that not more than from ʒ ss. to ʒ j. should be given per day.

Ollier's Method of Treating Bronchocele.—A correspondent of the *Lancet*, writing concerning the hospitals at Lyons, France, gives an account of M. Ollier's method of treating bronchocele. This is described as novel and efficacious. The surgeon dissects off carefully all the coverings of the tumor, and then applies to the surface an oval piece of Canquoins paste a quarter of an inch thick and just the size of the exposed tumor; after the paste has been on for four hours it is removed, and the tumor dries up and shrivels away without constitutional disturbance or pain, the cure being effected in from three to four months.

The Determination of the Sexes.—Of the various theories that have been offered to explain the determination of sexes, the most plausible is that which assumes that the sex is determined by the relative maturity and vigor of the parent. When these qualities reside in the male, the offspring will probably be male, and *vice versa*. This view has some support from the fact that the proportion of birth (including still-birth) of males is to that of females as 143 to 100. Furthermore, the statistics of Hofacker and of Saddler corroborate the theory. According to the former, the proportion of male births to 100 females is as follows: father younger than mother, 90.6; father and mother of equal age, 90; father older by 1 to 6 years, 103.4; father older by 6 to 9 years, 124.7; father older by 9 to 18 years, 143.7; father older by 18 or more years, 200.

Saddler's statistics show very similar proportions. The actual proportion of living males to females at birth is, however, only about 105 to 100. The great losses of still-births, therefore, are among males, and are due chiefly to the larger size of the male child. The living male infant is about one-third of an inch longer and one-third of a pound heavier than the female. The average difference between the male and female fœtus is still greater. A large expenditure of valuable life, therefore, is produced by the pelvic strait being too small. Dr. Charles Roberts, who gives (*Lancet*) the above statistics, urges the necessity of a better physical education for girls, and intimates that the present practice of encouraging the intellectual development of women develops their crania at the expense of the pelvis, and leads to deplorable results. These results will be probably, in time, sterility, or, more probably, a lessened proportion of males. According to this philosophy, therefore, the enlargement of the pelvis should be one of the great goals of educational effort.

This is but a narrow view of the matter, however. There are many other factors in the question, and statistics so far show an excess of males in the most highly civilized races as well as in those where women is only a slave or a drudge.

The Expansiveness of Obstetrics.—A correspondent of the *British Medical Journal* calls attention to the fact that in the programme of the Obstetric Section of the coming International Medical Congress there are only two subjects that come strictly under the head of obstetrics. The remaining subjects are those of hysterotomy, laparotomy, Battey's operation, etc., all which belong really to the domain of surgery. There is, perhaps, no objection to obstetrics expanding, but things should be called by the right name, and laparotomy is not midwifery.

The Secrets of the Consulting-Room. — The Philadelphia *Medical Times* earnestly urges its readers in Pennsylvania to use their influence in securing the passage of a law recognizing the confidential relations between physician and patient, and protecting the former on the witness stand. It is proposed to copy the law that exists in New York. This law, enacted in 1828, has worked very well.

The Cost of Charity in France.—The Board of Charity (Assistance Publique) received last year, from various sources, the sum of 15,633,000 francs (about $3,000,000). Its expenses for the same time were 28,865,000 francs, leaving a deficit of 13,232,000 francs.

Dr. Brown-Séquard is lecturing at the Collége de France, Paris, on the "Dynamic and other Changes arising in the Animal Organism from Distant Irritation."

Paralysis from Thoracentesis.—M. Dumont Pallier reports to the Société de Biologie a case of empyema treated by thoracentesis, in which irritation of the pleura by injection of fluid gave rise to successive crises of contraction of the right side and

paralysis of the left side. These phenomena, which rapidly passed off, were followed by sweating and excessive lachrymal secretion. They were attributed to reflex action successively upon the left and the right cerebral hemispheres. M. Lépine had previously reported hemiplegia, lasting for fifteen days, excited by a like irritation of the pleura.

French Gingerbread does not reach this country in great amount. Those who do get it should know that it is made of flour, glucose, carbonate of potash, chromate of lead and chloride of tin. This is the statement made by Drs. Moynier and Galippe.

Success of the Edinburgh Provident Dispensary.—This institution has just finished its first year as a provident dispensary, and congratulates itself upon its success as such. It was formerly a free dispensary. The number of successful provident dispensaries in Great Britain seems to be constantly increasing.

Bloodless Excision of the Mammary Glands.—Several cases are reported by Dr. Leisrink, in the *Centralblatt für Chirurgie*, in which he removed the mamma without the loss of a drop of blood. The patient had pendulous breasts, hence favorable for the operator. He prepared an apparatus having two metal rods at the sides and a movable cross-piece at each end. These cross-pieces could be screwed closely together. The breasts were first emptied of blood by pressure and manipulation, and then the apparatus adjusted. He found it much superior to any modification of the Esmarch bandage.

Tonga.—The much-vaunted cure for neuralgia is not to be the product of any particular plant, but rather a kind of herbalist's composition powder, for which the formula was prepared by a German resident of the Fiji Islands.

Infant Mortality.—Still-births, illegitimate births, and crime generally, have been steadily increasing in France during the past thirty years. But France is the most civilized of all nations!

Scientific Affection.—A French chemist is said to have condensed the body of his deceased wife into the space of an ordinary seal, and had her highly polished and set in a ring. He made a nice income by betting with lapidaries and others that they could not tell the material of the seal in three guesses, and, after pocketing the money, would burst into tears and say, "It is my dear, dear wife."

Incomes of Medical Men.—Physicians and surgeons in England have occasionally left large means, notably Sir Henry Halford and Sir Astley Cooper. The latter received the largest fee on record in England—$5,000 thrown to him in a night-cap from the window by a patient after lithotomy. Sir Charles Locock, the Queen's accoucheur, returned income tax one year on £30,000, which is believed to be the largest income ever received by an English medical man. Sir William Gull and Sir James Paget very likely make to-day from £10,000 to £15,000 a year; the very large sums paid for journeys out of town largely swell their incomes. Sir William is said to have received $2,000 for a visit to Ireland. Probably the excessive exaggeration about lawyers' and doctors' incomes is largely due to the fact that it becomes noised abroad that a man in a certain year made £10,000, and it is assumed forthwith that this is his normal income. Few lawyers and doctors in New York have died really rich.

Dr. Topinard succeeds the late M. Paul Broca as editor of the *Revue d'Anthropologie.*

Low Temperature in Disease.—Dr. L. Woods, of Pittsford, Vt., writes: "Having seen but few low temperatures recorded, and wishing to know the lowest temperature with which a person can live, I report the following case, hoping it will call out others.

"December 6, 1880.—In a case of uterine cancer, I found a temperature of 91½°, pulse 88, at 9.45 P.M., nine hours before death took place from exhaustion. Owing to circumstances beyond my control, I was unable to obtain another record nearer death. At 9 A.M. of same day temperature was 94⅘°.

"December 13th.—In a case of pneumonia, on the seventh day, the temperature had fallen to 97¼°; pulse, 56. On the eighth day, 95⅘°; pulse, 52. On the ninth day, 97½°; pulse, 48; and the tenth day, 97⅘°; pulse, 54. The highest temperature was 103½°, on the second day; highest pulse, 120. This case recovered.

"In neither case was there any hemorrhage or diarrhœa to account for the low temperature. In both cases it was carefully taken in the axilla.

"I find a case of typhoid fever recorded by Dr. Parkes, in which 'on the seventeenth day of the fever the temperature was as low as 93°; blood was largely passed in fluid stools the night preceding.' I do not learn whether the patient recovered or not. Dr. Cheyne records a case of typhus fever in which 'a few days before death he observed the temperature to fall to 95°.' In yellow fever, a fatal case is reported with a temperature of 96°. In cholera, Dr. Finlayson, of Ceylon, found the temperature in the axilla from 92° to 97°, while Dr. Keir, of Moscow, found it under the tongue to be from 79° to 88°.

"I notice several other cases reported, but, as the temperatures were taken under the tongue, do not consider them reliable, and consequently of no value."

Philadelphia Doctors.—One of the characteristics of professional life in Philadelphia, writes the correspondent of the *Chicago Medical Journal*, is its comparative freedom from those bitter feuds and heart-burning jealousies which prevail in other large cities, where there is more inequality of success, and where the race for wealth is more reckless and furious. The profession is liberally supplied with social and professional organizations of all kinds. An attempt at social enjoyment on a large scale has been initiated this season in the form of a series of receptions given by the County Medical Society, the largest and most representative society of the city. These receptions have been a marked success, contributing to the popularity and membership of the society.

Dr. Robert Barnes has resigned his appointment as obstetric physician to St. George's Hospital. Dr. Barnes is engaged with his son, Dr. Fancourt Barnes, in preparing a manual of midwifery for the press.

Books Received.

Diseases of Throat and Nose. By F. H. Bosworth, M.D., Lecturer on Diseases of Throat, Bellevue Hospital Medical College, etc. New York: W. Wood & Co. 1881.

Medical and Surgical Uses of Electricity. By Beard and Rockwell. Third Edition. Revised by A. D. Rockwell, M.D. New York: W. Wood & Co. 1881.

Elements of Practical Medicine. By Alfred H. Carter, M.D. (London) Philadelphia: Presley Blakiston. 1881.

Original Lectures.

INFLAMMATION OF THE UVEAL TRACT.

A Clinical Lecture.

By D. B. ST. JOHN ROOSA, M.D.,

PROFESSOR OF OPHTHALMOLOGY IN THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF THE CITY OF NEW YORK.

(Reported for The Medical Record.)

Gentlemen—This man, thirty-eight years of age, comes to us on account of symptoms affecting his left eye. He is a laboring man, and has been employed in a gas-house. He complains of pain over the left side of the forehead, along the left side of the nose, and in the remnants of the first upper molar tooth. This tooth, he says, has been inflamed about six times, but it has caused him no inconvenience during the last two years until the present attack of disease in the eye, which manifested itself ten days ago. At that time he first suffered from toothache, which has persisted, and in addition he now has pain over the left side of the forehead, along the left side of the nose, and in the left eye. There is no pain on the opposite side of the face or in the opposite eye.

Four years ago he had trouble with his right eye, which subsided under treatment. Of that I will speak hereafter, for he was then also under my care. The present attack, so far as symptoms referable to the eye are concerned, began with a feeling as if something had gotten into it; and besides this, in going about at his work, he hit his head against a gas-pipe. Then he began at once to have pain in the eye and head, especially in the occipital region.

Let us now look at this man's left eye. The conjunctival and the subconjunctival vessels are overfilled. The radiating vessels of the ciliary region are distended. The iris is moderately dilated, not fully. Atropine has been used. The color of the iris is nearly unchanged; perhaps it is slightly darker than the iris in the fellow eye. The cornea is perfectly clear. The eyeball is tender to the touch, especially just under the situation of the superior rectus muscle, at a point a little behind the ciliary portion of the eye. There is some photophobia, and there is slight lachrymation.

There is then in this eye hyperæmia, congestion of the conjunctival, the subconjunctival, the scleral, and the ciliary blood-vessels, and there is tenderness of the eyeball—a tenderness referred to the choroid coat. Let us next see whether or not there is impairment of vision.

We will first test the right eye, and we find that when the left eye is covered he can read No. 20 of Snellen's test-types at twenty feet; that is, his vision in that eye is normal, or $\frac{20}{20}$. When the right eye is covered we find that he reads with the left, or the affected eye, No. 100 of the same test-types at twenty feet; that is, his vision in that eye is $\frac{20}{100}$, or much less than normal. So far as he knows, he could see as well with his left as with his right eye before the present attack of inflammation. His vision then has probably been reduced in the affected eye from $\frac{20}{20}$ to $\frac{20}{100}$. The salient features of his symptoms, then, are these: he has great pain referred to the eyeball and directly in the course of the branches of the fifth pair; he has tenderness of the eyeball, hyperæmia, and congestion perhaps of the various parts mentioned, and he has marked impairment of vision. He has been under treatment at the Manhattan Eye and Ear Hospital eight days.

Now, let us inquire as to what was done for his eye during the two days prior to his attendance at the hospital. He says that he washed his eye, first, with camomile tea, and afterward with *breast-milk*. We shall never be free from the superstitions of the dark ages until we cease to attribute mysterious virtues to compounds or mixtures which are efficacious, if efficacious at all, by reason of some ordinary property that can be secured in some simple way. The use of milk from the breast of a woman as a collyrium is as absurd to the scientific mind as the cure of the sick by the incantations of a painted Indian; and yet white people still attribute mysterious virtues to certain substances, as we have just heard. This man, who had a sad experience four years ago, when he had serious trouble in his right eye, which required a long time to effect a cure, profited but little by that experience, and for two days persisted in making these applications, none of which reached the seat of the disease. Unfortunately, he made a diagnosis for himself: he thought that he had gotten something into the eye and produced a conjunctivitis, that he had injured the nerves of the head by a blow from a gas-pipe, and that he needed nothing except warm fomentations. From the very beginning he had serious, deeply seated disease of the eye, about which I am to lecture to you this afternoon.

A word about the tooth. I find the stump of a tooth not at all sensitive, but covered with tartar, as are the other teeth, and it may have something to do with the disease of the eye from which he is now suffering. I am unable, however, to find in its present condition the exciting cause of his affection of the eye.

What shall we name the disease whose symptoms we have already enumerated? One gentleman says that the intense pain in the part of the eyeball indicated means choroiditis. Not especially, however. Intense pain in the eyeball occurs in glaucoma, in neuritis, in iritis, in cyclitis, in keratitis, in choroiditis, in certain forms of conjunctivitis; but the tenderness in the part of the eye in which this man experiences it, does indicate choroiditis, although the pain does not specially do so. Now, what other symptoms of those pointed out made you think of choroiditis? We have: first, pain; second, loss of vision; third, ciliary injection; fourth, tenderness of eyeball; and fifth, sluggish, moderately dilated pupil. The tenderness, I have said, indicates choroiditis. Yet we may and do meet with choroiditis with no tenderness of the eyeball. But what is the primary affection from which this man probably suffers? One gentleman says cyclitis. I am always surprised that students in medicine, in diagnosticating diseases of the eye, think first of the rather uncommon, or at least less frequent diseases. There is cyclitis here, but we name affections of the eye from the part which *predominantly* suffers. Of course he has conjunctivitis. He could hardly have the trouble already admitted to exist without having more or less inflammation of the conjunctiva. It is possible that the disease from which he now predominantly suffers had its starting-point in the vessels of the conjunctiva; but the conjunctivitis has been lost sight of practically in the course of this disease, which is much more serious than a conjunctivitis.

This man certainly has *iritis*. The irregularity and change in color in the iris show this. I believe that he also has choroiditis and cyclitis; in other words, he has *inflammation of the uveal tract*, and that forms the basis of my lecture. A case of inflammation of the uveal tract. Why uveal? Why tract? Uveal on account of the color and quantity of the pigment, and tract because of its extent, for the uveal tract is made up of the iris, the ciliary body, and the choroid.

In the diagram on the blackboard, we see the iris with its epithelium, its muscles radiating and circular, its posterior surface covered by a layer of pigment-cells, its blood-vessels supplied largely from the ciliary arteries, its nerves from the fifth pair—probably also from the sympathetic—and from the third pair and its lymph-vessels.

Here we also see the ciliary body, consisting of the ciliary muscle and ciliary processes, with its large supply of blood from the same source which supplies the iris, its nerves, its layers of muscular fibres, and its pigment-cells; and then back of that we see the choroid, the vascular tunic of the eye, the part upon which it depends for nutrition, abundantly supplied with pigment, also having muscular tissue in its structure which so predominantly exists in the ciliary body and is largely found in the iris. The uveal tract comprises these three portions of the eye: the choroid, the ciliary body, and the iris.

Now, I believe that, instead of saying iritis so much as we do, it would be better to say inflammation of the uveal tract; for it is seldom that iritis stops at the limits of the iris, it is very seldom that cyclitis is limited to the ciliary body, and choroiditis, though more commonly limited, does not infrequently extend beyond the choroid, yet less rarely than does iritis or cyclitis extend beyond the boundaries of the iris and the ciliary body. All of these diseases may extend the one into the other. The tissue is substantially one, from the iris back into the choroid. In this case we can dismiss the cornea and the conjunctiva from our consideration, and talk chiefly of iritis. Inflammation of the choroid exists, as I believe, because there is such marked tenderness upon pressure made on the eyeball at a point a little back of the ciliary region. I know that he has iritis from the character of the congestion, from the sluggishness and turbidity of the pupil, and from the character of the pain, and we can hardly believe that serious inflammation can exist in these two parts, with a sound condition of the connecting band, the ciliary body.

VARIETIES OF IRITIS.

In many of the books iritis is divided into a number of varieties. Sufficient for your purpose, however, is the following classification: first, there is hyperæmia of the iris which you should understand and study carefully. When a patient has a discolored iris which moves sluggishly under atropine, and not at all, under the influence of light admitted, as you have so often seen done here, by shutting the eyelid over the eye, and then quickly pushing the lid back with the ball of the thumb—when there is ciliary congestion, but when there are no adhesions, when there is no swelling or exudation into the anterior chamber, we may content ourselves with the name hyperæmia of the iris. I have no doubt that this man's loss of vision is due to the clouding of the anterior chamber, and that is the particular symptom which distinguishes *serous iritis* from hyperæmia, and distinguishes it from the next form, which is the most important—namely, *plastic iritis*, in which the exudation is sometimes so marked that you can see it in the pupillary space, and so great that the iris becomes glued to the capsule of the crystalline lens.

There is another form of iritis met with, chiefly after injuries of the iris such as come from accidental wounds or from cataract operations, viz.: *suppurative* iritis, the most dangerous of all, and that which usually destroys the eye.

There are, then, four forms of disease of the iris: 1, hyperæmia of the iris; 2, serous iritis; 3, plastic iritis; and 4, suppurative iritis. There is another classification, that dependent upon the cause, which is quite important. But all forms of the disease require the same local treatment, and present many symptoms in common. We have iritis from syphilis, from rheumatism, and from other causes. Iritis from syphilis is the most frequent form of the affection. Wecker gives it at 70 per cent. of all cases, but I should be inclined to put the figures higher rather than lower.

Then we have iritis from rheumatism, and iritis from other causes, such as injuries, and it is possible that there may be an iritis produced by decaying teeth. Excessive weeping may sometimes, I think, be a cause of inflammation of this part of the eye. Certainly there may be keratitis from the same cause, and why not iritis?

Having noted the general symptoms and etiology of the disease, let us, before speaking of the treatment, see if, from the history of the case, we can find the cause of this man's present attack of iritis. I said that I would speak of the affection that he had in the fellow-eye four years ago. That affection was plastic iritis, and I remember very well with what difficulty we dilated the pupil by the energetic use of atropine. By energetic I mean instillations of a solution of four grains of the sulphate of atropia to the ounce of water, from four to eight times a day. By the use of this strong solution we finally succeeded in securing good dilatation of the pupil, and he now has a useful eye, with a round, movable pupil, and iris with good color. The latter fact shows that its tissue was not much injured.

We will now carry the investigation a little farther. As you see, he has a bad tooth, and we will put that factor in, at the same time remembering that he got well of his previous iritis, although, as he says, the tooth at that time was in a bad condition. He denies ever having had venereal disease. I am especially anxious to reach the cause in this case, because the patient has not been made much better as yet by the treatment to which he has been subjected. This man has never had any of the symptoms of syphilis, either primary or secondary, and therefore I see no evidence that his attack of iritis was or is syphilitic. From what does it arise? There is no history of rheumatism. Has it arisen from this diseased tooth, which has involved some of the branches of the fifth pair, and through them developed iritis? At all events, I shall recommend that he have the root of the diseased tooth removed. But I am rather inclined to think the iritis depends upon some cause unknown, and that the decayed, not specially sensitive, but painful tooth, is only one of the factors contributing to his discomfort and preventing him from getting well. One step toward curing the eye perhaps consists in getting rid of the painful tooth; but I am strengthened in the belief that it is not the tooth that has given rise to his eye-trouble by two facts: in the first place, it was in a bad condition and troublesome when the iritis occurred

upon the opposite side, and from which he made a good, though tedious recovery; and in the second place, he improved most rapidly when under the use of mercurial ointment, iodide of potassium, and atropine. However it may be, we will have the remains of the tooth removed, and will hereafter report the result.

TREATMENT.

What are we to do for iritis, whether it be serous, or plastic, or suppurative in character? *The* great remedy, and the one first to be used, is the *sulphate of atropia*. The sulphate of atropia acts directly upon the iris, dilates the pupil, and prevents the plastic exudation from resting on the capsule of the lens and producing union between the capsule and the iris, the most dangerous of all the consequences of iritis.

You must not make any mistakes. The gentleman who answered conjunctivitis in this case must look very carefully that he does not answer conjunctivitis when a patient meets him with hyperæmia of the iris, or plastic iritis in the consulting-room, and that he does not prescribe sulphate of zinc instead of sulphate of atropia. This man is now having instillations into his eye of a two-grain solution of sulphate of atropia, and the strength of the solution will at once be increased to four grains to the ounce of water.

In this case there is severe pain, and hot water is running out of the eye; what shall be done to give him relief? Morphine and leeching are the great agents with which to relieve the pain of iritis, and the leeching is the first in rank of importance. This man will have his bad tooth removed, and then two leeches applied to the temple upon the same side of the affected eye. Besides that, he will receive morphia at night, unless he gets relief from pain by the adoption of the other measures.

As a hygienic measure, cover the eye with a green, or blue, or brown patch to protect it from the bright light, and the patient must not use the fellow eye in close application, because the use of the well eye will increase the irritation in the affected one.

There is another remedy which I would use in all cases where it can be had, and that is warm bathing. The best of all is the Turkish bath, and in obstinate cases of iritis and keratitis it is a powerful adjuvant in the treatment. In New York the Turkish bath can be obtained quite cheaply, and yet, if it be impossible for tl is man to afford it, the ordinary warm bath may be used, having some one to help rub the body well after it.

Then, as regards the internal or the external administration of mercury and the iodides, I am very much inclined not to believe in their use in cases of serous iritis and in cases which are not largely plastic, as I think this case is. Mercury is a remedy commonly used; but I think that where there is no syphilitic diathesis you do very well not to use either mercury or the iodides; I am very much in doubt as to whether they are essential in any except specific cases. When I am in doubt I use mercury and potash.

I have not yet said anything with regard to the pathognomonic symptom in a case of syphilitic iritis. A gummy tumor of the iris is about as sure evidence of the presence of syphilis as we can wish. But there is no general appearance of the iris or the exudation by which you can distinguish the syphilitic from the traumatic, or either from the other forms of iritis.

Wecker says that in the rheumatic variety there is great engorgement of the subconjunctival tissue. I am not quite sure that my own experience has been turned in that direction. I am very apt to rely upon the history of the case to assist me in deciding whether it belongs to this or to that class.

Dr. Chisholm has lately written a paper in which he recommends the salicylate of sodium as a very useful remedy in the treatment of iritis. I do not doubt but that Dr. Chisholm's cases did well while the remedy was being used. The principle upon which it was used is the same as governs its use in rheumatism, and it is believed by that gentleman to have some special efficacy in the treatment of the rheumatic form of the affection. I have had no experience in its use in this class of cases.

Remember, gentlemen, that without reference to the form of iritis with which you have to deal, the first thing to be done when you meet with a case is to use the sulphate of atropia. You must make a correct diagnosis at the beginning. The diagnosis made by the gentlemen, of choroiditis and of cyclitis, would perhaps not have led them into danger, for they would have used, probably, leeches, atropia, morphia, mercury, and the iodides; but the diagnosis of conjunctivitis would have been fatal to the eye.

We will carry out these principles in the treatment of this case, and report the result at some future clinic.

[At the close of the lecture the remains of the tooth were removed, and the gum freely cut, so as to effect a moderate amount of local depletion. The patient made a tedious recovery, after the performance of a paracentesis of the cornea, as well as the other remedies discussed in the lecture. The cause of the attack was never positively determined.]

Improved Dover's Powder.—Dr. S. Mitchell, Jr., of Hornellsville, N.Y., writes: "I have been using for some time lately, Dover's powder, made in somewhat different manner than it is commonly made, and think it a great improvement; and inasmuch as I have never seen anything of the same in medical literature, I think the idea will be as novel to the other members of the profession as it was to myself, when first suggested to me by my brother Dr. J. D. Mitchell. The preparation is simple, and is made by substituting finely pulverized bromide of potassium for the time-honored sulphate of potassa. The bromide must be ground to a powder, nearly as fine as flour, and will be found to answer all the requirements of the sulphate of potassa, as to hardness of particles in promoting 'that minute division and consequent thorough intermixture of the opium and ipecacuanha upon which the peculiar virtues of the compound depend.' This is not all, for the bromide is not only a good mechanical, but a good medicinal agent in this connection as well. It increases the hypnotic virtues of the compound and does not diminish, but rather increases its anodyne properties. The sleep produced by it is refreshing, and delirium very uncommon, my patients often remarking that the powder did not make them 'flighty' as Dover's powder had commonly done. The powder is just as agreeable (?) to take as the old original prescription of Dr. Dover, and its diaphoretic tendency is in no way altered. It works like a charm in many forms of headache."

The More Extended Use of Wire-Cloth for splints, shoulder-caps, buckles, and other surgical purposes, is urged by Dr. J. S. Wight.

Original Communications.

RHINOPLASTIC OPERATION.

By R. W. ERWIN, M.D.,

BAY CITY, MICH.]

PATIENT, Elizabeth H——, German, aged forty-six years; has resided in this country twenty-six years; married, and has had six children, all living except one. Is healthy, and at time of operation was in the menopause. Fourteen years ago she alleges that she ran against an open door, severely injuring her nose; that inflammation followed, resulting, finally, in the loss of the entire organ, including septum. She called it "erysipelas," but whether syphilis or lupus I am not prepared to say. The opportunities for a specific origin were not lacking. The nares were open, and in a front view the deformity was very striking and repulsive, so much so that the public shunned her, and, to hide it, she constantly wore a veil. One of the peculiar results of the restoration of the nose was the recovery of smell. This sense had been absent for years.

After some preparatory treatment, the operation was undertaken May 12, 1879, assisted by Drs. Vaughn and Williams, of this city. The size and shape of the flap had been previously outlined upon the forehead, provision being made for shrinkage. In the greatest diameters it measured two and three-fourths by three inches. A column three-fourths of an inch wide, for joining the septum, was formed at the upper part, mostly from the hairy scalp. The angles for the base were acute (see illustration, Fig. 1).

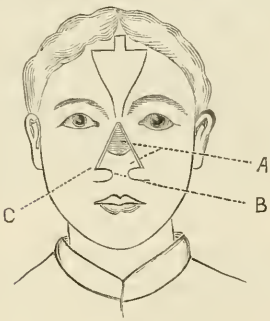


FIG. 1.]

The recommendation of Prof. Packard to hold the knife inclined in making the lateral incisions, forming the flap so as to bevel the edges, was adopted. As soon as dissected up, it was wrapped in oiled linen, and the wound in the forehead closed by sutures, so far as possible, and supported by plaster. The nares were then filled with lint, covered with cosmoline, and the edges prepared to receive the transplantation. An incision was carried down the wrinkle or depression seen on one side of the remnant of nose * to the very base. It was repeated on the other side, and the two corners pulled down for alæ in the new nose. This made a ⌊ space on each side and furnished a firm stay to the coming structure (see Fig. 1). These spaces corresponded to the sharp angles on the base of flap. Grooves were cut on both sides to receive its bevelled edges. A portion of skin as large or a little larger than the thumb-nail (Fig. 1, A), embracing all taken up in freshening the edges, was reflected over the nares. It was left attached along the margin, and being turned over afforded a bed for the bridge, but what was of greater importance, gave a skin, in part, to the under surface, and thus diminished somewhat the subsequent shrinkage in cicatrization. The flap was then brought down, and one side secured at a time by the silk suture, in such a way as to draw the bevelled edges into the grooves upon tightening the thread. The columnar portion passed between the corners for alæ and was made fast. By using the groove the surface for attachment is much increased and the new structure

FIG. 2.

rendered more firm. One suture was tied over a little roll of court-plaster, much to my regret afterward, since it became slack and dirty. A roller was placed on each side of the nose to preserve its shape, and held in position by court-plaster. Water dressing constituted the after-treatment, in addition to the means employed to secure good form. Union by first intention took place throughout. Owing to lowness of the forehead it was decided to take the septum from the upper lip—a decision followed with much trouble. This operation was performed June 18th, and through failure to carry out instructions by keeping parts wet, so much swelling ensued as to push the whole septum outside, where it remained through inability to return it, till healed. The hair-follicles in the extremity of nose prevented prompt union between it and the septum. The mucous surface would secrete a slime that hardened like a scab over it, increasing the difficulty. This condition of the nose was allowed to remain till the 23d of the following January, when I succeeded in carrying it to its proper place by the following method (see Fig. 3): The septum was separated at the nasal end, and divided from top to bottom by a transverse incision forming two columns, *a* and *b*. Two incisions about one-fourth of an inch in depth were then carried from the extremities of the last incision parallel into the nares. The part embraced between them, *c*, was dissected up, leaving the upper end attached. *a*, *c* was then raised and pushed inside the nares

* See Fig. 2, photograph.

where *a* was secured to the under surface of the nose which had been freshened. *c* forming the septum, *b* was then laid down in the gape made by removal of *c*, and secured by suture. Union quickly followed, and thus prevented the possibility of its again drawing out. May 5th—almost a year afterward—I di-

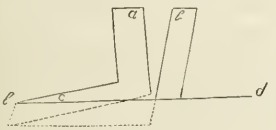


Fig. 3.

vided the pedicle and sunk it into a groove made for it. The photograph marked Fig. 4, gives a front view in the June following—thirteen months after the first operation. The photographs are untouched pictures. At this time the nose was high and possessed very good shape. It will be observed that the scar in the forehead is quite small, and that the change in appearance, expression, etc., is very marked. This is partly due to the removal of wrinkles by cicatrization, but chiefly to moral effect. The points of most interest derived from the case are:

First.—The entire structure should come from the forehead without regard to hair.

Second.—It should be large enough, especially in the vertical diameter, to admit of leaving the pedicle

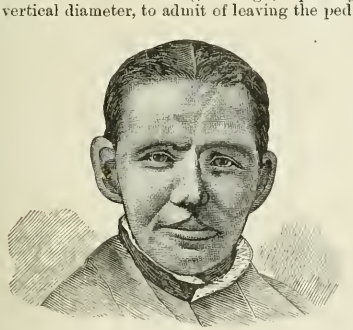


Fig. 4.

for several months undivided. The column for the septum must be long, else it will continue to draw down the tip. The leaving the pedicle attached does more than anything else to prevent the organ from becoming flat. While left it will be necessary to use a little pressure over it to prevent retraction. Court-plaster will do, and may be applied by the patient himself. Should the patient be unwilling to exercise this care it would be better to divide the pedicle as customary.

Third.—Long after the healing a compress on each side of the nose should be worn part of the time (nights will do) to insure symmetry and permanency of shape.

Fourth.—No skin should be wasted in preparing the parts for the reception of the flap, no matter how small. It should be dissected up, and turned over to form a partial cover for the exposed raw surface beneath the bridge.

December, 1880.

NOTES ON A CASE OF HYSTERICAL ARTHRITIC HYPERÆSTHESIA.

By EDWARD T. REICHERT, M.D.,

LATE DEMONSTRATOR OF EXPERIMENTAL THERAPEUTICS AND INSTRUCTOR IN EXPERIMENTAL PHYSIOLOGY, IN POST-GRADUATE COURSE, UNIVERSITY OF PENNSYLVANIA.

Sydenham, many years ago, in speaking of the multiformity of the shapes which hysteria puts on, says that there are but few maladies not imitated by it, and that whatever part of the body it attacks it assumes the appearance of the disease to which the part is liable; and I must say that a more striking illustration of this truth can scarcely be given than in the instance of the present case, in which acute arthritic rheumatism was so closely simulated, as to make it impossible for either my colleague or myself at first to distinguish the case for this disease, and in being led into unavoidable error by thus confounding the two affections.

The following is a brief survey of my notes in the case: Lizzie M——, aged seven years, has suffered since early childhood with frequent and almost constant headaches. She has had no sickness other than the familiar troubles met with in children—such as scarlet fever, chicken-pox, and pseudo-membranous laryngitis—except frequent attacks of rheumatism in the joints, especially so in those of the left leg, and two years ago an attack characterized by considerable pain in the left thigh-joint, with inability to stand on the leg, shooting pains running down the inside of the thigh to the knee, and an accompanying symptomatic fever. The limb, on examination by the attending physician, was found to be shortened an inch and a half, and the case was diagnosed hip disease, and treated as such; and after several weeks of blistering and other similar antiphlogistic methods, the patient got out of bed and was able to limp about with a crooked limb, which finally became straightened, and so far as the physician and parents were able to judge was fully cured (even the shortening). She has a nervous temperament, is easily excited or frightened, and a general history of an emotional nature. The family history, generally, is good, there being no specific or hereditary diseases, save a decidedly well-marked history of rheumatism, and a general prevalence of nervousness throughout many past generations, but no account of anything like what might be construed as attacks of hysteria, except in the mother of the child who had an attack of hemiplegia about four years ago, and from which she fully recovered, without its leaving any traces whatsoever. Every member of both sides of the family, back as far as the memory of the grandmother goes, has had one or more attacks of rheumatism, and some of them had attacks which were so frequent and bad as to seriously interfere, after their recovery from the acute seizures, with the pursuance of their daily work.

On Saturday night (January 8th) the little girl, who had been limping about all day, retired early, because of suffering from considerable pain in the left hip-joint and knee, and having distressing shooting pains running down the inside of the thigh and knee. She was feverish and restless all night, and would frequently cry out with pain. On the next morning a call was left at the office, and on account of my absence from the city, my colleague (Dr. T. N. Bradfield) saw the case. There was a decidedly hyperæsthetic condition of both the thigh and knee-

joints; the thigh was partially flexed and adducted, the joints sore to the touch, and if the leg was moved even the slightest, the pain caused was so intense that the patient would scream, so that any unnecessary manipulation was forbidden. The joints did not appear to be much swollen, much increased in temperature, or colored; and neuralgic pains on the inside of the thigh running to the knee were frequent. There were headache, injection of the sclera, the respirations were increased and heaving, the pulse nearly 130, the temperature 101° F., the skin hot and parched; the urine was small in quantity, seldom passed, and high colored, and the bowels decidedly constipated. Acute articular rheumatism was diagnosed, and the patient at once put on a febrifuge and anodyne mixture with alkalis; and purgative powders were given in addition to move the bowels.

On my return to the city the following morning, I called to see the patient, and found her in a suffering condition, with fever unabated, condition of the urine and bowels unchanged, pains in the joints unmitigated, and indeed, even in addition to the pain in the knee- and hip-joint, it had extended to the ankle since early morning. Fully expecting to find the child improved, I was not a little surprised at her condition. However, as the family history savored so remarkably strong of the rheumatic diathesis, and as her symptoms were so well marked, and my confidence in the recognized diagnostic skill of my colleague such, that did I not for a moment suspect the correctness of his conclusion, but thought that the cause of the unrelief was, in all probability, simply due to the inability of his moderate doses to produce the impression desired. So the doses were increased, and in addition, two and a half grains of sodium salicylate with morphine were given every two hours; and powder of podophyllin with rhubarb and aromatics were given in large doses to move the bowels.

The following morning found the patient but little changed for the better, the fever being but slightly diminished, and a good movement from the bowels obtained. During the night the patient was very restless with insomnia, and had frequent spells of crying, at which times she would complain of her painful joints, and at other times would sing, as if delirious, or at other times talk incoherently. The skin was still hot and parched, the pulse 124°, the temperature plus 100° F., and the urine still in the same febrile condition. The pain in the joints of the left leg was somewhat diminished, but the flexor and adductor muscles of the thigh seemed rigid, and kept the leg firmly but partially flexed and adducted. The extensor muscles of the foot seemed paralyzed. The patient was wholly unable to make the slightest extension of the foot, and it hung down apparently lifeless, although readily movable by my own manipulations. The corresponding joints of the right leg now became affected, and from the little sufferer I gained the information that, as much as the pain was diminishing in the left joints, it was increasing proportionately in those on the opposite side. Distress in the præcordia was also complained of, and cardiac complication was feared; but auscultation and percussion revealed no cardiac trouble. She also complained of such great pain and general distress in her stomach after taking the salicylate, even though given greatly diluted with water, that it was felt necessary to abandon its use. Feeling satisfied that my colleague's mixture was not doing the work anticipated for it, the following was prescribed:

℞. Tinct. verat. virid..... ℥ xij.
Spts. æth. nitrosi..... .... ʒ j.
Morphiæ sulph..... gr. ss.
Potassii citratis..... gr. lxxij.
Syr. zingiberis,
Syr. simplex.....āā ʒ j.

M. Sig.—A teaspoonful every hour until perspiration or decided drowsiness occurred.

After giving half a dozen doses the skin became slightly moist, and the patient felt slightly better. With the addition of two one-twelfth grain morphia powders, she passed a more quiet night, but was sufficiently wakeful to be always ready for her dose of medicine on the very minute of the hour, and at no time was she sleeping but for a few moments at a time. The following morning (Wednesday) did not find her condition essentially changed from what it was on the previous evening, notwithstanding the often repeated doses she had had for the past eighteen hours. The pain was still considerable, the pulse still ranging about 120; the temperature, plus 100° F.; condition of the urine unchanged, and no movement of the bowels since Monday night. Purgative powders were again given, and the mixture continued throughout the day, with additional doses of morphine. By the evening not the slightest drowsiness had been induced, nor had the skin become any more than slightly moistened. The pain in the joints of the right leg grew slightly worse, notwithstanding the morphia, and the left was somewhat improved, although that stiffened, immovable condition remained unaltered. Noticing the nurse rubbing the child's limbs, I inquired if it relieved the pain, and was informed that it did, and on very gently rubbing the child's limb myself—so gently that I scarcely more than touched her—found that before I thrice had done it she screamed out with pain, and upon inquiring the cause of it was told that I "rubbed *up*;" that if I "rubbed *down*" it gave her such great relief, but if "rubbed up" it gave her "awful pain." A few moments afterward she told me that "that horrid medicine gave her such awful pain in her left knee and ankle every time she took it." Not seeing the philosophy of the "rubbing up" acting the very opposite of the "rubbing down," and the relation between the pain in the knee and ankle and the medicine, I, for the first time, suspected the case to be one of hysteria, although I had previously suspected that there was evidently a hysterical complication. So, after endeavoring in very many ways, and for a considerable length of time, to divert the patient's attention from herself, and to get her mind deeply occupied in something altogether foreign to her troubles, I at last succeeded, and at that time took advantage of the opportunity to manipulate her left leg, both in "rubbing up" and in moving it, and to my intense satisfaction found that this operation, which a short while ago apparently gave her such intense suffering, was now performed without cognizance on her part. While continuing to do this, I abruptly recalled her attention to her painful joints, and scarcely had I uttered the words before she cried loudly and said that I was hurting her so much, and implored me to please stop.

Further inquiries informed me that the singing spells which she had on several previous evenings would often occur almost immediately after the child would be complaining of pain, and would be crying from it; and even sometimes in the midst of her crying she would stop suddenly and commence singing, "Oh, my dear little foot!" or refer to her knee,

or to her mother, etc.; at other times it seemed as if the crying and singing coexisted. Yet, when asked if the pain in the joints was constant or intermittent, invariably stated that it was of the former nature, and was not subject to any marked exacerbations. Upon asking the parents if the child had ever suffered with the *globus hystericus*, I was told that she often complained of a choking sensation in the throat, and particularly so after she had been crying from some slight cause.

The case now appeared to me to be a clear one of hysterical arthritic hyperæsthesia, the general family history and the paralytic seizure of the mother, with her subsequent entire recovery, confirming my diagnosis. Consequently, the child was put on twenty minims of fluid extract valerian, every three hours, and, as remarkable as it may seem, after the second dose had had time to operate the fever rapidly subsided, the skin became natural, the kidneys active, and the pain in the joints considerably diminished. The following morning (Thursday) found the child a different being. She had passed a good, quiet night, slept well, and was refreshed; not a trace of the fever was present, the urine became natural in color and quantity, with no pain in the joints, although considerable stiffness remained, and the patient was able to move the left foot a little, which, as will be remembered, hung a few hours previously as if lifeless. Passive movements of the joints were made and the muscles manipulated. The patient was put on general tonic treatment in connection with the valerian, and told that on the morrow she must sit up a little, and be sitting up when I called; but she assured me that she was certain she could not do it. However, without going into the details of the moral treatment with which we are all so familiar, I found her sitting up when I arrived, and in five minutes more, after a determined effort, had her out of bed and, with my support, was walking about the floor, although she stoutly protested a few minutes before that she could not possibly straighten her limbs, or use her left foot.

This case is an exceedingly interesting one, as being an illustration of that very rare class of the multitudinous forms of hysteria in which a well-marked pseudo-febrile condition is attended by decided symptoms and signs of serious organic or arthritic lesion. Hysteria in a child so young is indeed interesting of itself, and but few cases have been reported. Willis, Hoffman, and others of the older authorities, give us but few instances; and even Briquet, with all his extended experience, has only seen eighty-seven cases occurring before the twelfth year; and of 351 cases analyzed by Landouzy, not one was below ten years of age. Hysterical affections of the joints have been referred to by Brodie,* Skey,† Barlow,‡ Meyer,§ and others. Meyer states that one of the leading phenomena which distingnishes hysterical from other affections of the joints is, that in the former the pain ceases in the night; but in the present case it was unmistakably present. Yet, with the other characteristics which he points out, the phenomena of this case are in harmony; such as the transient swellings of the joints, changeability of the temperature of the part, the fact of pressing the joints being no more painful than gentle handling, and the rapid disappearance of the trouble following usual or known methods of curing or alleviating hysterical affections in general. Rosenthal,* the only one of half a dozen authors on nervous diseases with whose works the writer is familiar, refers to this pseudo-febrile condition in speaking of hysterical vaso-motor disturbances, and he says that in several cases he noticed that the temperature did not rise in the axilla above 37.4°—37.6° C. [99.3°—99.7° F.], despite a pulse of 100 to 120; yet, in the present case, the temperature was decidedly in excess of this. The marked tolerance of morphia and purgatives, and the inefficiency of the usual febrifuges to reduce the fever, were no doubt due to the hysteria, and were but symptoms of its existence; while the immediate and marked improvement following the use of the so-called anti-hysterics is equally as suggestive.

106 Halsey Street, Newark, N. J.

* Illustrations of Certain Local Nervous Affections, London, 1887.
† Hysteria. Fifth Lecture.
‡ A Treatise on Diseases of the Joints
§ Berlin. Klin. Wochensch., No. 26, 1874.

A CASE OF
UTERINE DISPLACEMENT.

By M. F. PRICE, M.D.,

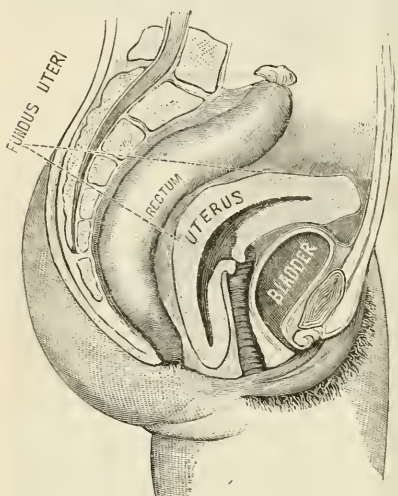
ACTING ASSISTANT SURGEON, U.S.A., FORT STOCKTON, TEXAS.

About December 4, 1879, a Mexican came to me and said his wife was sick, and he wanted some medicine for her. My interpreter was not a good one, and about all the information I could get was conveyed in the term "agua caliente" (hot water), and motions made toward the genital organs. I finally learned that the urine was hot and there was frequent desire to void it. As gonorrhœa is quite common among the Mexicans here, both married and single, I took it for granted this was such a case, and prescribed accordingly.

December 6th.—The man returned and said his wife was no better. I now had a more efficient interpreter, and, after some conversation about the case, I came to the conclusion my diagnosis was wrong, and that I had better see the woman. I therefore rode out to the ranch, and in one of the adobe huts found my patient lying on the ground, apparently in great distress. She was a medium-sized, well-built Mexican woman, about twenty-two years of age. I asked her where her pain was, and she took my hand and passed it over her abdomen to the groins and around to her sides, saying, "Aqui!" "Aqui!" (here, here). I made examination externally and found a tumor (seemingly) above the pubis, which felt like the uterus, but flattened posteriorly. Passing a finger into the vagina, I found what appeared to be a tumor between the recto-vaginal walls, which extended down to and rested on the perineum. The bladder was apparently full, but felt peculiarly puffy. For a long time I could not reach the os uteri, and had about concluded I had a pelvic hæmatocele to deal with. After persistent effort for some time I finally found the os, which was turned forward toward the symphysis pubis and pressed firmly against the bladder, so that it felt like a slit lying crosswise. The cervix uteri was likewise flattened and shortened. The apparent tumor back of the vagina, and the one above the os pubis, I found to be connected; in fact, were one and the same. This condition of things was somewhat puzzling for a time, to say the least. My diagnosis was, finally, that the uterus was much enlarged from some cause, and that the fundus had been by some violence pushed down toward the os, thereby flattening the uterus from above, causing it

* Diseases of the Nervous System.

to assume the shape and position shown in the drawing, and pressing the walls—anterior and posterior—to the positions in which I found them, one to the perinæum and the other above the pubes. Acting upon this diagnosis, I passed the right hand into the vagina from before, and, after drawing it down as far as possible, placed the ends of my fingers against the dependent uterine wall and carried it up, at the same time gently making counter-pressure with the left hand on the anterior portion above the pubes. Persisting in this manœuvre until the posterior wall was carried well up to the promontory of the sacrum, while I was still using considerable force, it suddenly left my fingers and went in its proper place with an



audible "*swoosh*"—the anterior wall simultaneously passing from under my left hand. On further examination I then found the uterus normal in shape and position, but large enough for about three and a half or four months' pregnancy. I now turned my attention to the enlarged and puffy bladder; passed the catheter and drew off about two ounces of pure blood, when the instrument became clogged with clots. I administered an anodyne, enjoined quiet in the recumbent position, and returned to the post.

December 7th.—Found my patient quite comfortable. Drew from the bladder—which was much reduced in size and in a more natural condition—about three ounces of blood. After a thorough examination to-day, I decided that the woman was certainly pregnant, advanced about four months.

December 8th.—Urine passing freely without blood. Uterus normal, bladder nearly so. The woman said she was "muy bueno" (very well). I did not see her again until March 27, 1880. At this time she was very well, and appeared to be advanced to at least seven months' pregnancy. I have not seen her since, but have learned that she was delivered, May 10, 1880, of a large, healthy boy. I refrain from making any comments on the peculiarities of this case, and simply give a description of the condition and the results.

EXTIRPATION OF CANCER OF THE RECTUM.

By CHARLES B. KELSEY, M.D.,

SURGEON TO THE INFIRMARY FOR DISEASES OF THE RECTUM, NEW YORK, ETC.

In a certain number of cases cancer of the rectum has been removed, and has not returned for so long a time as to justify the statement that the patient has been radically cured. In many more cases, though the disease has ultimately returned, a greater length of life and freedom from suffering have been obtained by the entire ablation of the growth than could have been hoped for by any other method of treatment. The operation is, therefore, both a curative and palliative measure, and should be studied from both these standpoints.

The first case of extirpation of the rectum of which we have any record was by Faget, in 1739, and was not for cancer, but simply a removal of the lower portion of the bowel, which had been completely surrounded and denuded by an abscess beginning in one ischio-rectal fossa, and subsequently extending into the other. From that time until 1826 the operation, as a means of treatment of cancer, will occasionally be found mentioned in surgical literature; generally, however, only in condemnation. In 1826 Lisfranc performed the first successful operation for cancer; and three years later his student, Pinault, in a *thèse* reported nine cases, and gave to the procedure a permanent place in literature and practice. In 1833 Lisfranc himself embodied the same ideas in a paper read before the Acad. Royale de Médecine,* and from that time the operation became widely known. Since then it has had its advocates and opponents, and has been subject to many modifications in its performance. For a long time it was coolly received by British surgeons, but within the past decade it has received a new stimulus from the Germans, and at the time of writing it seems about to be fairly tried by the surgical world and judged on its merits.

Almost every surgeon whose name is prominently associated with the operation has had his own favorite way of performing it; and we shall, therefore, speak in detail only of those which have proved most acceptable, and first of those described by Volkmann in his *Klinische Vorträge* for March 13, 1880. He describes three different operations, depending on the location of the disease. The first is for the removal of a circumscribed spot only. This is accomplished by dilating the anus, dragging down the disease, and excising it in such a way that the wound shall not cause subsequent strictnre. When the growth involves the anus the edges of the wound are carefully brought together, stitched with catgut, and a drainage-tube inserted between them. When the growth is entirely within the sphincter, the edges are brought together with equal care, but the tube is inserted through a track made for it, which communicates with the wound above and perforates the healthy skin at a point outside of the border of the sphincter. When dilatation does not suffice, the anus is freely divided down to the coccyx, and this wound is subsequently carefully closed under the antiseptic precautions. In the second class of cases, where the growth involves the whole circumference of the bowel, but not the anus, the latter is divided forward into the perineum and backward to the tip of the coccyx when necessary to give room for

*Mém. de l'Acad. Roy. de Méd., 1833. III., p. 296.

manipulation. The latter of these two incisions is carried as far into the bowel as the lower border of the disease, which is then removed. The mucous membrane above is stitched to that below, the preliminary incisions carefully closed, and a drainage-tube left in the posterior one. In the third class, where the disease involves all, or nearly all of the anus, and of the circumference of the rectum, the entire tube is separated and removed in a cylinder. The same preliminary incisions may be made as in the second class, and the anus is surrounded by a circular cut, which runs outside the sphincter. From this as a starting-point the dissection is carried parallel with the bowel till the upper portion of the disease is passed. By the use of knife, scissors, and fingers the bowel is completely freed, then drawn down to the anus and cut off above the disease, the healthy upper end being stitched to the margin of the skin. In case the peritoneum is opened, the wound is at once stuffed with carbolized sponge, and afterward carefully closed with catgut. The coccyx and part, or nearly all of the sacrum, are removed when necessary to make room, as a preliminary step.

The risk of hemorrhage is one of the great objections to this operation, and later on we shall describe another procedure, which is preferred by many, in which the knife is supplanted by other and bloodless instruments. It is no doubt true, as Allingham says, that the deep dorsal incision is the key to the operation, and greatly facilitates the securing of bleeding vessels; yet the hemorrhage may be so great as to impede the operator and endanger the life of the patient. It will be seen that at every step in this operation union by first intention is aimed at, and Lister's methods are carefully followed. If the elements of success in Listerism are, as I believe, cleanliness and drainage, these are certainly better met by a deep posterior wound, which is left open and syringed out frequently, than by carefully closing that safety-valve with catgut sutures and inserting a drainage-tube. It will also be observed that the bowel is always brought down and stitched to the free edge below. To do this much dissecting is necessary, and but little permanent good is gained, as the stitches soon tear out. Of the freedom with which the peritoneum is opened, and of the operation in general, as practised by the German surgeons for cases of the most advanced disease, we shall speak later.

Maisonneuve described, in *L'Union médicale* of 1860, an operation which he named the *procédé de la ligature extemporanée*, and which differs from the preceding in being almost entirely bloodless, although it differs little from the operation previously described by Chassaignac under the name of *l'écrasement linéaire*. In the latter the rectum is divided into two lateral halves by the chain *écraseur*, and each half of the disease is then attacked in the same way and removed. In the operation as done by Maissonneuve a strong cord is substituted for the chain, and the disease is removed in the following manner: the skin and subcutaneous tissue are divided by a circular incision which completely surrounds the anus. The operator is provided with several strong curved needles, each of which is to be threaded through the point as often as used, with a strong silk ligature about a foot in length. One of the needles with the ligature in its point is then passed from the external incision into the bowel above the growth, going wide of the gut to clear the tumor. The loop of string in the eye of the needle is seized within the rectum and drawn out of the anus, while the needle is drawn back out of its own track. The result of this is a double uncut ligature, passing from the point where the needle entered the external incision, outside of the tumor, into the rectum above it, and then out of the anus; and this manœuvre is repeated eight or nine times at points around the circumference of the anus equidistant from each other. A strong whip-cord or bow-string is the next requisite, about two yards long, and to this all the loops hanging from the anus are attached at points nine inches distant from each other. Each of the original ligatures is then withdrawn by the same course it entered, carrying a loop of the whip-cord with it. When all are drawn out, the rectum above the disease is surrounded by a series of loops of strong cord, and the ends of each loop hang out from the original incision. The ends are then attached to an écraseur, and each loop made to cut its way out in turn. After all have been cut out, the lower end of the bowel and the diseased mass are of necessity completely separated from their attachments.

The operation performed by Cripps * is a modification of the two preceding ones, and would seem to possess several advantages in facility of performance. The preliminary dorsal incision is made from within outward, by passing a strong curved bistoury into the rectum, bringing its point through the skin at the lip of the coccyx, and cutting all the intervening tissue. The buttock is then drawn away from the anus to put the tissues on the stretch, and a lateral incision made from the preliminary cut behind, around the rectum, to the median line in front. The site of this incision, whether inside or outside the anus, will depend upon the location of the disease, and whether or not the anus is implicated. The cut itself should be made boldly, and deep enough to reach well into the fat of the ischio-rectal fossa. The forefinger in this incision will readily separate the bowel from the surrounding tissue, except at the attachment of the levator ani muscle, which should be divided with the knife or scissors. A piece of sponge is pressed into this cut to restrain the bleeding, while the opposite side is treated in the same way. The anterior connections give more difficulty, and the dissection in the male is aided by having a sound in the urethra. The knife and scissors replace the finger in this part of the operation. When the dissection has been carried to a point above the disease, the bowel is drawn down, and held while the wire écraseur is passed over it, and the section made at the required level. After this there may be free, but seldom serious, hemorrhage. The vessels divided in the first steps of the operation all come from the wall of the bowel, and, if ligatured when first cut, are again opened with the écraseur. When the disease is located to one side of the bowel the operation is modified accordingly. The preliminary dorsal cut is the same, and the lateral incision is made on the affected side. At the farther end of this lateral incision, away from the dorsal one, a needle carrying a cord in its point is passed around the disease and into the rectum above it. The loop of cord is brought out of the anus, attached to the chain of the écraseur, and withdrawn as it entered. The chain is then made to cut its way out, and a rectangular piece of the rectum is thus included between two longitudinal incisions, one posterior with the knife and one lateral with the chain. In this rectangle is the cancer, and it is dissected up-

* Cancer of the Rectum. London, 1880.

ward from below, and separated above by again using the écraseur.

Instead of the chain or wire écraseur, the wire of the galvanic cautery may be used, heated to a dull red, and not a white heat, if the desire is to avoid hemorrhage. Or, again, instead of the wire the galvanic cautery knife may be used, and the operation performed with bloodless incisions. This is the operation favored by Verneuil. The rectum is first divided into lateral halves with the écraseur, as in the method of Chassaignac, the cut dividing both the anterior and posterior walls. Then with the galvanic cautery blade the lateral halves are separated from their attachments stroke by stroke, until a point is reached above the level of the disease. The chain is again slipped over the end of each, and the final section made.

An ingenious and simple method applicable to certain cases has been recorded by Emmet.* The growth in the case in which it was used was an epithelioma the size of a hen's egg, situated on the posterior wall of the rectum an inch above the sphincter, with considerable surrounding infiltration. The sphincter was stretched, and the mass seized with a double tenaculum and drawn well down by an assistant. "A steel grooved director, as the most convenient instrument for the purpose, was pushed through the skin in front of the coccyx and just behind the outer edge of the sphincter, into the cellular tissue of the pelvis, and then made to puncture the rectum, in healthy tissue, just beyond the upper edge of the tumor. The end was turned out of the gut, and pushed far enough forward to rest on the perineum while the other end was over the coccyx. Then a second director was pushed around from the outer side of the muscle on one side, through the cellular tissue into the rectum, across to the other side, through the cellular tissue and skin again to the opposite side of the muscle. So that the mass, with a portion of the rectum above, was now brought through the anus and fixed by the two directors, which had been passed behind the mass at right angles to each other, with their ends resting outside on the soft parts. The chain of an écraseur was placed behind these two instruments and slowly tightened till the whole mass, as transfixed, was cut through along the course of the directors. By this means I removed the entire sphincter muscle, about three inches of the posterior wall of the rectum, and about an inch and a half of the rectal surface of the recto-vaginal septum. The immediate result was a most formidable opening in the connective tissue of the pelvis, about three inches in diameter, and cone-shaped from below."

Dr. Rouset has recently called attention to a simple method of avoiding a wound of the sphincter, which is applicable to some of the slighter cases. A curved incision is made parallel with the outer border of the sphincter, and on a line with its outer limit. By introducing the finger through the rectum, the growth may be everted through this incision, and removed with the part of the rectal wall to which it is adherent.

Perhaps, as Molliere is inclined to believe, the best of all the operations we have spoken of is the combination of the écraseur and galvanic cautery knife, as used by Verneuil. But the operator is at liberty to choose from among them all the one he considers easiest of performance, and most free from the risk of hemorrhage, or of wounding surrounding parts.

* Principles and Practice of Gynæcology. Ed. 1879.
† Lancet, Oct. 2, 1880.

Regarding the immediate dangers of the operation, the first thing to be feared is hemorrhage, and the second, a wound of the peritoneum. Allingham says he has learned not to fear hemorrhage in operation on the rectum; and yet he warns against wounding the "middle hemorrhoidal (sacral?) artery" by approaching too near the sacrum; an accident which has occurred to himself, and which was followed by so free and so sudden a gush of blood as to convince him that in a weak patient it might easily have been fatal. The arterial supply to these tumors is often very free, and a spirting vessel four inches up the rectum is not an easy thing to secure in spite of the preliminary incision. I know of but one case in which death is said to have been due directly to the hemorrhage, although in many it is reported to have been very profuse, and no doubt contributed to the fatal result which followed in the course of the first few days.

A wound of the peritoneum is not an uncommon accident attending the operation, although it is one to be greatly deplored, and which has contributed more to swell the list of fatal results than any other. The deaths from this cause alone nearly equal those from all others combined; and whatever may be said of the impunity with which this serous cavity may be opened in other parts of the body, does not seem to apply here, for there are few cases recorded in which the accident has not ended fatally. A wound into the vagina, though always to be avoided when possible, may often be necessary in order to fully remove the disease.

When the fistula thus made is not too extensive, it may be closed immediately after the operation. If large, it must be left. A wound of the urethra in the male, when slight, is to be treated as though the patient had submitted to an external urethrotomy, by the frequent passage of the sound, to prevent contraction. When a large piece has been taken from the urethral wall a permanent recto-urethral fistula is the necessary result, though the danger of fatal inflammatory action is greatly increased, from the presence of the urine in the rectal wound. As for the cases reported by Nussbaum and others, in which the whole neck of the bladder, the greater part of the prostate, and the seminal vesicles have been removed, and the patients have lived for years in comfort, they are merely curiosities of literature. That such a thing may happen has been proved, but that the operation should ever be undertaken in any case where such a result is necessary for the entire removal of the disease, has yet to be proved.

After peritonitis, the most frequent causes of death are blood-poisoning and deep pelvic inflammation.* To account for this, we have only to remember the free venous supply of the rectum, the extent of the wound, and the lax cellular tissue filling the pelvis. It has happened to good surgeons that a patient has died of diffuse pelvic inflammation after a simple operation for fistula in ano. How much greater, then, must be the danger in an extensive operation such as is now under consideration. The best way to avoid such an accident has already been pointed out—leaving the wound open for the free escape of fluids, and the frequent use of disinfecting fluids injected into all its pockets and sacs.

Regarding the ultimate condition of the rectum in case of recovery from the operation, stricture to a troublesome extent is very rare. In one case, re-

* See "An Analysis of One Hundred and Forty Cases of Excision of Cancer of the Rectum," by the author, New York Med. Journal, December, 1880.

ported by Verneuil, a special plastic operation was performed to relieve this condition, an account of which may be found in the work of Marchand.* The opposite condition of incontinence is much more common, but it is no contraindication to the operation, because in the great majority of cases it is no more marked than after the only other surgical procedure applicable—lumbar colotomy. As a fact, in a very large proportion of cases the incontinence is not sufficient to cause any great amount of trouble, the patient being able to keep himself clean and avoid accidents by immediately attending to the call of nature as soon as felt. Only one element in the act of defecation has been removed—the sphincter. There are many others, so that, though the patient may not be able to resist the call to empty the bowel, there is still a call, and a certain amount of time to attend to it, except in cases of diarrhœa and fluid motions. In a few cases there will be a constantly unconscious discharge, which can only be met by the wearing of a bandage or apparatus.

The operation of excision has not yet been accepted by the entire profession as the best means of treating those cases of cancer of the rectum to which it is manifestly most applicable. By American surgeons, as a rule, colotomy is considered preferable, as giving greater relief, and more surely staying the progress of the growth. Excision can never be judged in comparison with colotomy, being applicable properly only to an entirely different class of cases. It must be judged in the light of actual experience of results in those cases to which it is best adapted. What are those cases? The Germans have apparently no limits to its applicability. They perform it in cases of the most extensive disease, opening the peritoneum, exsecting the sacrum, when necessary to reach its upper limit, and removing the prostate and base of the bladder when they are implicated, balancing the risk of immediate death from the operation against the chance of radical cure, or prolonged immunity from return. Conservative surgeons will hesitate long before accepting this view, for, although very satisfactory results have been obtained in such cases, they can hardly be considered other than exceptional, and a study of cases shows that the frequency of the fatal result is in direct proportion to the extent of the operation attempted. The rules for the selection of cases laid down by Lisfranc were these: when the bowel is movable, in other words, when the disease has not involved surrounding parts, the operation should be undertaken. When, on the other hand, the disease is more extensive, and reaches higher, he leaves the question to be decided by future experience. I believe that experience has now decided against it. In deciding for or against the operation, an examination of the glands in the hollow of the sacrum and in the loins is of great value, for these receive their lymph directly from the rectum, and may be enlarged, while those in the groin, which are supplied from the skin around the anus, may still be uninvolved. Although the hope of radical cure is but slight, there is still some chance of such a result; but the operation, when done at all, is generally undertaken merely as a palliative measure. Labbé, in a recent article,† rather argues against it, on the ground that, in ten of his cases, the average date of return was only ten months. This, I think, might be considered a very favorable result. Ten months of comfort, with the chance of painless death from return in the viscera, is certainly as good a result as any other treatment offers.

48 East Thirtieth Street.

* Étude sur l'extirpation de l'extrémité inférieur du rectum, par le Dr. A. H. Marchand. Paris, 1873.

† Gaz. hebdom., June 4, 18, 1880.

Progress of Medical Science.

Eye-Symptoms in Locomotor Ataxy.—Dr. J. Hughlings-Jackson read a paper before the Ophthalmological Society, London, December 9, 1880 (*Lancet*, December 18, 1880), in which three well-marked non-ocular tabetic symptoms were considered in connection with certain ocular symptoms. Twenty-five cases, in different stages, furnished the materials for the communication. Of these there were twelve of optic atrophy. In two there were also ocular paralyses, and in one a history of it; in nine there was Westphal's symptom. In one of the three, without this symptom, there had been no pains; gait was slightly ataxic. In the second there had been double vision ten years ago; there is now paresis of the left third nerve: this patient had pains, but his gait was normal. The third case was one of atrophy of one disk, with limitation of the field outward and downward; this patient saw green as gray, and red as reddish brown; he had pains, but his gait was good.

In one case, in which there was paralysis of those parts supplied by oculo-motor nerve-trunks, it was noticed that the patient had no positive symptom except Westphal's (tendon-reflex). This patient's pupils acted well to light and during accommodation; he had no pains of any sort anywhere. In one case, with normal pupils and Westphal's symptom, there had been paralysis of the third nerve. In one case of inactive pupils, with Westphal's symptom, there had been temporary double vision. In another, with inactive pupils and Westphal's symptom, paralysis of one sixth nerve. That condition of the pupil, observed by Hempel, Vincent, Erb, Hutchinson, and others, called the Argyll Robertson pupil, is a double condition, negative and positive, and in this way resembles the so-called disorder of co-ordination of locomotor movements. This symptom is not peculiar to tabes; it may be found in general paresis of alienists—at least, reflex pupillary immobility. Erb's diagram was exhibited to the society, which gave that physician's view of the central conditions corresponding to the double pupillary condition, and the following case was cited, which was considered a very rare one: A woman, aged twenty-six years, had sought advice, simply because her right pupil was larger than the left. It had been so for three years. The right pupil was dilated and absolutely motionless to light, and also during accommodation. Yet her ciliary accommodation on this side was perfect. She could read No. 1 Jaeger from fourteen inches up to five, or by effort to four. The field was perfect. The fundus was normal, except that the veins were large, and convoluted at the disk, probably physiological; the media were clear. Her sight with this eye was perfect. The pupil of the left eye was most active, and of normal size; the left disk was slightly paler than the right; the veins as on the right; macula normal; double slight limitation of nasal part of the field. She could read Jaeger No. 2 with the left eye, but the centre syllable of a long word seemed blurred. She seemed to be in perfect health, except for the ocular abnormalities mentioned. In testing her knees not the smallest trace

of the knee phenomenon could be found. There were no other symptoms of tabes. Erb has found the pupillary condition in patients who had no other nervous symptoms, as well as in nervous affections which could not be classed as tabes or as general paresis. Again, it is not said that the action of light may not be present in very well marked cases of tabes. Pagenstecher has recorded a case verifying this fact, and it has also been observed by Laidlaw Purves. Twenty-years ago Dr. Jackson had observed that many men who had "white atrophy" of the optic disks had also lightning pains in the legs; and later, on making a distinction as to the kind of atrophy, he concluded that the pains were a symptomatic link between "uncomplicated amaurosis" and locomotor ataxy. This atrophy is now more particularly described as gray degeneration, and is supposed by Charcot and others to be parenchymatous. The peculiar limitation of the field of vision in cases of the atrophy in tabes is significant when we consider that the developed disease is in great part one of the locomotor system. The limitation would seem to correspond roughly to certain ocular deviations from cerebellar disease, in the way that hemiopia does to lateral deviation of the eyes from cerebral disease. In all cases of optic atrophy we should inquire for the pains, and test the knees whether the gait be abnormal or not. The pains are often bridging symptoms between so-called uncomplicated amaurosis and tabes. Charcot says that, as far back as 1868, he pointed out that the great majority of women admitted into La Salpêtrière for amaurosis have, sooner or later, manifestations of tabes. He mentions one case in which the amaurosis preceded the pains ten years. Gowers has seen a case of tabes in which optic atrophy preceded other ataxic symptoms twenty years.

Esmarch's Bandage an Aid to Diagnosis in Simulated Contraction.—A case in point is narrated in the *St. Petersburg med. Woch.*, No. 25, 1880. A young soldier was said to have been afflicted with contracture of the flexors of his right leg for more than six years. Indications of existing disease were not seen. The affected extremity was enveloped with the elastic bandage and the constricting tube applied about the middle of the thigh. Without any feeling on the part of the patient, the leg was spontaneously extended, and could not afterward be made to assume its former position by voluntary efforts.—*Centralbl. f. Chir.*, December 18, 1880.

Extensive Carbuncle.—In the *British Medical Journal*, November 20, 1880, Dr. Joseph Hinton has reported a case of extensive carbuncle in a very stout old lady, who had been enjoying remarkably good health, being active, notwithstanding her age, which was nearly eighty. The whole of the nape of the neck was hard and brawny. By degrees, with nitrate of silver externally and potassa fusa placed in the little apertures, sloughing went on, and when at last the eschar had separated, the ulceration extended from ear to ear, some distance up the posterior part of the scalp, and down the upper portion of the back. Owing to the patient's size, the difficulties of dressing the neck were extreme. Everything that could support strength was given. The wound filled up slowly and the patient improved daily, when the case became complicated by a very large abscess on the outer part of the right gluteal region, and the patient finally succumbed eight months after the inception of the disease.

Amaurosis Following the Administration of Salicylate of Sodium.—A young lady, aged sixteen years, had been taking two drachms (8.0) of salicylate of soda within ten hours. The patient was under treatment for acute articular rheumatism. Complete blindness soon set in, together with enormous dilatation of the pupils. There was also torpor and somnolence. The sensibility of the conjunctiva and cornea remained unaltered. No internal ocular change. Deafness was also developed, and the cardiac action became much enfeebled. The pulse, too, was correspondingly weak. No trace of the salicylic salt was observed in the urine, neither was albumen found to be present. A profound slumber set in. Ten hours later the amaurosis disappeared, but mydriasis and deafness remained until the following day. Similar disturbances of vision have been reported by Buss, Fürbringer, and Schultze.—*Le Courrier médical*, January 8, 1881.

Treatment of the Lancinating Pains of Ataxia by Nerve-Stretching.—M. Charcot recently cited a case of locomotor ataxia, in which stretching of the sciatic nerve promptly alleviated suffering of long standing. The case was observed at the *Bicêtre* by M. Debove. It was one of those instances in which several of the symptoms usually witnessed in the spinal affection were wanting. The patient was about forty years of age, the son of an epileptic, and brother to several other epileptics. The most distressing symptom which he had consisted of violent and lancinating pains (douleurs fulgurantes) in both inferior extremities. Inco-ordination of muscular movements existed to a certain extent, preventing stationary support on his feet. In the arms, aching sensations were likewise present. He had been at the Bicêtre about a year, and was constantly bedridden. Hypodermics of morphia alone afforded him temporary relief. M. Gillette was therefore asked to try operative measures. The sciatic nerve of the left side was accordingly exposed and forcibly stretched with the forceps. An anæsthetic was not employed, nor did the operation appear to cause the patient much pain. Almost instantaneous relief followed this measure, and the pains have not returned.—*Gaz. des hôpitaux*, December 11, 1880.

Statistics of Mammary Cancer.—The immense material accumulated at the Vienna Pathological Institute has been utilized by Török and Wittelshöfer (*Archiv für klinische Chirurgie*, vol. xxv., 1880) in order to determine some questionable points in relation to the statistics of mammary carcinoma. In 72,000 bodies, of which autopsical records were made between the years 1817 to 1879, mammary cancer was found 366 times, or about in one-half per cent. of the cases. In about 30,000 female corpses the tumors were found in one per cent. of all cases. In perhaps eight of them sarcoma may have been present. Of 351 in which the location of the tumor was stated, 161 exhibited disease on the right side, 141 on the left, and 46 on both sides. Three times the disease was found in very old men. The age of the dead varied from twenty to ninety years; the majority of cases occurred between forty and seventy years. In 184 instances the patients had undergone operation; of this number, 105 were found without metastatic deposits. Of the 182 who had not been operated upon, only 41 were free from secondary nodules. Secondary local dissemination was frequently found in the adjoining integument, muscles, glands, pleuræ. Very rarely distant organs were found to have become involved by local extension. Thus, in the pericardi-

um, peritoneum, and liver, such secondary deposits were seen only in two cases of each. Secondary metastatic neoplasms, however, were frequent. In the lymph-glands they were found 192 times, in the respiratory organs 132, in the organs of digestion 139; of which number 127 belonged to the liver.—*Centralbl. für Chir.*, December 18, 1880.

Laryngeal Tubes in Operations Within the Buccal Cavity.—One of the dangers attending operations in the mouth and pharynx is the entrance of blood into the respiratory passages. In many such cases it has been deemed necessary or advisable to perform a preliminary tracheotomy. Verneuil (*Gaz. des hôpit.*, December 4, 11, 1880) recently had occasion to excise the superior maxilla for epithelioma. As a precautionary measure, to avoid a possible flow of blood into the trachea, Dr. Krishaber had been requested to pass a tube into the patient's larynx. This manipulation had been attempted several days previously, but, the patient not being under the influence of an anæsthetic, the presence of the instrument in his larynx caused such terror that the tube had to be quickly withdrawn. On the day of the operation, however, the patient was anæsthetized and the canula was then readily passed into the trachea, without causing any embarrassment of respiration. Anæsthesia was then kept up by giving chloroform through the tube, and the operation was thus rendered an easy one. Bouchut had long ago advocated this measure for other purposes, and had pointed out its easy performance and comparative innocuousness. In order to secure the perfect adaptation of the instrument to the walls of the trachea, an inflatable membrane is adjusted to the canula. This may be filled with water to any desired degree, thus effecting a perfect closure of the air-passages. (The action of this instrument appears to be similar to that of Trendelenburg's tampon-canula, and will, therefore, probably share with that apparatus its inconveniences, and above all, its lack of reliability. A more efficient canula for similar purposes has lately been devised by Dr. Gerster, of this city, and will be described in a future number of the Record.)

Symptoms Simulating Strangulation in Inflammation of Empty Hernial Sacs.—At a meeting of the Vienna Physicians' Society (*Mittheil. des Wiener Med. Doct. Colleg.*, vol. vi., No. 26, December 2, 1880), Dr. Englisch read a paper with the above title. Forty cases had been collected, and in thirty herniotomy had been performed. His own experience extended to six cases, of which number four had concerned women. In the latter cases femoral hernia was observed exclusively. If, in consequence of some irritation or traumatism, the peritoneum of the sac became inflamed, symptoms of strangulation would be developed, even if the sac had no intestinal or omental contents. The protrusion would first of all become exquisitely painful, rapidly increase in size, and become tense. In some few instances the augmentation in volume had been slow.

The quality and extent of the pain might aid differential diagnosis, without, however, being so characteristic as to exclude the possibility of error. In actual strangulation, the most intense pain would be felt at the constricting ring, and thence extend into the abdomen. If an empty sac became inflamed, the hernial protrusion would be most tender, and pain might be absent at the ring. This symptom was, therefore, not reliable in all instances, nor would such differences be found in cases of longer standing. The condition of the integument afforded a better clue to differential diagnosis. Provided rude taxis had not been resorted to, the skin over a strangulated hernia would be found unaltered and freely movable. In inflammatory action about an empty sac, the subcutaneous tissue would become infiltrated, the skin itself would grow red, and after one or two days would adhere to the subjacent tissues.

Vomiting was not a characteristic symptom. It might get progressively worse in inflammation of an empty sac. Constipation was equally unreliable, although there was no mechanical obstruction; cases had been observed in which enemata and purgatives had produced no action of the bowels, not even the escape of flatus. The condition of the hernial tumor was not a trustworthy guide to go by. In inflammation of the empty sac it might be impossible to effect a reduction in the size of the protrusion, just as in true strangulation. As regards the temperature of the body, it might materially aid differential diagnosis. In strangulated hernia a febrile movement might be postponed to the third or even fifth day, whereas in inflammation of an empty sac an early rise of temperature took place.

In most cases of the latter description the patients belonged to the female sex. This was owing to the fact that in women crural hernia was more frequent, this variety being, also, the one which oftener led to inflammation of the empty sac. No single symptom, therefore, could be safely relied upon, and even the conjoined presence of several might still lead to a wrong diagnosis. Surgeons were incidentally cautioned against pumping air into the bowels in giving injections, because the re-escape of such air might mislead one to assume the presence of flatus.

Sulphide of Calcium in Inflammatory and Suppurative Processes about the Ear and Throat.—At a meeting of the St. Louis Medico-Chirurgical Society, Dr. Todd, in discussing the above subject, stated that he had administered this medicine in the case of a child about eleven years old, who was suffering intense pain from suppuration of one of the ears. There was also a great deal of swelling about the ear and some of the neighboring glands. Under doses of one-twentieth of a grain, given every two hours, the pain was relieved in a most marked manner. Dr. Spencer, in referring to the use of this drug, stated that in his experience, after giving it a fair trial in some forty-five cases of furuncular inflammation, together with suppurative process in the middle ear, he could not see that it had in any instance either shortened a case or influenced it in any way. Dr. Glasgow reported that he had treated several suppurative cases successfully. One of them, a case of tonsillitis, where the pain was intense, was greatly benefited by the use of one-quarter of a grain every two hours. Others, however, who reported their experience to the society, had failed to obtain results similar to those of Dr. Glasgow.—*American Journal of Otology*, January, 1881.

Chlorate of Potassium, and the Increase of Nephritis.—In his work on diphtheria, Dr. A. Jacobi says that chlorate of potassium, or sodium, is used more probably than any other drug. It is used domestically, and is then not weighed out, but taken indiscriminately. Acute nephritis, probably, and chronic nephritis, certainly, is oftener met with now than it was formerly. Dr. A. Jacobi is inclined to think that the chlorates are partly to blame for this increase in nephritis. Such a view is rather a transcendental one.

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GEORGE F. SHRADY, A.M., M.D., Editor.

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THE GENERAL PRACTITIONER.

In these days, when the treatment of the diseases of almost every organ is being appropriated by specialists, the general practitioner finds his former field of usefulness becoming comparatively small and insignificant. In fact, he is often brought to the point of asking what is left for him. Many times he feels that he is the mere go-between for the patient who may wish trustworthy information concerning the specialist to be consulted. A probable reason for this is that comparatively few men, at least in our larger cities, care to be general practitioners, deeming that the latter class are particularly exposed to the luck of such as are hindmost in the race for fame and fortune. Certain it is that the family doctor is not in the majority, as he should be, in our larger cities. His type is still to be found, however, in the rural districts. It was an agreeable surprise to the members of the State Society, at their recent banquet, to hear the claims of the general practitioner advocated in the response by one of the rural members to the toast of "The country practitioner." Although the subject received the humorous treatment of a post-prandial effort, the real truth was very satisfactorily brought out. When the speaker claimed that the practitioner of the country was a man of varied responsibilities, a creature of many emergencies, and an individual who needed all his brains, he not only spoke the truth concerning a representative class of medical men, but was, perhaps, unconsciously sarcastic toward many physicians who do not live in the country and do not attend to family business.

At all events, he used his opportunities for retaliation upon such as supposed that the mere country practitioner was not a useful member in the church medical. None of the members needed to be told that the country practitioner was unable to call a consultation when he found a patient "in the last house on the road," in the dead of night, "with his throat grown shut," and that the doctor must make use of what brains he had, or the patient would die. And yet, underneath all the merriment which this and other droll allusions called forth, there was an eloquent plea for the general practitioner—"the medical man of brains"—who is found not only in every portion of our State, but who, as the type of the "family doctor," is scattered over all parts of our country. The circumstances which surround him are so different and so varied that he is forced to rely almost entirely upon his own efforts in treating every case that presents itself. With the full appreciation of what is required of him, he is not at liberty to decline attendance upon this or that case merely because he wishes to be simply a physician or wholly a surgeon. He is just as likely, without warning as to the nature of the case, to be summoned miles from his home in the darkness of the darkest night, over roads almost impassable, to operate upon a strangulated hernia, possibly with a razor or sharpened jack-knife, and by the uncertain light of a tallow dip, as he is the day following to attend upon a case of indigestion in the family of his wealthier neighbor. His obstetric cases are to be managed by himself, and if any complication exists to endanger the life of his patient, upon him alone, in most cases, devolves the responsibility of acting on the spot.

It is seldom that the general practitioner has a more effective advocate than was the respondent of the toast. The avowed disposition of "the plain doctor" to appropriate all that he believed was good from the expert, merely because the latter took so much pleasure in imparting information, was a delicate stroke of irony at the expense of some of the gentlemen who present papers at similar organizations, and who so often fail in giving a practical turn to their observations. Altogether it is comforting to know that the general practitioner is not yet extinct, that he has brains enough to appreciate his opportunities, and enough knowledge of his profession to discharge all his various and responsible duties to the sick with credit to himself and with benefit to his race.

THE RECENT MEETING OF THE STATE SOCIETY.

The recent meeting of the Medical Society of the State of New York was a very satisfactory one. Although the attendance was not as large as might have been expected, the proceedings—thanks to Dr. Bailey, the President—were varied and interesting, and much important business was transacted. The papers were not as numerous as on former occasions, but this was comparatively advantageous, inasmuch as it allowed more time for discussion. They were practical in character, and the variety of their subjects gave great interest to the proceedings. As will be seen by a reference to our report elsewhere, many matters relating to medical legislation were discussed

and acted upon. Not the least of these were the appointment of a committee to revise the code, and the recommendation for the abolition of the office of coroner. The choice of President for the ensuing year gave great satisfaction to the members. The honor is well deserved, and its bestowal upon Dr. Jacobi reflects credit on the society. The election of Dr. Govan as Vice-President was also a happy one, and was a reward for long and faithful services.

THE PHENOMENA OF TRANCE.

Several weeks ago we referred to a revival of interest in the various phenomena which have gone under the names of mesmerism, hypnotism, nervous sleep, trance, etc. The subject continues to excite increased interest in England and this country, as well as in Germany and France. It is receiving more attention also from scientific men than ever before. In this city, Dr. Geo. M. Beard has spent a great deal of time and labor in studying the various phases of the trance state, and, largely through him, many members of the profession here have seen and been convinced of the genuineness of phenomena heretofore uncredited. Although the subject of mesmerism, to adopt the more familiar term, is an old one, even in its scientific aspects, it has lately received enough additional light and excited enough scientific interest to justify a fuller account of it than we have yet given.

Of the various names applied to the phenomena in question, that of trance, adopted by Dr. Beard, is perhaps as good as any. The condition of trance is one that affects lower animals as well as man. Crabs, fishes, frogs, birds, and the various quadrupeds can all be brought under it. "Rarey's method" of horse-taming was to put the animal in a trance. This trance condition in these lower animals, however, is less stable and produces much less interesting phenomena than it does in man.

Among human beings the persons most easily affected are those, speaking broadly, of nervous or emotional temperament. In individuals who have vigorous or well-disciplined minds, trance is, as a rule, induced with difficulty or not at all. The highest manifestations of the state probably occur oftenest in women. There is hardly any age when the phenomena may not be developed, but they are more frequently observed in the first half of life, and may decline in force as the person grows older or loses health. A curious fact, noted by certain travelling mesmerists, is that there are more persons who are susceptible to trance in dry and elevated localities than there are in places near the sea-shore. The "subjects" are very numerous in Minnesota, for example, but scarcely to be found at all on Cape Cod.

There has been nothing in the recent studies of trance which throws a ray more of light upon the physiology of its production. It is shown, however, that all the old theories regarding it cannot be maintained. The fact is now well established that "passes" and bright objects are not absolutely necessary to induce trance, but that the patient can go into it of his own accord. The theory advocated by Dr. Tuke, that it depends on changes in the vascular supply of the brain, is without any support whatever in facts. There are two well-marked phenomena in the trance state which every theory must take into account. These are: a suspension of the volitional power of the subject, leaving it at the mercy of every outside suggestion; and an exaltation of certain functions or senses, with an inhibition more or less complete of the rest. In certain forms of trance, such as somnambulism, the exaltation is very slight, if present at all, while the inhibition affects nearly all the higher cerebral centres, leaving the subject for the most part an automaton under the control of the basal ganglia and cord. On the other hand, in some of the intellectual phenomena of trance, all the mental power or nervous force of the individual is concentrated in some particular direction. The subject is for the time a visionist, a poet, an orator, or a mathematician. He illustrates the supremacy of intellectual or sensory concentration. All of the other powers of mind or of special or general sense are suspended. This theory of "exaltation" propounded some time ago by Dr. Beard, is the most rational and widely applicable of any with which we are acquainted. It does not, however, carry us to the bottom of the matter, or explain all the peculiarities of this abnormal state.

The simplest of the phenomena of trance are those which affect motion and sensation; increased muscular power, paralysis, catalepsy, or absolute rigidity of single muscles, or of half or all of the body, may be induced. Areas of anæsthesia may appear, and these may be as small as a pin's point or involving accurately half the body. A patient who stands without flinching the pricking of pins, pinching, or the red-hot iron, in a moment may be brought out of his trance, and then begins to feel the now painful part.

It is in the exaltation, during trance, of the special senses, or of special intellectual functions, that the most remarkable phenomena appear. The entranced subject speaks with all the power of an intense and earnest concentration, upon any subject suggested, provided that subject be one with which the speaker has, at least, some slight knowledge, for the trance brings out nothing which was not in the individual at first. Two very interesting facts are developed in connection with this speaking. One is an exaltation of the capacity to measure time. If a half-dozen persons are mesmerized and told to speak each on different subjects for different periods of time, they will almost always stop speaking within thirty seconds or less of

the time specified. Again, there are peculiar reflexes by which speech is interrupted or set going. Thus, if, when a trance-speaker is in the full tide of an impassioned harangue, pressure be made over the seventh cervical vertebra, aphonia will be produced, there being movements of articulation with the tongue and lips, but no sound from the larynx. A touch upon the cheek, over the point of emergence of the seventh nerve, relieves the aphonia, and the subject speaks again. The same interruptions can be produced by passes up and down in front of the face, and by reflex excitations of other parts of the body. The two points mentioned, however, are considered to be those which are by far the most commonly and easily affected. The increased intellectual power that may be attained in a trance-condition is very great. The emotional and imaginative faculties are those that, so far as we know, seem capable of the highest exaltation. A trance-poet in this city can turn out very fair poetry on almost any subject, at the rate of one hundred words a minute. The rhyme and rhythm are uniformly good, and the ideas are connected and often well expressed.

The state of trance has been called by Tuke "artificial insanity." Though this term is an exceedingly bad one, yet it is certain that an artificial insanity can be produced. A young woman who had, several years before, been rendered for a time insane, chiefly by the anxieties of school-teaching, was mesmerized. The associations of a school-room were then suggested; the subject at once felt all the old emotions come back, and in a few minutes was raving and maniacal. She was brought out of that condition with some difficulty.

In the exaltations of the special senses trance displays some very curious features. We have referred to this point to some extent in a previous article, but much more can be said about it.

If the ears are stopped with wax, and a number of watches, some of which are going and some not, are placed low down on the back of the neck, the trance-subject will tell which watch is ticking. Ordinarily a watch cannot be heard in that spot. German observers claim the same power of hearing over certain regions of the abdomen. Complete deafness to every noise except the voice of the mesmerizer seems to be produced without difficulty. Such a condition is, of course, only the deafness of intense abstraction.

By suitable manipulations the sense of vision may be remarkably affected. Strabismus, amblyopia, and color-blindness can be produced in one or both eyes. Examinations of the retina made on one occasion by Dr. Mittendorf failed to show any notable change in the vessels of that membrane. It is possible for the range of vision to be increased or shortened. Thus, a somewhat myopic person can in a trance read test-types at a greater distance than when he is in his normal state. A number of other modifications of this visual sense can be brought about. The power of seeing through translucent bodies, such as the eyelids and handkerchiefs, is one which few will believe in unless they have seen it. We present, in another column, an account of an experiment in this direction, which our readers can receive with such confidence as they choose.

We have not space to refer to the modifications in taste and smell which may be developed. They all illustrate the same law that a trance-subject will smell and taste, just as he will hear and see and think, anything whatever that is suggested to him.

We have described these phenomena at considerable length, without entering at all into the question of their genuineness. This, so far as we can learn, is not doubted by any who have practically investigated the subject.

THE ANNUAL REPORT OF THE MEDICAL DEPARTMENT OF THE ARMY.

The annual reports of the Medical Department of the Army always show much work accomplished that is of importance to the profession. That which is of most interest, of course, is the medical and surgical history of the war, and the collections in the Army Medical Museum. Regarding the former, we are told that much progress has been made with the concluding part of the surgical history. The fifth volume of the whole work is now going through the press. It is gratifying to learn, also, that a bill has been introduced into Congress, which authorizes the printing of an edition of 50,000 of the four volumes already published. This is to satisfy a constant demand for the work which is made upon the department by the profession in all parts of the country. As additional contributions to this work, it is stated that, through correspondence with medical officers in the civil war, from reports of pension examiners, and from medical journals and other publications, additional data have been obtained in 5,889 cases of injuries. One hundred and seventy-eight drawings and cuts have been prepared for the third surgical volume, and it is evident that no labor is spared to make the records of this history complete.

A catalogue of the specimens in the Army Medical Museum has been made during the past year. This shows that the total number of specimens now on hand is 22,096, and that 538 have been added during the past year. The microscopical section and that on comparative anatomy have received the most additions. In connection with the work in this museum, we learn that seventy-six negatives and 1,115 photographic prints of surgical subjects have been made. Besides this, accurate measurements of one hundred and forty-three human crania, and of twenty-two human skeletons have been made. The medical museum has long been one of the regular resorts of sight-seers in Washington, and that its attractions

continue to be appreciated is shown by the fact that 34,111 visitors registered their names during the year.

The medical library has, of course, been largely increased. It numbers now 51,500 volumes and 57,000 pamphlets. There were 2,500 volumes and 3,500 pamphlets added during the year. The edition of fifteen hundred copies of the first volume of the Index Catalogue was printed and sent out last summer. The first part of Volume II. has now gone to press, and an estimate has been forwarded for printing Volumes III. and IV. We have before expressed the hope, which every medical man must share, that Congress will grant the money for a speedy completion of this great work. The Surgeon-General states that both the museum and library are in a building which is not fire-proof, and which is surrounded by old and inflammable wooden structures. The experience of the past with the Smithsonian Institution and the Patent Office should lead the Government to supply what is earnestly recommended in the report before us—a fire-proof building for the many valuable and irreplaceable collections in the care of the medical department.

Regarding the condition of the medical staff, we learn that there are now on it, on active duty, one hundred and sixty officers, with eighteen more on ordinary or sick leave. There were one hundred and forty-four candidates for the position of assistant surgeon examined last year, of which number twenty-one were found qualified. The number of vacancies in the grade of assistant surgeon is now nine.

A Clinical Demonstration of the Accuracy of Cerebral Thermometry.—Professor Arata, of the University of Geneva, removed a tumor from the neck of a man aged fifty years, and was obliged to tie the right common carotid during the operation. Five hours later Professor Maragliano applied thermometers to the head and found the following temperatures: Frontal region, *right*, 35.9° C.; *left*, 37.6° C. Temporal region, *right*, 34.3° C.; *left*, 37.4° C. Occipital region, *right*, 36° C.; *left*, 36.2° C. Mean of mid-half, *right*, 35.4° C.; mean of mid-half, *left*, 37.1° C. Now, as the cerebral cortex in the frontal and parietal regions is irrigated by the anterior and middle cerebral arteries, both branches of the internal carotid, it is evident that ligature of the common carotid must have diminished their blood-supply, with a probable result of lowering temperature. On the other hand, the occipital lobes are nourished by the posterior cerebrals, branches of the vertebral, and their blood-supply and temperature we might infer would not be affected. The thermometrical readings and the changes in the blood-supply thus corresponded.

Mr. Frank Buckland died in London recently. He was a graduate of Oxford and of St. George's Hospital, being a fellow-student of Mr. Holmes. Mr. Buckland did not follow medicine long, but yielded to his fondness for natural history and zoology, in which branches his name is very familiar. He founded and edited *Land and Water*.

Reports of Societies.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.

Seventy-Fifth Annual Meeting, held in Albany, February 1, 2, and 3, 1881.

Tuesday, February 1st—First Day—Morning Session.

The society met, pursuant to adjournment, in the city of Albany, at 10 o'clock A.M., and was called to order by the President, Dr. William H. Bailey, of Albany.

Prayer was offered by the Rev. Walton W. Battershall.

The President then delivered his

INAUGURAL ADDRESS.

After suitably expressing his indebtedness to the society for the distinguished honor conferred upon him by his selection for the high office of President, he went on to contrast the comparative ignorance and lack of harmony of seventy-five years ago with the present flourishing condition of the profession in our State. "The history of our society, if carefully written, would show a most creditable record, and it must ever be a matter of regret that the proceedings of the earlier meetings were not more fully recorded for preservation."

The increasing influence of the society was then alluded to, as well as kindred matters, showing its present creditable status and the encouraging promises for the future.

"Our annual volume is our biography—historical and professional, bequeathed to us from the fathers in the profession. Let us cherish it; let us, while we may, improve and enlarge its scope, and discourage any thought or suggestion of discontinuing it or impairing its usefulness."

The code of ethics was made to meet the necessities of early days, and undoubtedly served an admirable purpose then, besides having been comparatively useful since. But, in the progress of years and the marked advancement in medical science, the wants of the profession had greatly changed. He recommended, therefore, that the present code be materially revised—possibly a new one made more in harmony with the changed conditions of the profession toward each other and the public.

The registry law enacted in 1880 had its defects, yet it was beneficial in many ways. The law of 1872, relating to the examination of candidates for the degree of Doctor of Medicine, in Section 3 declared that such examination should be "according to each of the systems of practice represented by the several medical societies of this State." It had been decided by authority that such examination was to include *all* the systems recognized by law. This was a glaring defect, and he recommended that application be made to the Legislature to so amend this law that each school would be made responsible for its own faith and practice.

The education of the community as to the necessity of sanitary reform was next set forth, in which connection the good accomplished by the State Board of Health was pictured. He was indebted to the learned and experienced Secretary of the Board, Dr. Elisha Harris, for much information of its labors

and purposes. The system of collecting vital statistics was here alluded to, as also the registration and careful record of the causes of death.

The necessity of some such power as was delegated to the State Board was shown in the wide range of subjects embraced in the inquiries directed to its officers: the preventable sources of miasmatic diseases, pollution of wells and watercourses caused numerous complaints; diphtheria and scarlatina, many requests for advice; small-pox the greatest alarm. Invitations to make special investigations were frequent; also the demand for analyses. Local authorities asked counsel in sanitary matters. All this showed that the necessity for such supervision and control as was intrusted to this board was fully appreciated.

It was his sad duty to announce the death, last year, of the following members: Drs. H. K. Bellows, of Norwich, Chenango Co.; Edward R. Hun, of Albany; John V. Lansing, of Albany; Levi Moore, of Albany; Charles A. Robertson, of Albany; Lake G. Tafft, of Syracuse; John F. Whitbeck, of Rochester; William H. Price, of Phœnix.

Suitable obituaries would be prepared and presented to the society, according to the usual custom.

On motion by Dr. A. Van Derveer, of Albany, the President's address was referred to a special committee.

ANNOUNCEMENTS OF COMMITTEES.

The following committees were then announced by the President:

Committee on Credentials.—Drs. B. F. Sherman, of Ogdensburg, Geo. W. Cook, of Otego, and Charles E. Willard, of Catskill.

Business Committee.—Drs. A. Van Derveer, of Albany, Wm. W. Potter, of Batavia, Charles L. Stiles, of Owego.

COMMUNICATIONS FROM COUNTY MEDICAL SOCIETIES.

Dr. Johnson, of New York, presented a communication from the Medical Society of the County of New York relative to the revision of the Code of Ethics.

On motion by Dr. Piffard, this communication was laid upon the table. A second communication was also tabled. Another communication was referred to the Committee on Legislation.

THE REPORT OF THE COMMITTEE ON BY-LAWS

was then received and its recommendations adopted.

MEMBERS BY INVITATION.

The following gentlemen were proposed by Dr. S. B. Ward, and duly elected: Drs. O. D. Pomeroy, of New York; De La Mater, of Schenectady County; E. A. Bartlett, of Albany; John M. Bigelow, of Albany; S. R. Morrow, of Albany. Dr. Clarkson T. Collins, Delegate from the Massachusetts State Medical Society, was introduced to the society, and invited to a seat. Later the following were elected: Drs. C. S. Merrill, of Albany; C. J. Hull, of Norway; C. W. Hamlin, of Middleville; P. B. Collier, of Albany; John B. Stonehouse, of Albany; Lorenzo Hale and S. O. Vander Poel, Jr., both of Albany; also, Drs. R. H. Sabin, Edward E. Brown, and Amos Fowler, of Albany County; C. L. Squire, of Elmira; H. J. Fellowes, of Albany; F. M. Curtis, of Albany; I. S. Munson, of New York; J. W. Gould, of Albany; John Thompson, of Albany; D. H. Cook, of Albany; Wm. Geoghan, of Albany; M. R. C. Peck, Theo. P. Bailey, and Franklin Townsend, of Albany; Edmund C. Wendt, of New York City; William Hailes, Jr., of Albany; A. B. Husted, W. H. Murray, H. S. Case, all of Albany; L. A. Tourtellot, of Oneida County; W. P. Seymour, of Rensselaer.

On motion by Dr. Squibb, it was resolved that two members be appointed to act as a

DELEGATION TO THE INTERNATIONAL CONGRESS OF MEDICINE,

to meet in London in August next; two alternates to be likewise named by the nominating committee.

SYMPATHETIC NEURO-RETINITIS.

Dr. David Webster, of New York, read a paper upon the above subject. It will appear in a future number of the Record.

Dr. Pooley, of New York, remarked that, in addition to the two cases referred to by Dr. Webster, he had quite recently seen still another instance of this disease. The case was that of a boy, who was at present under the care of Dr. H. Knapp, at the Ophthalmic and Aural Institute. The patient had received a wound of the sclero-corneal margin, associated with prolapse of the iris. Although the protruding iris was abscissed, some plastic irido-cyclitis ensued.

In the other eye, as well as in the injured one, a very marked neuro-retinitis had developed. The case was still under treatment, and the injured eye had not been enucleated. In the secondarily affected eye there was no inflammation of the uveal tract. Dr. Pooley thought it important to make a strong distinction between a neuro-retinitis, which was only one of the symptoms present in sympathetic irido-cyclitis, and neuro-retinitis pure and simple. In the first instance the affection of the optic disk and retina was difficult to determine because of the haziness of the vitreous, and, when it really did exist, might be an extension of the inflammatory process by continuity along the uveal tract. While in the second, especially where neuro-retinitis was seen in the injured eye, it was not impossible that the propagation was by way of the optic tract.

Would it not be best to call only the latter class sympathetic neuro-retinitis?

Dr. N. L. Snow, of Albany, then read a paper entitled

LITHOTRIPSY WITH ENTIRE REMOVAL OF FRAGMENTS AT SAME SITTING, BY BIGELOW'S ASPIRATOR.

After a review of the history of the operation, the doctor reported the following case:

Robert A——, an American by birth; aged fifty-three years; family history good; first noticed trouble in micturition in spring of 1879. In November of same year chronic cystitis was diagnosed and treatment therefor instituted during the following winter. In October, 1880, was examined with Thompson's short curved sound, and a small stone detected, which rapidly increased in size until December, when the operation was performed. The time occupied in the operation was thirty minutes; weight of fragments, eighty grains. On January 6th, ten days after the operation, the patient was able to attend to business.

Dr. O. D. Pomeroy, of New York, an invited guest, demonstrated the mode of application of his modified aural and throat mirror; also of an improved ear-syringe, representing a modification of Toynbee's instrument.

On motion by Dr. Webster, the communication was referred to the Committee on Publication.

Dr. A. McLane Hamilton, of New York, read a paper

UPON THE SIGNIFICANCE OF FACIAL HAIRY GROWTHS AMONG INSANE WOMEN.

It will appear in a subsequent number of the Record.

Dr. Charles S. Bull, of New York, then read a paper entitled

CONTRIBUTION TO THE PATHOLOGY OF ORBITAL TUMORS, BEING A STUDY OF THE SECONDARY PROCESSES IN THE PERIOSTEUM AND BONES OF THE ORBIT AND VICINITY.

The following is a *résumé* of his conclusions:

Such cases were not fit subjects for operative procedures. When the periosteum of the orbit or the orbital tissue were involved, it did not seem possible to remove all the growth, owing to the nature of the parts. Any mass of cellular infiltration, no matter how small, became at once a starting-point for more rapid growth than before. With each operation there followed an increased rapidity of growth, the tumor showing a tendency to change from pure sarcoma to myxo-sarcoma. When once the bones of the orbit were involved, he did not think that any further operative interference should be attempted. The rapidity of growth among the small bones of the face and base of the skull, and their disintegration by infiltration with the large sarcoma-cells, was very marked, especially in the case of the ethmoid and sphenoid bones. The small amount of good obtained by an operation was but temporary, and was far out-weighed by the dangers of the operation, the severity of reaction, and the rapid recurrence of the growth.

Dr. Pooley, of New York, said that, in confirmation of a statement made by Dr. Bull, *i.e.*, that a sarcoma, when encapsulated was less likely to recur than when free, he would like to report a case in point. A patient under his care in Charity Hospital had an orbital tumor which displaced the eye outward and downward. The eye itself was unaffected. It was proposed to remove the growth without sacrificing the eye, but the patient would not submit to an operation. It was not until about two years later that the tumor had so far progressed as to destroy the eye. The eyeball and tumor were then both removed, when the tumor, which was very easily enucleated, was found to be encapsulated.

Dr. L. D. Bulkley, of New York, read a paper entitled

FAVUS AND ITS TREATMENT BY A NEW METHOD OF DEPILATION.

After detailing his experience with several methods which had proved unsatisfactory, he advised the preparation of sticks of various sizes, from one-fourth to three-fourths of an inch in diameter, and cut off in lengths of two or three inches.

The formula was as follows: ℞. Ceræ flavæ, three drachms; laccæ in tabulis, four drachms; resinæ, six drachms; picis Burgundicæ, ten drachms; gummi Dammar, one and a half ounces. By the use of such differently sized sticks, they could be applied to affected surfaces of various sizes.

"They melt at a comparatively low temperature, and yet are hard at that of the body. The hair should be cropped short over the part to be treated, and, as the stick is applied, a slight rotary or twisting motion is given to it. After it has been applied for several minutes, it is removed by bending it over and drawing the hairs in succession. The hairs thus left in the stick are burned off. It is sometimes necessary to repeat the operation. This operation does not work so well in ringworm of the scalp, because the result of the action of the parasite on the hairs is to render them so brittle that they very easily break off."

Dr. E. R. Squibb called attention to the alleged anæsthetic effects of carbolic acid, which he and others had been able to verify.

Dr. H. G. Piffard said the first attempt at successful treatment of favus had been inaugurated by a couple of quacks in Paris. Dr. Keyes had brought a stick of cosmetic from Paris, which was found to possess powers of depilation. Similar sticks he now used, and preferred to the method of depilation by the forceps, in cases of sycosis.

Dr. Jewett, of Canandaigua, remarked that simple shaving of the scalp had, in his experience, cured most cases of ringworm.

Dr. Piffard stated that shaving had been given a large and extended trial, and had been pronounced in most cases a failure.

Dr. Bulkley, in closing the discussion, said that shaving was a well-known means of treatment, which was of service in recent cases, in connection with proper local measures. But shaving was by no means always curative, for, in the public institution to which he had referred, he had had this used in many of the forty cases of ringworm there under his care. These were shaved two or three times weekly, and even with varied local applications, the disease, in many instances, had lasted several months. It was of far greater value in recent cases than in those of long standing. But it was also of the greatest importance to differentiate between favus, or tinea favosa, caused by the parasite *achorion Schoenleinii*, and ordinary ringworm, tinea or herpes tonsurans, caused by the *trichophyton tonsurans*. The former extended deeply into the hairs, and caused destruction of the hair-follicles, resulting in cicatrices on which no hair could grow; whereas ringworm did not thus produce scars and permanent baldness. In ringworm more superficial treatment was sufficient, but in favus depilation was necessary, because of the deep penetration of the parasite, both in order to remove the affected hairs and to allow any remedy to reach down into the follicles.

PAPERS READ BY TITLE.

The following papers were then read by title, and referred to the Committee on Publication: "Obituary Notice of Dr. Daniel Golden Thomas," by Dr. Samuel G. Wolcott, of Utica; "Acute Primary Synovitis of the Hip," by Dr. V. P. Gibney, of New York; "Case of Fracture of Rib of Right Side—Perforation of Lung, with Emphysema of Chest and Colles' Fracture of Right Forearm—Perfect Recovery," by Dr. J. B. Graves, of Corning; "Obituary Note of Dr. J. V. Lansing, of Albany," by A. Van Derveer, M.D., of Albany.

The President announced that, in accordance with the plan adopted at the last annual meeting, the Committee of Arrangements had arranged for the annual dinner to be held at the Delevan House, on Wednesday evening, at the expense of the participants. The price of the tickets had been fixed at one dollar.

The society then adjourned to meet at 3 P.M.

FIRST DAY—AFTERNOON SESSION.

The society was called to order at 3 P.M., by the President, who later announced the following

COMMITTEE ON NOMINATIONS.

Dr. John P. Gray, member at large.

For First Senatorial District.—Dr. H. G. Piffard, of New York Co.

For Second Senatorial District.—Dr. William Govan, of Rockland Co.

For Third Senatorial District.—Dr. LeRoy McLean, of Rensselaer Co.

For Fourth Senatorial District.—Dr. L. C. Dodge, of Clinton Co.

For Fifth Senatorial District.—Dr. Charles G. Bacon, of Oswego Co.

For Sixth Senatorial District.—Dr. H. R. Rainsworth, of Steuben Co.

For Seventh Senatorial District.—Dr. Theo. Dimon, of Cayuga Co.

For Eighth Senatorial District.—Dr. W. W. Potter, of Genesee Co.

TREASURER'S REPORT.

D. CHAS. H. PORTER, of Albany, Treasurer, presented his annual report, which showed the receipts to have been $2,956.69; the disbursements $2,349.88; leaving an apparent balance of $606.81, of which $605 was dues paid in advance by societies and permanent members; thus, the actual balance was $1.81.

It was accepted and referred to an

AUDITING COMMITTEE,

consisting of Drs. F. B. Parmele, of Rensselaer Co., E. M. Lyon, of Clinton Co., and J. D. Spencer, of Jefferson Co.

DR. CHARLES H. PORTER also read the Librarian's report, and the report of the Merritt H. Cash Prize Essay Fund, which were accepted by the society.

DR. J. O. ROE, of Rochester, read a paper on "Nasal Stenosis," which was illustrated by the demonstration of charts and the exhibition of various instruments. It will appear in a future number of the RECORD.

DR. O. D. POMEROY, of New York, recalled a recent experience of his with regard to closed nostrils, occurring in a gentleman forty-five years of age. He had used a dental engine provided with drills. He also had recourse to a cross-cutting drill. In three sittings he had made a sufficiently large aperture, and the patient was now in a satisfactory condition.

PAPERS READ BY TITLE.

The following papers were read by title, and referred to the Committee on Publication.

"Hystero-Neurosis of the Stomach in Pregnancy," by Dr. John S. Warren, of New York.

"The Forceps," by Dr. J. H. Squire, of Elmira.

"Obituary Notice of Horatio Knight Bellows, M.D., of Norwich," by Dr. Geo. W. Avery, of Norwich.

MEDICAL INDUCTION COILS.

DR. L. E FELTON, of Potsdam, read a paper on medical induction coils, and showed a newly devised cell, for which he claimed advantages over other cells.

DR. ARTHUR MATTHEWSON, of Brooklyn, then made some

BRIEF REMARKS ON TRANSPLANTING LARGE PIECES OF SKIN WITHOUT PEDICLE,

illustrating his subject by the exhibition of photographs taken from a patient. It was a case of transplantation for complete eversion of the left upper lid as the result of contraction from burns. The lid was freed by dissection and transplantation performed of a piece of skin three inches by one and one-half inch without pedicle. The result was union throughout by first intention. The advantages of the operation were said to be the ease of execution, with greater surety of success than by old methods, with pedicle or sliding flaps.

The President announced the

COMMITTEE ON THE PRESIDENT'S ADDRESS,

to consist of the following gentlemen: Drs. Alexander Hutchins, of Brooklyn; H. Jewett, of Canandaigua; and S. G. Walcott, of Utica.

DRESSING OF THE UMBILICAL CORD.

DR. DANIEL LEWIS, of New York, read a paper on the above subject. After briefly considering the accidents and diseases to which the infantile cord was liable, he gave his own method of procedure in taking charge of a case. He referred to the probable fact that trismus neonatorum might be caused by irritation at the umbilicus. Imperfect union of the abdominal walls was a frequent occurrence, as seen from the reports of the New York Hospital for the Ruptured and Crippled. Early abdominal support would lessen the frequency of this accident. From personal experience he would advise that the cord be cut *before* the ligature is applied, and thoroughly emptied of blood and serous contents, thereby reducing the amount of material to be sloughed off to a minimum. It was then tied and twisted sharply three or four times, which torsion so closed the umbilical vessels that hemorrhage was almost impossible, in case the ligature should prove imperfect. A band of rubber adhesive plaster, two by eight inches, was then tightly applied over it and allowed to remain until the parts were thoroughly cicatrized. This device was believed to be sufficient to prevent any protrusion of the navel in predisposition to umbilical hernia.

The following gentlemen were announced as

MEMBERS BY INVITATION:

Drs. J. W. Arnold, of Wayne County; A. P. Ten Eyck, of Rensselaer County; D. M. Lee, of Chenango County; G. L. Ullman, A. T. Van Vrancken, H. R. Stuckweather, and Otto Ritzman, of Albany County.

PERICHONDRITIS AURICULÆ.

DR. THOMAS R. POOLEY, of New York, read a paper on perichondritis auriculæ, and exhibited photographs illustrative of his remarks. This paper will appear in a future number of THE RECORD.

THE SURGICAL TREATMENT OF EPITHELIOMA OF THE CERVIX UTERI.

DR. W. W. POTTER, of Batavia, read a paper on the above subject, in which the various operative measures likely to afford relief or establish a cure in this malignant disease of the cervix were successively discussed. The écraseur was thought to be objectionable. The galvano-cautery and its claims were alluded to, and the objections to its universal application stated. Paquelin's thermo-cautery came next. The advantages of this instrument over others were explained. The last kind of operative procedure considered was the use of the curette, knife, and scissors, supplemented by the potential cautery. One of the four cases recently operated upon by Dr. Potter was narrated in detail.

DR. E. R. SQUIBB, of Brooklyn, remarked, with re-

gard to Dr. Clay's recommendation of Chian turpentine, that this vaunted cancer-specific must now be classed with the utterly useless drugs. Thus, the Middlesex and other hospitals had but recently forbidden its use. The apparently good effect was due to the giving of hope to the hopeless, *i.e.*, the moral effects of enthusiasts upon susceptible, because diseased persons. Probably no real Chian turpentine had ever reached this country; hence, the spurious article was as good as the genuine, for good results had been claimed by American observers also. This was readily explained by what had just been stated concerning the giving of hope to the hopeless.

Dr. Graves assented to the foregoing, allnding to his own experience, which tended to confirm the conviction that Chian turpentine was utterly useless in the treatment of cancer.

A communication from the Medico-Legal Society of New York, was read relative to reform in the Coroner's office. Clark Bell, Esq., would be willing to bring the matter before the society at to-morrow's session.

On motion by Dr. H. G. Piffard, of New York, the communication was received, and the society expressed its willingness to hear the report of Mr. Bell.

The following paper was read by title: "Obituary Notice of Dr. Levi Moore, of Albany," by Dr. J. M. Bigelow, of Albany.

REPORT OF THE COMMITTEE ON LEGISLATION.

Dr. Piffard, of New York, chairman of the committee, submitted their report. It referred to a resolution recommended to the consideration of the State Society, by the Broome County Society, urging the regulation of the dispensing of medical charities, and suggesting that a committee of the State Society ask the Legislature to require all institutions receiving State or municipal aid to restrict the admission of patients, or the dispensing of medicines or treatment, to those only whose pecuniary circumstances evidently demanded assistance. The committee, while it believed that the proposed legislation would prove of great service in controlling the evils connected with the present system in the rural and sparsely settled portions of the State, did not believe that it would be of equal benefit in the larger cities, and were not, therefore, disposed to favor the passage of the general act, as proposed.

The committee also reported that a compilation of the medical laws had been made, and that said laws were printed in the Transactions of 1880.

In answer to an inquiry in relation to the cutting down of bills by town boards, the committee reported that the physician who, on the demand of a properly authorized town officer, renders medical services to the poor, has a claim against the town for services rendered, to be substantiated in the usual way.

The committee also recommended a resolution defining the liability of permanent members to the payment of dues; reported that it had, in accordance with instructions from the society, procured the passage of a medical registration act, and made a report in relation to a proposed drainage act, stating that all necessary powers to that end were now held by the State Board of Health.

On motion by Dr. Wm. C. Wey, of Elmira, it was adopted as the sense of the society.

The society then adjourned to meet at 8 P.M.

First Day—Evening Session.

The society was called to order at 8 P.M., by Dr. Abraham Jacobi, of New York, Vice-President, who introduced Dr. William Hailes, Jr., of Albany. The latter then proceeded to deliver a lecture entitled

A PLEA FOR MORE PRACTICAL WORK IN THE LABORATORIES OF OUR MEDICAL COLLEGES.

After some introductory remarks, Dr. Hailes described various subjects relating to microscopical technology, especially the use of a freezing microtome devised by himself, which possessed certain advantages over other similar apparatus. He secured the interest of his listeners by illustrating his remarks through many excellent images thrown on a screen by means of a stereopticon.

Interspersed between the substance-matter of his lecture were practical hints and suggestions, the value of which was perhaps only apparent to those engaged in similar pursuits with himself. The lecture closed by a brief summary of the history of incubation of the chick up to about the fourth day. All the photographs which served for images upon the screen had been made by himself. They showed very beautifully the embryo chick from the first appearance of the primitive trace, through the various stages of its progressive development, culminating in the clearly-marked differentiation of separate organs. Some of these images, illustrating the origin of the blood-vessels in the area vasculosa, and the rapid establishment of embryonal circulation by the formation of the omphalo-mesenteric vessels, and the sinus terminalis, were especially happy results of diligent research combined and blended with mechanical skill. This exhibit was in all respects a satisfactory one, and the interest manifested by the members was apparent from the crowd of questioners surrounding the doctor after the completion of his lecture.

Wednesday—February 2d.—Second Day—Morning Session.

The society was called to order at 9½ A.M., by the President.

Prayer was offered by the Rev. T. H. Patterson.

The minutes of the preceding day were read and approved.

On motion by Dr. A. Jacobi, a vote of thanks was tendered Dr. Hailes for his interesting and instructive exhibit of the previous night.

The Auditing Committee reported that they had examined the accounts of the Treasurer, and had found them correct in every particular. Accepted.

MEMBERS BY INVITATION.

Dr. S. B. Ward, Chairman of the Committee of Arrangements, proposed the following as members by invitation, and they were duly elected: Drs. M. J. Lewi, T. M. Trego, B. U. Sternberg, and G. H. Newcomb, of Albany; A. Mercer and Frank G. Mosher, of Syracuse; L. A. Van Wagnen, of Madison Co.; Edwin Evans, of Oneida Co.; H. A. Gates, of Delaware Co.; E. C. Seguin, of New York; Henry Ford, of Cazenovia; E. B. Tefft and L. B. Winne, of Albany Co.; J. L. Cooper, of the New Jersey State Society; J. S. Cooley, and F. L. R. Chapin, of Warren Co.; Willis G. Tucker, of Albany; C. C. Chaffee, of Springfield, Mass.; Harris J. Fellows, of Albany; T. L. St. John, of Rensselaer; D. C. Case, of Albany; D. N. Walker, of Herkimer; O. D. Ball, of Albany; W. L. Pierson, of Schenectady; Jas. P. Boyd, Jr., and Jos. Lawe, of Albany.

Dr. Starr, of Rochester, presented a series of resolutions from the Monroe County Medical Society, in relation to changes in the form of printing the pro-

ceedings of the society, which gave rise to a lively and protracted discussion.

On motion of Dr. Wey, as amended by Dr. Hutchison, and further amended by Dr. Piffard, it was resolved, in view of the importance of this matter, to appoint a special committee of three to report on this subject at the next annual session.

Dr. Squibb suggested that, in order to have a fairly representative committee, such committee should be named by the society through its nominating committee. Agreed to.

REPORT OF THE COMMITTEE ON THE PRESIDENT'S INAUGURAL ADDRESS.

Dr. A. Hutchins, of Brooklyn, Chairman of the Committee, reported the following recommendations for adoption:

1. In regard to co-operation with the State Board of Health, a resolution was offered reading:

Resolved, That the county medical societies of the State be requested to instruct their committees on hygiene or public health to put themselves into such relations with the State Board of Health as shall facilitate said board in acquiring such local and general information as it may require.

2. Referring to the interpretation of § 3, Sect. 1, Chap. 746, Laws of 1872, the committee recommend the passage of the following:

Resolved, That the Committee on Legislation be instructed to procure such change in the paragraphs of § 3, Sect 1, Chap. 746, Laws of 1872, as will obviate the legal construction referred to in the address.

3. Relating to such change in the code of ethics of the State Society as shall bring it into harmony with the present conditions of the profession, the following was proposed:

Resolved, That a special committee of five be appointed by the President, to be designated a

SPECIAL COMMITTEE ON THE CODE OF ETHICS,

whose duty it shall be to consider the whole question of desirable changes in the code, and who shall present to the society, at the session of 1882, such suggestions on this subject as their deliberations and investigations may decide.

The various resolutions thus presented were received and accepted.

On motion by Dr. Wey, it was decided that the committee to be appointed in accordance with the last resolution, have the power to fill occurring vacancies.

MISCELLANEOUS BUSINESS.

Dr. A. Jacobi, of New York, presented his report as Censor to the Medical College of Syracuse University. Referred to the Committee on Publication.

Dr Wm. Manlius Smith then read the report of the Delegation to the Pharmaceutical Convention. Received and accepted.

REPORT OF THE COMMITTEE ON ETHICS.

Dr. C. R. Agnew, of New York, read the report of the Committee on Ethics in regard to the charges and counter-charges preferred by Dr. A. L. Carroll and the Richmond County Medical Society on the one side, and Dr. H G. Piffard and the New York County Medical Society on the other, arising out of the admission by the latter society of Drs. Goldman and Black as members. The committee found that the New York County Society and Dr. Piffard were justified in what they had done, and that the charges should be dismissed. Agreed to.

REPORT OF THE COMMITTEE TO CO-OPERATE WITH THE SOCIETY FOR THE PREVENTION OF CRUELTY TO CHILDREN.

Dr. Jacobi presented the report of the committee appointed last year, in accordance with the following resolution:

Resolved, That the President appoint a committee, consisting of five members, to co-operate with the Society for the Prevention of Cruelty to Children, etc.

An elaborate letter from Elbridge T. Gerry, Esq., President of the Society for the Prevention of Cruelty to Children, was embodied in this report. The latter showed the necessity of further legislation in behalf of children employed in factories, also for the better care of children of incompetent or dissolute parents.

On motion by Dr. Squibb, it was resolved that the report be received and the present committee continued, in order to carry out its suggestions and recommendations, the society fully endorsing such recommendations.

REPORT OF THE COMMITTEE ON EXPERIMENTAL MEDICINE.

Dr. John C. Dalton, of New York, presented this report. Bergh's new bill was read, and the fact pointed out that a petition was now circulating to enlist the support of the public for Bergh's proposed measures of repression. The efforts of the anti-vivisectionists were as senseless as they were persistent. Bergh's new bill was identical with his old one. The insincerity of the motives animating these attempts at repression were apparent, and the bottom of the whole movement was nothing but a maudlin sentimentalism. Quotations from Bergh's strictures were then read to illustrate the truth of this assertion, and the necessity for sustained vigilence was set forth.

Dr. Vander Poel stated that active opposition was certainly necessary on the part of members of the Legislature, and they should have the matter properly brought before them.

On motion by Dr. Squibb, the report was received and adopted.

Dr. Chamberlain, of New York, offered the following:

Resolved, That the Secretary of the State Medical Society be instructed to procure the printing and transmission to the Committee of the Senate and Assembly on Public Health, of any matter relative to the Vivisection Bill which may be offered by the committee of this society on Experimental Medicine. Accepted.

Dr. C. A. Post, of New York, offered the following:

Resolved, That it is the unanimous opinion of this society that the bill to prevent vivisection ought not to pass.

Resolved, That the above resolution be signed by the President and Secretary, and forwarded to the Committee of the Legislature on Public Health.

This was unanimously adopted by a rising vote.

MISCELLANEOUS BUSINESS.

Dr. Johnson, of New York, called up the matter of the New York County Medical Society. He moved that the Special Committee on the Code, already authorized, also take into consideration the differences between the Richmond and New York County Medical Societies. Laid on the table.

A resolution from the New York County Society,

that the State Society inquire into the expediency of making a change in the law relative to the divulging of information given to physicians by patients, was dismissed and referred to the Committee on Legislation, with instructions to report thereon in 1882.

Dr. Wey, of Elmira, offered the following resolution, which was accepted :

Resolved, That this society recommend that the county societies empower their several boards of censors to take such measures as may be necessary to carry into effect the Medical Act of May 29, 1880.

Dr. Lewis, of New York, offered the following :

Resolved, That no county society can consider applications for membership from persons who are members of county medical societies not represented in this society.

Carried.

Dr. Squibb's motion, to the effect that 500 copies of Dr. Jacobi's report as president of the committee appointed to confer with the Society for the Prevention of Cruelty to Children be printed for public distribution, was carried.

PAPERS READ BY TITLE.

"Report of the Committee on Hygiene," by E. V. Stoddard, of Rochester.

"A Case of Cerebral Tumor," by J. C. Hutchinson, of Troy.

"Thoughts on Sanitation," by Dr. Harvey Jewett, of Canandaigua.

"A Biographical Notice of Dr. Alfred Bolter, of Ovid," by Dr. J. C. Corson.

CICATRICIAL CONTRACTION OF THE THUMB, AND FINGERS, AND PALM OF THE HAND, RESULTING FROM A BURN.

Dr. A. C. Post, of New York, addressed the society on the above subject, exhibiting a plaster cast of the deformity of the hand alluded to. The report of case will appear in full in a future number of the Record.

Dr. Matthewson thought that the transplantation of large pieces of flexible skin would produce good results in such cases.

Dr. A. Van Derveer, of Albany, had also had good results with somewhat similar procedures.

Dr. J. P. Creveling, of Albany, remarked that in two cases he had seen good results follow the subcutaneous division of cicatricial tissue.

The abstract of a paper on

HYSTERO-NEUROSIS OF THE STOMACH

was read by Dr. J. S. Warren, of New York. From a consideration of several hundred cases he did not believe that there was anything like a specific for this affection, but that each case required a special line of treatment. Vomiting was not always, nor even in most cases, a sympathetic symptom, but arose from certain nerve-influences, or from changes in the thyroid gland, spleen, liver, or kidneys.

Dr. William S. Ely, of Rochester, referred to the diagnostic value of the gastric neuroses in pregnancy. Where a woman has had special cravings in previous pregnancies, which she has experienced at no other time, the recurrence of this craving will often strengthen the suspicion of pregnancy, before evidence is furnished in other ways. In the treatment of vomiting of pregnancy there is one method which will often prove successful, and this is the disregard of regular hours for meals, and urging patients to take small quantities of food often, to go to bed with food under the pillow or near the bed—to steal a march, so to speak, on the stomach, and not wake up its irritability. Discard excessive medication, exclude complications, relieve constipation, and, in moderate cases, the patient's strength can be maintained by the plan named.

Dr. A. C. Post had found an absolutely opposite plan of treatment most successful in such cases. It was his opinion that rectal alimentation would give the best results. Perfect rest and quiet of the stomach was the great desideratum.

A case in point was described, in which food by the stomach was entirely forbidden for three weeks. Absolute abstinence had also succeeded in another case, conjoined with the introduction of the finger into the os uteri.

Drs. W. W. Potter, of Albany, Woodward, of Chemung, R. H. Sabin and Osborne, of Chautauqua, also participated in the discussion.

The President here announced that the Nominating Committee would meet at 5 P.M.

Dr. Van Derveer read a telegram from Clark Bell, Esq., to the effect that that gentleman would address the society on Thursday.

The society then adjourned to meet again at 2.30 P.M.

SECOND DAY—AFTERNOON SESSION.

The society was called to order at 2.30 P.M., by the President.

MEDICINAL ERUPTIONS.

Dr. H. G. Piffard, of New York, read a paper on medicinal eruptions. He stated that, until within a very few years, hardly any drug, except arsenic and the diaphoretics, was credited with a direct action on the skin. Effects upon the healthy skin, following the ingestion of drugs, were rare, yet on this very account important to be recorded for reference. Practitioners should know all the irregular and abnormal effects of remedial agents, lest a medicinal rash be mistaken for an idiopathic affection of the skin, and the unsuspected cause be permitted to remain in operation. Thus far, dermatology had mainly considered the symptomatology and pathology of cutaneous affections springing from what might be termed natural, though frequently obscure causes. There was need of careful observation of a different class of cases : those which arose through the agency of means intended to combat disease, but which in turn might become the originators of morbid action. While in many cases these effects were unusual, and commonly explained as due to some idiosyncrasy, it was none the less important that they should be recognized at the time of their occurrence, and their true cause be ascertained. Owing to the pressure of business, the reading of the paper had to be interrupted before its completion.

Dr. Bulkley said that the subject of the distinction between eruptions produced by drugs, and ordinary diseases of the skin, was one of great practical importance, inasmuch as the practitioner might frequently mistake them and cause needless anxiety.

Although many drugs had been mentioned as occasionally producing lesions of the skin, there were practically but a few which it was necessary to bear constantly in mind ; these were copaiba, quinine, chloral, and salicylic acid or its compounds, named in the order of their importance in this respect.

He afterward added the iodides and bromides, which were omitted as the writer of the paper had not reached them before he was interrupted by the expiration of the time allotted.

The most important medical eruption to bear in mind was that from copaiba, inasmuch as it was so liable to be confounded with the early erythematous eruption of syphilis. Thus, a patient had contracted venereal disease and there might be reason to believe that he had a chancre. He might, at the same time, have a urethral discharge, for which copaiba was prescribed in some mixture. An erythematous eruption appeared, and, if the existence of the possible cause was not understood and borne in mind, it was at once put down as that of syphilis, and the patient was now regarded as syphilitic, with all the prospects which that diagnosis entailed, whereas the sore might have been a chancroid or progenital herpes, and the eruption wholly due to the copaiba. This had frequently happened.

Dr. A. C. Post, of New York, alluded to the liver of the halibut as capable of producing severe cutaneous eruptions. He had himself been subject to a rash of this kind from the same cause.

Dr. Piffard said that there was a case on record of a man having died in consequence of eating stale liver of eels.

Dr. Squibb remarked that the inter connection of the two subjects seemed to him somewhat doubtful. When one considered the enormous quantities of quinine, chloral, and even salicylic acid, which were consumed, and contrasted therewith the limited number of cases of medicinal eruptions reported, the causal relation of the two might be justly doubted.

ADMINISTRATION OF NITRITE OF AMYL.

Dr. Piffard described the way in which this drug should be given in order to circumvent all danger. It consisted essentially of filling a bottle with cotton and then saturating it with the amyl nitrite.

Dr. Squibb remarked that it was quite safe to carry vials filled with the fluid. He was of opinion that the dangers likely to follow a free inhalation of the drug had been considerably exaggerated. If about two-thirds of the contents of a vial had been used, the remainder would be found useless, and should be thrown away.

Dr. E. C. Seguin said: "I can cordially indorse Dr. Piffard's device for giving amyl, as I have used the same plan for some three years. I was led to adopt it because I found that the amyl was often spilled by patients over their shirt-bosoms, or on the carpet of their room after the beginning of the paroxysm for the relief of which they had been smelling the bottle. I might add that I have much less fear of amyl than I had two years ago. It is now my custom to tell patients to sniff hard and rapidly until their faces flush. I have never known any dangerous or unpleasant results to occur. Indeed, one of my female patients once received half an ounce of amyl as an enema by mistake, and the only consequences were universal blushing and an intolerable odor in the house."

INTRA-PARIETAL HERNIA.

Dr. Geo. F. Shrady, of New York, read a paper on the above subject, which was illustrated by the exhibition of a colored drawing. It will appear in the Record.

Dr. Harvey Jewett, of Canandaigua, alluded to the peculiarity of Dr. Shrady's case, and then, in connection with the general subject of hernia, narrated the following:

"In my earlier practice, before the use of chloroform, I was called to operate for strangulated femoral hernia. The patient had hiccough, stercoraceous vomiting, and all the indications of speedy dissolution. I declined to operate, as the case would soon terminate by death. At the solicitation of the friends of the patient I performed the operation and left the patient to die. After forty-eight hours, feculent matter, together with a large lumbricoid worm, appeared at the place of operation. The contents of the bowels were discharged at the place of the wound for about six months, during which time, with the aid of injections, the external discharge gradually diminished, and at length entirely ceased. The contents of the bowels passed by the natural channel, and the patient enjoyed uninterrupted health for thirty years."

Dr. Post thought the case might be considered an unusual one of conjoined ventral and inguinal hernia. A remarkable case of traumatic ventral hernia occurring in the New York Hospital was also described.

Dr. Van Derveer dwelt on the exceptional nature of Dr. Shrady's case, and did not remember a similar one.

Dr. Mercer, of Syracuse, related a case in which a large mass of intestines had protruded from an abdominal wound received in a quarrel. The protruding intestine was caught between the muscular layers of the abdominal parietes, and there became strangulated.

Dr. E. R. Squibb exhibited a series of micro-photographs illustrating the histology of pseudo-polypus of the colon, as described by J. J. Woodward, Surgeon, U.S.A., in the *American Journal of the Medical Sciences* for January, 1881.

Dr. H. Knapp, of New York, read a paper on

EXOSTOSIS OF THE FRONTAL SINUSES.

After developing the importance of the subject and dwelling on the rarity of bony growths of the frontal sinuses, Dr. Knapp gave a comprehensive *résumé* of known cases. He then proceeded to the detailed description of his own cases. It appeared that only in two instances were the operative measures attended with success. One of these belonged to Dolbeau, of Paris, and the second was the last of his own cases.

Dr. A. C. Post, of New York, narrated a case of osteo-sarcoma, in which the dura mater had to be exposed by an operation. The patient afterward recovered from the effects of this surgical procedure.

PAPERS BY TITLE.

"Obituary Notice of Dr. Alfred Boller, of Ovid."

"Thoughts on Sanitation," by Dr. Harvey Jewett, of Canandaigua.

REPORT OF THE COMMITTEE ON HYGIENE.

Dr. E. V. Stoddard, Chairman of the Committee on Hygiene, called the attention of the society to the work that had been done by the committee. He stated that, on consultation with the State Board of Health as to the subject to be considered, it had been decided that attention should be directed to the subject of the prevention of contagious diseases in schools, especially of diphtheria. With this view the committee had thought it best to invite special attention to this matter, and had asked members of the profession to do all in their power to discover the relative influence on the contagiousness of diphtheria: first, from direct personal contact; second, from clothing worn by the sick; and, third, from unsanitary surroundings. Observations on these points had been called for, and over three hundred responses from physicians had been received. The

general testimony was unanimous in favor of the great contagiousness of the disease. The committee proposed to suggest that their successors prescribe the gathering of some rules of study and observation in the matter, and that sanitary measures be taken looking to the isolation and suppression of all cases of the disease from families, and from attendance at school; and further, the supervision of the public schools by a sanitary inspector. This question of *quarantine* in the public schools as well as the family was urged by the committee, and will serve as the subject of the coming year.

Dr. Elisha Harris, one of the State Commissioners of Health and Secretary of the State Board, invited the attention of the society to the present widespread prevalence of diphtheria. The utility of the general observations and records of the medical profession relating to the causation and prevention of this malady was obvious, and while we all gave attention to this subject, Dr. Harris urged that the unguarded causes of the distribution of diphtheria should be brought under such sanitary control as might be possible. He explained the special importance of regulating the domestic quarantine, or isolation of all who were convalescing, as well as those who were yet in the sick-room or at the height of the disease. The evidence upon this matter showed conclusively that many a convalescent, when allowed to go to school or otherwise to rejoin the community, had conveyed the infection of diphtheria.

The State Board of Health found it a duty to investigate the course of this disease as respects the factors that entered into its modes of distribution, its infectious as well as other causes. Though not unusually malignant at present, it was so prevalent, and the total mortality from it so great, that the physicians of this State could do great service by teaching and inducing the necessary care in preventing the spread of the infection that pertained to this destructive malady.

The opportunities that had from time to time been afforded us for investigating the course and causes of diphtheria in sparsely populated districts, and during the past autumn in a wilderness where it had not before been seen, gave results which showed how important it was to regulate the whole matter of domestic and personal isolation of the sick, even until convalescence had ended in health.

In connection with these remarks, the doctor called attention to the following table:

From health officers of villages, in December, 1880: diphtheria, 29; malaria, 40; typhoid fever, 29; measles, 16; mumps, 0; scarlet fever, 25; small-pox, 7; whooping-cough, 19.

From physicians in towns and incorporated villages, in January, 1881: diphtheria, 50; malaria, 20; typhoid fever, 18; measles, 45; mumps, 6; scarlet fever, 48; small-pox, 4; whooping-cough, 12.

VESICAL CALCULI, WITH OPERATIONS.

Dr. A. Van Derveer, of Albany, read a paper on the above subject, which will appear in a subsequent number of the Record.

DOUBLE TALIPES EQUINO-VARUS.

Dr. A. M. Phelps, of Chateaugay, read a paper containing the description of an extreme case of this kind occurring in a little girl six and a half years old. The paper was illustrated by the demonstration of a model and the exhibition of photographs. After tenotomy, the feet relapsed to nearly the old position. The doctor made a free incision through the inner side and sole of the foot, dividing the contracted parts in their respective order. The feet were then brought into position and put up on a modification of Neil's board; the wounds gaped an inch and a half. The patient then went on crutches, swinging both feet. The wounds healed after four months. An ordinary shoe, with a stiff counter, was now worn on the left foot, and a Sayre's shoe on the right; the patient could walk, however, without any shoe.

Dr. A. C. Post, of New York, said that in many cases of club-foot subcutaneous division of the constricted tissue was inadequate, sometimes even dangerous. Free open division, under antiseptic precautions, was often a better procedure.

At the instigation of Dr. Jacobi, Dr. Post then related his case of torticollis, in which an open operation had produced highly satisfactory results.

Dr. J. C. Hutchison, of Brooklyn, thought that the results of Dr. Phelps' case were certainly encouraging. He would be tempted to proceed in a similar manner in a case of that kind.

ON THE EARLY DIAGNOSIS OF SOME ORGANIC DISEASES OF THE NERVOUS SYSTEM.

Dr. E. C. Seguin read a paper on the above subject, which will appear in a future number of The Record.

The society then adjourned to meet in the Assembly Chamber of the new capitol, at 8 o'clock, to listen to the annual address of its President.

Second Day—Evening Session.

THE PRESIDENT'S ANNUAL ADDRESS.

The society convened in the Assembly Chamber of the new capitol, at 8 P.M., when the Vice-President, Dr. A. Jacobi, introduced Dr. William H. Bailey, who delivered the annual address. He spoke mainly on the "duties and opportunities which fall to our profession in its relations with our fellow-men."

The progressive perfection of medical sciences was set forth. The medical student of to-day, with his greater facilities for acquiring knowledge, was contrasted with the student of former times. The corresponding increase of responsibility was dwelt upon.

"The students of law and divinity are required to pass through a prescribed course of mental training and study. The catalogues of institutions for such instruction show a large majority of their students to have been college graduates. But the catalogues of our medical schools, I am sorry to say, show only a small proportion of such. And yet who believes that the medical student requires less preparation and mental training than they? Is it not true that no standard of instruction can be too high for the education of men, from whom so much is expected and required, in preparing them for a work calling for such nice powers of observation, of discrimination, and of inference?"

Medical societies were likened to the guilds of the olden time, and the various advantages of such fraternization were pointed out. It was thought that the profession might drop its written law of ethics without detriment or danger. "Our profession has gradually advanced in its value and efficiency, constantly increasing its sphere of usefulness and influence, greatly benefiting and improving the moral, social, and physical conditions of the human race. I think it is, moreover, safe to assert that, with the rapid progress making in medical science, the future contains greater and still more honorable possibilities for the intelligent and competent practitioner."

The President closed his address in the following words: "This, then, is the urgency of my appeal to you, this my entreaty and hope, that with the cultivation of the kindest feelings toward each other, friendly counsel and interchange of experiences, symphathetic words and encouragement, we may emulate each other's virtues, condone the faults which inhere in our poor human nature, and thus, having faithfully sought to discharge our whole duty in life, winning the esteem of our fellow-men, we may also merit and receive the approbation of Him, the greatest Physician, whose verdict of 'Well done, thou good and faithful servant,' is the highest praise that can reward our honorable stewardship."

The address was listened to with marked attention. At its close a vote of thanks was tendered to the President.

The society then adjourned to the Delavan, and partook of the annual banquet. About 135 persons were present. Rev. C. W. Camp, of Kingston, said grace. The "feast of reason and the flow of soul" were inaugurated by appropriate remarks from the retiring President, Dr. Wm. H. Bailey. The following were some of the toasts:

"The State Society: now in the vigor of manhood, it has had its days of childhood." Responded to by Dr. S. O. Vander Poel.

"The Ex-Presidents: once in the chair, now on the floor." Responded to by Dr. Joseph C. Hutchison.

"The clergy: always called upon to finish our work, and charge our blunders to Providence." Responded to by Rev. W. W. Battershall.

"The press: we know its power; may it rise to be the instructor of the people." Responded to by Mr. Wm. H. Bogart.

"The legal profession: they worry lots of fellows into becoming our patients." Responded to by St. Clair McKelway.

"The Board of Regents: higher education for the medical profession." Responded to by David Murray, LL.D.

"The State Board of Health: we are in hearty sympathy with its work." Responded to by Hon. Erastus Brooks.

Third Day—Final Session.

The society was called to order at 9 A.M. by the President.

Prayer was offered by the Rev. W. D. Nicholas.

The minutes of the previous day were read and approved.

Miscellaneous Business.

A communication was received from the Westchester County Medical Society, and referred to the Committee on Legislation.

Dr. W. M. Smith, of Manlius, read the report of the Committee on Publication. It was received and accepted.

Dr. H. G. Piffard offered the following on behalf of the Committee on Legislation:

Resolved, That all the paragraphs contained in the Appendix to By-Laws (see Trans. of Med. Soc. State of New York for 1880, p. 23), beginning with Art. II., Sec. 6, be repealed, except those paragraphs reading:

"Three censors shall annually be elected from each censorial district, all of whom shall be residents of the same county; and,

"The first and second senatorial districts, as established by law in 1836, shall be called the *Southern;* the third and fourth the *Eastern;* the fifth and sixth the *Middle;* and the seventh and eighth the *Western Censorial District.*"

The Abolition of the Coroner's Office.

Mr. Clark Bell, of New York, then read an exhaustive address on the above subject, in which he advocated the abolition of the Coroner's office, and the appointment of competent medical men to take charge of all such investigations. He urged that the framing of a new law be recommended to the Legislature, and suggested the recent Massachusetts law as a model.

Dr. Govan, of Stony Point, said that he had been Coroner in his county for many years, and he had often done away with a coroner's jury. He had received information from reliable sources that this was a legal action on his part.

Dr. Potter moved to refer the whole matter to the Committee on Legislation, with instructions to report at the next annual meeting.

Dr. Mosher thought such delay was not desirable.

Dr. Squibb was willing to let the matter lay over one year for better consideration.

Mr. Bell expressed an opinion that delay was not advisable.

Dr. Squibb moved an amendment that the paper be referred to the Committee on Publication, and also to the Committee on Legislation, with instructions to confer with the representatives of the Medico-Legal Society at their earliest convenience.

Carried.

The following

Special Committee on Ethical Revision

was announced: Wm. C. Wey, of Elmira; C. R. Agnew, of New York; S. O. Vander Poel, of Albany; Wm. S. Ely, of Rochester; Henry G. Piffard, of New York.

The following were adopted as

New By-Laws.

Permanent members of ten years' standing, who have paid up all their dues, and permanent members of the age of sixty years and upwards, who have been permanent members for ten years, on making application to the Secretary, accompanied with the Treasurer's certificate that all dues have been paid up to date, shall be placed on the list of Retired Permanent Members, and shall thereafter be exempt from payment of dues, and have the rights and privileges of honorary members. Such retired permanent members may be restored to full permanent membership on payment of half the amount of dues that would have accrued during their period of retirement, if they had not been retired.

Carried.

The following were proposed and elected

Members by Invitation:

Drs. Lewis Balch and L. B. Hoit, of Albany Co., C. C. Schuyler, of Rensselaer Co.

Enforcement of the Act to Regulate the Licensing of Physicians.

The following resolution was read by Dr. Smith, of Manlius:

Resolved, That the Medical Society of the State of New York advises the various county medical societies that form its constituency, to endeavor to secure the co-operation of the other incorporated county and district medical societies throughout the State in the enforcement of the "Act to regulate the licensing

of physicians and surgeons," passed May 29, 1880. Carried.

PAPERS READ BY TITLE:

"Biographical Sketch of Dr. Edward R. Hun," of Albany, by Dr. Samuel B. Ward, of Albany.

"Obituary Notice of Dr. Charles A. Robertson," of Albany, by Dr. J. S. Mosher, of Albany.

"A Case of Cystic Degeneration of the Chorion," by Dr. James Chapman, of Medina.

"Summary of Cases of Accouchement from January 8, 1819, to May 1, 1879," by Dr. J. B. Cowles, of Dunham.

A paper was read by DR. C. L. STILES, of Owego, entitled

A DEVICE FOR RETAINING DISLOCATIONS OF THE CLAVICLE AT ITS DISTAL END.

It will appear in a future number of the RECORD.

DR. GEORGE H. FOX read a paper on

THE BENIGN ASPECT OF SYPHILIS,

which gave rise to a protracted discussion as to whether the disease was eradicable or not, and benign or malignant.

Drs. Bulkley, Pooley, Ferguson, of Troy, Ward, Van Derveer, Piffard, Squibb, and Curtis, participated. The weight of opinion was decidedly in favor of regarding syphilis as a disease which had stronger tendencies toward malignancy than benignity. It was, however, admitted by all that occasionally cases did occur which, from the lack of all grave manifestations, deserved the epithet benign. On the other hand, it was pointed out that the choice of the expression was an unfortunate one, on account of its leading one to form wrong conclusions. Benign suggested too much of harmlessness, innocence, and innocuousness, to make its association with such a disease as syphilis seem either quite just or entirely desirable.

The following paper was here read by title, and referred to the Committee on Publication:

"The New York State Inebriate Asylum: A Defence of its Management." By Dr. George Burr, of Binghamton.

APPROPRIATIONS FOR THE SECRETARY AND TREASURER.

DR. SQUIBB offered the following:

Resolved, That the increasing labors of the Secretary and Treasurer of the society be recognized and acknowledged by adding $100 to the already appropriated annual compensation of the Secretary, and $50 to that of the Treasurer. Carried.

REPORT OF THE COMMITTEE ON LEGISLATION.

The committee recommended the following, through the Chairman, Dr. H. G. Piffard:

Resolved, That, in the opinion of this society, it is desirable for the Legislature to thoroughly amend and revise the laws of this State in regard to the office and duties of coroners, and would recommend for their consideration the recent statute act adopted by the State of Massachusetts.

The following was also recommended:

Resolved, That the thanks of this society are due to the Medico-Legal Society of New York, and to Clark Bell, Esq., for the action they have taken in reference to the matter of Coroner's law.

Both resolutions were unanimously accepted.

REVIEW OF THE SECOND TRIAL OF JESSE BILLINGS FOR MURDER.

This was the title of a lengthy paper by Dr. Lewis Balch, of Albany. He gave a detailed account of the entire subject, and explained the tests made of the effects of shots into the human skull, exhibiting a number of skulls of the subjects used in his experiments, as well as that of the murdered woman. A full description of the various fractures was also given. Referred to the Committee on Publication.

The Committee on Legislation reported by title the Act of 1841 referring to the censors of the Albany Medical College, and recommended that the act be published in full in the Transactions of 1881.

REPORT OF THE COMMITTEE ON NOMINATIONS.

The Committee on Nominations presented the following report:

President.—Abraham Jacobi, of New York.

Vice-President.—William Govan, of Stony Point.

Secretary.—Dr. Wm. Manlius Smith, of Manlius.

Treasurer.—Dr. Chas. H. Porter, of Albany.

Censors.—Same as last year.

Committee of Arrangements.—Dr. S. B. Ward, F. C. Curtis, J. S. Mosher, all of Albany.

Committee on By-Laws.—Wm. C. Wey, of Elmira; Alex. Hutchins, of Brooklyn; C. E. Witbeck, of Cohoes.

Committee on Hygiene.—Drs. E. V. Stoddard, of Rochester; Stephen Smith, of New York; Jacob S. Mosher, of Albany; J. Foster Jenkins, of Yonkers; Caleb Green, of Homer; E. Hutchinson, of Utica; Harvey Jewett, of Canandaigua.

Committee on Legislation.—Albert Van Derveer, of Albany; Alex. Hutchins, of Brooklyn; H. G. Piffard, of New York.

Committee on Medical Ethics.—Drs. C. R. Agnew, of New York; S. O. Vander Poel, of Albany; E. M. Moore, of Rochester.

Committee on Prize Essays.—Drs. T. F. Rochester, of Buffalo; J. P. White, of Buffalo; W. S. Ely, of Rochester.

Committee on Publication.—Wm. Manlius Smith, of Manlius; H. D. Didama, of Syracuse; C. H. Porter, of Albany; J. Foster Jenkins, of Yonkers.

Censor of College of Medicine, Syracuse University.—W. S. Ely, of Rochester.

For Permanent Members.—First District: John C. Peters, F. A. Castle, T. R. Pooley, J. C. Dalton, of New York County; W. H. Dudley, of Kings County. Second District: N. H. Freeland, of Westchester County; Smith Ely, of Orange County. Third District: C. E. Nichols, of Rensselaer County; C. E. Whitbeck, of Albany County. Fourth District: Henry Gray, of Washington County; E. F. Edgerly, of Essex County. Fifth District: C. C. P. Clark, of Oswego County. Sixth District: W. W. Crandall, of Alleghany County; S. H. Peck, of Tompkins County. Seventh District: Peter M. Wise, of Seneca County. Eighth District: Wm. Chace, of Chautauqua County; Henry Lapp, of Erie County.

For Honorary Members.—J. C. Bucknell and William Farr, of London, England.

Eligible to Honorary Membership.—J. Lockhart Robertson, Sidney Ringer, of London, England; T. S. Clouston, of Edinburgh, Scotland; Roberts Bartholow, of Philadelphia.

Delegates to State Medical Societies.—New Jersey: Drs. H. G. Piffard, of New York; W. Govan, of Stony Point. Massachusetts: S. G. Wolcott, of Utica; J. C. Hutchison, of Brooklyn; J. V. Kendall, of Baldwinsville. Michigan: C. F. Bacon, of Fulton. Vermont: E. M. Lyon, of Plattsburg; R. W. Taylor, of New York. Pennsylvania: T. H. Squire, of Elmira.

Delegates to International Medical Congress, London.—Drs. T. F. Cock, of New York; Jos. C. Hutchison,

of Brooklyn. Alternates: Drs. C. R. Agnew, of New York; N. C. Husted, of Tarrytown, N. Y.

Delegates to Canadian Medical Association.—B. F. Sherman, of Ogdensburg; J. B. Andrews, of Buffalo.

Delegates to American Medical Association.—Drs. A. C. Post, L. D. Bulkley, and G. H. Fox, of New York; J. V. Kendall, of Baldwinsville; H. R. Ainsworth, of Addison; C. G. Bacon, of Fulton; G. W. Cooke, of Otego; F. R. Sturgis, of New York; A. Coe, of Oswego; J. R. Boulware, of Albany; Conant Sawyer, of Ausable Forks; W. U. Coit, of Champlain; J. B. Graves, of Corning; F. L. R. Chapin, Glen's Falls.

Special Committee on Publication of Transactions.—J. C. Dalton, of New York; W. H. Bailey, of Albany; Thos. F. Rochester, of Buffalo.

The President and Secretary received authority to fill all vacancies.

All the nominees were duly elected officers of the society for the ensuing year by an affirmative ballot cast by the Secretary.

On motion by Dr. Cook, of Otego, a vote of thanks was tendered the retiring President for the faithful, impartial, and efficient discharge of his duties.

After the retired President had returned his thanks in appropriate words, the society adjourned to meet in the city of Albany, on the first Tuesday in February, 1882.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from January 30, 1881, to February 5, 1881.

Vollum, E. P., Major and Surgeon. Granted leave of absence for six months on surgeon's certificate of disability, with permission to go beyond sea. S. O. 24, A. G. O., January 31, 1881.

Burton, H. G., First Lieut. and Asst. Surgeon. Assigned to temporary duty at Ft. Niagara, N. Y. S. O. 18, Dept. of the East, February 1, 1881.

Medical Items and News.

Contagious Diseases — Weekly Statement. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending February 7, 1881.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Jan. 29, 1881.	0	6	170	12	41	121	26	0
Feb. 5, 1881.	0	6	173	7	42	104	15	0

Daily Edition of "Medical Annals," Albany, New York.—During the recent session of the State Society, the *Medical Annals*, of Albany, published two daily editions containing excellent reports of the proceedings of the meeting of the previous days. Too much credit cannot be given to the Editing Committee for their enterprise in the matter.

International Congress for the Abolition of State Regulation of Prostitution.—At a meeting of this Congress in Genoa recently, the following resolutions were adopted: 1, everything relating to prostitution must be made subject to the Common Law of each country; 2, all legal guarantees of personal liberty must be equal for the two sexes; 3, the law must not provide or tolerate any official registration of prostitutes, or any official recognition of prostitution as the status of a social class; 4, the law must not sanction or tolerate any violation of the rights possessed by every woman over her own person; 5, the law must not allow imprisonment, except upon a judicial sentence passed in open court, upon evidence on oath or affirmation of a legally defined offence, and after full opportunity of defence for the accused; 6, all policemen, when performing executive duties, must be in uniform; 7, all officers of the law must be fully responsible for all their acts before the ordinary courts.

And the Congress rejects every regulation of prostitution, whether established by the State, by the Commune, or by any other authority.

The University Hospital, at Philadelphia, has been given the sum of $50,000 with which to erect a new wing for incurables in connection with the hospital. Efforts are being made to raise an endowment fund of $500,000 for the hospital.

The Anesthetic Mixture commonly used in the Vienna General Hospital is composed of alcohol, 90 parts; ether, 90 parts; chloroform, 300 parts. Billroth has used this for nine years without a death, except one that occurred last summer.

The Etiology of Cancer.—Mr. Herbert Snow (*Lancet*) comes to the following conclusions as the result of a study of a large number of cases of cancer:

1. Hereditary tendency, as a predisposing cause of cancer (at all events, of mammary and uterine cancer), is almost valueless, if not entirely so, and in practical diagnosis should be altogether ignored, as misleading.

2. Mechanical injuries directly produce cancer in a certain percentage of cases; but this percentage is small.

3. As direct and immediate causes of cancer (especially of uterine cancer), mental trouble and hard work are very potent agents, and exert more influence than any other antecedent within our present knowledge.

The New York Academy of Medicine.—At the stated meeting held on the evening of the 3d inst., President Fordyce Barker, M.D., LL.D., delivered his second inaugural address, which was replete with valuable suggestions, and was listened to with marked attention. The occasion was made one of mutual congratulation over the prosperity of this medical organization. Brief addresses were also made by ex-Presidents Dr. Willard Parker, Dr. Austin Flint, and Dr. S. S. Purple, and invited guests, Dr. Beverly Cole, of San Francisco, and Dr. John P. Gray, of Utica, after which all were invited to partake of "the loving cup" and a bountiful collation. A full report of the meeting will be given hereafter.

A Nurses' Training-School in Brooklyn.—A training school for nurses, modelled after the New York Training-School, has been established in Brooklyn, in connection with the Brooklyn City Hospital.

Local Application to Diphtheria.—Dr. C. C. P. Clark, of Oswego, N. Y., speaks very highly of the value of the application to the fauces twice daily of the liquor ferri persulphatis in cases of diphtheria. He says: "It is certainly worth all the other remedies I have ever tried, many times over."

Original Communications.

NERVOUS DISEASES CONNECTED WITH THE MALE GENITAL FUNCTION.

By GEORGE M. BEARD, A.M., M.D.,
NEW YORK.

(Continued from page 509, No. 496, May 8, 1880.)

REFLEX IRRITATION AS A CAUSE OF NEURASTHENIA—CLINICAL VARIETIES OF NEURASTHENIA—SEXUAL NEURASTHENIA, AS REFLECTED FROM STRICTURES AND PHIMOSES AND THE PROSTATIC URETHRA—RESULTS OF OPERATIONS—SEXUAL NEURASTHENIA IN WOMEN—UNDER-ESTIMATE AND OVER ESTIMATE OF SYMPTOMS.

VI.

THE body is a bundle of reflex actions. An irritation in any one part is liable to produce an irritation in some other part, the nature and locality of which will depend on the degree of irritation and the constitution of the individual.

This is true of all parts of the body, on the surface and beneath the surface, and of all organs, including, probably, the brain and spinal cord, injuries to which may be transmitted to other portions of the body, or to other portions of their own substance, indirectly as well as directly.

There are certain organs, however, which, on account of abundance and complexity of their own supply, and the indispensability of their functions to life and the perpetuation of life, are pre-eminently centres or foci of reflex irritation. Among the most conspicuous of these reflex centres are: the stomach, the digestive apparatus, including the liver and intestines, the prostatic urethra, the uterus, the ovaries, and the eyes.

Some of the clinical varieties of neurasthenia derive their names from the fact that one organ or set of organs are more particularly involved in some cases than in others, and, either as causes or effects, are the chief avenues of suffering, and require special treatment and hygiene.

Thus, we have cerebral neurasthenia, spinal neurasthenia, digestive neurasthenia, sexual neurasthenia. All these and other varieties not necessary to mention here, are simply special and varying manifestations of a general neurasthenic state; to be diagnosticated and treated, however, with reference to location, constitution, and the special needs of each individual. Theoretically and practically, it is necessary to make these distinctions in our study of the cases, although we may not use or even think of the terminology here employed.

Of these clinical varieties the sexual is, on the whole, the most frequent, after the cerebral; and many of the cerebral and spinal forms, and even the digestive varieties also, take their origin in, or are made worse by the irritation of the reproductive system.

Neurasthenic symptoms, including many or all previously described here or elsewhere, may be excited, kept up, and aggravated by the following conditions of the genital system in the male.

Phimosis or redundant prepuce; stricture; irritable and congested prostate. Next to the stomach, the prostatic urethra is probably the most important centre of reflex irritation of the body. There is every reason, physiological and anatomical, why it should be so, and a close study of the symptoms of nervous debility proves that it is so. A morbid state of this part of the body is both an effect and a cause of nervous exhaustion; for on the one hand it is impossible for one to have an irritable prostate, and yet be in good health in other respects; and on the other hand it is impossible for one to suffer from nervous exhaustion for a long time and not suffer in the prostate urethra. The symptoms of irritation of the prostatic urethra are:

First.—True spermatorrhœa; that is, a flowing away of spermatozoa and spermatic globules in the urine and at stool.

Second.—Frequent urination night or day, or both. This may or may not be accompanied by excess in the secretion of urine.

Third.—Pain and exhaustion after defecation or urination.

Fourth.—Excessive sensibility of the urethra in the prostatic region, or in the entire length; urethral spasm and erectile excitability.

Fifth.—Redness and swelling of the lips of the meatus.

Sixth.—Sweating of the scrotum.

Seventh.—Pain in the testes.

Eighth.—Pain, heaviness, burning sensation in the perineum, sometimes neuralgic in character, during coitus, with numbness.

Ninth.—Varicocele and relaxed scrotum.

Tenth.—Flaccidity, coldness, or gristle-like appearance of the penis, with greater or less degree of impotence, in various and familiar manifestations.

Eleventh.—Coldness of the penis and scrotum, persistent or varying.

Twelfth.—Prostatorrhœa; a flowing of the prostatic fluid (without spermatorrhœa) after stools, or in the urine, or after erection or sexual excitation; weeping penis.

These local symptoms may be accompanied with any one of a very large variety of neurasthenic symptoms in other parts of the body, as the brain, the spine, and the stomach; but the diagnosis of sexual neurasthenia is only defined when there is some one, or, as is usually the case, a number of the above local symptoms.

In regard to reflex irritation from phimosis and contracted meatus and stricture, there are two prevailing errors; one is, that when any of these conditions are found in a case of neurasthenia, they are the sole or chief cause of that neurasthenia, and that the removal of these causes by surgery will be sure to cure.

The other error is, that these conditions have nothing to do with neurasthenia, and that local treatment for their removal is never needed. Experience and close study of these cases—watching them for years—shows us that between these two extremes lies a valuable truth.

Phimosis, redundant prepuce with smegma, contracted meatus, and stricture, may, and do, in some individuals, excite and originate neurasthenic symptoms, and the removal by surgery of these conditions is an aid, sometimes an indispensable aid, to successful treatment; but constitutional as well as local treatment is required, and the co-operation of time and hygiene also, in order to bring about the best results. These conditions may even cause insanity.

When the nervous system becomes depleted of its nervous force, then this local irritation from stricture, phimosis, or redundant or adherent prepuce, may become the excitant or aggravant of nervous symp-

toms. It always takes two factors to make any disease: the subjective must be united with the objective—what comes from without must be united with what comes from within, before they can be combined in any morbid condition of the system.

The surgical world is divided between the traumatic and the constitutional form of hip-diseases. Some have attributed these diseases to constitutional injury, and others to traumatic. One might as well ask whether the acid or the alkali were most important in making soda-water; it is the union of the two that produces the result; either alone being powerless. To advocate exclusively either the constitutional or the local origin of diseases of this kind is non-expertness—looking at half the truth instead of the whole truth. It is local injury acting on constitutional tendency that produces hip-diseases, that produces cancer, that produces consumption; neither influence alone being competent to produce the effect any more than alkali or acid alone can make soda-water.

When a storm sweeps through the forest, it fells only those trees that are prepared to fall; when irritations radiate from any nerve-centre, they excite nervous symptoms only when the system has been prepared for it by debilitating conditions.

There are no greater disappointments in medicine and surgery than for those who have operated for phimosis, stricture, or contracted meatus, with the expectation that immediately after the operation the patient will get well of all his neurasthenic symptoms.

The disappointments that have attended these operations have come partly from expecting altogether too much. Surgeons expect the paralyzed child to get up and walk next day after this operation has been performed; they expect epileptic fits will cease; they expect that insanity will be cured right on the spot.

Now, it is true that in some cases, especially in children, we do get just these quick and startling results in a certain proportion of instances, but we do not find them in the class of nerve-patients to which my paper is devoted. In these cases the symptoms have been a long time coming on; they have advanced not boldly as a lion, but as a thief in the night; and they will disappear not rapidly, but slowly, perhaps almost imperceptibly, the operation being the removal of an impediment to their treatment.

Some of these cases would have been nervous, even had they not been affected with stricture or phimosis, although their nervous symptoms may have been made worse, and kept up in part through the irritation of a stricture or phimosis or smegma, with redundant prepuce. Operating in such cases is like taking away an obstruction in the road in the way of a carriage; the load has still to be drawn after the obstruction is removed, and force is required to draw it, but far less than was needed prior to the removal of the obstruction.

It is not well to depend exclusively upon the operation for the cure of the symptoms that are connected with phimosis. Accessory and supplementary treatment of various kinds is needed after the operation is performed.

This operation, in these cases, is, indeed, but one of many useful therapeutic measures, and adjunct to medical and hygienic treatment; it removes an obstacle to the progress of the cure, and allows the medicines employed to have freer course. I would no more depend on the operation alone, for cure of these cases, than I would depend on the cure of asthenopia, or any disorder of the eye, for the entire relief of the neurasthenic symptoms with which these disorders of the eye are so often associated. Trimming one branch of a tree does not trim the whole tree. Myopic and astigmatic eyes are, very often, the centres of reflex irritation to the whole body, and of such importance in the pathology that the general neurasthenia cannot be cured without treating the eye; but to depend on the treatment of the eye for the cure of the neurasthenia is unphilosophical, and is, very often, the cause of disappointment to the patient, in cases of this kind. Dr. Roosa's reasoning on this question is in harmony with the facts.

In regard to the nature of this accessory and supplementary treatment, I may say that it has been that which is used for general neurasthenia, as described in my work on that subject. There is no specific for this state; there is no one prescription that can cure it. We must do not one thing, but many things, studying each case as to its individuality, if we would get the best attainable results. In a number of these cases I have used the treatment for neurasthenia for some time before the operation was performed, and have secured good results thereby, but only up to a certain point. After the operation the medical treatment was more successful.

One effect of phimosis, as also of redundant prepuce without actual phimosis, is arrested development of the penis. The pressure of the skin upon the glands undoubtedly interferes with circulation and nutrition, and hence it is that we so often find these parts to be so very small in persons where there has been from infancy this phimotic condition. One effect of operative procedure is to allow the parts to grow, by removing the mechanical pressure. Dr. M. Josiah Roberts tells me that he has known a case where simply stretching the prepuce so far removed the pressure that the organ grew to such an extent as to protrude beneath the skin, so that phimosis no longer existed. Effects of this kind are of course more probable in the young than in adults.

On the other hand, there may be a good degree of phimosis, and the prepuce may be both redundant and adherent from birth, and there may be quite a close stricture without exciting any nervous symptoms that can be traced to these conditions. It is quite safe to assert that in at least one-half of the healthy adults there is either phimosis or redundancy of the prepuce, with or without adherence. Here comes the question, What is a normal penis?

In order to settle this problem, I requested the proprietor of one of the Russian bath establishments of this city to investigate the matter among his patrons during the past year. He tells me that more than one-half of the bathers have either phimosis or redundant prepuce sufficient to about cover the gland. I have studied this question at one of these baths, at times when large numbers were bathing, and my observations agree with those of the proprietor.

Out of eighty cases of general and sexual neurasthenia in adult males that have been under my care, and of which I have preserved statistics of the condition of the prepuce, I find that in thirty-six cases, over one-third, there was phimosis or redundancy, with or without adherence.

I have had treated twelve cases of sexual neurasthenia by circumcision, or by stretching. The operations have been performed by Dr. Francis D. Buck and Dr. M. Josiah Roberts. In one case an immense quantity of *hardened smegma*—the accumulation of

years—was removed. Some of these cases are very remarkable indeed, as illustrating on the one hand the complexity and variety of symptoms from which neurasthenics suffer; and, secondly, as illustrating the effects that are obtained by the combination of medical and surgical treatment, patiently carried out and varied from time to time, according to the needs of each case. In none of these cases did any striking or brilliant result follow at once after the operation, but all have since been improving.

Case XXIX.—In this case—that of a gentleman over thirty years of age—there was congenital phimosis to such an extent that it was possible to urinate only in a very small stream. Any number of neurasthenic symptoms accompanied this state; among them, unusual flushing of the face from very slight cause, or no cause at all, exhaustion, lumbar pain, etc. The relief following the operation was very great, but it was not even moderately satisfactory until medical treatment of various kinds had been used. This patient was very susceptible to remedies, and required to be treated very cautiously and carefully. He has now improved, and is in good working condition. The operation did not cure him, but it removed the obstacle in the way of relief.

Case XXX.—This was a very remarkable case in every respect. The amount of redundancy of the prepuce was not very great, and there was not much phimosis, but it was sufficient to justify an operation. The neurasthenic symptoms accompanying the condition were, attacks of profound mental depression, urging on to suicide; lumbar pain, fear of society, anthrôpophobia, very rapid pulse, salivation, sweating hands, very extraordinary urethral hyperæsthesia, as well as irritable prostate. There were a number of interesting facts connected with this case. One was, he had been very fond of smoking, and had indulged in the habit until he became neurasthenic, when he was compelled to give it up. His fear of society was so great that on going into company he would break out into profuse perspiration, so that even his underclothing would be saturated. He suffered also from excessive urination. He was also a sufferer from congestion of the eyes. One interesting fact in connection with his fear of society was, that it did not trouble him much in the day, but only after supper. He suffered from involuntary emissions, and the symptoms connected with these were of such a character that he knew beforehand, by his feelings, when they were going to appear. The improvement has not yet resulted in perfect cure, but it has been sufficient to justify what was done. In several other cases the results of these operations, supplemented by various medical treatment, have been far more complete and satisfactory, bringing about a practical cure, and enabling the sufferer to return to his abandoned occupation.

VARICOCELE AND ITS RELATION TO NEURASTHENIA.

The relation of varicocele to spermatorrhœa and other disturbances of the genital system does not seem to have been clearly understood. My studies lead me to the conclusion that varicocele is a *result* of spermatorrhœa, or, more strictly speaking, of the prostatic disease of which spermatorrhœa is a complication. The irritation proceeding from the prostatic urethra causes relaxation and a wet-rag condition of the veins of the scrotum, usually on the left side.

Varicocele, when it exists, may be accompanied with sweating of the scrotum, and also with pain; but we have no evidence that it causes any important symptoms of itself, either local or general, and those who expect that a cure of this condition will cure the other symptoms of sexual neurasthenia will be disappointed. I have been consulted for a case of spermatorrhœa where there had also been varicocele, and this varicocele had been operated upon very successfully; the operation cured the varicocele, but otherwise the patient had not been at all benefited, and I see no reason why he should have been—the varicocele was a *result, not a cause,* and the treatment needed to be directed to the cause more than to the result. It is entirely proper to remove varicocele, if it be possible; but it is not well to depend upon its removal for the cure of neurasthenia, any more than it is to depend upon cutting strictures or operating for phimosis for the relief of the same symptoms. All operations of this kind are to be considered in cases where malformation exists, and are often to be performed, but always with the understanding that they are the incidents of the treatment and not the treatment itself, and it is my rule always to have this understanding with the patients, with their physicians, and their friends.

SEXUAL NEURASTHENIA IN WOMEN.

The question has several times been asked me by physicians, whether sexual neurasthenia in woman resembled that in man? The answer is clear: woman is man, pathologically; all the symptoms of sexual neurasthenia, as described by me here or elsewhere, are found in females as well as males, though they are not as frequent, perhaps, among the former. A young girl who masturbates is liable to have precisely the same symptoms that a young man will have who indulges in the same habit. I have had under my care two ladies, both of whom were masturbators, and both of whom presented symptoms which give no suggestion of any distinction in sex. Take the following cases:

Case XXXI.—A lady, between thirty and forty years of age, of a very decided nervous diathesis, presented these symptoms: dilated pupils; frequent micturition; vertigo, especially in reading; neurasthenic asthenopia (this was probably one of the causes of the vertigo); pain in the vertex. It has been supposed that this last symptom—pain in the vertex—was peculiar to woman, but, as I have again and again stated, it is often found in man. Attacks of mental depression; monophobia, or fear of being alone, combined with unnatural and excessive fear of death; averted eyes; pain in the back of the head; ovarian tenderness, and scanty menstruation.

As will be seen, none of these symptoms, except tenderness of the ovaries and scanty menstruation, give any suggestion of the sex. The appearance of the patient was more striking than the description of the symptoms. She had the symptoms of a man, although not at all masculine. With regard to causation there was no question, as it was freely admitted by the patient. In this case, also, anæmia was combined with the neurasthenia.

Case XXXII.—A lady, in middle life, unmarried, began to masturbate at a very early age—much before puberty—and kept it up, off and on, for very many years. The lady was of nervous diathesis, and there had been nervous diseases of various kinds in the family. This habit, acting upon a nervous constitution, had produced the following symptoms: aversion of the eyes; a feeling of fulness in the head; morbid fears, especially monophobia—fear of being alone; melancholia, delusions; anæmia; insomnia.

There was nothing in the symptoms that suggested

the sex. The same habit, acting on the same nervous diathesis in a man, would have produced all these symptoms. In this case, also, there was some trouble of the genital organs, just as in a man there would be trouble with the prostate gland, or varicocele. Pathologically, also, the prostatic urethra is a good analogue to the uterus. As it is almost impossible for any man to suffer from general neurasthenia, whatever be the cause, without developing, sooner or later, some trouble with the prostatic urethra, so, also, it seems to be almost impossible for any woman to suffer from general neurasthenia without developing, sooner or later, primarily or secondarily, some trouble of the womb or of the ovary. In man, the trouble of the prostate may not be of an important character; it may be far out of range of any diagnosis with the finger through the rectum; there may be no enlargement, but simply irritation, yet severe enough to make a man an invalid. So, in woman, the difficulty of the womb or ovary may be of a slight character; there may be no great congestion, no retroversion, no retroflexion, no displacement, no enlargement of the ovary, no positive inflammation, but still enough hyperæsthesia to be a constant source of irritation. Just as, in man, masturbation may expend its injurious effects, in some cases locally, inducing merely local disease, without any very great amount of general disease, so, in woman, masturbation may produce sometimes purely local effects, at other times both general and local.* In the following case the effects were mostly local.

Case XXXIII.—There had been an early habit of masturbating. The patient was of a nervous constitution. The symptoms were: ovarian irritation on the left side especially; a very considerable amount of backache; prolapsus and retroflexion of the womb; sick headaches; feelings of fulness in the head at times.

There was nothing here, except the local troubles, to suggest sex. The troubles and the symptoms, aside from the sick headaches, were of a local character. In woman, as in man, masturbation of itself, acting on a very strong constitution, does not, even when kept up for a long time, necessarily produce any serious local or constitutional effects; it is the masturbation acting on a nervous diathesis, it is the habit *plus* a nervous constitution that gives us the product, sexual neurasthenia. Strong, phlegmatic, Irish servant-girls may begin early the habit of abusing themselves and keep it up for years, with but little apparent harm. Indeed, one quite common habit with this class of servant-girls is to teach the children under their charge, with whom they are brought into relation, the habit of masturbation. I have known a number of cases that traced the beginning of their habit to this intimacy of the servant-girls with them. While the girls themselves were not injured, their victims, in some cases, have been life sufferers. The range for endurance of sexual excitation is wonderfully wide, there being, as it would appear, a far greater difference in the capacity of different persons for indulgence in this respect, than, perhaps, in indulgence in the appetite for food, or smoking, or drinking. For example, I was lately consulted by a man nearly sixty years of age, who, by a fall, had injured his spine so that his sexual power was impaired. On inquiry, I ascertained that he could still have intercourse three or four times a week, and when I stated that it seemed to me that in one who could do that there was not very much impairment, he said that for all his life he had been accustomed to have intercourse every night. On the other hand, I have seen very many cases to whom the sexual act is poisonous, who cannot bear intercourse or excitation in a natural way, even infrequently, who are injured by it, no matter how rarely performed, and to whom, therefore, marriage cannot be recommended, except with the understanding that the marital rights should be fulfilled but very infrequently indeed. For this reason, the indiscriminate prescription of marriage for cases of sexual neurasthenia is, like the indiscriminate recommendation of medicine of any kind, oftentimes unwise and unscientific.

UNDER-ESTIMATE AND OVER-ESTIMATE OF SYMPTOMS.

It is the common belief that patients suffering from this form of disease, magnify—create symptoms which really never existed. This belief is an erroneous one; there are more persons who overlook many of their symptoms, forget them, or regard them simply as signs of health, or at least not as signs of disease, than of those who create symptoms that do not exist, or over-estimate their importance. There are many, for example, who for years have had such symptoms as sweating scrotum, sweating hands (palmar hyperidrosis), mild costiveness, mild insomnia, cold hands and feet, frequent urination, abnormal erectile excitability, pain in the perineum, dryness of the hair and skin, with slow reaction of the skin, neurasthenic asthenopia, flying pains in different parts of the body, who never think of any one or all of these symptoms, do not worry over them, do not refer them to the prostatic gland, or to any irritation proceeding therefrom; who do not, indeed, regard them in any sense as evidences of disease, and never, therefore, consult a physician for them; yet all these phenomena are symptoms of a pathological state; they are not the phenomena of health. They are not usually serious or fatal, although they may, in time, lead to symptoms that are serious; they are consistent with great activity of mind and body.

There are those who, having suffered during life from these and allied symptoms, have never known what real health is; they have no means of comparison; for all they know that every one has just such sensations and experiences.

On the other hand, there are some, but they are not the majority, who over-estimate these and allied symptoms, who fear that they have impending paralysis, or softening of the brain, or some disease that shall cripple or destroy them; and these patients have been taken as the type of the class. I see both kinds—those who over-estimate and those who under-estimate the significance of their symptoms. One of the difficulties of getting a full history of cases of this kind is, that patients forget the symptoms they have passed through; so little impression have they made upon the mind that only by considerable effort can they recall them.

In those cases where hypochondria is a symptom, that is, morbid fear of disease, this morbid fear is itself a symptom, just like sweating hands and scro-

* The following passage from Erichsen, on concussion of the spine, is instructive: "A person who, by any of the accidents of civil life, meets with an injury by which one of the limbs is fractured or dislocated, necessarily sustains a very severe shock, but it is a very rare thing indeed to find that the spinal cord or the brain has been injuriously influenced by this shock that has been impressed on the body. It would appear as if the violence of the shock expended itself in the production of the fracture or the dislocation, and that a jar of the more delicate nervous structures is thus avoided. I may give a familiar illustration of this from an injury to a watch by falling on the ground. A watchmaker once told me that if the glass was broken, the works were rarely damaged; if the glass escapes unbroken, the jar of the fall will usually be found to have stopped the movement."

tum, or premature emissions, cold hands and feet—a result of the exhausted condition of the brain—and, like all these other symptoms, they disappear as the brain becomes stronger.

Those persons who intellectually over-estimate their symptoms from ignorance, are cured by simply informing them of their mistake; in such cases a single interview with a physician in whom they have confidence removes the burden of a lifetime. Those who emotionally over-estimate their symptoms from morbid fear or hysteria, will continue to make such over-estimate in spite of our reasoning with them, until such time as the brain becomes invigorated by rest, treatment, and hygiene.

The original and exciting cause in cases of sexual neurasthenia is usually irritation of the prostate gland, but many of the above symptoms come from the brain and spine, to which the prostatic irritation has extended. Such persons require, then, both local and general treatment—local treatment directed to the brain, the spine, and digestive system.

STRYCHNIA A PARALYZING AGENT.

Proofs from Authentic Experiments.

By THOMAS W. POOLE, M.D.,

Lindsay, Ont., Canada.

It was Dr. Anstie who wrote of strychnia, that it had been somewhat hastily classed as a spinal stimulant, not because it had been shown to be such, but "merely in deference to preconceived ideas as to irritability," which ideas might themselves be entirely erroneous.

"The researches of Dr. Harley were the first scientific attempts" to explain the action of this drug, and what he found was that strychnia prevents the oxygenation of the blood. This is an effect which Dr. C. B. Radcliffe states "may, in one sense, be looked upon as equivalent to loss of blood, for blood which cannot become arterial is as good as lost to all purposes of life." It is a change which, Dr. Anstie remarks, "can hardly be supposed to communicate increased force to the nervous system." ("Stim. and Narcot.," p. 72.) Indeed, if the symptoms of strychnia-poisoning, and those of impending death from sudden hemorrhage be collated side by side, there will be found a remarkable similarity between them.

It is not, however, to general considerations, but to the actual facts of physiological experimentation, that an appeal is here to be made to prove the paralyzing action of strychnia. One of these facts was mentioned in a previous paper ("Electricity a Paralyzing Agent"). It is, that in a frog poisoned by strychnia, the spasms and convulsions may be promptly arrested by the thrust of a piece of whalebone, or of a wire, into the spinal canal, so as to destroy the cord. This result, at first sight, would appear to be adverse to our thesis, since it may be said, if strychnia be a paralyzer of the cord, the destruction of that organ ought simply to intensify its effects on the muscles rather than to arrest them.

But other considerations come into play here. There is good reason to believe that the motor nerve-trunks bear, in some respects, a similar semi-independent relation to the spinal cord as the latter bears to the brain, and that when the disturbing influence of the action of strychnia on the cord is prevented, by its destruction, from extending itself along the motor nerves and paralyzing them, these motor nerve-trunks regain their former molecular state, and with this their control over the muscles.

It is easy enough to justify this doctrine. In its favor might be quoted the modern (erroneous) teaching, that the cord and its motor nerves may be found in the very opposite conditions of excitability, as when the cord is said to be excited and its motor nerves paralyzed by atropia. (Dr. Ringer: "Ther.," p. 462.) But its further and more complete justification is to be found in the fact that the peripheral nervous system does not grow from the spinal cord as branches from a tree, but that the first development of these nerves is at the periphery, and that they grow toward, and finally attach themselves to the cord. Dr. Thomas Laycock, professor of medicine, psychology, etc., in the Edinburgh University, states it to be "a general fact, deduced from clinical observation and experimental research, ... that not only do the tissues themselves undergo normal vital changes independently of nerves or of a nervous system, but also that *nerves and nerve-fibrils perform their appropriate functions independently of nerve-centres.* Nerves are produced anew in organized plasma, and join on to the general trunk in accordance with the order of embryonic development of the nerves from the periphery to the centre. MM. Philipeaux and Vulpian made numerous researches, which prove that nerves separated wholly from the nerve-centres, and completely altered as to nutrition, may become regenerated, although remaining separate, and recover all their vital properties. *Numerous experiments, also, on the nerves of muscles, show that those motor nerve-fibrils have their own inherent properties in entire independence of brain, spinal cord, or nerve-centres,* and not only in separated limbs but in muscles that have been cut from the limbs." (*Medical Times and Gazette, Braith. Retros.*, Jan., 1872, p. 58.)

With these facts before us, the foregoing explanation of the effects of pithing in arresting the convulsions of strychnia-poisoning is at least equally valid as the explanation that this operation puts an end to the stimulating action of strychnia on the cord and its motor nerves.

Having disposed of the objection which this experiment might furnish to some minds, I proceed to more direct evidence. It is unnecessary to trouble the reader with the proofs that "strychnia does not act on the muscles, the nervous extremities, or on the nerve-trunks," and that "it does act on the nerve-centres of the medulla oblongata and medulla spinalis." (Stillé and Maisch: "Nat. Dispens.") This is universally admitted. It is well, however, to point out how singularly physiological writers sometimes misinterpret the results of experimentation.

Dr. Ringer writes: "After division of one sciatic nerve, strychnia excites tetanus in every part of the body except the limb supplied by the divided nerve." Dr. R. holds that "as the vessels of this limb are undivided, its unconvulsed muscles and nerves are as much poisoned by strychnia as those parts which are convulsed." ("Therapeutics," p. 499.)

This can hardly be true. Like causes produce like effects; and where the effects differ, there must be a modification in the cause. The distal portion of the cut nerve cannot receive a paralyzing wave from the cord from which it is separated by section; so that this source of paralysis (or stimulation) is cut off. If it still holds true, as stated by Dr. W. B. Carpenter, that the membranous sheath of the ultimate nerve-fibre is not penetrated by blood-vessels, then there is good reason why this cut nerve should escape the influence of the poison, at least for a

time, and so continue to retain its control over the muscles, as a consequence of which they do not pass into spasm. The *facts*, as stated by Dr. R. are undoubtedly true, but the *inference* he draws from them is obviously erroneous, even from his own standpoint; for the foregoing considerations hold good whether the impulse passing along the nerve be paralyzing or stimulating. Here is another experiment:

"If all the tissues of the frog's leg, except the nerve, are tied, and the parts beneath the ligature protected from the poisoned blood, all parts become tetanized. But the convulsions cease sooner in the poisoned than in the protected leg, the motor nerves of the former having been paralyzed by the strychnia-containing blood." (Ib., p. 500.) False induction again! If "all parts become tetanized," it is evident that no part can have been really "protected" from the poison. The ligature on "the protected leg" has only protected its muscles, on which strychnia does not act. The nerve of this leg, which was left free, has conveyed the paralyzing wave from the cord to the muscle, which has been tetanized accordingly, just as if no ligature had been applied. But this is not all. The reason assigned why "the convulsions cease sooner in the paralyzed than in the protected leg," is that "the motor nerves" of the poisoned leg "have been paralyzed by the strychnia-containing blood." (Dr. Ringer here uses the word "*paralyzed*" no doubt quite inadvertently; he should have regarded the nerves as *stimulated*, from his point of view.) But the free motor nerve of the ligatured limb is paralyzed also, as has been shown above. It could not have escaped, owing to its free communication with the poisoned cord, and from the fact that "all parts are tetanized." What then becomes of this explanation of the earlier cessation of convulsive spasms in one leg than in the other, seeing neither has been really protected and the muscles of both have been tetanized? The explanation is defective because it is not based on the actual conditions present.

Here is the true explanation. In the ligatured limb, while the main, free, nerve-trunk has been paralyzed through its connections with the cord, the lesser motor nerves have been protected by the ligature, which, besides excluding the poisoned blood, has cut off the paralyzing wave which without it would have reached them from the cord. These nerves, then, retaining their vital activity, maintain for a longer time their struggle with muscle than do the nerves of the non-ligatured limb, which are all poisoned, and succumb early, setting free the contractile power of the muscle so suddenly and completely, that from the last spasms of life it passes almost at once into the contractions of rigor mortis. This is really how "the convulsions cease" in the limbs of animals dying of strychnia-poisoning.

I have had a double object to serve in thus delaying the reader from the main facts of this paper: first, to show him that the conclusions and explanations of the text-books, even when made with an air of accuracy and *quasi* scientific authority, are not always to be trusted, and are often erroneous; and second, to make it manifest that the theory I advocate has nothing to fear from physiological experimentation, with the facts of which, when rationally interpreted, that theory is in full accord.

The experiments just discussed prove, what indeed is universally admitted, that strychnia acts upon the muscles, from the cord, through the agency of their motor nerves. What is the character of this action on the motor nerves? Let Dr. Ringer answer.

"After traumatic and strychnia tetanus *the functions of the motor nerves and muscles are depressed: the motor nerves conveying impressions imperfectly*, and the muscles by direct galvanic stimulation contracting imperfectly and becoming stiff early from rigor mortis."

But may not this motor nerve depression be due to *excessive previous excitation*, which has exhausted the nerves? (This is a mode of explanation very commonly offered.)

Dr. Ringer says no!—and he justifies this answer as follows: "Strychnia apparently *directly depresses the motor nerves*, for large doses kill without exciting convulsions, when *the motor nerves are found to have lost their conductivity*." This "loss of conductivity," in the language of physiological experimentation, means *paralysis*. It is a state in which the nerves have "lost their power to receive impressions or to transmit them."

As a further proof that this depression of the motor nerves is not due to previous excitation, Dr. Ringer adds,—"When the sciatic nerve is divided, thus protecting the limb from convulsions"—the absence of convulsions indicating the absence of previous exhausting excitation—"the divided sciatic loses its irritability, though not so soon as the undivided nerve." (Ib., p. 500.)

These statements of Dr. Ringer, as to the depression, loss of conducting power, and consequent paralysis of the motor nerves, directly induced by strychnia, are confirmed by others. Dr. W. A. Hammond writes: "An experiment performed by myself and my friend and collaborator, Dr. S. Weir Mitchell, shows that *the action of strychnia is to destroy the nervous excitability from the centre to the periphery*." Here is the experiment:

"Under the skin of a large frog, whose left sciatic nerve was previously divided, a few drops of a strong solution of strychnia were introduced. Tetanic spasms ensued in two minutes. After forty-five minutes the nerves were irritated by galvanism. That of the left side, which had been cut, responded energetically, while no motions could be produced through the uncut one. The former (the cut nerve) remained excitable for two hours later." ("Dis. Nerv. Syst.," p. 539.)

The reasons for the exemption of the cut nerve from the poison have been stated above, in dealing with a former experiment. So long as the vital activity of the nerve remained, to be temporarily suspended by electricity, so long the muscles contracted. The uncut nerve was so thoroughly paralyzed that electricity could suspend its action no further, and consequently no additional contraction could be produced.

Strychnia is here shown to be so bad a stimulant that it so paralyzes the nerves as to deprive them of their power of conduction; and electricity is so poor a substitute for nerve-force, that it is perfectly powerless to cause a muscle to contract, unless where nervous activity is present in the nerve, and its still lingering control over the muscle may be further suspended.

Now, if the facts here shown on the authority of reputed experimenters be true—and there is no reason to doubt the facts they offer—what do we find established regarding the action of strychnia?

That it prevents the oxygenation of the blood.

That it produces effects equivalent to the loss of blood.

That, like electricity, it hastens the onset of rigor mortis.

That it depresses the functional power of the motor nerves, so that they convey impressions imperfectly.

That it "destroys the conductivity of motor nerves from the centre to the periphery." That it does this *directly*, and not simply as the reaction from previous excitation.

It will be obvious that while strychnia is doing this, it cannot be acting as a stimulant. It is precisely while acting in this way that it induces spasms and convulsions of the muscles ending in tetanus. These spasms and convulsions cannot, consequently, be due to a stimulus passing along the nerve to the muscle. The conclusion is inevitable, that, by this depression of motor power in the nerves, their functional activity is arrested, and the muscle is set free to exert its independent contractile power. No other conclusion is possible from the authentic facts of the case. There has never been any proof adduced that strychnia is a spinal stimulant, and the production of any such proof is impossible. When such proofs as these of the paralyzing action of strychnia appear at the hands of experimenters, involuntarily pledged by their early teaching, by their daily associations, by the literature which surrounds them, and, perhaps, even by their acquired reputations, to regard strychnia as a stimulant, what additional proofs of its paralyzing effect might not appear, could these prepossessions be entirely dispensed with.

And since such proofs as these are extant, what explanation have the leaders of medical thought to offer for having ignored them, and for having adhered to the figment of the ancient doctrine of a vital irritability residing in the tissues as something apart from and independent of the functional condition of these tissnes?

Here is an example, selected almost at random: "Irritability of the nervous centres is the precursor of exhaustion." . . . "The centres of respiration becoming exhausted are abnormally irritable." (Dr. Fothergill: "Antag. of Ther. Agents," p. 57.) These two phrases occur in successive sentences. Irritability is the *precursor* of exhaustion, and exhaustion is the *accompaniment* of irritability! By being "abnormally irritable" is here meant acting with undue vigor, because the condition the author is discussing is one of spasm, and it is a part of the teaching of the day that "over-activity of a nerve displays itself in spasm." (Dr. J. R. Reynolds: "Lec. Elec.," p. 24.)

But an exhausted nerve-centre cannot be generating and "discharging" an excess of nerve-force in stimulating shocks upon the muscle. This is a physical impossibility. From whence, then, comes the "preternatural stimulus" which the muscle is said to be receiving? From "the irritability," the modern Archæus, which is excited, and takes advantage of the exhaustion of the nerve-centre, and comports itself accordingly, and has in its various moods to be soothed, or stimulated, or cajoled, like the other "imaginary demon," its former prototype!

It will not do to assume (in justification of the doctrine of "irritability") that there are two kinds of nerve-force, one healthy and the other morbid, and that one of these becomes active as the other declines. There is no room for such a supposition in the entire range of physiology. This would, after all, only be a modern Archæus in disguise. Nerve-force is the product of nerve-cells, and is either present or absent. It is never in excess and in abeyance at the same time. It has no *alter ego* to take its place and mimic its functions, or exaggerate them in its absence. To entertain the idea of a weak condition of a nerve-centre, as accompanied by "increased irritability," is to regard the latter as a something apart from and independent of the proper function of the part; it is, in fact, to regard it as a substance, or entity, or Archæus, and is simply to echo the exploded notion of a by-gone age. It is time that this relic of antiquity were expunged from modern medical literature.

Like all great truths, this truth of the paralyzing character of strychnia will be found to be in complete accord with all the minor facts bearing on the subject.

"Strychnia affects paralyzed, sooner than unparalyzed muscles," writes Dr. Ringer: but even this short sentence is inexact. Strychnia does not affect the muscles, as Dr. R. himself shows; and the muscles are not paralyzed in the cases to which he refers. What he means is, that strychnia induces twitches and spasms in muscles whose nerves are enfeebled, sooner than in muscles whose nerves are acting normally. Why is this? If strychnia were a stimulant, would it not sooner excite vigorously acting nerves than enfeebled ones? But since its effect is to cause "depression of the motor nerves," nerves already suffering in this way have their vital activity more easily extinguished, and their muscles set free, than is the case with healthy nerves. The same thing is equally true of the other paralyzer, electricity. Twitches, tremors, spasms, and tetanus are all but varying stages of nerve-paralysis and of muscular freedom.

This latter fact is verified by the treatment of these states. Our "antispasmodics" are stimulants (Anstie). Dr. Hammond classes "stimulants" as the most curative agents in tetanus; while dilute alcohol is rapidly coming to the front as the best antidote to strychnia. "Dr. Huseman has confirmed the experiments of Amagat, that in cases of poisoning by small doses of strychnia, the treatment with alcohol is to be preferred to the treatment with chloral. The reason for this is that the quantity of alcohol required to neutralize the small but fatal dose of strychnia is not dangerous to life, although such may be the case from the amount of chloral administered." (*Practitioner, Amer. Jour. Med. Sciences*, October, 1879, p. 587.) The foregoing are very strong corroborative facts, which are entitled to much weight in this discussion.

But if strychnia be a paralyzer, how are its use and value to be accounted for in paralytic states? Its indiscriminate use in these cases is not commended. Peripheral paralysis is, more or less, frequently dependent upon a congestive or hyperæmic state of the nervous centres. Dr. Fothergill states that strychnia produces a contraction of the arterioles, which would account for its utility in some cases, after the manner of ergot, aconite, and other paralyzers; for this is not the effect of a stimulant on the arterial system.

Dr. Anstie believed it to be "a nearly universal rule that doses of strychnia which fall short of producing any poisonous effect, increase the activity of the systemic circulation, diffuse a comfortable feeling of permanent warmth over the body, and favor the progress of local nutrition, when this is absent." This is doubtless quite true. People do not resort to strychnia while in health, and in certain abnormal bodily conditions something very similar may be said of paralyzers like opium, atropia, and digitalis. Given a relaxed condition of the systemic vessels, with a consequent sluggish blood-stream, drugs of

this class, by a moderate depression of the vaso-motor nerves, proportionately release the arterial muscle from the dilating influence of these nerves; a contraction of the muscle follows, reducing the calibre of the arterial tubes, increasing blood-pressure, quickening the circulatory stream, sweeping along effete particles to be oxygenated or expelled, and thus producing the beneficial effects referred to by a species of *quasi* stimulation, but in reality in strict accordance with the paralyzing character of these drugs. The explanation of the minor differences in the effects of these drugs in accomplishing this general result, common to them all, is to be sought in the different portions of the vascular nervous system which they respectively assail; a subject on which, as yet, information is but very meagre.

It will be seen from this, that the *quasi* "tonic" effects of strychnia, as well as of digitalis, atropia, and other drugs, so far from furnishing an argument against the theory here advocated, admit of an explanation, on its basis, more truly scientific and physiological than is to be found in an exposition of their action which requires us to believe that while stimulating one portion of a nerve they are paralyzing another portion, or that they are constantly reversing their mode of action in first stimulating and then paralyzing.

I would like to close this paper with some passages from the late Dr. Anstie's "Stimulants and Narcotics," which lend a strong confirmation of what is here advanced; but I forbear, and simply refer the reader to the pages of that work, in which it is more than once strongly hinted that "the true action of vital force would appear to be rather that of restraining muscular contraction than of exciting it" (p. 70).

MEDICAL PRACTICE IN JAPAN, OLD AND NEW.

By DUANE B. SIMMONS, M.D.,

YOKOHAMA, JAPAN.

THE medical practice in Japan to-day is represented by two systems, the old and new, or the Chinese and foreign. Both are borrowed, as their names indicate—the former from their celestial neighbors, and the latter from Western nations.

The origin of the Chinese system dates back to a very early period, and was introduced by refugees, emigrants, and Buddhist missionaries, along with letters and the arts and sciences, while the Japanese were yet a semi-barbaric people. Until the country was opened to foreign intercourse, in 1859, the principles and practice of the healing art taught by the Chinese had undergone comparatively little change.

The wonderful progress that has been made by the Japanese since that time, in all that pertains to modern science, is too well known to be repeated here. We may say, however, that in no department of knowledge is the progress more apparent than in the theory and practice of medicine. Not only is every encouragement possible offered by the Government for its study, but the medical officers in all departments directly under its control are required to practise the foreign system, and all who propose to enter upon the profession from *this time* must pass an examination before censors appointed by the chiefs of the prefectures where they reside. The Imperial College, at Tokio, has a corps of twelve German professors, and the course of study, including the German language, is ten years. A course of three years, conducted by Japanese professors (for the most part educated in Europe) and in the Japanese language, has also been instituted in the same school for those who have not the means to complete the extended one under foreign teachers.

Nearly every prefecture and all the large cities have hospitals conducted on the general plan of Western nations, one of which I had charge of for eight years. A portion of these only, however, have foreign teachers.

Private enterprise has translated into Japanese, from the European languages, one or more books on the various branches of medicine and surgery and collateral sciences. Among these are some large works, such as Gray's "Anatomy" and Tanner's "Practice of Medicine." The majority of the translations, however, are compendiums like Neil and Smith and Hartshorne's "Essentials of Medicine," the latter having a very extensive circulation, exceeding by far any of the others. There are also a number of medical journals published in Japanese, and a translation of Cutter's "Physiology and Hygiene" is one of the text-books ordered by the Government for all the public schools in the empire. Notwithstanding this, a vast majority of all the doctors of the country, or about seventy-nine per cent., still adhere to the practice of the Chinese system, and will continue to do so for many years, from the fact that the Government requires *no qualification of those who have been in practice up to the present time*. The worst feature of this mistaken policy is that by far the greater portion of these are the merest pretenders and quacks of the worst sort, ignorant often not only of the Chinese characters in which the medical books are all written, but of their own written language.* For this reason we find the medical profession in former times held at a very low estimate, and so it is still, by the great mass of the people.

Worthy of no confidence, it receives none, and consequently a protracted case of illness is almost sure to pass through the hands of a number of doctors whose names, even, I have often found the patients unable to give. For slight ailments, however, a vast majority of the people patronize the numerous medicine-shops, whose keepers usually belong to the class of *irresponsible* medical men already referred to, and who "counter prescribe" for their customers, or supply them with some of the numerous nostrums which are everywhere for sale in great numbers. Professional services are not paid for by a fee, but by the profit derived from the medicine furnished. Hence, each doctor does his own compounding and dispensing. Unfortunately, custom requires him to charge by the day for medicines, the rate of which is fixed, in some localities, at from four to six cents. This is still the custom with the old-school doctors, and prevails in the rural districts and to some extent in the cities. As a natural consequence, great economy has to be exercised in the mode of prescribing. Hence, no tinctures or mixtures requiring bottles and corks are used, but all medicines are dispensed in the form of pills, powders, and little packages of roots and herbs, to be made into infusions by the patients themselves. Instead of boxes

* I have long urged on this Government the necessity of protecting its people from this class of doctors by requiring of them at least an elementary knowledge of the principles of scientific medicine. Though I feel quite certain that a majority of the Cabinet would be glad to do so, it hesitates, because of the opposition it would be sure to meet from quite a number of physicians of the Chinese school, who still find favor with not a few of the members of the Imperial court.

for pills and ointments, small clam-shells are used. Very small pills is a favorite mode of administering all medicines which can be made into them. Their manufacture is followed by some as a business, to whom the doctors send the mass to be treated. For this purpose a somewhat ingenious contrivance is used, consisting of copper plates perforated with holes of various sizes. The mass to be made up is firmly pressed against these plates till portions protrude through the holes, when they are cut off by a single sweep of a thin-bladed knife and the bits rolled round in the palm of the hand with the ends of the fingers. As the drugs used are not often very powerful, this mode of manufacturing them into pills is sufficiently accurate for all ordinary purposes.

The expensiveness of foreign drugs, and the necessity of using bottles and corks, has led to the abandonment, by the doctors of the new school, of the day system of charging for medicines, and the adoption of the one of taking pay for each prescription, so that their profits have been largely increased—some collecting as high as two or three thousand dollars a year, whereas the old-style men rarely ever succeeded in making more than a living, and a poor one at that.

Some of the new-school men have also attempted to demand a fee from their patients. In all but a few cases, however, this has been abandoned, for, though the people are willing to pay dear for foreign medicine, they object to any other mode of professional compensation (except to foreign doctors) than that embraced in their price. Well-to-do and grateful patients, however, usually present their doctor with small sums of money, but more often this gratuity consists of a box of eggs, a fowl, or a small piece of silk or cloth.

The doctors of the feudal lords, however, occupied the position of retainers, and received a stipend in rice sufficient for their support. These in turn repaired daily to the castle, and remained in attendance till relieved by others. Their duties were to look after the health of the whole household, and especially that of the Prince, whose pulse, in both arms, was daily long and carefully studied, this being the principal and almost only means, according to the Chinese system, of diagnosing disease.*

If by chance the doctor should find him ill, great solicitude immediately fills the minds of all his numerous household and retainers. This was especially exhibited in the elaborate ceremonies to be gone through with when a consultation was called. My own experience on these occasions has been exceedingly interesting, though hardly of a nature to admit of detailed description in a medical journal.

A fact worthy of notice, however, is that on every occasion the patients were found to have studiously avoided the use of water—even for washing the tips of the fingers or cleaning the teeth; the hair, beard and nails were never cut, or the latter cleaned till convalescence was established. If the illness has been a protracted one, the condition of the patients may be better imagined than described—a condition which was strangely constrasted with the exquisite cleanliness of the apartments, the richness of the silken garments and entire bed and bedding of the same material. There is no custom more deeply rooted in all classes of Japanese than this one of not washing when ill. Even the doctors of the new system refrain from insisting on personal cleanliness in their patients as a hygienic measure, as their dismissal would almost certainly be the penalty.

The old-school men also never permit their patients to drink cold water. Great attention is paid by them, however, to the diet, even in mild cases; and when the disease is severe, all food except soft-boiled rice (so diluted with water that it can be drunk) is forbidden for days together. Stimulants and tonics in any form are never administered, no matter what the form or stage of the disease. Hence it is that nearly as many sick die from inanition as from the disease, a fact admitted by all who have come over to the new system and adopt the supporting plan in the management of their cases.

It is impossible to estimate the deleterious effect of this starvation plan of treatment of diseases of all kinds in a country where a purely vegetable diet is next to universal. No wonder, we may add, that the population of this empire has fallen far short of the normal rate of increase observed under much less favorable circumstances of soil and climate.

Though this would appear to be the place to give a description of the theories of the Chinese school of medicine, we shall not enter upon it now. Suffice it to say that, in its elaboration a perverted system of thought has led its disciples to waste intellect and opportunities in groping after tortuous explanations of natural and morbid phenomena, and the complex relationship of the five pseudo-elements of Chinese philosophy.

The therapeutics of the Chinese school, however, is more rational, in that experience has led its disciples to use a variety of drugs of undoubted efficacy in disease, such as cathartics, diuretics, diaphoretics, sedatives, astringents, antispasmodics, emetics, etc., some of which, if not already adopted by Western nations, might form valuable additions to its materia medica. For example, the use of aconite (lately lauded so highly in the West for certain forms of neuralgia), and of mercury in syphilis, is undoubtedly of Chinese origin. So universal has it been the custom of the disciples of the old school of medicine in Japan to use mercury in the treatment of all venereal sores, that, in nearly twenty years of hospital and private practice among the natives, I have rarely met with one who has ever had a chancre, who has not been thoroughly mercurialized by stuffing the nostrils with cotton or paper saturated with the drug.

Most of the doctors of the new or foreign system, however (who, by the way, reject everything good or bad in the old), have, for the most part, not only abandoned this mode of treatment of syphilis, but have gone to the other extreme of not using mercury in any form, relying entirely on iodide of potash for its cure in all its stages. With the generally accepted opinions as to the value of this drug in the treatment of this disease, there is little doubt but those suffering from it will, for a time at least, gain little by this change of practice.

In surgery, even prior to the opening of the country in 1859, the Japanese had made some feeble attempts, and a few monographs are met with in which individual efforts in this direction are detailed, and even illustrated. Tumors of the breast and lipoma, when seated on the back and shoulders, were attacked by the knife. Quite a number of minor operations, such as the strangulation of hæmorrhoids and fistulæ by the ligature, and even paracentesis of the bladder for retention of urine, were occasionally performed. Most, if not all those who had attained

* This practice is still carried out with the Emperor by a staff of ten of the leading doctors of this capital, each receiving a monthly salary of about $200. Though these are all physicians of the new system, some of H. M.'s household, it is said, still have little or no faith in them, and send for the adherents of the Chinese school when ill.

this proficiency, however, had been students of the Dutch surgeons who were stationed at Nagasaki. Very soon after the country was opened, some half-dozen men were sent to Europe to be educated in medicine. One of these, on his return, founded a private hospital in Tokio, and has done some very creditable work as an operating surgeon.

Obstetrical practice in Japan is in the hands of professional midwives. When labor commences, the patient is placed on her knees, supported by a pile of cotton mattresses at her back. The midwife presses down upon the abdomen during the pains, in aid of the expulsive effort. The patient is allowed gradually to assume the recumbent position, and on the twentieth or twenty-first day, if all has gone on well, takes a bath and resumes her duties.

I see that both pressure on the uterus during labor, and an elevated position of the head and shoulders after confinement, are being advocated by some of our Western obstetricians.

It may be remarked here that I have never seen a case of puerperal fever in Japan. It would be too much to say it never occurs; but, unless rare, it would most certainly have been encountered in daily consultations for over ten years with the native doctor, in grave cases of all forms of disease. It is an interesting question as to how much the position referred to, by favoring the free discharge of the lochia, may have to do with this apparent rarity of septic poisoning in lying-in women. Version has long been resorted to by the Japanese doctors, also hooks, wires, strings, etc., for effecting delivery when the natural efforts failed of its accomplishment.

The numerous mineral and hot springs of the country are patronized by thousands for the relief of a great variety of diseases, especially for those of the skin, syphilitic and rheumatic affections, and leprosy. Quite as much harm as good is often done, however, by their too frequent use, when the water is at a very high temperature. A domestic remedy of very extensive application for muscular pain, or, as it is more commonly expressed, a tired feeling in them from any cause, is pinching, kneading, and tapping with closed fists. To this business almost the entire blind population, both male and female, devote themselves, and from their dress and well nourished appearance have no lack of occupation. Moxæ are also applied for a great variety of supposed diseases, usually as a counter-irritant, but sometimes as a revulsive; thus, for pain in the head a moxa is oftener burned on the tip of the great toe. For neuralgic pains, acupuncture is practised, and with good effect in many cases—occasionally, no doubt, by the accidental puncture of a nerve-sheath, thus relieving it of pressure from accumulated serum. In two cases I have known alarming symptoms to have occurred from the deep penetration of the long, slender needles used for this purpose, between the cervical vertebra.

Cremation in Japan.—Miss Bird, the author of "Unbeaten Tracks in Japan," visited a cremation-ground at Kirigaya, where a large number of cremations are constantly going on under the direction of Buddhist priests. The crematory is a plain building with a high roof and chimney. The bodies are placed on granite supports and fires of faggots built under them. The bodies are reduced to ashes in the course of twelve hours, and, owing to the height of the chimneys, there is no offensive smell. The cost is very slight, being only from seventy-five cents to three dollars.

DISLOCATION OF THE ACROMIAL END OF THE CLAVICLE DOWNWARD.

By J. X. ALLEN, M.D.,

OGDEN, UTAH.

This dislocation is extremely rare—so rare, indeed, that Professor Hamilton declares there are but three cases recorded, one described by Melle, in 1765, the second by Fleury, in 1816, and the third by Toomel. I not only had never seen this singular dislocation, but had never considered it possible until my attention was called to the case which I am about to lay before your readers. A little reflection will show how extremely difficult it is for a force to be so applied (without producing a fracture or dislocation of a frailer or contiguous bone or articulation) as to compel the acromial end of the clavicle to pass down by or through the coracoid process. In its descent it must not only break down the coracoid process, but must rupture in its course the acromo-clavicular and also the coraco-acromial and coraco-clavicular ligaments, until it finally finds a resting-place below the acromion process.

Near the middle of November, 1880, Miss E., of Brigham City, Utah, was brought to my office for treatment. She said that some six weeks previous, while in the act of splitting a stick of kindling wood, and while the hand which held the axe was extended upward and outward, and at the moment when she intended to precipitate the utmost strength of her arm in a final blow, something gave way in her shoulder. The axe dropped from her extended hand, and her arm hung lifeless at her side, while the most terrible lancinating pain shot through her shoulder and radiated in all directions, but more especially in the vicinity of the acromial end of the clavicle. She was a beautiful young girl, of some sixteen or seventeen years of age, of almost perfect muscular development and symmetry, and was nearly heart-broken over the deformity, which she had been assured would continue so long as she lived. Previous to her visit at my office she had been under the treatment of a professional "bone-setter" in her native town, after which she was sent to a hospital in Salt Lake City, where she had the attention of a respectable regular practitioner, but who at length confessed he could do nothing for her.

On examination, I found a marked depression over the coracoid process, and the inferior angle of the scapula was thrown prominently outward. There was a great deal of discoloration in the region of the axilla. There was complete immobility of the arm when dependent on her volition, nor could she so much as move a finger without assistance, nor flex the hand at the wrist. I had no trouble in moving her arm at the shoulder, but it gave great pain. There was no crepitus. A pricking sensation constantly pervaded the arm and hand, which were turgid and swollen. To use her own language, her hand felt "as if it was asleep." The arm and hand were cold, and there was an entire absence of sensation. But the most singular thing about the whole affair was that, though there was a depression over the region of the coracoid process, yet the shoulder was elevated some three inches above its fellow. The angle at the neck was not higher than the opposite side, but a line drawn from that angle to the tuberosity of the humerus was the hypothenuse of a triangle whose perpendicular was three inches. There was positively no fracture or luxation of the humerus to account for the elevation. The radial

artery was normal in its stroke at the wrist. A line drawn from the centre of the spinal column to the tuberosity of the humerus was one and one-eighth inch less on the injured side than on the other.

The more I surveyed the subject the greater appeared the mystery. I therefore despatched a messenger for my friends, Drs. J. D. Comahan and A. S. Condon, of this city, for consultation, and both were promptly on hand. They instituted a careful and searching examination. Our diagnosis was that the clavicle had been dislocated downward in its acromial end. My assistants drew the shoulder outward and backward, while I tried to seize and disengage the clavicle. In this manner the dislocation was easily reduced. Afterward we applied a broad band around the chest, under which and over the scapula was placed a thick, firm linen pad, and over these was applied a figure-eight bandage, to draw the scapula inward to the body and keep the shoulder *in situ*.

For several days I used a weak current of electricity to restore nerve-vitality. She continued to wear the appliances for some time, but rapidly regained complete use of the arm, and up to the present time it has given no trouble.

In conclusion, I would ask, if this was not a dislocation of the acromial end of the clavicle downward, what was it? It is for the opinion of readers of the RECORD that I present this paper. The diagnosis of fractures and dislocations would be easy enough if victims at the time of accident would be careful to observe some uniformity, and do it in conformity to some old established law or principle upon which could be predicated some rule for their reduction. But in the excitement attending accidents their thoughtlessness give the surgeon no end of trouble.

THE VITALITY OF GONORRHŒAL VIRUS.—Dr. E. T. Rulison relates an interesting case in the *Medical and Surgical Reporter*. On July 17th a patient called with symptoms of gonorrhœa. He gave the following history: He became acquainted with a young lady visiting in the village, and was invited to call. The invitation was accepted, and also another of a different character, the same evening. This was the first and last time that he had ever had sexual intercourse. At first he improved under treatment. Then he got worse. The fluctuations in his condition continued for several weeks. Finally he left the village, and soon after reported himself well. After a few weeks he returned to his village and resumed his vocation. His trouble began again at once, and kept on getting better and worse as it had done before. At last the patient came in one evening and said he had found out the trouble, and felt positive that the end had come. When first taken he got some of the discharge on his pants, and he remembered that whenever he wore those pants and was well enough to get along without bandaging, he got worse again at once.

THE CONVICT, DR. BUCHANAN.—Buchanan, the foster-father of bogus medical diplomas, entered the Eastern Penitentiary at Philadelphia a few days ago with his head covered by a sack to prevent his knowing the location of his cell. He had been confined up to that time in the County Prison, but now he is a convict in the Penitentiary, fulfilling the sentence passed upon him for conspiracy to defraud the United States of his bail. There are still other charges pending against him. Thus ends for the present the career of the celebrated "doctor."

Progress of Medical Science.

A RARE CASE OF BULLET IN THE BRAIN FOR SIXTY-FIVE YEARS.—Dr. Robert Elliot has reported this interesting case in the *Edinburgh Medical Journal* for December, 1880. The patient was shot in the left eye at the battle of Waterloo, in the year 1815. He instantly fell, and was reported as dead by his right-hand neighbor, Sergeant Morris, who makes the statement in his "Recollections of Military Service," quoted in the obituary notice of the patient's death, which occurred at the age of eighty-five. The patient came under Dr. Elliot's observation some thirty-three years after this remarkable escape from death. After careful inspection of the scalp and manipulation of the cranium, he could not observe any indication that the ball had anywhere effected an exit from the cranium. The feelings described were such as would be expected to arise from a bullet that had destroyed his eye and traversed the brain, but had not effected its escape. He never varied in his description of the sensations experienced when he lowered his head, or (when it was down) he turned it from side to side. Dr. Elliot had no reason to doubt the accuracy of observation and judgment of the patient, whom he considered honest and intelligent. This case resembles that of a young military officer (*Dublin Journal of Medical Sciences*, 1830) in whose hands a gun burst, and so fearfully fractured his skull in front that portions of the bone and brain had to be removed, yet the young man recovered and lived for several years, and at last died of fever. In this case a post-mortem inspection of the head was obtained, when it was found that some two or three ounces' weight of the shivered lock of the gun had actually been ensconced in the anterior portion of the brain for some two or three years without obvious or recognized impairment of the faculties ascribed to the mental organs.

DETECTION OF ARSENIC IN WALL-PAPERS.—Dr. William B. Hills excepts to the wide publicity given to the nitrate of silver as a test for arsenic in wall-papers. In the *Boston Medical and Surgical Journal*, January 13, 1881, he asserts that it is one of the *least* reliable tests for the purpose mentioned. The cases in which the nitrate of silver test gives fairly reliable results are comparatively few, and are essentially those in which arsenite of copper (Scheele's green) or aceto-arsenite of copper (Schweinfürt green) is used as a pigment, unmixed with other substances. These arsenical compounds are, however, seldom thus used, but are commonly employed in combination with other substances, by which means the green color is modified and various tints are obtained, in which, as a rule, the arsenical green cannot be detected by any physical appearance. Under these circumstances the above test will ordinarily fail to indicate the presence of arsenic, and particularly so if the arsenical green be mixed with organic pigments. Many of these latter, when treated with ammonia, furnish colored liquids, the color varying with the nature of the organic pigments. If nitrate of silver is added to such a liquid, any precipitate produced, whatever its true color may be, will ordinarily assume the color of the liquid. For example: yellow arsenite of silver will usually *appear* red in a red liquid. Obviously, no conclusion can be drawn in such cases as to the presence or absence of arsenic. Again, the yellow

sulphide of arsenic is sometimes used, and the arsenic in such cases cannot be detected by nitrate of silver. The test is also useless in detecting arsenious acid in the aniline colors. Dr. Hills' method of proceeding is as follows: take a sample three or four inches square, cut into small pieces, moisten with concentrated sulphuric acid, and heat carefully until the paper is thoroughly charred. Let the charred mass cool, add to it about one fluid ounce of water, grind up the black mass so that the water may come in contact with all parts of it; filter and wash. The arsenic will be found in the filtrate, which is examined by Marsh's test. All chemicals must be free from arsenic. A paper which, treated carefully in this manner, furnishes no arsenical stain on porcelain does not contain any appreciable amount of arsenic.

The Immediate Cure of Inguinal Hernia by a New Instrument.—Dr. W. Dunnett Spanton has published in the *British Medical Journal*, December 11 and 25, 1880, a paper on this important subject, in which he proposes to obliterate the inguinal canal by means of a screw-like instrument shaped like a corkscrew, with a flat point and movable handle. The screw is made rather broader near the point, tapering somewhat toward the handle, and should be sufficiently strong not to break; but yet as thin as may be consistent with strength. In addition to this instrument a thin, strong knife, like a tenotomy-knife, is used, for separating the skin from the subjacent tissues. The mode of performing the operation in a case of ordinary oblique inguinal hernia is as follows: an incision is made in the skin of a scrotum large enough to admit the forefinger easily, over the fundus of the hernial sac, generally about two inches below the spine of the os pubis; and the skin is separated from the parts beneath by means of the blade or handle of a narrow scalpel, to an extent determined by the size of the hernia, and that of the inguinal canal. The operator standing on the left-hand side of the patient, the forefinger of the left hand is passed up to the internal abdominal ring, invaginating the fascia and hernial sac to the same extent. A careful examination is now made of the surrounding structures, the position of the vessels clearly made out, the size and shape of the abdominal rings noted, as well as the length of the canal. This is necessary in order to have an instrument of the proper size. The left forefinger, being retained in the hernial canal, protecting the spermatic cord and, at the same time, closing the internal ring, the screw instrument, previously dipped in carbolic oil, is, with the right hand, thrust through the skin of the groin so as to transfix the aponeurosis of the external oblique muscle, at a point somewhat above that at which it is intended to pass through the conjoined tendon. Having given the instrument one half turn to the right, if a right inguinal, and a whole turn if it be a left hernia, it is next made to pierce subcutaneously the conjoined tendon of the internal oblique and transversalis muscles as high up as can safely be reached, the left forefinger carefully guarding the point so as to avoid wounding the vessels or peritoneum. This part of the operation must be executed cautiously and deliberately. It will then be found that, as soon as a hold has been secured by the instruments, the internal ring is practically closed. Another turn is now given to the screw, causing it to pass through the invaginated tissue—whether consisting of fascia, or sac, or both—and it is again passed through the external pillar, and then across to the internal pillar of the external ring, and another turn given if possible, so as to bring the point out at the wound in the scrotum. The handle should then be flatwise on the abdomen, and the point of the instrument be protected by a round piece of solid india-rubber, or by winding around it some carbolized gauze. A light pad is then placed over the part, and a bandage applied. The subsequent treatment is very simple. After a period, varying from a week to a fortnight, a certain amount of inflammatory action will be observed along the line of the inguinal canal where the instrument lies, and more or less discharge takes place from the wounds. The amount of induration excited will be the guide as to the time for removal of the instrument; but a week has usually been found sufficient. The removal of the instrument is easily effected, as the suppuration which takes place along its course serves to loosen it somewhat, and by keeping it well oiled from day to day, it is easily withdrawn. The wounds will readily heal under any simple dressing, with pad and bandage. In thirteen cases thus far operated upon, not one had any serious symptom to be recorded. In eleven cases the cure has been complete.

Case of Strychnine-Poisoning Treated Successfully with Bromide of Potassium and Chloral.—A case of strychnine-poisoning has been reported by Dr. Engledue Prideaux (*Lancet*, January 8, 1881), in which the hydrate of chloral and bromide of potassium were successfully used as antidotes. The poisoning occurred under the following circumstances: at an institution with which Dr. Prideaux had been connected there was a mixture kept, containing among other ingredients a solution of strychnia, of which there were five minims to the ounce of water. The dispenser had, by mistake, substituted ounces for drachms of the solution of strychnia. The patient who received the medicine was a woman about fifty years of age, who had been out at work in the open air all day. She took of the medicine about two ounces after her meal, "to make up for not taking any during the day," as she said. When the doctor saw the patient, he found her lying on the floor, unable to speak, perfectly rigid, and in a condition of constantly recurring opisthotonos, convulsions succeeding one another with great rapidity. The pulse was slightly quickened, but otherwise normal. As soon as the jaws were relaxed he administered half an ounce of potassium bromide in solution with one drachm of chloral. After a quarter of an hour the spasms began to materially abate, and the muscles relaxed in a marked degree. Again he administered another half-ounce of the bromide, and in half an hour there was almost perfect relaxation, slight spasms recurring at much longer intervals. After remaining with the patient for some time, and finding the spasms did not recur in their intensity, but were becoming much slighter and only occasional, the doctor left, ordering another ounce of bromide to be given in divided doses of two drachms every four hours during the night. The next day the patient was in a very feeble state, and quite unable to raise herself and hardly able to move a muscle; indeed, she seemed like a sheet of wet blotting-paper, and was almost completely paralyzed; her water was voided in great excess, and also a large quantity of liquid fæces. The pulse was slow and markedly feeble. She had taken half of the remaining quantity of bromide. Its administration was then stopped, and she was ordered strong beef-tea and milk, with a little brandy at frequent intervals. After three days

she was able to raise herself, and had regained power over the sphincters, and on the fifth day was able to sit up. She then rapidly recovered. The patient must have taken about eighty minims in all, nearly three-quarters of a grain of strychnia. The complete muscular paralysis was attributed to the partial abolition of the functions of the spinal cord, caused by the exhibition of the remedies, and not to nerve or muscular exhaustion consequent upon the extreme excitation and activity induced by the poison.

Case of Recurrent Pemphigus Puriginosus due to Checking of the Menses.—Dr. W. A. Duncan has reported an interesting case of this character (*Lancet*, January 8, 1881) in a patient aged twenty-five years, who had, by exposure to the rain on the second day of her monthly period, been wet through. Next morning the patient noticed that the menses, which had commenced the previous day, were stopped. She then complained of headache, nausea, and general malaise, together with a peculiar tingling sensation in both hands. When the patient came under observation, Dr. Duncan noticed numerous round papules on the palmar aspects of both hands, and also on the sides of all the fingers. The hands were somewhat swollen and slightly œdematous, but the skin was not inflamed. The sensation of pricking and tension was so great that the patient could obtain no sleep without the aid of a morphia draught. The papules subsequently developed into vesicles, which, in irregular groups, were situated most accurately over the course of the median and ulnar nerves on the palms and fingers; even the small palmar cutaneous branches of both of these nerves over the anterior annular ligaments had their appropriate vesicles. The next day these vesicles had developed into round bullæ, from a quarter of an inch to half an inch in diameter, and contained a perfectly clear, colorless fluid. On the palms the bullæ were much less developed, the largest being about the size of a pea, which gave the patient great pain. These disappeared under local treatment with vaseline, poultices, and a lotion of lead and belladonna; but, notwithstanding every possible precaution was taken to avoid catching cold, the menses again stopped suddenly during their regular appearance. Several papules appeared upon the sides of the fingers, and a few on the palms. The swelling and irritation were not so severe as on the first attack. The patient was then ordered to the sea-shore, and put upon the citrate of iron, phosphorus, and zinc, for several weeks, with a satisfactory effect.

On the Treatment of Othæmatoma.—Dr. William Meyer (*Archiv für Ohrenheilkunde*, XVII., 2) recently resorted to the treatment for othæmatoma by the method introduced by Metzger, with excellent results. This system consists in systematic kneading of the effusion to assist absorption, and the application of a pressure-bandage, which is worn continuously. In three cases reported in the *American Journal of Otology*, January, 1881, in which this was tried, the result was very satisfactory. The first case was that of a man aged thirty-four years, strong, not plethoric, and perfectly healthy. His father, however, was insane (religious melancholy) at sixty-four years of age, and died a year later. One and a half month before the patient applied for treatment, without any previous injury of any kind, a hard, insensitive nodule appeared on the left auricle, which increased in size gradually, and developed fluctuation without any change in the skin, and without pain, tension, or sensitiveness. The tumor was incised, and dark fluid blood evacuated. From this time the cavity filled rapidly, became sensitive, and was accompanied by headache. It was again incised three days later and the cavity stuffed with charpie, but the pain increased, extending to the temple, vertex, and nape of the neck. On examination by Meyer subsequently, in addition to the hæmatoma, the whole auricle was much inflamed, and this inflammation was first reduced by continuous applications of lead-water. Massage was then resorted to four times a day, and continued for a quarter of an hour each time, the skin being first anointed with glycerine salve. In the intervals the auricle was kept firmly compressed between masses of charpie, by means of a bandage over the head. Massage was stopped as soon as it produced pain, but, except the first day, was well borne for the whole fifteen minutes. One week after the hæmatoma had almost disappeared the skin was freely movable on the cartilage, but there was a slight thickening of the ear. Massage and the pressure-bandage were continued for some weeks. Ten weeks after treatment the auricle was absolutely perfect, except a very slight thickening. The second case was in the same patient, but on the right auricle, one and a half year later. The tumor began in the same way, and the diagnosis was confirmed by aspiration. The same treatment was used, but only twice a day, and in three weeks the ear was well, and both auricles were perfect four years after. The third case was in a woman, aged thirty-four years, and the tumor was the result of a blow. She was perfectly healthy, but her mother had been insane. The same treatment was used, and the tumor had almost disappeared when she withdrew from observation. In all these cases external evidence of a degeneration of the cartilage was lacking; the existence of any predisposing disease was absent, and the only cause to be discovered was in the history of the patients, in both of whom the parents had been insane. Hun's observation, says Meyer, that the appearance of othæmatoma in sane persons usually precedes a later mental disturbance, and Roosa's, "that although persons suffering from vascular tumor of the ear may not always be insane, they generally have brain disease," is worthy of special attention in this connection.

Impacted Fæces.—Dr. Robert Battey has a practical way of relieving women of hard masses of impacted fæces when for any reason an enema or cathartic fail to do the work, or cannot be administered. Instead of distending the sphincter ani muscle and digging out the mass with a spoon, or with some like instrument, he breaks it up and presses it out by means of the fingers in the vagina. This may generally be accomplished without difficulty, or with as little difficulty as by other means. The method is, moreover, less disagreeable, both to the doctor and to his patient. It would manifestly be more easily accomplished in the cases of women who have been or are parturient.

Small-Pox in Jersey City has been increasing of late in a way to alarm the authorities. In the country at large there seems to be a considerable prevalence of the disease, though during the first week in February there were more cases in Philadelphia than in all other places put together. Seventy-one deaths were reported for the week ending February 5th. Of these, 47 occurred in Philadelphia, 9 in New York, 13 in Chicago, and 5 in San Francisco.

THE MEDICAL RECORD:

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GEORGE F. SHRADY, A.M., M.D., Editor.

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THE ABOLITION OF THE OFFICE OF CORONER.

The successful working of the Massachusetts law abolishing the office of coroner, and transferring its duties to a medical expert, has had its effect in stimulating other States to a like reform. The question has often been asked regarding the real usefulness of the coroner in our body politic, and the same question is now likely to be repeated during the present session of the State Legislature in discussing the practicability of altering the methods of procedure in cases of sudden death associated with suspicions of the commission of crime. No one who has studied the subject of coroners' investigations—none who have watched the proceedings of the juries by the present law whereby a verdict is rendered in cases of sudden death, can fail to be convinced of their utter uselessness. In fact, the more the matter is looked into the more absurd does the present system appear.

Mr. Clark Bell, a member of the bar of this city, in an able address before the recent meeting of the Medical Society of the State of New York, brought this subject to the attention of the profession throughout the State, and it is to be hoped that practical good may come from his effort. The Medico-Legal Society of this city, after concluding upon the necessity of a radical change in our present laws relating to the office and duty of coroners, appointed Mr. Clark Bell and Professor Frank H. Hamilton a committee to bring the subject before the State Society, with a view of obtaining the aid of that body in influencing the necessary legislative action. Thus the proper beginning was made, and the endorsement on the part of the State Society of the necessity for a change in our present laws was timely and wise.

From the time that Mr. Tyndale, of the Boston bar, practically opened the discussion before the Department of Health of the American Social Science Association, at its meeting in 1877, until the present, the medical profession of the country has interested itself more or less directly in the propositions for reform advocated by that gentleman. In Massachusetts, as a result of the powerful influence of the medical society of that State, the Massachusetts law abolishing coroners' inquests was passed, and the people of this State have thus offered to them a useful model by which to guide them in what now promises to be a serious and deliberate determination to make necessary reforms. The Massachusetts law was passed on May 9, 1877, and since then its practical working has given universal satisfaction to the citizens of that State. In estimating the agencies which effected this result, it is proper to state that the *Boston Medical and Surgical Journal*, from the first inception of the movement, tendered its powerful support, and made the profession of the State a unit of influence in the proper direction.

The history of the passage of the Massachusetts law should be an encouragement for the medical profession of this State to take hold of the matter in earnest, with the reasonable hope of being likewise successful. Appreciating what such an influence can accomplish, Mr. Clark Bell has sought it in his appeal to the State Society, and it is fair to assume that the desired result in the shape of a new law will be speedily obtained.

The measures proposed are the abolition of the office of coroner, the dispensing with juries in preliminary examinations, and the adoption of a system by which a competent medical examiner shall be appointed in the different districts of the State, whose duty it shall be to examine into the cause of all sudden deaths, and in cases of suspected criminality to report to proper officials, who shall examine into and report upon the legal and statutory aspects of the charge. As the best reasons for such a change, it is claimed that the examination by the coroner and the verdict of his jury have no weight whatever upon the subsequent judicial proceedings—in fact, very often actually interferes with the course of justice, on account of incompetent autopsical examinations. Admitting this fact, which is eminently proper in the light of experience, the trial by such a jury can easily be dispensed with without infringing upon the rights of any citizen suspected of crime. Besides this, the alleged criminal has the privilege of being tried by two other juries—the grand jury, before the indictment, and the jury of the court, after the indictment. The final trial is, after all, the most important, because entirely independent of previous judicial proceedings.

Thus, it will be seen that practically the right of trial by jury, so dear to every one, is not infringed upon.

Again, it is claimed that an ordinary coroner's jury is entirely incompetent to form a verdict in the large majority of cases which are the subject of legal inquiry. In the first place, the law makes no require-

ments for special skill in the coroner who makes the examination, nor does it insist that the medical examiner shall be competent to discharge the grave responsibilities of his office in determining whether or no a death in a given case was the result of a criminal agency. The determination of the cause of death lies at the foundation of all subsequent proceedings, and an autopsy by a thoroughly competent medical man, or, as the Massachusetts law requires, "an able and discreet man learned in the science of medicine," is a necessity. The opinion of the medical man as based on a carefully conducted autopsy naturally becomes of value throughout the whole progress of the case, and is received as so much scientific testimony in the court.

The next question, as to the culpability of the suspected criminal, is an entirely judicial one, and a coroner's jury, as at present constituted, is no more competent to render a verdict concerning it than it is in the first step of inquiry relating to the actual cause of death. We are narrowed down to the conclusions that the real cause of death in any given case can only be determined by a medical man, and that the judicial proceedings in cases of suspected murder should be intrusted to none but the proper officer, whose duty it should be to conduct it to the proper tribunal. These are certainly simple, safe, speedy, and satisfactory ways of bringing such cases to justice, and must commend themselves to the good sense and the earnest indorsement of every good citizen.

These principles, upon which reform should be based, can stand on their own merits, and be entirely irrespective of the positive abuses so notoriously associated with the office of coroner. It need not be said here that at present the office of coroner is a purely political one, that as a rule it is filled by persons who are utterly incompetent to conduct the necessary examinations, that in many instances the autopsies are made in a hurried and unsatisfactory manner, and from a scientific and judicial aspect are valueless, and that there is no guarantee that there will be any reform in these respects until the necessary changes in the present laws are made. The movement has already commenced in that direction. It is safe to say that the medical profession is in earnest in its advocacy of the new measures proposed, and will gladly use its influence in the right direction, when the new bill is before the Legislature.

REWARD TO A SURGEON.

A few weeks ago we recounted the death of Dr. Wilbur F. Sanford, of Greenpoint, from diphtheria, caused by trying to clear out a tracheotomy-tube with his mouth. An instance of the same kind of reckless devotion, but with a very different ending, occurred in England. A lieutenant of the Tenth Regiment, being in danger of death from diphtheria, Mr. Henry Grier, the army surgeon, performed tracheotomy and then applied his own mouth to the tube to restore respiration. The patient, unfortunately, died, but the surgeon sustained no ill-consequences. For this act the Albert medal was conferred upon Mr. Grier.

The cross of the Legion of Honor is given for such deeds as these in France, and gold medals are struck for them in England. In the Land of the Free and the Home of the Brave, the doctor, if he lives, is lucky if he gets his bill settled without a discount; if he dies, he gets a decent interment, a notice in a medical journal, and a set of resolutions from his medical society.

ENFORCEMENT OF THE MEDICAL LAW.

It is stated in the *Buffalo Medical and Surgical Journal* that the Erie County Medical Society is determined to prove that the Medical Law is something more than a dead letter upon the statute-book. Many practitioners have failed to register, as the law requires, and the society, in its corporate capacity, propose to inquire into the matter. Other societies in the State have had their attention directed to the necessity of doing likewise. It appears to us that the time has come for some action one way or the other. A good way to make a beginning is to publish a list of registered practitioners. We offer this as a hint to the Medical Society of the County of New York.

THE PREVALENCE OF LEPROSY IN THE UNITED STATES.

At the meeting of the Academy of Medicine, on January 20th, Dr. H. G. Piffard read a paper on leprosy. In this paper and in the subsequent discussion, some facts of much interest, and perhaps of great importance, were brought out. From the statistics collected by the Dermatological Society, it appears that there are between fifty and a hundred lepers in the United States at present. Moreover, an examination of the tables shows that this number has been constantly increasing every year. In view of these facts the question of the contagiousness of leprosy is a most important one, and it was discussed very carefully by the reader of the paper and other gentlemen present at the meeting referred to. Dr. Piffard was inclined to believe that, though not contagious in the ordinary sense of the word, it might be so through the medium of the blood or secretions, as in the case of syphilis. Furthermore, it was a well-established fact, that when leprosy had once gained a foothold in any community it was very sure to spread in some way. A marked illustration of this was to be seen in the Sandwich Islands. Forty years ago there was no leprosy there; now one-tenth of the inhabitants are lepers. Honolulu, a place once entirely free from leprosy, now has two hundred and fifty cases of the loathsome disease.

This view, that leprosy once established in a place spreads in some way, was agreed to by all the speakers, and there is little doubt that it is the actual fact. In view of it and of the loathsome nature of the malady, we may well inquire whether some steps to limit the increase and to prevent the introduction of leprosy shall not be taken. Only a short time ago a number of Chinese lepers were returned to their native country by the health authorities of San Francisco. It is the Chinese who introduced leprosy into the Sandwich Islands, and who are responsible for its spread in other localities. We are constantly exposed to the infection, therefore, on that side of the country, and we are somewhat exposed also, on the east, from cases in the West Indies. It was suggested, therefore, that the National Government be urged to take some action in the matter, by establishing, perhaps, a lazaretto, where sufferers from leprosy could be isolated and receive proper treatment. As preliminary to this, however, an investigation of the exact extent of the disease in this country was very properly authorized, a committee being appointed for the purpose.

The danger of any extensive prevalence of leprosy in this country, where the food and the general hygienic conditions of the inhabitants are so superior, is not very great. Still, leprosy can spread here, and may, in some particular localities, do so with considerable rapidity. The disease is so horrible a one that every contingency should be guarded against.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, January 20, 1881.

FORDYCE BARKER, M.D., LL.D., PRESIDENT, IN THE CHAIR.

THE paper of the evening was read by DR. H. G. PIFFARD, the subject being

LEPROSY,

with a presentation of cases.

The speaker first gave a brief history of the disease. Leprosy is a constitutional affection which shows itself in three different forms: the macular, tubercular, and anæsthetic. These are usually associated together, more or less, but one or the other predominates.

The disease has usually a prodromal stage, which may last for years without causing any very marked symptoms. In time, however, certain reddish brown maculæ, which are hyperæsthetic at first, but are not elevated, appear. The hyperæsthesia is gradually replaced by anæsthesia. Tubercles soon develop along with the maculæ. The favorite seat of these is on the face, but they may appear on other parts of the body, especially the forearms and legs.

These tubercles are hard, elevated portions of the skin. They may eventually ulcerate or remain unchanged, or even disappear in part. The chief cutaneous lesions are bullæ, which may rupture, and leave sores. The extremities are especially affected; here ulcerations may develop, and the hands or feet drop off. The prognosis is unfavorable, though there are probably some cases that have been cured.

The immediate causes are not known. Hygienic and climatic influences do not seem to be the cause, for the disease exists in Norway and Iceland, as well as in the tropics.

The question of the

CONTAGIOUSNESS OF LEPROSY

is one of the greatest importance. In the opinion of East Indian medical officers contained in a report on leprosy, published in 1867, the disease is not contagious. Further negative evidence is given by the fact that for several years, from 1864 to 1869, there was a leper patient in Bellevue Hospital; and during a portion of this time another leper was connected with the hospital in the capacity of nurse. And yet, during that time and since, there has never been a case of leprosy developed in this city. None of the cases observed here were residents of New York at the time referred to above, and none of them ever had any communication with the lepers at Bellevue. On the other hand, it is a well established fact that when leprosy has once gained for itself a foothold in any locality it is apt to remain there and spread. A recent writer, Dr. Bross, a Jesuit missionary attached to the lazaretto at Trinidad, takes the ground very strongly that the disease in some way or other is transmissible. He has written a work of considerable size in defence of this position.

A review of the evidence bearing on the contagiousness of leprosy led the speaker to the conclusion that this disease, like syphilis, is not contagious by ordinary contact, but it may be transmitted by the blood and secretions. Vaccination may transmit it. A case in the speaker's own experience was cited in proof of this.

The subject of the treatment of leprosy involved, first, the consideration of the

PROPHYLAXIS OF THE DISEASE.

The principles which underlie this are well understood. If a community is to be protected from the spread of leprosy, all cases that exist in it should be absolutely separated from the inhabitants, and each new case should be sent to live at a lazaretto with the others. To do this thing, however, always requires the help of the General Government. There are now in the United States over fifty lepers. A suitable lazarette ought to be established, where these cases and all subsequent ones may be isolated and properly treated. National legislation would be required for this. The case of the Sandwich Islands illustrates the danger which a country may be subjected to from the spread of leprosy. Forty years ago the disease did not exist there. Now one-tenth of the inhabitants are lepers.

In the treatment of individual cases, general hygienic measures demand the first attention.

As regards curative treatment, there are some few cases reported which seem to have been cured. In many cases, undoubtedly, the symptoms of the disease are greatly ameliorated, and its progress is retarded. It is not right, therefore, to say that every case is hopeless. The principal indications for treatment are: first, to relieve the pains, to restore sensibility to the anæsthetic parts, and to cause the tubercles to disappear; and, second, to retard the progress of the disease. To fulfil these indications a number of drugs have been employed.

The speaker mentioned a large number of these drugs, and described the results which had been obtained from their use. Among them was the *calotropis gigantea*, a remedy in high repute in India fifty years ago, and still used there. It is considered very efficacious in lupus also. The *hydrocotyle asiatica* was accidentally discovered to be useful in leprosy by Dr. Boileau, who was himself a leper. It still has a reputation for efficacy, but is not a specific. It is used on the island of Mauritius.

The *anacardium occidentale* and bichloride of mercury are used together, salt meat and salt fish being excluded from the diet. In this connection it was stated that nearly every writer insisted upon the importance of including fresh meat in the diet, excluding all salt meats and salt fish.

Lepers are subject at times to a peculiar fever, for which quinine may be given. This fever is especially apt to appear in the later stages, when carious processes set up in the bones.

An oil known as cardol is used with benefit. It is an extremely irritating substance, and is applied externally to the tubercles.

Somewhat similar in action to this is nitrate of silver, strong solutions of which are painted on the parts.

Gurjun balsam has some repute in leprosy.

CHAULMOOGRA OIL

is another drug which has efficacious properties. A number of persons have recommended it, and some cases are reported cured by it. There is now a case at Charity Hospital, under the care of Dr. Sturgis, which has received marked benefit from this remedy. It is given internally in doses of ℥v., increasing to ℥xx. t. i. d. The taste is extremely nauseous, and large doses irritate the stomach. It may be applied externally also.

Nux vomica, in the form of the crude nut, is used in the East, and there asserted to have remedial virtues. It must be taken for a long time.

Hoang-nan is another drug lately come into repute. It comes in the shape of a brownish yellow powder, of intensely bitter taste. It has a tetanizing effect, and probably belongs to the strychnos family. In a letter from a gentleman in Honolulu, where this drug has been tried, it is stated that sometimes the drug did good, sometimes it did harm, and sometimes it had no effect.

Galen recommended the wine in which vipers had been drowned. Following him, perhaps, the homœopaths recommend *lachesis*, which is the venom of a South American snake.

The speaker gave a full account of the treatment recommended by Dr. Erasmus Wilson.

Having concluded his review of the treatment, Dr. Piffard said that, as a result of personal experience, he has found the pains controlled by blisters; the tubercles are lessened under frequent painting with iodine. Chloride of barium internally has produced some improvement; but very decided benefit has resulted from the use of Chaulmoogra oil.

The speaker thought that there would yet be discovered some means of curing leprosy. Heretofore treatment had been entirely empirical. Attempts at a rational treatment, based on a knowledge of the pathology of the disease, had yet to be tried. Dr. Piffard was of opinion that leprosy was primarily a

DISEASE OF THE NERVOUS SYSTEM,

and especially of the spinal cord. The first changes appear to be subacute and inflammatory. These are succeeded by sclerosis, the neuralgia becoming largely increased in amount. This theory is founded upon clinical study and post-mortem examination. If it is correct, it follows that in the earlier stages treatment should be directed to the hyperæmia; ergot, counter-irritation, etc., being given. Later, chloride of barium and mercury; and still later, phosphorus, phosphoric acid, strychnia, etc., would be indicated.

This hopeful view of the prospect of curing leprosy is shared in by other writers, as was shown by several quotations made by the speaker.

The paper being concluded, Dr. Piffard exhibited

TWO CASES OF LEPROSY.

One was that of a man aged sixty-eight years, a German by birth, who contracted the disease in Mexico eighteen years before. He came to this country to live four or five years before the disease appeared. He entered Charity Hospital more than a year ago, and had been under the care of Drs. Sturgis and Piffard since that time. No benefit appeared from any medicines that were given until Dr. Sturgis placed him upon Chaulmoogra oil, externally and internally, when improvement began and is now very great. After taking the oil, the tubercles subsided; the extremities, which before had been almost completely anæsthetic, regained their sensibility. The patient, who could hardly lift his feet from the floor, now walks with ease, and can raise his limbs without difficulty. In response to a question by the President, the patient expressed, with great fervor, his conviction of a wonderful improvement. At one time the oil had to be discontinued; there was then some return of the anæsthesia.

The second case was that of a young man who came from Bermuda two or three years ago. He came to this country, where the disease developed. The patient showed dark macular and tubercles upon the arms and face, and had areas of anæsthesia upon the skin. He had been placed on hoang-nan. Some improvement had followed.

Dr. Piffard, in concluding the subject, said that he hoped to interest the Academy in the matter of ascertaining the number of lepers in the country, and of obtaining from the Government help in isolating them and preventing any spread of the disease; for it was known that when the disease once got a foothold, it would almost certainly spread in some way.

Leprosy is very prevalent in China, and only a short time ago a number of lepers were sent back from San Francisco to their native land. He believed it for the interest of the country that something should be done in the matter.

The paper being open for discussion,

Dr. Sturgis said that the question of treatment had been so thoroughly gone over that he could add but little. In regard to the case which had been taking Chaulmoogra oil, he said that the amount given had at first been ℥v., t. i. d.; but this seemed to produce no effect. The dose was then doubled, and the patient is now taking ℥xx., t. i. d. The oil was applied externally, at first mixed with seventy-five per cent. of vaseline, but now it is applied in the pure form. The improvement produced is very great; whether it is permanent remains to be seen; but it is noticeable that even when from necessity the oil was stopped, the anæsthesia, though it returned, was not so severe, while the tubercles did not enlarge again.

The speaker then referred to the danger which the country was exposed to on both sides from the dis-

ease, as it might be imported from the West Indies, and from China and the Sandwich Islands. There is very little question that the Chinese are responsible for a great deal of the disease. It is stated that Chinese emigrants having the disease brought it to Honolulu, that island being then free from leprosy entirely. Ten years later the disease had spread so much that 250 persons were affected by it. These facts were given in a report made to the Secretary of the Navy in 1869. Leprosy was not known in the Sandwich Islands until Chinese emigration reached there. The disease exists in many parts of China, but it seems to be more prevalent in the marine ports than in the inland cities of the Empire.

There seems to be very little doubt that the question of contagion has a very fair showing. Danielson particularly claims that the disease is contagious, and that it is hereditary, though this point is far from being proved. It may turn out that the disease is contagious only in the earlier stages. At any rate, it is a question that would bear much more investigation than it has yet received, particularly in view of the fact that we are exposed to an increase of the disease.

The question of diet undoubtedly influences the disease. As to how much it has to do with the etiology, the speaker was unable to say. A great deal has been ascribed to the influence of putrid meat, both of animals and fish. Especial stress has been laid upon this point by Norwegian writers.

Dr. T. R. Pooley said that he thought he could add something to the clinical aspects of the disease, as it affected the eye. A work upon this subject had recently been written by Drs. Bull and Hansen. It was shown that leprosy, in a certain proportion of cases, attacked the eye and affected both its external and internal parts, as well as its appendages. Dr. Pooley gave a brief description of the various changes which the disease produced in this organ.

Dr. L. D. Bulkley said that he could add to the descriptions, in the way of several personal cases that he had had. He had treated nine cases of leprosy in its different forms; four of these, however, had been seen, or been under the care more or less of the other gentlemen who had spoken. These cases were of various character. One was of the destructive form, and was affected as badly as any ever described. He had had two patients in his personal care, both of whom were natives of America, both lived in New York, and neither had ever been five hundred miles from this city, neither of them had had any hereditary history of leprosy or any personal relations whatever with the disease.

The first case was that of a man, thirty-eight years old, who lived in Hudson, and who had had leprosy for eight years when he first came to the speaker for treatment. He had the tubercular form in a very characteristic way. The case was studied with great care by a number of gentlemen merely to verify the diagnosis. Dr. Bull, of Norway, was among those who assisted in this. The patient died in the ninth year of his leprosy.

The other case, which was developed in this country, was that of a young man thirty years of age, of healthy parents. He had never been out of the country, had never been 300 miles from New York. The leprosy was of the macular form. The diagnosis in this case was also verified by the Dermatological Society. He died two or three years later, and in about the eighth year of his leprosy. No post-mortem was made.

The question of contagiousness, in the ordinary sense of the term, is pretty well decided negatively. Still, when a book of 300 pages is written in an effort to prove this contagiousness, and by a man who has seen and studied leprosy a great deal, it seems to be very strong evidence that the disease is contagious in some way or other. The speaker would throw his influence, therefore, toward having the question more thoroughly investigated, and for having the Government do something toward stamping it out. The Dermatological Society had adopted a plan of making a census of cutaneous diseases, and every year new cases of leprosy were added to the list. This list, however, is necessarily imperfect, and there is no doubt that the real number of cases is greater than is supposed.

In regard to treatment Dr. Bulkley said that his cases were not submitted to Chaulmoogra oil or to hoang-nan, and nothing that was given them seemed to do very much good.

Dr. Geo. H. Fox said that he was very glad to testify to the marked improvement that had taken place in the patients presented by Dr. Piffard. The improvement was more surprising, inasmuch as the tubercular form of leprosy which these cases presented was considered more obstinate than the anæsthetic form; some observers had claimed that the average life of the former is only about nine years. The speaker said that leprosy was the most terrible disease that afflicts the human system, yet it seemed to be a fact that during the past ten or twenty years the number of lepers in this country had increased; it seemed, also, to be true that where it has once obtained a foothold it is very liable to spread. Here in New York we are apt to find cases of leprosy in our midst at almost any time. Very many sailors are liable to develop the disease.

As to its contagiousness, if there is only a possibility or probability of this, it is the duty of the profession to the community to take whatever measures are in its power to prevent any possible spread of the disease. The physician in his individual capacity can do very little, and some concerted action, therefore, ought to be taken by the profession to learn more about the disease, to prevent its spread, and to ameliorate the condition of the lepers themselves.

Dr. Maxwell said that he had assisted in making the post-mortem on the case of leprosy which had died in Charity Hospital under Dr. Piffard's charge.

The most noticeable changes were in the spinal cord. This showed very marked sclerosis, particularly, as he remembered, in the cervical and lower dorsal regions. The sclerosis appears to affect the whole thickness of the cord. The appearances in other internal organs showed nothing characteristic.

Dr. W. J. Morton said that he had visited lazarettos in South Africa, and that one in particular he had examined with much interest. The physician in charge was an Englishman and a very intelligent man. He had about thirty patients, with about ten children who presented no signs of leprosy. The physician in charge did not think the disease contagious, but the children were believed to be doomed. Still marriage was allowed, and each of the men had stout, healthy wives who did not seem to have any fear of the disease. It was generally believed to be dangerous, however, to marry the widow of a leper. The treatment here was by strychnine, and the doctor in charge showed two cases which were believed to have been cured by the remedy.

Dr. Morton referred to a case seen by him last summer at the clinic of Professor Charcot. The disease had existed for six years, and large patches of

the skin were affected. The treatment was by static electricity, under which the anæsthesia had disappeared and the tubercles lessened in size. One interesting feature of this case was the muscular atrophy which had taken place under the affected skin. Many muscles also showed the reaction of degeneration. All these symptoms had a bearing on the question whether the disease is a nervous one or not.

The speaker referred to certain discoveries, recently announced, of bacteria in the tubercles of leprosy.

Dr. Piffard, in closing the discussion, referred to Dr. Morton's remarks as confirming his idea that the disease was of neurotic origin. The use and value of electricity pointed in the same direction. It had been used by several physicians, as stated in his paper. The discovery of bacteria he had not referred to, because he had not been able to get the original papers on the subject, and he disliked to base anything on abstracts. He did not consider it at all likely that bacteria had anything to do with the causation or progress of the disease.

The case of leprosy whose autopsy had been referred to by Dr. Maxwell, died suddenly of a multiple thrombosis of the lungs.

The discussion being closed, Dr. Sturgis offered the following resolution, which was adopted:

Resolved, That a committee of three be appointed by the President to investigate the extent to which leprosy prevails in this country.

The President appointed Dr. H. G. Piffard, Dr. F. R. Sturgis, and Dr. G. H. Fox.

The society then adjourned.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, December 28, 1880.

Dr. H. B. Sands, President, in the Chair.

FRACTURE OF THE SKULL, WITH RECOVERY.

Dr. L. A. Stimson presented a male patient with the following history: He was seventeen years old; and, two months ago, while standing near another man who was engaged in "throwing the hammer"—a sledge-hammer weighing eighteen pounds, and attached to a long handle—was struck upon the forehead by the hammer, after it had been thrown. He was brought to the hospital at once, and Dr. Stimson found a scalp-wound over the left frontal tuberosity, that divided all the soft parts down to the pericranium, which was raised by the blood pouring out beneath it, and there was a considerable area of depression. On cutting through the pericranium the bone was found denuded over a space two inches in diameter. That area represented a crater-like depression in which the bone was continuous throughout, and the elevator could not be introduced. He therefore used a small trephine at the border of the depression, and, after removing the button of bone, raised as much as could be raised of the outer table, removed a small piece of the inner table, and finally applied the trephine a second time in order to complete the elevation of the fragments. The wound was treated antiseptically. The incision in the pericranium was closed with catgut suture. The case progressed to a favorable termination without accident. The wound remained open and suppurated at one point for six weeks, and a probe introduced there followed a track half an inch in length, and then touched bare bone. That track, however, finally healed, and the scar was complete, and had been so for three weeks.

One interesting point in the case was that a very considerable amount of bone was left bare and partially separated from adjoining bone, and yet gave rise to no complication.

ABSCESS OF THE BRAIN—TREPHINING.

Dr. Stimson also narrated the following case: A man, aged thirty years, was struck, last spring, upon the side of the head with a stone. He was taken to St. Vincent's Hospital, where the wound was enlarged and the bone was thoroughly examined for fracture or fissure, but none was found. He remained in the hospital a few days, and was then dismissed and treated subsequently as an out-patient. He suffered from headache, and had slight trouble with some of the muscles of his left forearm. After about six weeks he was sent to the medical side in Bellevue Hospital, where he was treated for some time for pachymeningitis. The wound upon the side of his head had entirely healed, leaving a firm non-adherent scar. An informal consultation was held, and opinion was divided as to the exact condition which existed, but all agreed concerning the impropriety of surgical interference. He was then transferred to the surgical side, when he came under Dr. Stimson's care. The patient had no rise of temperature, except, occasionally, a slight elevation, lasting only for a short time, and most of the time he was dull, and sometimes in a condition of hebetude. Within a few days he aroused, and Dr. Stimson, then noticing the scar, asked him to hold out his left arm, when it was noticed that there was paralysis of the extensors of the forearm. The scar was upon the right side of the patient's head, beginning a little behind the upper part of the ear, and extending upward and slightly forward about two inches. Its upper extremity reached to the so-called motor area, and to a point which corresponds to the supposed area of motion for the hand and forearm. He thought the circumstances were such as justified an operation, and called a consultation, which was attended by one gentleman who agreed as to the propriety of an operation. The patient had again become stupid, and was so unconscious that an anæsthetic was not required. Dr. Stimson made a crucial incision at the upper end of the scar, and as soon as it extended through the skin a loose piece of bone was struck. Upon working down to it, he found a piece, half an inch long, of the outer table alone, and as thick as a piece of thick blotting-paper, and about one-sixteenth of an inch wide, lying in a groove in the bone, but not surrounded by any pus. After removing this piece, he felt a small opening which extended through the bone. The trephine was then applied to the edge of the opening, and upon removing the disk the dura mater was exposed and found to be thickened, covered with granulations, and not pulsating. He then introduced a hypodermic needle a quarter of an inch, did not obtain any fluid, introduced it a quarter of an inch deeper and obtained pus, and then passing a knife in, evacuated two ounces of pus. A probe was then introduced, entered a cavity, and encountered a firm wall. The wound was dressed antiseptically. The patient did not recover his consciousness, and died nine hours afterward. At autopsy the abscess was found so reduced that the cavity was not larger than a small pea, and its location corresponded very closely to the area mapped out by physiologists as the motor centre for the hand and forearm, namely, just behind the middle portion

of the right ascending parietal convolution. There was no fracture of the bone. The original injury seemed to have set up osteitis, which caused exfoliation of a portion of the outer table, and the abscess in the brain seemed to be one by proximity.

Dr. Sabine thought that the case seemed to show that the limits accorded to this motor region had been made too exact by physiologists. Certainly an abscess which contained two ounces of pus would not only encroach upon more than one convolution, but would probably produce outside changes, and the man should have had more than paralysis of the extensors.

Dr. Markoe remarked that the interest in the case, so far as localization was concerned, was the fact that within two weeks, probably, after the receipt of the injury, the defective movements of the muscles were manifested. The abscess probably encroached upon other regions, and doubtless produced other signs, which in turn were masked by the coma produced by the abscess itself.

Dr. Lange suggested that the formation of the abscess was so slow that the surrounding centres became accustomed to the pressure which it produced, and therefore gave rise to no symptoms.

Dr. Stimson regarded it as a reasonable supposition that the abscess had formed at the expense of a limited amount of the cortical substance of the brain, and that other portions of the brain had adjusted themselves to this pressure.

DISLOCATION OF THE OUTER EXTREMITY OF THE CLAVICLE WITH FRACTURE OF THE ACROMION PROCESS.

Dr. T. T. Sabine narrated a case which he had in St. Luke's Hospital. A woman, very stout, and fifty years old, was thrown down and trampled upon by a horse. She was clear and positive in her statement that one of the horse's hoofs struck and pressed upon the front part of her right shoulder. The patient was anæsthetized, and, after careful examination, Dr. Sabine made out very distinctly—also satisfactory to three members of the house staff—that there was dislocation of the acromial extremity of the right clavicle, which was thrown upward and backward, and, in addition, fracture of the entire acromion process. The injury had probably been produced by the pressure of the horse's hoof, first causing dislocation of the clavicle, and, second, the pressure continuing, the acromion had separated at its narrowest part. There was no crepitus, because the broken surfaces could not be sufficiently approximated to produce it. There was no evidence of contusion of the skin.

PERITYPHLITIC ABSCESS—FÆCAL CONCRETION.

The President presented a fæcal concretion, which he had removed from a perityphlitic abscess he had opened, in the usual manner, six days previously. It had shrunken somewhat since its removal, but even then was more than half an inch in one diameter and three-eighths of an inch in another. There was no fluctuation at the time of the operation. After matter, in considerable quantity, had been allowed to escape, and no foreign body was detected, Dr. Sands explored the cavity with the index-finger, and discovered at several inches from the opening a concretion, which he hooked out with the finger. If the finger had not been used in exploration the concretion might have remained at the bottom of the cavity for an indefinite period.

The President also referred to a case which occurred several years ago, and in which a concretion, not more than half the size of the one presented, was retained after the abscess had been opened, and caused a recurrence of the disease after the patient had apparently recovered and left the hospital.

In the case from which the specimen presented was obtained, Dr. Sands noticed particularly that, when the abscess was opened, no gas escaped. He regarded it as somewhat remarkable that in these cases of perityphlitis, due to intestinal perforation, fecal fistula was not established. Before the disease culminates in abscess the concretion escapes and the opening becomes plugged. He thought that this fact was in accordance with the teaching of pathological anatomy; that in these cases perforation occurs of the appendix vermiformis and not of the caput coli, although perforations of the cæcum do sometimes take place and give rise to such abscesses. But if perforations of the cæcum were the rule instead of the exception, fecal fistula would doubtless be more likely to result than where perforation takes place of the long and slender appendix.

In the present case there was nothing to indicate the existence of suppuration except continued high temperature. There were not, at any time, severe symptoms of peritonitis. The signs of local inflammation were well marked, but they subsided under the use of leeches, fomentations and opium, and the pulse fell to nearly its normal standard, yet the temperature remained high. On the fourteenth day, when the operation was performed, the temperature was 103° F. It was the continued high temperature that led to the use of the exploring-needle, when pus was detected. There was no localized œdema, and no recognizable tumor, but some tenderness over the seat of abscess.

Dr. Markoe referred to a case in which a fecal fistula remained for a long time.

Dr. Sabine referred to a case in which he removed a fecal concretion, between two and three months after the abscess had broken, which prevented the abscess from closing. In that case the fistula was clearly beneath Poupart's ligament. Probably it was not originally so, as there was very extensive undermining of the skin when the case first came under his care.

The society then proceeded to the transaction of miscellaneous business.

THE NEW YORK SOCIETY OF GERMAN PHYSICIANS.

Stated Meeting, December 17, 1880.

Dr. H. Knapp, President, in the Chair.

Dr. Seibert read his report on atrophy of the heart in conjunction with fatty deposit beneath the pericardium.

HEMORRHAGIC INFARCTION OF UPPER EYELID.

Dr. Knapp presented a male patient, the subject of an ocular affection, which, strictly speaking, did not constitute a disease in itself. The case was one of embolic infarction in the upper eyelid, and the patient had given the following history: About three weeks ago he awoke one morning to find a painless, œdematous infiltration of the upper lid and conjunctiva. Eight days later he came to Knapp's clinic, when his conjunctiva was found to be injected and in a condition of chemosis. There was no discharge, nor did the bulbus show any abnormal condition. On everting the lid, a rounded induration, mottled with

black spots, appeared in the lid. It was about three lines in diameter, showed some central softening, and was surrounded by an area of infiltration. The conjunctival covering of this consolidated portion was not destroyed. The absence of ulceration, together with the presence of central softening, as well as the denial by the patient of traumatism or infection, justified the exclusion of injury or chancroid from the list of possible causes. Cleanliness was the only suggestion of treatment. On the following day the central softening was found to have extended, and twenty-four hours later, capillary hemorrhagic spots were discovered at the lower border of the induration. At this time the above diagnosis was made. The case progressed favorably, and at present absorption was going on without any indication of existing necrosis.

The distribution of the terminal arteries in this locality was not such as to favor embolic processes, hence similar observations had not been frequently made. Nor would he be inclined to attach any special value to the present case, were it not his opinion that similar processes of connective-tissue infiltration had been described, and were known as essential œdema of the lids.

In this connection he also showed a specimen, accompanied by a drawing illustrating a case of embolic infarction of the retina, first seen by himself a number of years ago.

Dr. Kucher alluded to the well-known case of General Radetzky, where enucleation of the eyeball was seriously contemplated for supposed orbital tumor, but when under expectant treatment both œdema and exophthalmus entirely disappeared.

Dr. Jacobi asked if the present case was not rather to be regarded as one of thrombosis, such as is encountered elsewhere in the body. The patient presented had no cardiac lesion, a fact which gave this supposition additional weight.

Dr. Knapp replied that the wedge-shaped form of the consolidated tissue, taken in conjunction with the occurrence of capillary hemorrhages, militated against the interpretation of the phenomena as due to thrombosis. Moreover, thrombosis in this region commonly spread to the sinus cavernosus, and was accompanied by febrile manifestations, neither of which was found here.

Dr. Gruening also thought the case under discussion might be one of thrombosis. Michel and Hutchison had recorded examples of sudden thrombosis of the central vein, unaccompanied by fever.

OVARIAN CYST, WITH FATTY DEPOSIT.

Dr. Garrigues exhibited the above specimen, which had been previously presented at a meeting of the Pathological Society. (See Medical Record, January 1, 1881.)

Dr. Jacobi observed that the diverticulum found in the cyst-wall might be explained by early fetal inclusion.

ANGIO-SARCOMA OF EYELID AND TEMPLE.

Dr. Jacobi presented specimens of this variety of neoplasm. The tumors had been removed from an infant born February 4, 1880, on the day following its birth. These congenital growths were supposed to be angio-lipomata, until a microscopical examination demonstrated their sarcomatous nature. An interesting structural peculiarity of the tumors was their richness as regarded lymphatics.

Dr. Kucher referred to a diffuse infiltration of similar structure covering the thorax of a child, and not amenable to surgical interference.

PRIMARY RENAL CANCER—PERINEPHRITIC ABSCESS.

Dr. Jacobi presented a specimen of primary carcinoma of the kidney, which during life had simulated pyonephrosis, the patient having been treated on the diagnosis of the latter condition. The history, briefly summarized, was as follows: The patient, aged fifty-three years, had been ailing for several years, during which time he had suffered from various urinary troubles, which often took on the character of renal colic. Nevertheless, there existed neither urethral stricture, nor had concretions ever been passed with his urine. In February the appearance of pus in the urine led to the diagnosis of pyelitis. In May he went to Europe, spending the summer in the south of France. There he was not improved, and, utterly prostrated, he once more returned to this country, though he did not expect to survive the ocean trip. Shortly after his arrival here, on the 22d of September, he was seen by Dr. Jacobi. He found him suffering with air-hunger (*lufthunger*), and having a temperature of 103° F. At the left upper portion of his thorax there was dulness on percussion, and extensive râles were heard. It was thought possible that multiple pulmonary abscesses existed, but the patient rapidly improving, this supposition was abandoned. The urine contained a considerable proportion of pus. The region of the left kidney was distinctly tumefied, and quite tender to the touch.

A week later pus was here found by means of the aspirator. Accordingly the abscess was incised, much purulent matter evacuated, and a drainage-tube inserted into the wound. The cavity was washed out alternately with solutions of thymol and carbolic acid. Little benefit accrued to the patient from these measures. Rigors were still at times observed. The pulse often ranged from 120 to 130. A distressing cough continued to weaken him, the cause of the cough being a chronic naso-pharyngeal catarrh. The urine, however, gradually became clearer, showing less slime and pus; the cavity of the abscess diminished in size, and now only admitted one and a half ounces of fluid. But the appetite became persistently poor; he began to sink rapidly. When, at length, a lobar pneumonia developed, together with erysipelatous inflammation around the wound, the patient died.

At the autopsy, instead of finding the diagnosticated pyonephrosis, a perinephritic abscess was discovered. The purulent collection was in contact with the kidney at its posterior aspect, and the organ itself was considerably augmented in volume from cancerous deposit. The other kidney was also the seat of carcinomatous invasion, but to a less extent. On the liver some small secondary nodules were found. The omentum showed numerous large deposits of the neoplasm.

TRACHEAL TAMPON-CANULA.

Dr. Gerster demonstrated the mechanism and mode of application of a new canula of this kind, which had been made according to his directions by Tiemann. It was claimed for this new instrument that, unlike a similar apparatus constructed by Trendelenburg, when once secured within the trachea it would be perfectly and permanently reliable. In place of Trendelenburg's inflatable membrane, this instrument contained a contrivance resembling the collection of strips of steel used in Otis's ure-

thrameter. By means of a suitable screw the calibre of the canula could be increased until the trachea would be completely closed. The dilatable portion of the instrument, corresponding to the adjusted steel strips, was provided with a covering of thin rubber. Experiments on human corpses had proved the perfect action of the apparatus, which was more solidly constructed than Trendelenburg's canula. The inconveniences and accidents attending the use of the latter instrument were thus entirely obviated. As regarded that portion of the canula which subserved purposes of inhalation, it was made after a similar adjustment of Trendelenburg's instrument.

Correspondence.

PERSONAL EXPERIMENTS WITH THE INHALATION OF SULPHURIC ETHER.

To the Editor of The Medical Record.

Sir—Reading the report of the "Committee on Anæsthetics," appointed by the British Medical Association, has induced me to publish the result of some experiments, made by myself eight years since, on the physiological effects of ether as an anæsthetic, and also my experience of it in the same capacity during the last ten years. When I was an interne of Bellevue Hospital, during 1869–70, and saw ether administered, I used it myself in a large number of cases without having occasion to be alarmed at any of the symptoms produced by it, or having to wait more than five minutes for an effect sufficient for any operative procedure. Since then I have constantly used it with the same results, having never seen anything approaching a fatal case, nor failed to produce complete anæsthesia. In 1872 I inhaled ether myself for the purpose of experiencing in my own person its physiological effects and noting the amount of anæsthesia produced, and also the amount of rational consciousness remaining while insensibility to pain continued. My experiments resulted in a perfect demonstration to my own mind of the following propositions:

First.—Ether affects the *terminal ramifications* of the nerves *first*.

Second.—That complete insensibility to pain may be produced by ether, while entire rational consciousness remains. Thus, while perfectly conscious of everything, I could stick a pin or make a small incision in any part of my body without feeling any pain whatever. I also noticed that the peculiar deadness or numbness began in the feet and hands first, and extended gradually to the trunk, until—although fully conscious *mentally*—I did not know that I was breathing unless I *looked* at my chest and *saw* it rise and fall. Finally, I was only aware of the cool feeling produced on the tip of my nose by the passage in of the air, and then complete oblivion, lasting, however, only half a minute. I had my watch in my lap and noted the time from my last recollection to my first awakening, for, of course, the handkerchief containing the ether fell from my hand during unconsciousness, and destroyed the continuous effect of the anæsthetic.

Third.—Ether mixed with *much atmospheric air* can be inhaled for hours without producing unconsciousness—sufficient for the quiet performance of a delicate surgical operation. Although sensibility to pain may be abolished during the whole time, yet reflex movements will occur on the application of a sharp stimulus.

Fourth.—That ether almost *undiluted* with air, after the few free respirations, produces rapid anæsthesia and *mental unconsciousness* with complete muscular relaxation, amply sufficient for the uninterrupted performance of any capital operation.

Fifth.—That the condition above-mentioned, being once produced, can be easily maintained for hours by slight additions of ether diluted with air.

Sixth.—That ether *increases* the blood-pressure, and that it enfeebles the pulse only after long-continued and excessive administration. That it gradually produces an increasing slowness and shallowness of respiration, and that in my opinion it kills only in this way, and that if the heart should become enfeebled it is a secondary result of the pulmonary lethargy.

In conclusion, I would say that I have seen great benefit result from the moderate inhalation of ether where cavities existed in the lung; that I have given it to patients afflicted with nearly every form of disease, without having occasion to be dissatisfied with its action as an anæsthetic or alarmed at its operation as a narcotic. I believe that the trouble in producing anæsthesia with ether, complained of by some surgeons, is due to the fact that they are afraid to administer it *undiluted* with air. *I* always use Lente's improved inhaler—an impervious brass nose-piece with rubber stuffing on the edge to make it air-tight. I have always given ether *undiluted*, with the exception of a few inhalations at first to accustom the air-passages to the vapor. Given in this way, I believe it is perfectly safe and efficient. The fearful mortality of chloroform speaks for itself in the report of the eminent men referred to above, and it would be needless for me to discuss the question. Ethidene is only spoken of as *less* dangerous than chloroform; but why use an anæsthetic that is dangerous *at all*, when ether is as safe as anything of the kind can ever be, solely for the purpose of saving a few minutes' time. Chloroform is tricky and uncertain. Ether can only kill, in my opinion, by stopping the respiration, which can be easily watched and the administration controlled to suit any emergency. The few deaths recorded against ether represent so small a percentage as to be almost infinitesimal, while you cannot read a journal without noting one or more deaths from chloroform.

I have performed and seen others perform operations lasting one and one-half hour, under ether, without the slightest consciousness or reflex movement intervening to interfere, and without an alarming symptom, even in delicate patients. Indeed, my experience with ether is that women and children are *most* calmly and easily brought under its influence, and robust, muscular men least; although these latter can always be anæsthetized by a minute or two of undiluted ether. I would feel uneasy only at giving it in a case of kidney disease when uræmia was imminent.

As to mixtures of ether, chloroform, alcohol, etc., I consider them as of no use, because the different specific gravity of the vapors of these substances will cause them to be inhaled *separately*, however well they may be mixed. I merely state these results of my own experience, hoping they will be of benefit to the profession; but I do so without going into the details of the experiments which led me to adopt these views—that would be tiresome. Let each one prove it for himself, if he disbelieves. As to chloroform, it is almost criminal to use it to save a few minutes' time,

when we have a perfectly safe substitute in ether. I wrote this off just as it came into my mind, so that any shortcomings, I hope, will be excused.

BLAIR D. TAYLOR,
Capt. and Asst. Surgeon, U.S.A.

GOVERNOR'S ISLAND, N. Y. H.,
January 21, 1881.

"PLAIN ENGLISH" AND THE METRIC SYSTEM.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR—I was so intrepid as to offer a few suggestions to those who were inclined to favor the metric system, in an article which appeared in the RECORD of the 8th inst., which article has furnished the inspiration for a somewhat satirical editorial in the *Michigan Medical News* of January 25th, and a "Plain English" communication from Dr. S. P. Hubbard, of Taunton, Mass., in the RECORD of January 29th.

The *News*' editorial is remarkable principally for its prolixity of cheap sarcasm and its absence of ideas.

I cannot refrain from calling the attention of the editorial space-filler of the *News* to a passage (with which he is undoubtedly familiar) from Macaulay's "History of England."*

Referring to the establishment of diligences in England, in 1669, he says: "As usual, many persons were, from mere stupidity and obstinacy, disposed to clamour against the innovation, simply because it was an innovation. . . . . It is not impossible that our descendants, when they read the history of the opposition offered by cupidity and prejudice to the improvements of the nineteenth century, may smile in their turn."

Dr. Hubbard's article is more open to criticism. Referring to the arguments used in favor of the metric system, he says: "This all looks well on paper, but the thing cannot be demonstrated. The absurdity of the system has been shown up by able scientific men, and the greatest of all." Although slightly ambiguous, I think I get his meaning. I have never before heard it objected that the system was absurd, nor that there was anything about it incapable of demonstration. The popular prejudice seems to be that our present system is *good enough*, and that the advantage to be gained is not worth the trouble involved in making the change. Our conception of quantities is in grains, drachms, etc., and it may require the practice of years to forget fifteen grains when we think of the size of a gramme. If the system is better than the other, this is no sufficient objection, and it is an inconvenience that will affect only the generation that effects the change. I believe nearly all who have given thought to the subject will agree that, if the change was completely made, it would be desirable.

The doctor says: "We might as well compel medical men to learn and use the French language as to compel them to use the metric system." This assertion will hardly be convincing to the average reader, as there are no terms required which are not so thoroughly Anglicized as to be found in any English dictionary, medical or otherwise, published within the last half-century.

"This brings (he says) another thought on the writers for medical journals, viz.: it seems as though they were very desirous of showing they had a smattering knowledge of Greek and French, by their compound words made up of a combination of Greek, Latin, French, Spanish, with a sprinkling of Dutch and Indian thrown in."

This is a very withering "thought on the writers for medical journals," and perhaps not entirely unmerited by many; but does not the gentleman's house have at *least* one exposed window? and to one so familiar (by name at least) with languages, this should be a matter of indifference.

His conclusion is one at which, I think, many readers will arrive, and is not altogether illogical. It is as follows: "*A little learning is a dangerous thing.*"

C. H. EAMS, M.D.

EAST SAGINAW, MICH., January 31, 1881.

* Macaulay's History of England. Porter & Coates' ed., p. 345.

TO THE EDITOR OF THE MEDICAL RECORD.

DEAR SIR—It seems to me that for a method so very "simple" the metric system requires a good deal of explanation. I have noticed this fact in numerous discussions of the subject appearing in the RECORD since 1876, and the writer has yet to find, in a tolerably thorough study of the subject itself, and of various articles devoted to its discussion, wherein it can be more readily utilized in writing prescriptions than the old way. Besides its manifest inadaptibility to the needs of the practitioner who *is* a *practitioner* and not a *theorizer*, I am opposed to the system upon the one or two general principles involved; one in point is the "international" idea of the matter. As a correspondent in the RECORD said lately, we may as well have an international language in which textbooks shall be printed, and with which every physician worthy the name should familiarize himself, and this because some European druggist may cause harm and disaster through a misapprehension of the meaning of American prescriptions written in the old way! We have been so long accustomed to hear of the excellence of the education, both classical and professional, of European physicians and druggists, that we should consider it a matter of equal indifferance to them whether a prescription were written in English or Sanscrit. A pertinent question is, When shall the medical profession of America become *American* and cease to be imitators of the fashion-plates of Europe? When shall we cease to sink our individuality in following, blindly, transatlantic opinion?

Our country, as a nation, is the foremost in intelligence of population and excellence of government on the earth, conforming to the laws, customs, and manners of no nation but America; is it a fact that the medical profession of the United States is so far behind that it is eagerly grasping at and adopting every innovation that comes across the water. There are a few good souls in the profession, principally upon our eastern coast, for whom it is almost a pity that America was discovered, otherwise they might have been revelling in that atmosphere for which their superior intellectual (?) qualities specially fit them. Conventional Listerism (I am glad of it) is on the wane, and I venture to predict that in another decade those who so enthusiastically advocate the metric system will laugh at themselves to think how silly they were; it will have gone the way of Listerism.

J. B. STAIR, M.D.

SPRING GREEN, WIS., February 3, 1881.

AN INTERNATIONAL SANITARY EXHIBITION is to be held in connection with the International Medical Congress, in London, next year.

New Instruments.

A NEW PROCEDURE IN THE OPERATION FOR PHIMOSIS.

By R. J. LEVIS, M.D.,

SURGEON TO THE PENNSYLVANIA HOSPITAL AND TO THE JEFFERSON COLLEGE HOSPITAL.

The object of the instrument illustrated in the cut is to facilitate the entire excision of the inner inelastic mucous membrane of the prepuce, without removing any, or more than may be required, of the outer, normal skin. In some cases of phimosis total circumcision is necessary, but in a considerable proportion only a partial ablation of preputial integument is essential, and the inconvenience may be readily overcome by the method I suggest, without causing disfigurement, or, indeed, making much change from the normal appearance of the organ. In most instances only the inner lamina of the preputial fold is morbidly involved, and the excessive removal of the outer layer is an error which is liable to be committed in the usual manner of operating.

In general form the instrument somewhat resembles the ordinary mathematical compasses or dividers. The limbs, or blades, terminate in blunt points, and are deeply serrated on their outer surfaces, with points or teeth set backward, like fine saw-teeth, for the purpose of firmly holding the mucous membrane, without the risk of slipping when traction is made. The blades are forced apart by a thumb-screw.

In operating, the blades, closed to a point, are introduced within the prepuce up beyond the corona of the glans. They are then, by turning the thumb-screw, strongly separated, so as to render the mucous membrane tense. Traction is then made, and the outer elastic skin is drawn back fully, so as to be away from the portion to be excised, and excision is effected by transfixing the prepuce through the middle with a bistoury, and cutting laterally in both directions toward the blades of the instrument. Any remaining portions of inelastic tissue may be removed with the scissors, and the operation is completed by attaching the cut edge of skin to the edge of mucous membrane remaining around the cervix by a few stitches. In this manner the inner inelastic mucous membrane may be removed while all the normal outer integument remains.

The instrument may be obtained from any of the prominent surgical instrument makers.

Dr. W. E. Crook, a prominent physician of Alabama, died a few days since in Mobile.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from February 6, 1881, to February 12, 1881.

Lippincott, H., Capt. and Asst. Surgeon. Upon expiration of present leave of absence, to report in person to Commanding General, Department of the Platte, for assignment to duty. S. O. 34, A. G. O., February 10, 1881.

Girard, J. B., Capt. and Asst. Surgeon. In obedience to S. O. 14, C. S. from A. G. O., relieved from duty in Department of Texas. S. O. 20, Department of Texas, January 29, 1881.

Reed, W., Capt. and Asst. Surgeon. To accompany Battery I, 2d Artillery, from Fort Ontario, N. Y. —abandoned—to Fort McHenry, Md., and then report by letter to these headquarters for further orders. S. O. 25, Department of the East, February 9, 1881.

Gardiner, J. de B. W., Capt. and Asst. Surgeon. Relieved from duty in Department of Arizona, to proceed to Baltimore, Md., and on arrival report by letter to the Surgeon-General. S. O. 34, C. S., A. G. O.

Medical Items and News.

Contagious Diseases — Weekly Statement. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending February 12, 1881.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Feb. 5, 1881.	0	6	173	7	42	104	15	0
Feb. 12, 1881.	0	5	162	6	34	90	20	0

The Medical and Surgical History of the War, and the Proposed Publication of an Extra Edition of Fifty Thousand Copies.—In the last number, and during our temporary absence from the city, an item appeared endorsing the bill before Congress providing for the publication of fifty thousand extra copies of the "Medical and Surgical History of the War." The writing and insertion of the item were due to an inadvertence of a member of the staff who at the time misunderstood the situation of the Record. Hence, while correcting this error, we take another occasion to repeat our former opinion regarding the measure proposed in the bill. There is no necessity for the appropriation. The volumes are not yet so scarce as to warrant the outlay. Members of the profession who really wish the volumes can obtain them at a small price at the old-book stands. Again, the measure is not so much for the benefit of the profession as for the congressmen who have these volumes for distribution; and the major part of the volumes, it is safe to say, will be distributed to non-professional readers, and used as campaign documents. The profession does not desire to be responsible for this large appropriation on any such grounds as are advocated in the bill. We are more emphatic than ever in saying that the passage of the bill would be a useless and shameful waste of the public money.

THE "SIXTY SURGEONS' BILL" is a measure that seems likely to be favorably acted upon by Congress. It provides an increase of facilities for the examination of and adjudication of pension claims. It authorizes the Secretary of the Interior to appoint a pension examiner and a surgeon to each congressional district who shall sit in different parts of the district, according to the convenience of the claimants. In case of necessity the Secretary is authorized to appoint as many as four more district surgeons. He can also appoint special examining boards of surgeons. If the bill becomes a law it will involve the appointment of three or four hundred medical men to these positions.

A VERY BAD MAN.—A student of the University Medical College, and a graduate of two other institutions, was recently arrested in this city for carrying concealed weapons (a small sword-cane). He confessed to having a wife seventeen years old who weighed 244 pounds, and he stated that he did a business in cadavers with outside medical colleges, charging twenty-five dollars apiece for them.

THE THIRD ANNUAL RECEPTION OF THE NEW YORK MICROSCOPICAL SOCIETY was held on Monday evening, February 11th, at the rooms of the New York Academy of Medicine. Mr. Romyn Hitchcock, President of the society, delivered the annual address, his subject being "The Relations of Science to Modern Thought." Exhibitions of objects were made by members of the Society.

THE CAUSES OF DIPHTHERIA.—Dr. A. T. Conley, of Cannon Falls, Minnesota, writes: "I read with interest Dr. J. W. Pinkham's article in the January 22d number of the MEDICAL RECORD, on the cause of diphtheria in the Crump family, of Montclair, N. J., the more so as our State is suffering severely this winter from that dread disease, and our village and surrounding country have just passed through the worst epidemic ever known in these parts.

"After careful study of the disease, I have become convinced that we cannot find the specific cause of diphtheria in the effluvia of decaying vegetable or animal matter, conveyed either through air or water, for this reason: we have had so far a much more than ordinarily severe winter—not a single thaw since the last of October, the mercury most of the time below zero, and yet, perhaps, Minnesota never suffered so severely from diphtheria. I believe medical men will agree with me when I say that the most malignant epidemics of diphtheria are to be found in the Northern States *and in the winter*.

"How can this be accounted for by the advocates of the theory that the specific cause can be found in the decomposition of vegetable or animal matter, when no such decomposition is taking place? Dr. P.'s case would have been much stronger had some of the Crump children slept in rooms not supplied by air from the furnace, and thereby apparently escaped the disease. The fact of *adults* sleeping in such rooms and not taking the disease proves nothing, as all admit that diphtheria is a disease of childhood. Of the 140 cases in our village and vicinity, only three were adults over twenty years of age, and they all recovered. Is it not a fact that hostlers and persons who sleep in barns and livery-stables are a very healthy class, and seldom take diphtheria or other zymotic diseases? and yet the air is always loaded with the kind of effluvia the doctor speaks of.

"There may be such a thing as spontaneous diphtheria, but I think not more likely so than of small-pox. Dr. P. says there have been thirteen fatal cases of diphtheria recorded in Montclair in the last fourteen years. If the Crump family had, under like circumstances, taken small-pox, with the same record of fatal cases in the town, would he have accounted for it in the way he did for the diphtheria, or on the ground of contagion? I believe, for children, diphtheria is as contagious as small-pox.

"As soon as diphtheria appeared in our vicinity, we had a competent sanitary committee appointed, who visited every house, and examined into all sources of filth, and our village was put into the best sanitary condition possible, and yet the disease has carried off twenty-two of our children in the dead of winter. I have further noticed that filthy families have suffered no more than the cleanest, that families who lived in the immediate vicinity of manure-piles suffered no more than those who were far removed from such sources of contamination.

"I believe we have only succeeded in getting rid of the plague by the strictest quarantine, closing all schools and churches, and prohibiting public gatherings of all kinds, and allowing only physicians and nurses to visit the sick; the village paying a man to take orders and deliver everything needed by families where the disease existed, at the gate, and after the disease subsided, thoroughly disinfecting and cleaning up. In short, treat it the same as small-pox. I believe I can trace every case, and account for it by contagion solely, in our village.

"Now, while I am a strict believer in the laws of hygiene, and that cleanliness is next to godliness, and that towns and cities cannot be too strict in enforcing all laws for the removal of all sources of filth, still they must go farther in dealing with diphtheria, and enforce strict quarantine, and the sooner medical men are united on this point the sooner will diphtheria lose much of its formidableness."

TRIPLETS.—Dr. J. M. French, of Simsbury, Conn., reports a case of triplets occurring in his practice. The patient was twenty-seven years of age, and this was her second confinement. The labor progressed normally, each child presenting by the head. The placenta was single with three cords. Altogether the children weighed six pounds, were males, and died soon after birth.

THE DECLINE OF THE BACILLUS.—Dr. A. Jacobi, in his recently published work on diphtheria, takes ground against the germ theory. Buchner and Popper, of Goettingen, have lately shown that anthrax may possibly occur without the *bacillus anthracis*. Dr. Albrecht, of St. Petersburg, has lately announced that in two cases of relapsing fever, a disease which has been considered as certainly caused by a microscopic organism, this organism could not be found, or only in an extremely small number. These facts all seem to point one way toward the decline in the importance of the bacillus.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.—The officers of the Pathological Society of Philadelphia for 1881 are: *President*, Dr. S. W. Gross; *Vice-Presidents*, Dr. W. F. Norris, Dr. James Tyson, Dr. J. Solis Cohen, Dr. F. P. Henry; *Secretary*, Dr. S. F. Hazlehurst; *Recorder*, Dr. C. B. Nancrede; *Treasurer*, Dr. R. G. Curtin; *Curator*, Dr. Carl Seiler.

VISUAL EXALTATION IN TRANCE.—The following experiment in trance-seeing was recently made in this city by three physicians, members of the New York Neurological Society. The subject was a lady, of sensitive, nervous temperament, who for some years

had shown a peculiar susceptibility to the trance condition. There were present at the experiment the three gentlemen referred to, the subject, and her husband, who mesmerized her. After being put into the trance-state, a folded handkerchief was placed over each eye, two other handkerchiefs were then passed around the head and bound over these, making four handkerchiefs in all over the eyes. A leather strap was, in addition, carried over the lower part of the bandage and round the head, so as to hold the handkerchiefs firmly down. One of the experimenters had had his eyes bandaged in the same way, previously, and he could not distinguish light from darkness, even when his eyes were open. The subject's eyes were closed when she was mesmerized, and she stated that she could not open them at all. The bandaging being completed, the subject was placed in a chair, with her back to the light of the window. Her husband was blindfolded and sat at the other end of the room. Some sheets of paper, with blocks of bright color which had been painted that day by one of the physicians, were then produced, and one of them was given to the subject. She took it in her hand, and after a moment, during which her face grew flushed and she appeared in a state of great nervous excitement, she told the colors correctly. A new pack of cards that had also been brought by one of the experimenters, was shuffled and laid upon the table with the backs up. One of these was given to the lady; in a moment she told the color, then the kind, then the number of spots; the queen of diamonds was then handed her, and she told it instantly. Other cards were also told. A card that happened to be in the pocket of one of the gentlemen present was then produced, he alone of the party knowing what was printed on it. This was read correctly. It was "No. 9," the printing being rather large. The visual exaltation seemed to be greater at times; it finally disappeared entirely. A peculiarity noted was that the visual impression occasionally lasted for a few minutes. Thus, a three of diamonds was handed to the subject; after trying some time she failed to see it, and laid it down; a second card was then given her which she declared at first to be the three of diamonds, but afterward read it correctly. Other experiments confirmed the truth of this peculiar feature of the phenomenon. A perfectly opaque body placed before the eyes prevented the reading. It seemed necessary that the luminous rays should at least strike the face. The objects appeared to the person reading very greatly magnified.

The experiment was considered a demonstrative one by those who conducted it. It was similar to those conducted by the French Academy many years ago, when it investigated the subject of mesmerism. The phenomena were then pronounced genuine. On the other hand, an investigation of similar phenomena once made in London, showed that the blindfolded subjects had acquired the trick of working the handkerchiefs down so that they could see up over the top. This, it is said, was not possible in the experiment described above.

Philadelphia County Medical Society.—At the annual election of the Philadelphia County Medical Society the officers for 1881 were elected as follows: *President*, Albert H. Smith; *Vice-Presidents*, H. Y. Evans, Charles K. Mills; *Treasurer*, W. M. Welch; *Recording Secretary*, Henry Leffmann; *Assistant Secretary*, J. D. Nash; *Corresponding Secretary*, John B. Roberts; *Reporting Secretary*, Frank Woodbury.

Trichinosis in Syria.—An alarming epidemic of trichinosis has appeared in a village near Mount Hermon. The inhabitants had nearly all of them eaten the flesh of wild boars that had been killed on the neighboring mountain. Two hundred and forty persons were seized with severe symptoms of the disease. This is said to be the first instance known in which the flesh of wild boars had caused the disease.

Insusceptibility to the Effects of Nitrous Oxide.—Mr. George Lyddon related two cases to the Odontological Society of Great Britain, in which the inhalation of nitrous oxide produced no effect whatever. The first was that of a clergyman, apparently healthy. Twenty gallons were inhaled by him, but with no more effect than if it had been common air. The other patient was a lady, and anæsthesia was subsequently induced by chloroform. No explanation of these anomalous cases could be given. The gas was pure and the apparatus in good order in each instance.

Local Applications of Turpentine in Diphtheria are very highly recommended by Dr. W. W. Cleave in the *Louisville Medical News*. It should be put on with a mop every two or three hours, until every vestige of the membrane disappears. It penetrates the deposit, lifts it off, and leaves a red, shining base, that very soon gets well.

A Case of Polyuria Cured by Ergot is reported by Dr. E. McClellan, U.S.A. (*Louisville Medical News*). The patient, a man aged thirty years, had had diabetes insipidus for many weeks, and passed from ten to twelve quarts of pale, acid urine daily. After quinine had been tried with no success, he was put upon ext. ergot, fl. ʒ ss., q. 4 h. In four weeks he was discharged cured.

Notes on Recent Remedies.—Dr. James Sawyer writes on the above subject to the *Practitioner*. Speaking of *fuchsine* in the treatment of Bright's disease, he says: "I think the fuchsine treatment has given me better results than any other medicinal treatment in renal albuminuria. Fuchsine is an aniline dye, and appears to be mainly excreted with the urine. A patient taking it experiences no inconvenience from its effects. His urine becomes of a rosy pink color, and his fæces are often tinged with the same hue. The drug, to prevent stinging the lips and mouth, should be given in pills, dose, gr. j., t.i.d."

In regard to nitroglycerine in angina pectoris, Dr. Sawyer reports two cases, in one of which the drug did no good; in the other it produced very considerable relief. In the first case there was fatty heart; in the last, aortic stenosis and regurgitation. The drug was given as directed by Dr. Murrell, in one-drop doses of a one per cent. alcoholic solution in half an ounce of water.

The use of a combination of salicylate of soda with tincture of opium in diabetes produced very excellent results, some being practically well. No restrictions were put upon the diet in these cases.

A Bogus Medical College in Charleston, W. Va.—Dr. Simmons, member of the West Virginia State Senate, recently introduced resolutions revoking the charter of a wild-cat university, ostensibly located at Charleston, and known, by the provisions of its charter, as "The Livingstone University of America." This institution purported to be a medical school, and was a branch of one of Buchanan's institutions in Philadelphia.

Cremation in New York.—A bill to authorize the formation of cremation societies has been introduced into the State Legislature.

The State Charities Aid Association has begun its fight at Albany for an existence independent of the State Board of Charities.

Medical Night Service in Brooklyn.—The bill for establishing this service has been introduced and favorably considered.

Buffalo Insane Asylum.—A full investigation of this institution has been ordered by the Board of Managers, at the request of its superintendent. This investigation is to meet the charges of cruel treatment recently made by an ex-keeper.

United States Marine Hospital Service.—Drs. D. A. Carmichael, of Oswego, N. Y., and D. T. Armstrong, of St. Louis, who recently passed successful examinations for appointment into the Marine Hospital Service, have been appointed assistant surgeons by the Secretary of the Treasury, in the order in which they passed the Board. Assistant Surgeon Carmichael has been ordered to the Boston Marine Hospital, and Assistant Surgeon Armstrong to New Orleans. Surgeon P. H. Bailbache, Marine Hospital Service, has been ordered as inspector to the New England ports.

False Health Bills from Consular Officers.—Dr. W. H. Smith, health officer of this port, writes to the *Bulletin* of the National Board of Health, that during the past summer clean bills of health were issued by consular and health officers in the Bahamas and at Key West, after yellow fever had appeared in those places. Well-marked cases of yellow fever were taken from vessels entering this port in more than one instance during the past season, where consular declarations were invoked to prove that the disease did not exist at the port of departure, but subsequent evidence of its existence was secured. Much embarrassment had been caused during the past season by reason of the above facts.

A Medical Cabinet Officer.—The portfolio of Public Instruction in the new Italian cabinet has been accepted by Dr. Guido Baccelli, the distinguished professor of clinical medicine in the University of Rome. Dr. Baccelli has been among the most active of the numerous medical men in the Italian Legislature, and is a skilful parliamentarian as well as a prominent sanitarian and physician. He resigns his professorship, to which Dr. Panizza succeeds.

A Hospital Sunday Society has been recently formed in Lowell, with Dr. William Allen at its head. —*Boston Med. and Surg. Journal.*

Small-pox and Diarrhœa are visiting Chicago. Small-pox, at last accounts, was increasing in amount. The diarrhœa appeared as an epidemic. It was not violent in character. The cause assigned is bad sewerage.

Is Residence in Brooklyn Calculated to Aggravate or Induce Nasal, Laryngeal, or Bronchial Catarrhs? is the question investigated recently by the Committee on Hygiene of the Kings County Medical Society, and answered in the negative. Brooklyn is thought to be as healthy as New York in this respect, and New York to be as healthy as any seaboard city.

Vital Statistics in Spain.—There has never heretofore been any special attention paid to vital statistics by Spain. Recently, however, she has put herself at the head of all civilized countries in this regard by publishing a monthly statement of deaths, marriages, births, diseases, etc., for the whole country. The tables show that the mortality rate is 26 per 1,000, which is very high.

Foot-and-Mouth Disease in New York.—There has been a serious invasion of foot-and-mouth disease in England, it having been introduced from the North of France. Ten cattle affected with this disease were recently landed in this city, having been imported from England. They were promptly quarantined, a measure rendered very necessary by the actively contagious character of the disease.

The Number of Cases of Small-Pox in the United States, reported for the month of December, 1880, was 227. Of these 215 were in the Northeast.

The Origin of Enteric Fevers.—Dr. D. E. T., of Cheshire, Mass., writes: "I noticed in your issue of January 29th Dr. Anderson's article on 'The Origin of Enteric Fevers in Isolated Rural Districts.' In closing, he says: 'Let the readers of the Record speak and we shall have more light.' Last fall I was called to see a family some little distance from town. I found three patients in the same house, and all sick with typhoid fever. I examined the place carefully for a cause of this trouble. I found the drinking-water good. In the cellars—for there were two—I found a large quantity of rotten boards, decayed vegetables from the previous winter, a tubful of 'stinking' brine, etc., too numerous to mention. Just west of the house stood a privy, with no vault. Upon going into it, it contained 'scripture measure'—it was full to overflowing, not having been cleaned in two years. Every west wind must of a necessity waft that effluvia directly into the house, and who would care to inhale it? I would not, for one. I could find nothing else, and why need one look farther? In my opinion, the condition of those cellars and that privy produced that disturbance. There had been no typhoid fever in the house for nine years. A short time previous the entire family had the measles; one, however, that was afflicted with the fever did not have the measles. Again, I was called to see a family where four, in the course of a few weeks, came down with typhoid fever. Here the water was from a spring, a long distance from the house. North and northwest of the house were a large hog-pen and a barn-yard, while not twenty feet from the house, north, was a privy, the contents of which ran over, and, commingling with the waste water from the house-sink, extended over quite a surface. The cellar was in good condition. The sleeping-room of the one who first came down with the fever was on the north side of the house. Two of the patients became completely exhausted while taking care of the first two, and might not have had it but for irregular meals and sleep, and overwork. The seven made good recoveries. In the first family I mentioned, a hired girl, after a short time, came down with it elsewhere, having just left the family, and also ten weeks after the first began to get better. A family moved into the house, and two weeks later a little child, three years old, came down with the same fever. There had never been a case of typhoid fever in the second house I spoke of. There is not a doubt in my mind but what the emanations from those cellars and privies caused that sickness. Doubtless the two whose vitality had been lowered by the severe attack of measles, and the

two subject to so much fatigue, fell a more ready prey to the poisonous germs from the sources mentioned. There were no other cases in the town that came to my notice. Had any one of these died, without doubt we should have heard an eloquent sermon on the 'Providence of God,' while a choir would have sung, 'God moves in a mysterious way, His *wonders* to perform.' I do not deny that He does, but I do not believe that He moves through human excrement, and 'rotten' at that. The laws of nature are fixed and poison kills."

The Western Pennsylvania Hospital.—An examination for three resident physicians, to serve for one year from April 1, 1881, will be held at the Hospital Building, Pittsburg, Pa., on the fourth Wednesday of March, 1881, at 10 o'clock, A.M.

A Discussion upon the Prevention of Insanity.—The National Association for the Protection of the Insane will hold a parlor meeting, February 12th, when Dr. Stearns, Superintendent of Hartford Retreat, will open a discussion on the prevention of insanity, and how to check its alarming increase.

Small-pox in the West.—The spread of small-pox and diphtheria continues in Chicago, fifteen new cases of the former and as many more of the latter having been reported to the health authorities in one day. The readiness with which vaccination takes this year leads some of the local physicians to believe that the conditions are peculiarly favorable to catching the disease.

The *Journal's* Des Moines special, January 26th, says: "Small-pox has broken out in the Fort Madison Penitentiary, creating great excitement and panic. All the foremen of contract work have fled, and the work is generally abandoned. It is believed the disease will soon be under control.

Transfer of New York City Lunatic Patients to State Asylums.—A bill has been introduced into the State Senate, by Mr. Bixby, and ordered to a third reading, authorizing the Commissioners of Charities and Correction in New York, in their discretion, to transfer any insane person, heretofore or hereafter committed to any institution under their control, to any State or county lunatic asylum which has been duly licensed by the State Board of Charities, and whose managers will consent to receive the same. The expense of the maintenance of patients so transferred shall be fixed by agreement between said commissioners and managers, and shall be a charge upon the city of New York, together with the cost of transfer and the return of patients to New York when discharged.

Dr. Chas. F. Folsom, of Massachusetts, has been nominated by the President to be a member of the National Board of Health.

A National Veterinary Bureau.—The select committee of the United States Senate, to which was referred the various bills on the subject of pleuro-pneumonia and other diseases of cattle by direction of the committee, reported a bill for the establishment of a bureau of animal industry, and asked that the same be printed and recommitted to the committee.

Apropos of Surgical Malpractice Suits.—The Philadelphia *Medical Times* relates the following, which occurred recently in England: A servant-girl was suspected by her mistress of being *enceinte*. A medical man was sent for, and the girl examined. She afterward sued both mistress and doctor for assault and battery. The case was argued several times, elicited antagonistic rulings from different judges, and resulted in a non-suit in favor of her mistress, and acquittal by jury of the doctor. The patient swore she did not consent, but the jury seemingly did not believe her. The *Times* remarks: "Explorations of the purity of servant-girls would seem to be even more risky than the practice of medicine."

A National Commission on Adulterated Foods and Drugs.—A bill to create a commission of the above character has been introduced into the House of Representatives, by Mr. Gillette, of Iowa.

The New York Sanitary Reform Society in Albany.—The Senate Committee on Cities met January 26th and heard Charles Tracey, Jr., on the bill of the Sanitary Reform Society creating a street-cleaning department in New York, with a superintendent appointed by the Mayor for six years, at a salary of $6,000. No action on the bill was taken by the committee, as it is understood that Mayor Grace is preparing a bill for the same purpose, and the bill to be reported by the special Senate Committee on the Reduction of Expenses in New York also provides a new street-cleaning department. When all the bills are before the committee it will report the plan that appears to be most feasible.

Glucose as an Adulteration.—The blenders of cane-sugar and glucose will be up in arms against the bill introduced into the State Assembly by Mr. Root, of Monroe. It provides that any person or corporation engaged in the manufacture, refining, or mixing of sugar, syrups, or molasses for sale, who shall mix the same with glucose or grape-sugar, shall, before selling or offering the mixture for sale, mark the cask or package "adulterated," giving the percentage of glucose or grape-sugar contained in it.

Stamping Out Pleuro-Pneumonia.—Gov. Cornell has sent a special message to the Legislature in regard to the subject of pleuro-pneumonia among cattle. In it he refers at length to the importance of the subject, expresses the hope that State legislation will be supplemented by legislation at Washington, and that, while the national body is considering the matter the State Legislature should not relax its efforts to arrest the progress of the disease. Acting upon this message, the Committee of Ways and Means have recommended the passage of Mr. Skinner's bill, appropriating $10,000 for preventing the spread of pleuro-pneumonia.

Treatment of Asthma with the Induced Current.—Dr. I. Burney Yeo relates, in the *Lancet*, his experience at Neuenahr, where he saw the induced current used in the treatment of asthma. It sometimes acted like magic, curing the cases completely in a week or two. The electrodes are applied usually on each side of the neck, about an inch below the angle of the jaw. The current must be of good strength, so that the patient can feel the stream go across the larynx and soft palate. In bad cases it should be applied twice a day, from fifteen to thirty minutes each sitting. Dr. Max Schaeffer, who first advocated this treatment, found that the constant current never did any good.

A Congress of Laryngology is announced for September, 1882, in Paris. The members of the organizing committee nominated are MM. Fournier, Gouguenheim, and Krishaber.

Original Communications.

ON THE EARLY DIAGNOSIS OF SOME ORGANIC DISEASES OF THE NERVOUS SYSTEM.

By E. C. SEGUIN, M.D.,
NEW YORK.

(Paper read before Medical Society of State of New York, Feb. 3, 1881.

Probably no one would deny the desirability and utility of making an accurate diagnosis of disease at the earliest possible period, and one of the results of recent progress in the medical art is increased possibility in this direction. We can recognize diseases which, though existing, were unknown to practitioners of thirty or fifty years ago, and we can also determine the existence of some of these affections at a much earlier period of their evolution than we could ten or even five years ago. The sciences of semeiology and of diagnosis have unquestionably progressed greatly in the last generation, and this is more especially shown in the history of specialties, as ophthalmology, dermatology, gynecology, and neurology. I may be permitted to say that it is a duty and privilege of the specialist to inform the profession at large of the advances made in his department in diagnosis and therapeutics, in order to enable the general practitioner to apply the new knowledge, or the confirmed old knowledge, to the advantage of his patients.

It is with such a motive that I would call your attention to the possibility and desirability of an early diagnosis of two or three organic diseases of the nervous system. Probably I shall name no new symptoms, but will aim to call your attention to the really valuable symptoms of these affections, and to the significant grouping of these symptoms.

I have selected three affections which are now quite well known to us, and yet which, judging from my experience, are frequently ignored during long periods of their formative periods: I refer to posterior spinal sclerosis (progressive locomotor ataxia), dementia paralytica, and cerebral tumor.

I. *Posterior spinal sclerosis, or progressive locomotor ataxia.*

While willing to admit the occasional occurrence of abnormal cases of this disease, in which ataxia appears with little premonition, yet I claim that the general practitioner at the present day should diagnosticate the disease in the clearly defined first stage, or pre-ataxic period, which may last from a few months to several years. The vast majority of cases exhibit this first stage, and its symptoms are peculiarly characteristic, if not pathognomonic. In general terms the symptoms of this first stage consist in peculiar pains, and in reduction or abolition of reflex movements in different parts of the body, and from a combination of these a diagnosis of great probability of accuracy can be made years before the patient's gait becomes disordered.

If we assume that nineteen out of twenty victims of posterior spinal sclerosis pass through this neuralgic or pre-ataxic stage, we will not be far out of the way.

The pains of posterior spinal sclerosis are almost pathognomonic, especially when described by an intelligent educated patient. They have the following characters:

a. The pains are vagrant; they occur in innumerable spots in the affected parts—so much so that patients who have long had them are unable to fully enumerate the localities in which they have suffered; or, rather, they can hardly name a region which has escaped.

b. The pains do not, as a rule, occur in the course or distribution of recognized nerve-trunks or branches; they are local pains, and this peculiarity may serve (with *a*) to distinguish between the pains of sclerosis and those of true neuralgia (sciatica, etc.).

c. The seat of pain is commonly in an area of skin varying in size from that of a pea to that of a small hand. In many cases pains are also referred to the muscles, to the vicinity of bones, and even to articulations and viscera.

d. The pains are paroxysmal in a completely irregular manner: they may occur every few moments for hours in one spot, or may be altogether wanting for weeks; or at times a single pain is the signal that the disease is not cured. It seems probable that the atmospheric disturbance which precedes a storm (areas of low barometer) causes an increase in this symptom, or even calls it forth.

e. The pains are sudden and vary in severity from the sensation caused by the penetration of a small knife-blade to what we may imagine to result from tearing through the tissues with a hook or large knife; or the sensation is like a painful electric shock. Perhaps most of the pain in such cases is in the shape of stabbing pains in an ovoid or round area of the skin (foot, thigh, arm, shin, etc.), repeated every few seconds for hours or even a day or two. The suffering is often such as to make the strongest-willed man writhe and shriek. The description of the pains, *i.e.*, their comparison with known sensations or physical conditions, varies greatly, according to the fertility of the patient's imagination and his command of language. From their suddenness and electric character the pains of posterior sclerosis are often called fulgurating or terebrating. The seat of pain usually is hyperalgesic, *i.e.*, painful to the lightest touch during the paroxysm; yet firm pressure sometimes gives relief.

Second.—Diminution of various reflexes throughout the body.

This is best observed in the iris and at the patellar tendon, though the constipation and imperfect micturition which are such frequent symptoms of the disease are phenomena of the same order.

a. The impairment of iritic reflex action ("pupillary reflex") was first intelligently studied in 1869 by Dr. Argyll Robertson, of Edinburgh. His observations have since been abundantly verified by numerous observers, and an exhaustive paper on the subject has been published by Prof. W. Erb, of Leipzig, in the *Archives of Medicine*, October, 1880. Robertson and others after him noticed that the pupil of tabetic patients did not dilate in the shadow and contract in the light, as do normal pupils; and they further observed that during the effort of accommodation there occurred a normal pupillary contraction. In other words, the reflex iris movements were abolished, while its associated quasi-voluntary movements were preserved. These phenomena I have observed in almost all my patients suffering from posterior spinal sclerosis, and I am in the habit of calling the attention of students to the symptom. In two of the patients now under my care this condition is not present, but there have been cases of abnormal sclerosis, in which all the symptoms appeared in a most irregular manner.

The pupils in a suspected case of posterior-spinal sclerosis are to be tested in the following manner: the patient is placed, seated or standing,

facing a brightly illuminated window, and told to keep his look fixed on some distant object, such as a house or tree. By alternately closing and opening the lids, or better, by shading the eyes with one's hand momentarily, it is easy to see if the pupils change diameter. It is of the utmost importance that the patient's intelligent assistance be secured, in order that his gaze shall remain adjusted for distance. In a given case the absence of reaction to light having been noted, we next hold up one finger or a small object within a foot of the patient's face and bid him look at it. At once the pupils contract and do so in proportion to the accommodative effort and the coincident convergence; when the patient looks at the distant object, and relatively or absolutely relaxes his accommodation, the pupils dilate again.

The finding of such a condition of the pupil—the existence of *Robertson pupils*, if you will allow the expression—is now considered of nearly as much importance for diagnosis as the occurrence of fulgurating pains.

b. Diminution and abolition of reflex action in the peripheral apparatuses is best studied at the knee.

We test the so-called patellar reflex or knee-reflex or patellar tendon-reflex in the following ways: the patient being seated, is told to cross one leg over the other in a natural manner, and to let the muscles relax; or seated, we place our left hand under the popliteal space, tell the patient not to help us, to let the leg hang loose, or, in popular parlance, "dead," and lift the whole limb so that the foot swings a couple of inches above the floor; then we tap the skin over the whole of the region from the insertion of the quadriceps femoris to the tuberosity of the tibia, with one or two finger-tips applied as in percussion. The place whence a reflex quadriceps contraction is most apt to occur is about midway between the lower end of the patella and the tibial protuberance. The taps should be gentle at first, and if these fail, harder ones are to be tried. A third mode of procedure, which is very good indeed, is to seat the patient on a table so that his legs dangle some two or three inches beyond its edge; then we tap the patellar region as above described, without supporting the thigh with our left hand. The test may be well done through the patient's clothing, yet it is desirable, especially in doubtful cases, to tap the bare skin. Another important precaution is to secure the absolute relaxation of the patient's muscles, and to divert his attention from what you are doing. Even with all precautions it is sometimes next to impossible to secure this indispensable muscular relaxation. In the healthy subject this test develops a contraction of the quadriceps extensor femoris and causes an extension of the leg, or a sudden jerk. In a very early stage of posterior spinal sclerosis no contraction takes place.

I would also call attention to the occasional occurrence of reflex movements of the thigh produced by contraction of the iliac group of muscles during the knee-test. I have an example of this distant reflex action in a typical case of sclerosis of the posterior columns, in which the quadriceps does not contract at all.

While claiming very great diagnostic value for this negative symptom, I would not be understood as attaching pathognomonic significance to it, as we all know that there are a few seemingly healthy individuals in whom the patellar tendon-reflex is lacking, and also that there are other diseases which diminish or abolish it. Indeed, I may say that I recognize no pathognomonic symptom, and even in attempts to push diagnosis to an extreme delicacy, would urge that reliance be placed on the grouping of symptoms, rather than on any one of the signs, however constant and important it may appear.

Physiologically analogous to this condition of loss of tendinous reflexes is the flabby state of the muscles in the affected parts. This is not due to any positive atrophy, as electrical tests show us marked departure from the normal reactions; but to impairment of what physiologists call muscular tonus, a state of partial contraction or tension of muscles which is kept up by the inevitable and continued excitation of the cutaneous nerves by air, clothing, surrounding objects, etc., acting in a reflex way through the spinal cord. It has been recently claimed that this loss of muscular tonus was the most important factor in the production of the ataxic movements which characterize the second stage of the disease.

The vesical and rectal reflexes are diminished in posterior spinal sclerosis. Slow, irregular micturition is complained of by most patients, in the first stage and in the second. We usually micturate without using much volition, but the tabetic patient is obliged to strain and to try hard to pass water. Defecation is, like micturition, a semi-voluntary act, and in the late first stage of the disease in question constipation becomes more and more marked, and that through loss of the automatic or reflex action of the rectum and adjacent muscles.

The sexual act is, in my experience, frequently impaired and sometimes almost lost before the second stage sets in. The acts of erection and emission are usually brought about in a reflex manner by irritation of the skin and mucous membrane of the genitals. As a result of diminished spinal reflex action we have imperfect erections, and either premature emission, or, what is more common, I believe, very slow production of the orgasm, and impossibility of repetition within a reasonable time.

Some writers admit abnormally great sexual power in the early stage of tabes, but I am not sure to have met with more than one or two cases in which this seemed to be the case. In one of the patients, a female, I became convinced that her extraordinary capacity for sexual intercourse was not in a strict sense pathological or pre-tabetic, but had been marked in one shape or another from childhood.

It seems reasonable at the present time to advance this general proposition: that in posterior spinal sclerosis the various reflex actions performed by means of those portions of the cord which are the seat of sclerosis, are diminished or lost; or, to put it in another way more useful for practice, it may be said that the limitations of loss of reflex action in different parts of the body accurately indicate the limits of sclerosis in the posterior sensory apparatus in the spinal axis.

Third.—The occurrence of paralysis of ocular muscles.

A very large proportion of tabetic patients tell of past or present diplopia, and in a certain number of cases the ocular paralysis precedes the pains and ataxia by several years. So true is this statement, that it has become an established practice with neurologists and ophthalmologists to suspect posterior spinal sclerosis in adults who present themselves with strabismus, diplopia, or ptosis. In such a case we should carefully question the patient about the occurrence of fulgurating pains, test the pupillary and tendinous reflexes. I need hardly add that another obligatory line of inquiry in such cases is with reference to symptoms of syphilis.

The same remarks apply to atrophy of the optic nerve, which is occasionally an early symptom.

I have not the time to refer to the gastric, laryngeal and rectal crises and the peculiar forms of arthritis which once in a while occur early in the disease.

It seems to me that, by a critical appreciation of the above symptoms in a patient, the diagnosis of the first or neuralgic stage of posterior spinal sclerosis is as certain as the diagnosis of any internal disease, not excepting such affections as pneumonia or valvular cardiac disease. Several autopsies are now on record, made during this first stage, and in these sections of the cord showed sclerosis of the posterior columns. I have one such observation of my own: fulgurating pains for about thirty years, absence of patellar reflex while under observation (two years), dilatation of one pupil, no trace of ataxia. The sclerosis of the posterior columns in this patient's spinal cord is visible to the naked eye.

It is often objected that the pains of ataxia are not absolutely reliable for diagnosis. This may be true when the patient is stupid, or when the physician is not careful to ascertain the precise character of the pains.

The only two conditions in which pains somewhat resembling fulgurating pains occur, in my experience, are paralytic dementia and gout. In the former disease, slight fulgurating pains—"smaller" pains, if I may be allowed the expression—are described by the patients; but in many of these cases autopsy shows that, besides the cerebral lesions proper to the disease, the posterior columns of the cord exhibit pathological alterations; so that these cases are, after all, *quasi*-tabetic. The sharp pains of gout are short, stabbing pains in the skin of various parts of the body, compared by the patients to the prick of a needle, cold or hot. There is no tendency to repetition of the pain in one spot for hours or days; the sensations appear in various parts of the body, and are bearable. It is but right to add that this statement is based on very few observations, and requires verification.

The differential diagnosis of fulgurating pains from the pains of neuralgia, strictly speaking, is very easy. In neuralgia the pain is in the course and distribution of one or two (seldom) nerve-trunks and their branches; it may be paroxysmal, but does not assume the excessive irregularity of the tabetic pains—agony for a few hours, and freedom from pains for hours, days, or weeks. The hyperæsthesia in fulgurating pains is at the seats of pain. In neuralgia we find regular "tender points" along the nerve-trunk, or where its branches become superficial. The lightest touch causes pain in the painful districts in tabes, while the tenderness of nerves in neuralgia is usually demonstrable only by firm, localized pressure. Further, true neuralgia is seldom bilateral, while it is the rule for fulgurating pains to appear on both sides of the median line—in both lower extremities, for example. A last important distinction is that neuralgia is relievable or curable, whereas fulgurating pains are practically incurable, and are fully relieved only by morphia-injections.

The confusion so often made between "rheumatism" and the first stage of sclerosis is even less pardonable. Of course no practitioner would mistake fulgurating pains for articular rheumatism; the error is with respect to "rheumatism," so-called, affecting muscular masses, and aponeuroses. In these affections the pains are usually dull, nearly constant, and distinctly aggravated by movements. Pressure must be firmly made upon the parts to produce pain, whereas in fulgurating pains the condition is one of cutaneous hyperalgesia under a slight touch. Again, this "rheumatic" condition is distinctly amenable to treatment (counter-irritants, etc.), whereas the pains of posterior spinal sclerosis are, in one sense, incurable.

II. The second disease of the nervous system to which I would direct your attention as the object of more exact and earlier diagnosis is *paralytic dementia*. By this term is meant the passive form of an affection which consists in peri-encephalitis, adhesion of the meninges, and various secondary degenerative changes in the brain and in the posterior columns of the spinal cord. Chronic peri-encephalitis also presents itself in an active or delirious form, which is known as general paralysis or paresis. In neither form is there a positive condition of paralysis at any time, except as a complication from the occurrence of cerebral hemorrhage or softening. Both the semeiological names, paralytic dementia and general paresis, are, strictly speaking, misnomers; yet we accept them as sufficient.

The semeiology of peri-encephalitis is complicated, and it would be beyond the scope of this essay to describe it in detail. I merely wish to call your attention to the symptoms which, in my opinion, are earliest in their appearance and significant of an incurable disease. These are tumors or fibrillary contractions in various muscular groups, especially in the tongue, facial, and brachial muscles; a tremulous, thick, and vibratory speech; inequality of the pupils; dementia.

The tremor of paralytic dementia probably first makes it appearance in the facial and lingual muscles. It consists in non-rhythmical contractions of small muscles or of fasciculi of muscles, which are either present in the quiescent state of the features, or are excited by emotion or by the performance of a voluntary movement, as showing the tongue or the teeth. Sometimes innumerable fine fibrillary tremors cover the face, while in some cases the movements are coarser and irregular enough to merit the term choreic. The tongue exhibits both sets of tremors—the very fine fibrillary ones and the large choreic oscillations. There is also, though usually at a later stage, some shrivelling or atrophy of the tongue.

The hands are tremulous, usually in a fine semi-rhythmical way. This trembling is sometimes scarcely visible, but is perceptible as a delicate parchment-like fremitus on holding up the patient's extended fingers between ours. In the lower extremities the tremulousness is not apparent.

The speech is affected as a result of this tremor and as the result of a certain want of co-ordination in the muscles of articulation. Words are quickly spoken, with some syllables omitted or blurred, or with a terminal syllable left off. The articulate sounds which are produced are heard as vibratory or tremulous, and the speech seems thick. Patients semi-unconsciously avoid long or difficult words in conversation, and even seek roundabout ways of expressing their meaning by shorter words. Besides this vibratory tremulousness in articulation there is an imperfection in the pronunciation of words, long words especially. Remedy is pronounced "remdy;" constitution, "constution;" infallibility, "infallaby." The last syllable may be badly sounded or even omitted. I have known this characteristic speech to be the only well-marked symptom, and to be followed by dementia, exaltation, etc. Occasionally a patient comes to us complaining of this defective articulation. I now recall two such cases, one of which died three years later in a German

private asylum, with all the symptoms of general paralysis.

Just as spoken language is affected by the facial and lingual tremor, so is the handwriting altered by fibrillary contractions in the muscles which govern the movements of the fingers. A tremulous, jagged, wholly irregular handwriting results, and in some cases, where dementia is present, words or syllables are frequently omitted in composition.

The pupils in paralytic dementia are either very small or irregular, usually the latter. The reaction of the iritic muscle to the influence of light may be diminished or abolished.

I may here say, by way of parenthesis, that small and unequal pupils in a person of middle age, from twenty-five to sixty, should lead to an inquiry into the possible existence of one of three morbid states, viz.: paralytic dementia (or general paralysis), sclerosis of the posterior columns, cardiac or aortic disease (intrathoracic disease).

In my experience, the patellar tendon-reflex is often increased in paralytic dementia.

The dementia or failure of mental power is sometimes impossible to detect until after the more peripheral, physical symptoms have existed for some time. It is possible for the psychical symptoms to precede the physical; sometimes the two appear to develop simultaneously; usually, I believe, the physical symptoms already studied are apparent for months before the mind shows decay.

Dementia is evidenced by impairment of memory for recent events, by loss of the power of comparison, and consequently of judgment. Many of the automatic or quasi-automatic acts of every-day life which form a part of the patient's manner and individuality are badly performed or omitted. This leads to what is known as change of character in the subject; he becomes less neat in his attire or personal cleanliness; he loses his table-manners, handling his spoon, fork and knife awkwardly, soiling his clothing with drippings of food, etc. This impairment of judgment is probably one of the factors in the immorality and tendency to alcoholic indulgence which are so frequent in this disease.

Yet, in the midst of this increasing moral wreck, so visible to the immediate relatives of the patient, there may remain a degree of correctness in thought and success in every-day occupation which may impose upon strangers, and even upon a judge and jury. The things which the patient is in the habit of doing every day, and about which he has thought many years, such as professional work and business transactions, may be fairly well executed, while the tremors, pupillary irregularity, impaired articulation and handwriting, together with alteration of moral character, make the medical observer recognize a fatal, progressive disease of the brain. These cases come more frequently under the observation of general practitioners than under that of the specialist, whether asylum physician or neurologist. They are very frequently in our midst, and their early recognition may save much disgrace and impoverishment to families, though, alas! it does not pave the way for more successful therapy.

I would repeat, that a person exhibiting tremors of the facial muscles of the tongue and hand, a vibratory and slurred speech, angular or tremulous handwriting, and irregular, small pupils, should be suspected of having chronic peri-encephalitis or paralytic dementia. The addition of gradual failure of mind—dementia—makes the diagnosis certain. In case there should be superadded exalted notions, with maniacal attacks and epileptiform seizures, the case deserves the name of general paresis, and as such is the form more usually seen and studied by asylum physicians.

It has been claimed in the last few years by Fournier and others that cerebral syphilis, in the shape of arteritis, partial arachnitis and localized peri-encephalitis, might give rise to the symptoms of paralytic dementia. I am in accord with Dr. Julius Mickle and others in believing that it is often possible to distinguish the idiopathic from the syphilitic dementia. The latter is, comparatively, much more acute (or rather less chronic), in its development; in it we do not observe the very fine muscular tremors as an early symptom; the pupillary disturbance consists usually of mydriasis of one side, with or without other signs of third-nerve palsy; the speech defect is a coarse thickness in pronunciation, rather than a vibratory, tremulous sound, which, when once heard, can never be forgotten. There are well-marked paralytic symptoms, usually hemiplegic, and decided epileptic phenomena in syphilitic cortical diseases. The dementia is seemingly more profound, causing an apparent imbecility with want of control over the sphincters. Altogether, the symptom-group is much more threatening in appearance, yet great improvement or even apparent cure may be obtained in very bad cases by the use of mercury and the heroic dosing by iodide of potassium. This therapeutic proving of a disease is of course valuable in practice, but logically it cannot be termed a diagnosis, and it is a reproach to the present state of our science that in several types of disease we should be obliged to resort to it.

III. The third organic disease of the nervous system which should, it seems to me, sometimes be recognized with positiveness much earlier than it now is, is *tumor of the brain*.

In making this statement I am perfectly aware that some cerebral tumors produce no distinct or special symptoms during life, and that others produce incongruous and apparently paradoxical symptom-groups. Some years ago, before the physiology of the brain was as well understood as it is now, we could offer no explanation of these perplexing cases which seemed to destroy our rules of diagnosis. To-day we have acquired an approximately correct knowledge of which portions of the brain (cerebrum especially), are excitable and capable of causing symptoms, and which are inexcitable, and may be the seat of extensive disease without clear indications. This I say without reference to the finer localization theories of the last five years. We know quite positively, for example, that extensive lesions may exist in the anterior and inferior portions of the frontal lobes, in the sphenoidal lobes, and in the occipital lobes of the cerebrum, and in one-half of the cerebellum, without causing any symptom specially useful for diagnosis, such as will be considered later on. We have also learned, from Flechsig's researches, that the decussation of the motor tract just below the anterior pyramids of the medulla oblongata is variable in amount, and that in some cases there may be no crossing of fibres, or hardly any. This important law of variability in the pyramidal decussation enables us to correctly appreciate the rare cases in which a cerebral lesion produces symptoms (paralysis or spasm) on the same side of the body as itself—cases which have been so urgently pressed upon the profession by Brown-Séquard in the last ten years as proofs that our physiological laws of cerebral action and of the productions of

symptoms were all wrong. These laws stand to-day, I believe, only strengthened by the exceptions which have been adduced.

All I wish to say is that tumors located in what we now term the excitable region of the cerebrum or the motor zone, are capable of very early recognition.

The region which receives the name of motor zone is irregular in shape, and perhaps its limits are not yet well ascertained. In a general way we may say that it includes the median region of each hemisphere, in particular the posterior extremity of the third frontal convolution, the upper half of the second and first frontal, the ascending frontal and ascending parietal convolutions, the anterior gyri of the island of Reil, the paracentral lobule on the inner surface of the hemispheres, and, perhaps, a large part of the upper set of parietal convolutions. These are the motor convolutions, and embrace the so-called motor centres of Ferrier. Besides, we must include under the name of motor zone, or region, those fasciculi of white substance which connect the above-mentioned gyri with the crura cerebri, constituting the anterior half (or less) of the internal capsule as it passes between the nucleus lenticularis on the outer side and the nucleus caudatus and thalamus opticus on the inner side.

The succeeding remarks apply to tumors which involve any of this large expanse of cerebral substance, either in its external gray matter or in the fasciculi of white substance lying between the motor convolutions and the central gray bodies.

The symptoms which I think are characteristic of tumor in the motor zone of the hemispheres are:

Localized convulsions in peripheral muscles; equally localized paralysis of peripheral parts; neuro-retinitis or choked disk; localized headache. The symptoms are named in the order of their frequency and importance.

The initial convulsions of cerebral tumor are sometimes restricted to one side of the face, one hand, or even two fingers, or one leg. The spasm is usually tonico-clonic, but may be wholly clonic or jerky. In many cases this localized spasm is unaccompanied by loss of consciousness or vertigo, and it may remain localized in the part first affected during many attacks, extending over weeks and months of time. The patient feels the muscular contraction before it becomes evident, thus constituting a sort of aura. In some cases almost from the first, in nearly all cases after a while, the convulsion involves more muscles on one side of the body; it seems to ascend or descend, to use the patient's expressions, and there results a hemiplegic epileptic attack with loss of consciousness. Again, the attack may begin in a small peripheral part, involve the whole of one side of the body, and later affect the opposite side, thus constituting a full epileptic attack. The patient is able to watch the progress of the spasm for a number of seconds or minutes before losing consciousness or being thrown down, and we may take advantage of this peculiarity to instruct the patient in the use of the tourniquet or bracelet, placed on the limb just above the seat of first spasm, to cut short the attack by pressure.

This distribution of spasm, and its possible occurrence without loss of consciousness, are signs which most positively distinguish these symptomatic convulsions from the ordinary epilepsy which we constantly encounter.

As early as 1827, a French physician, Bravais, described the hemiplegic form of epilepsy and showed its relation to gross cerebral disease; but it is to Hughlings Jackson, of London, that we owe the physiological study of these cases, and of cases of more limited epilepsy, and the first demonstration of the dependence of localized spasms upon limited lesions of the opposite cerebral hemisphere.

Indeed, in prosecuting these clinical and post-mortem studies, Hughlings Jackson laid the foundation for the vigorous hypothesis of cerebral localization, as Ferrier states in the dedication of his book on the "Functions of the Brain" to this illustrious physician. So far as my own experience goes, autopsies have invariably verified the theory of localized epilepsy which I have stated, and the journals of the last five or six years contain numerous corroborative cases. As the evidence now stands, chronic localized convulsions must be looked upon as almost positive indications of a localized lesion in the opposite cerebral motor zone, most probably a tumor.

What I have said of localized convulsions applies to localized paralysis. It, like spasm, may be limited to a small muscular group, or to one half of the body; it may begin in a part and gradually extend. In general terms paralytic phenomena follow in the wake of the convulsions at a distance of weeks or months, and have the same distribution.

Neuro-retinitis, or choked disk, is a frequent result of tumor within the cranium, but this symptom may, on the one hand, be absent with a large or even monstrous cerebral sarcoma, and on the other, it does not afford any indication of the locality of the tumor. The notion which was current a few years ago, that neuro-retinitis was pathognomonic of cerebral tumor, is wholly without foundation.

From my observations I am led to conclude that the occurrence of localized convulsions and paralysis, without choked disk, is valuable evidence of tumor, while choked disk without localized spasm and paralysis is merely a basis for suspecting tumor. The association of the two sets of symptoms makes up almost positive proof of the existence of a neoplasm. A diagnosis based on this symptom-group is quite as secure as that of any other disease giving rise to local physical signs.

The value of headache, of localized cranial pain more strictly speaking, is also variable. By itself it is not strictly indicative of tumor, but with either the choked disks or with localized motor disturbance it becomes highly significant.

The co-existence of the three symptoms justifies a positive diagnosis of cerebral tumor.

Had I more time I should like to speak of the possibility of a still finer diagnosis in cases of tumor of motor districts of the brain. We are sometimes enabled, through recent advances in experimental physiology and pathological anatomy, to localize tumors within an inch or two of their actual situation, in the regions known as centres for speech, centres for the face, centres for the arm and hand, centres for the leg, and centres for both arm and leg. The future of neurological medicine is pregnant with discoveries in this direction, which will have very practical application.

My purpose in embracing the opportunity of addressing you was to make a sketch of the scientific and logical basis for progress in the direction of early diagnosis.

The affections whose semeiology we have studied —cerebral tumor, paralytic dementia, and posterior spinal sclerosis—are as yet incurable. Yet, if we can ever hope to apply remedies to them successfully, it will have to be done at the earliest moment when their recognition is possible by the general practitioner, who naturally has charge of the cases in their incipience.

FRACTURE OF THE RADIUS IN THE CADAVER.

EXPERIMENTS BY JNO. H. GIRDNER, M.D.,
LATE HOUSE SURGEON TO BELLEVUE HOSPITAL, NEW YORK.

THE paper read by Dr. Pilcher before the New York Academy of Medicine, and published in the MEDICAL RECORD, July 27, 1878, and the experiments made and detailed by Prof. Hamilton in his book on fractures and dislocations, are the only ones which to my knowledge have been made of late years to discover precisely what occurs when the lower end of the radius is broken. In both these series of experiments, adult subjects were selected, at the suggestion of Prof. Frank H. Hamilton; therefore, I made the experiments which are detailed below, and some of the specimens which were preserved, may be found in his cabinet.

The first series of experiments made by me, were upon still-born subjects, or upon those who had died within a very few days after birth. The back of the arm and elbow of the subject being laid upon the table, the fore-arm was flexed to a right angle, which brought it to a perpendicular position, and forced dorsal flexion produced by carrying the hand backward.

When the back of the hand had been brought nearly in contact with the dorsal surface of the forearm, something was felt to give way, and the wrist at once assumed the silver-fork appearance so characteristic of a Colles's fracture. I then made a careful dissection of the radius, and found a separation at the epiphyseal junction. This junction was about three-fourths of an inch from the radio-carpal articulation, and the epiphysis had been thrown backward on the lower end of the bone, and occupied the same position which the lower fragment does when the experiment is made on an adult subject. The separation was so complete that when the ligaments and fibrous tissues around were cut, the two fragments at once fell apart. The next series were made upon subjects from nine months to one year old, and the same dorsal flexion was produced as in the preceding experiments. In these cases, when the hand had been carried back until it laid on the dorsal surface of the forearm, it was liberated and allowed to seek its own position, which it did—slowly coming back into line, which, however, it failed to reach. The deformity was not nearly so marked as in the first series, nor sufficient to indicate a fracture; but, when compared with the limb of the opposite side, considerable deformity could be noted, but not so great as in a Colles's fracture. A careful dissection of the radius proved the epiphyseal junction in this case to be less than one-half inch above the articulation, and the bone for an inch above the junction of the epiphysis was exceedingly cancellous, and rich in animal matter. About one-fourth of an inch above the junction of the epiphysis was the point at which the force used in the dorsal flexion had expended itself—not, however, resulting in a fracture, but in a bending of the bone, which, from the extreme point to which the hand was flexed, could not have been less than a right angle. The line of the bending could be distinctly made out, although the elasticity of the bone had brought it almost to a straight line.

The subjects of the third series of experiments were from three to seven years old; and as I have done in the other series, I shall describe what occurred in the case the specimen of which is in Dr. Hamilton's cabinet, the others of this series in no way differing from it.

The subject was two years and six months old, and a female. Forced backward flexion was practised as before, the hand being carried back to the forearm; this required more force to accomplish than in the other series, nor was there at any time during the flexion a sensation of yielding of the resistance. When the hand was liberated it returned quite rapidly to its normal position, nor could any deformity be made out.

A careful dissection showed that I had neither bent nor broken the bone; but I had stretched and partly ruptured the anterior ligament of the wrist-joint, and especially that fasciculus of it known as Pilcher's ligament. Ossification of the epiphysis in these cases was far advanced. Other experiments were made, the subjects being fifteen and eighteen years old. In these, however, as in adults, when forced dorsal flexion was applied to the hand, the lower end of the radius was broken, generally with an audible snap, the hand and wrist assuming at once the silver-fork deformity.

I will not enter into an account of what was revealed by dissection when the subject was over fifteen years old, as Pilcher and Hamilton have already done so very fully.

Now, the conclusions which are deducible from these experiments are:

First.—That, for the first few months of life, the epiphyseal junction is about three-fourths of an inch from the radio-carpal articulation and that, if sufficient force be applied in a direction which in the adult would produce a Colles's fracture, there will be a separation of this epiphysis, and the hand will present that deformity which is seen in Colles's fracture.

Second.—That, between the ages of nine months and one year the epiphyseal junction is within half an inch of the wrist-joint, and forced dorsal flexion will not produce a fracture of the radius, nor a separation of the epiphysis, but a bending of the bone about one-fourth of an inch above the epiphyseal junction, and the hand, left to itself, returns partly to its normal position, and the deformity is slight.

Third.—That, from the third to the seventh year of life (and perhaps to the tenth), the epiphysis of the lower end of the radius has almost completely changed to an apophysis, and forced dorsal flexion will neither bend nor break the radius, but will cause a stretching and partial rupture of the anterior ligament of the wrist-joint, and especially of Pilcher's ligament.

Fourth.—That, after the fifteenth year, and perhaps earlier, forced dorsal flexion will produce Colles's fracture with characteristic deformity.

METALLIC MERCURIAL OINTMENT IN OPHTHALMIC PRACTICE.—Dr. Wolfring recommends the use of an ointment composed of one part of metallic mercury to three parts of vaseline—a little of which is to be placed in the conjunctival sac twice daily, the eye beng afterward closed and bandaged—in the treatment of various diseases of the eye: circumscribed infiltrations of the cornea, plastic inflammations of the iris, posterior synechia, recent choroiditis, cataract, etc.—*Medycyna*, 1880, No. 32.

PREPARATION FOR CORNS.—Jazow recommends to paint the corns with the following preparation: R. Extr. cannab. indica, 5.0; acid. salicyl., 20.0; collodii, 240.0. In all cases where it was used, the corns rapidly disappeared.—*Vratch Vedomosti*, No. 437.

SKIN-GRAFTING IN LOSS OF SCALP.

By WILLIAM L. BRADLEY, M.D.,

NEW HAVEN, CONN.

In 1869, M. Reverdin, of Paris, France, made known the process of skin-grafting, and it soon became recognized as the best method of healing large granulating surfaces. In cases where the entire scalp has been torn off, the success of this method has attracted especial attention. The following case is believed to be the second of its kind occurring in the United States, and with the first, which was under the care of the late Dr. L. C. Bartlett, of Waterbury, Conn., was partially published in the "Transactions of the Connecticut Medical Society for 1874." In answer to inquiries, and to assist others in the treatment of similar cases, it is now published in a completed form.

On the 8th of August, 1873, Ann Farley, aged thirty-five years, of robust constitution, had her hair caught by a revolving shaft, which tore off the entire scalp. The tear extended below the right eyebrow and down upon the right cheek; the pinna of the right ear was also removed, and the pericranium covering the vertex was injured to such a degree that, afterward, the outer table of the skull exfoliated for a distance of seven inches. Immediately after the occurrence of the accident the case came under the care of Dr. Ira Smith. Dr. S. replaced the scalp, but in four days was obliged to remove it. The exfoliation of bone was hastened by the application of nitric acid, but more than three months was required for its entire removal. Dr. S. implanted a considerable number of grafts, but, probably on account of their large size, being an inch in diameter, and possibly for other reasons, none of them became permanent.

After nearly four months had elapsed, the patient, who had entered the New Haven Hospital, came under the care of the writer, who continued in charge until the wound was entirely healed. At this time, December 1, 1873, the unhealed surface measured seventy-four square inches. The growth of healthy granulations was so stimulated by the application of basilicon ointment, that, December 10th, several pieces of skin, removed from the patient and others, were successfully implanted. During the following five months the grafting was repeated at varying intervals, but the process of healing was retarded by several attacks of erysipelas. May 28, 1874, the progress of the case was exhibited to the Annual Convention of the Connecticut Medical Society. At that time the newly formed skin had advanced from one to two inches beyond the usual marginal cicatrization. The denuded surface was entirely healed September 22, 1875, completing a period of two years one and a half month from the time of the accident. This result was accomplished by grafting seven hundred and ninety-five pieces of skin, which measured from a quarter to an eighth of an inch in diameter, and were removed from fifty-five individuals; of this number, one hundred and seventy-one were contributed by a strong and healthy young man, who was resident in the hospital, and one hundred and fifty by the patient. It is estimated that about one-third of the entire number failed to become permanent.

Constitutional treatment.—The marked dependence of the condition of the wound upon the state of the general health rendered necessary the continuous employment of supporting measures. The tincture of chloride of iron was used as a blood alterative almost constantly, either to relieve or to ward off the tendency to attacks of erysipelas. The loss of blood attending the monthly flow usually resulted in the destruction of the more recent grafts, and the growth of others which had become permanent was temporarily arrested.

Condition of the granulating surface.—Granulations which were small, florid in color, and in the first stage of their growth, were found to possess an adhesive property which was peculiarly favorable to successful grafting. After the first few months the use of stimulating applications was discontinued, because of their tendency to produce large and coarse-textured granulations. Even under the employment of simple cerate, which proved to be the best ordinary dressing, it was found necessary to repress hypertrophy of the granulations by frequent applications of lunar caustic.

Mode of transplanting.—The temperature of the apartment in which skin-grafting is to be performed should be about 70° F. In preparation for the reception of grafts, the denuded surface was cleansed with a camel's-hair brush dipped in tepid water; a method of importance, because even a slight effusion of blood was found liable to prevent union between the grafts and the granulations. A piece of skin was seized, not bruised, with a pair of fine-toothed forceps, and, when removed with curved scissors, it measured from a quarter to an eighth of an inch in diameter. The graft was flattened out upon the finger-nail, and both of its surfaces were gently scraped to free them from blood, minute hairs, and loose epithelium. Having been pressed down upon, and sometimes between the granulations, the grafts were covered with oiled gutta-percha tissue, surmounted by cotton batting, and supported by a cap of cotton or flannel cloth. As a method for holding the dressings in place, strips of adhesive plaster were found to cause unpleasant pressure, and to impede the circulation of blood. The number of grafts was only limited by the supply and the extent of the healthy granulating surface. On sixty-six different occasions, an average each time of thirteen grafts were transplanted. In accordance with the observation of others, grafts were found more likely to grow in proportion as they were placed near the margin of the wound, or adjacent to other grafts which had become permanent. The dressings were retained until the third day, and great care was required lest the grafts should be disturbed by the daily dressing of other parts of the wound. It was observed that grafts which lived and became permanent, but did not grow, retained very closely their original appearance, while others, which did grow, could not be distinguished from the outgrowth of fibro-cellular tissue which surrounded them. When the grafts were placed in near proximity, the newly formed skin appeared to be stronger, and cicatricial contraction was entirely avoided. This was especially noticeable in the treatment of an ectropion of the right upper eyelid.

Operative Treatment for Infra-maxillary Neuralgia.—Dr. Perkowski has cured a case of obstinate neuralgia of the infra-maxillary nerve by dividing the horizontal branches running from the auriculo-temporal nerve to the external ear. The mouth being slightly opened, he made a vertical incision between the articular process of the maxilla and the auricular cartilage.—*Medycyna*, No. 40.

SOME REMARKS ABOUT

TERTIARY SYPHILIS OF THE THROAT AND ITS TREATMENT.

By WHITFIELD WARD, A.M., M.D.,

PHYSICIAN TO THE METROPOLITAN THROAT HOSPITAL, NEW YORK.

In no other portions of the human organism are the special manifestations of syphilis so perfectly portrayed as in the upper air-passages, where we constantly see inflammatory swellings, destructive ulcerations, new formations, perforations, and disfigurements from adhesion, a series of phenomena which render this disease peculiarly interesting. To the busy practitioner, who may have neither the time nor the opportunity to pursue a course of investigation into this variety of throat-affection, a perusal of the cases submitted below may be of some practical use. The cases referred to have been selected from a large number which I have met during the past year in both hospital and private practice.

Case I.—*Paralysis of Adduction of both Vocal Cords Producing Complete Aphonia.*—A young girl, aged eighteen years, applied for treatment at my office about nine months ago, complaining of inability to talk above a whisper. Upon laryngoscopic examination the cause of her trouble was easily recognized, for on directing the patient to phonate, the two vocal cords which, in a healthy larynx, should approximate each other in the middle of that tube, failed to do so, but remained stationary at the sides of the windpipe. As I could account for the paralysis in no way, there being but a slight amount of inflammatory action in the larynx, and none of the special conditions of hysteria (a frequent cause of loss of voice), and as both the dress and bearing of the party indicated the class to which she belonged, I questioned her regarding syphilis. After a great deal of prevarication it was finally ascertained that about two years previous she had a small sore on the external genitals which had been burned off, and, as she considered, cured. She remembered no secondary eruption. I prepared to follow out the usual plan of treatment in these cases, viz., the local application of electricity by means of the laryngeal electrode, but to my chagrin the battery would not work. I then made some mild astringent application and prescribed the iodide of potash in fifteen-grain doses, thrice daily. I did not see my patient again for five days, when she presented herself in a very happy frame of mind on account of her ability to talk a little. Upon laryngeal inspection a little motion was distinctly visible in the paralyzed bodies. Having obtained the above result solely through the agency of the iodide, I determined, for a time at least, to forego the use of the electricity and see if the voice could not be fully restored by means of the potash alone. I therefore increased the dose to gr. xx., thrice per diem. A week later the potash was again further increased to twenty-five grains, thrice daily. The same plan of treatment was pursued until one hundred and five grains were taken in twenty-four hours, when a retrograde course was instituted on account of the rapid improvement of the patient. The case was a complete success, the voice being perfectly recovered, and the paralyzed bodies restored to their normal condition.

Within the present month I have had at my clinic a case somewhat similar to the one reported above, the paralysis, however, being confined to one vocal cord, the left. The patient is progressing nicely, and the pathological condition gradually disappearing under a course of treatment similar to that tabulated above.

Case II.—*Syphilitic Glossitis.*—This case, one of exceeding rarity, was that of a female, aged about thirty-five years, who attended my clinic at the Metropolitan Hospital. Upon examination the tongue was immensely swollen, so much so that it protruded outside of the mouth. The patient complained of great pain in the organ, together with an inability to swallow any food, either liquid or solid. Along the free border of the gums several points of ulceration were also noticeable.

Upon questioning the sufferer as to the duration of the affection, she replied that she had first noticed the swelling about a week previous, and that it had gradually increased up to the time of her application for treatment. As those of my readers, who have practised in a time when ptyalism was more frequently produced than at the present epoch, may have already inferred, the above case presents all the points of a profuse and injudicious salivation. Upon interrogation, however, it was ascertained that no drugs had been swallowed; a simple gargle of potash, which had been prescribed by a medical gentleman at the commencement of the trouble, being the only medicament employed.

As the patient would not allow the use of the bistoury—a free incision along the dorsum of the tongue on each side of the raphe being indicated to allow of the escape of infiltrated fluid—and as there was a distinct history of syphilis contracted several years before, I ordered her twenty grains of iodide of potash every six hours, and enjoined her to return at the next clinic, two days following. She came at the time specified, declaring that she had faithfully carried out the directions. Upon inspection, the lingual organ had returned to almost its normal calibre, the inflammatory action having nearly subsided. The patient also reported that all pain had disappeared, and that she could swallow liquids and soft food with ease.

Case III.—*Syphilitic Ulceration of Velum accompanied with a Large Perforation.*—This case, that of a man aged about forty years, is an exceedingly instructive one, inasmuch as it illustrates the wonderful reparative power sometimes manifested with reference to the throat in syphilitic patients.

The patient when first examined had all the evidences of tertiary syphilis in the buccal cavity. The entire mucous membrane covering the fauces was greatly congested, the inflammatory redness being of a dusky color, a characteristic peculiar to syphilitic cases, and one that will often enable the expert examiner to instantly diagnose the disease correctly. On the right side of the soft palate, midway between the base of the uvula and the attachment of the velum to the side of the throat, an opening large enough to allow of the passage of an ordinary lead-pencil was distinctly visible. The entire circumference of the above orifice was in an ulcerated condition, and the tissues for at least a line beyond looked as if they were about to become involved in the destructive process. The cause of all this trouble was so apparent that it was hardly necessary to ascertain the patient's preliminary history. In response to the usual questions, the patient replied "that he had contracted chancre twenty years ago, and that he had suffered from pains in the bones for a long time."

The stereotyped course of treatment in a case such as the one portrayed above would be to freely cauterize the edges of the perforation with the stick

of nitrate of silver, and to administer internally the antisyphilitics, mercury and potash, either singly or combined. Now, instead of pursuing this plan, I, following an idea which had been applied by me to several other forms of syphilitic throat troubles, made no local application whatsoever, but simply prescribed the iodide of potash in large doses frequently repeated. The result was most gratifying, for at every attendance of the patient the perforation was smaller, until finally it disappeared altogether, the entire treatment occupying but ten days. There were several physicians who were attending the hospital as students during the treatment of the last-mentioned patient, and who followed up the case in all its stages with great curiosity. They one and all expressed themselves as greatly surprised at the wonderful result produced.

With reference to the throat, there is no doubt in my mind regarding the powers of the system to restore lost tissues, providing the destructive process has not gone too far, and the proper plan of treatment be pursued. I have in several marked instances seen a partially destroyed cord, which had superinduced a great amount of hoarseness, return to its normal condition with a complete restoration of the vocal powers. I have also noticed the same thing repeatedly with reference to some of the adjoining organs.

Case IV.—*Syphilitic Stenosis of the Larynx.*—This case, with which I shall conclude my paper, is by far the most interesting of all. The patient, an adult male of robust appearance, applied for treatment at my clinic on January 3d of the present year. As he walked into the examining-room he presented all the evidences of impaired breathing in a marked degree. The principal symptoms complained of were great difficulty in breathing, orthopnœa, pain referable to the larynx, a feeling of constriction about the throat, and dysphonia. Upon laryngoscopic inspection, the cause of the above peculiar train of symptoms was at once revealed, for a large swelling was seen to occupy the position of the right ventricular band. The other pathological conditions noticeable at the same time were extensive ulceration of the left vocal cord and an intense hyperæmia of the entire laryngeal mucous membrane. Upon inquiry it was ascertained that the trouble had begun with a slight cold, accompanied with hoarseness, about four weeks previous, and that the difficulty in breathing commenced about a week later, and kept gradually getting worse up to the time of his application.

As the robust condition of the patient counter-indicated a phthisical diathesis, the disease was diagnosed as a syphilitic gumma, and the diagnosis was confirmed by the previous history of the case, syphilis having been acquired some twelve years ago. Recognizing the gravity of his condition I prescribed the iodide in twenty-five-grain doses every four hours, and instructed the patient to report to the hospital at any time if the difficulty in breathing should increase. At my succeeding clinic, January 5th, he again presented himself. Upon laryngeal examination the parts looked pathologically the same as on the previous exploration, the gumma having obviously been arrested in its progress. The iodide was now increased to thirty-five grains every four hours, and the same general instructions given as at the previous clinic. January 7th he again appeared, expressing himself as much better. A laryngoscopic investigation revealed the facts that the tumor was much smaller, and that the amount of laryngeal inflammation was much less.

Upon further interrogation the patient averred that his breathing was greatly improved, and that he had slept the preceding night for the first time since the commencement of treatment. After enjoining him to follow out the same plan of medication with great carefulness, I dismissed my patient.

I did not see him again until January 12th, when he came into the examining-room with rapid step and smiling countenance. He reported that he had gradually improved until now, when he experienced no difficulty in breathing, except when rapidly walking or ascending a long flight of stairs. A laryngoscopic examination revealed the fact that the gummatous swelling had nearly all disappeared, together with the surrounding inflammation. The air-tube was also seen to be quite free, whereas at the first examination it was almost completely filled up with the abnormal mass. As it was no longer necessary to keep up the large doses of the iodide, the daily amount was reduced to sixty grains, which he is taking at the time of the present writing.

All the foregoing illustrations form beautiful exemplifications of the wonderful efficacy of iodide of potash in tertiary syphilitic manifestations of the throat.

In the variety of diseases of which Case III. is an example, the general plan of treatment, as hitherto stated, is to freely cauterize the ulcerated surfaces, and administer internally the iodide of potash combined with some one of the preparations of mercury. Now, since the topical application of the solid stick of argentum will not have the slightest effect in arresting syphilitic ulceration, unless the antispecifics are freely imbibed, it seems to me rational to infer that the good effect which is seen to be produced locally, is due, not to the topical application but to the general remedy. I now take a step farther, and state that in my experience it has often appeared that the cauterization of syphilitic ulcerations in the throat retarded instead of hastening resolution. I make this assertion only after repeated experimentation, those patients to whom the iodide was prescribed in conjunction with some mild local application appearing to make more rapid progress. Regarding Case IV., which borders upon the miraculous, and which furnishes the strongest kind of an argument with reference to the powers of the remedy used, it seemed to me so certain that tracheotomy would have to be resorted to, that I had made all preparations to perform the operation at short notice.

A word concerning the manner of using the iodide in tertiary syphilis of the throat, and I will close. If, after a careful examination of the throat, the presence of the syphilitic taint in the system be suspected, even if the patient firmly deny its existence, always give him the benefit of the doubt and prescribe the potash. If the patient be correct in his assertion, the use of the remedy can do no possible harm, while, on the contrary, if the disease is present, the medicine will have a most salutary effect, and your diagnosis be confirmed. Do not wait for the appearance of ulceration before invoking the aid of the antispecific, for mayhap, when you again see your patient, irreparable destruction will have invaded the affected tissues.

The nature and gravity of the manifestations are the sole regulators of the doses to be prescribed. Generally speaking, in cases of simple syphilitic inflammations, unaccompanied with much swelling, ten to fifteen grains thrice per diem will be quite sufficient. If, however, a slight amount of ulceration accompany the inflammatory action, it will be neces-

sary to begin at large doses, say from forty to sixty grains in the twenty-four hours. If the ulceration is marked, and the destruction of a prominent organ, as for instance the velum or vocal cords, be threatened, recourse must be immediately had to larger doses, that is to say, twenty to twenty-five grains should be given every five or six hours. In cases characterized by the rapid swelling of the tissues, especially if the pathological condition be manifested in the larynx—as the instance of stenosis already reported—give maximum doses from the start, as by temporizing you may lose your patient. Generally speaking, if, in a given case of throat disease superinduced by the syphilitic virus, thirty grains of the remedy has been prescribed daily, and the expectant good result has not been produced, the amount should be increased to about forty-five grains, and if this be not sufficient, the augmentation should be kept up until the desired result is obtained. The amount of potash some persons can stand is truly wonderful. I have often prescribed from two to three drachms per day without the slightest untoward result. The only bad effect to be dreaded is a derangement of the stomach necessitating a cessation of the remedy for a short time.

In summing up, I unhesitatingly assert that in the majority of uncomplicated syphilitic troubles of the throat, the internal administration of iodide of potash will invariably be followed by the most gratifying results, provided it be given at the proper time and in the proper doses.

339 West Twenty-Third Street.

Reports of Hospitals.

HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

Service of Dr. WM. PEPPER,

professor of clinical medicine.

(Specially reported for The Medical Record.)

A GROUP OF CASES OF FEVER FROM MALARIAL INFLUENCES, WITH REMARKS AND TREATMENT.

Gentlemen: I will bring before you this morning a series of cases of fever which I think will be of practical value.

Case I.—This lad, who resides in the vicinity of Chester, contracted a tertian intermittent fever, which he had about a week before admission. During that time the disease, besides being of a tertian type, presented the condition known as reduplication, that is, two distinct attacks or paroxysms occurred upon the regular fever days.

This is a rare condition, and was not always present in our case, though it occurred during part of his illness. Our patient has had but one regular chill, followed by fever and sweating, since his admission, for he was promptly placed upon the following simple treatment: confinement to bed, simple diet, and twenty-four grains of sulphate of cinchonia in the twenty-four hours, given in four-grain doses, so as to have the effect of eight to ten grains an hour before the expected paroxysm. He may now be pronounced cured.

Case II.—This man has had a rather severe attack of simple remittent fever.

This disease is more common in the hot climates than here, and differs from intermittent fever, as you know, in that there is only a lessening, not a complete cessation, of the fever between the paroxysms. The temperature never drops to normal, but is decidedly more reduced than in either typhoid or typhus fevers.

This reduction is an evidence of its periodical character, which, taken together with the absence of evidences of any local lesions, and the fact that it can be cut short, or at least, controlled by quinine or the preparations of bark, placed it among the malarial affections.

Now, when you have added to this a catarrhal inflammation of the stomach and bile-ducts, you have a bilious remittent fever, which condition is less under the control of the preparations of cinchona.

The case, under the same treatment as our first patient, has rapidly been brought to convalescence, which proves the malarial nature of the affection.

Case III.—This man came into the hospital for treatment for some chronic trouble; but from the first his appearance was so unnaturally dull, listless, and retiring as to attract attention.

At the expiration of three days I found him heavy-eyed, with circumscribed redness of both cheeks and anorexia, and complaining of restlessness at night. I accordingly ordered his temperature taken, which was found to be about 104°. Since then his disease has run the course of a simple continued fever, or rather, more properly speaking, a catarrhal fever, evidently connected with taking cold in his journey to the hospital.

He has had no delirium, epistaxis, purging, tympanites, or eruption—in fact, no characteristic symptoms of typhoid fever.

The temperature, starting in the evening at 104°, fell in the morning to 99°; was up again in the evening to 105½°, down in the morning to 99½°, up in the evening to 102°, then finally down to normal, where it has remained. From this we admit the probable presence of some malarial influence in the case, although, at first, quinine did not break the fever. As there was some irritation of the mucous membrane of the stomach, I enforced a rigid liquid diet and gave also minute doses of nitrate of silver.

As his temperature is normal and tongue slightly coated, I will give him small doses of quinine and treat him in a very simple manner.

Cases IV. and V.—Two brothers, twins, who have been, prior to admission, working in New York, where they were compelled to labor knee-deep in sewer-water.

The first, J., a large, plethoric man, complained of pain in the bones and general malaise. His temperature was 100° which fell to 99½°, then to 99°, then ran up to 102°, finally falling to normal.

He has had, no doubt, a simple malarial condition. His treatment has been twenty-four grains of sulphate of cinchonia daily, rest, and simple diet, which has proved sufficient, as he is now convalescent, with no cough, clean tongue, and appetite fully returned.

The other case—his brother Paul—cannot be considered as doing so well, although he was exposed to exactly the same influences. He has, as you see, a flushed face, dulness of intellect, looseness of bowels, and a temperature which has been fluctuating between 103° or 102½° and 104°. He has had no distinct chill, nor epistaxis, and there is no local disease to explain the present symptoms. His lips are dry, tongue brown, dry, and thick, while his teeth are covered with sordes. The belly is slightly meteoric, hardly tympanitic, but there can be discovered no

eruption on the abdomen, and no enlargement of the liver or spleen.

On examining his urine we found a large quantity of albumen present, with granular tube-casts. This man, therefore, presents the symptoms of a continued fever, together with kidney disease and gastro-intestinal irritation.

Although you have not present here the characteristic symptoms of typhoid fever, you must treat it as such, giving your patient, as you will be so often called upon to do in your private practice, the benefit of any doubt that may exist. I consider the loose, thin stools an important factor, as I do not think they would occur from his present liquid diet without some lesion of the intestines.

I say, therefore, that we must consider it as a case of typhoid fever, complicated, as is shown by the albumen and tube-casts, with acute catarrhal nephritis.

The kidney affection, from the absence of œdema, vomiting, etc., may possibly be considered as only a part of the wide-spread catarrhal condition.

In regard to treatment, this man was placed upon sulphate of cinchonia in the form of suppositories, so as not to add to his gastric irritation, and was given internally small doses of nitrate of silver, opium, and belladonna, as this latter combination has proved valuable in treating this catarrhal condition after the acute state has subsided. In addition, he was of course placed on a liquid diet, consisting of milk, beef, and chicken-tea.

We do not consider the kidney affection in our treatment, except to apply over that region some dry cups, as I am sure that it will gradually disappear with the subsidence of the fever.

From this, gentlemen, you will see different conditions of disease coming from similar conditions of exposure, varying from the mild intermittent to the more severe typhoid. I am not much of a believer in the specific character of typhoid fever, nor do I believe it arises alone from dirt, filth, or putrescence, for this is, to my mind, a far too narrow basis upon which to rest the etiology of so widespread a disease.

These cases should prove to you a great many valuable practical truths, especially this, that it is the exception, not the rule, to meet typical cases of typhoid fever.

It is certainly hard to draw the line at the bedside, however easy it may be in a didactic lecture or in the text-book, for very often do you see this malarial element merging into the catarrhal and typhoid fever.

Ligation of the Internal Iliac Artery for Gluteal Aneurism.—Professor Kasinski has performed this operation successfully for the cure of a moderately large gluteal aneurism. The spray and the antiseptic after-treatment were adopted. According to Kasinski, this operation, up to 1876, was performed four times, of which two cases proved fatal. Stevenson, Atkinson, Mott, and White were the operators. —*Vratch*, No. 47.

Use of Soap-suds in Burns.—Dr. Likernik recommends soap-suds made of any soap on hand to spread over burned surfaces. Their action in relieving pain and reducing inflammation is due to the presence of the alkali, and they possess evident advantages over powdering with bicarbonate of soda.—*Medycyna*, No. 36.

Progress of Medical Science.

Gastrostomy: Establishment of a Gastric Fistula in a Case of Stricture of the Œsophagus.—This case is another illustration of the fact that an opening can be made with safety into the stomach through the abdominal walls. The patient was a male, about sixty years of age, whose family and personal history were remarkably good. He complained of symptoms pointing to obstruction of the œsophagus. When admitted into the hospital not even fluids could be swallowed, any attempt in that direction being followed by their regurgitation. At no time was pain or dyspnœa a feature of the case; apart from the inability to swallow, he complained only of weakness. The œsophageal bougie and probang failed to pass, and stuck about half-way down the œsophagus. Gastrostomy was then performed in the following manner: an incision one and one-half inch in length was made across the linea semilunaris, about an inch below and parallel to the eighth left costal cartilage. The tissues were divided down to the peritoneum, and the cavity of the abdomen opened. The transverse colon was now exposed to view at the lower part of the wound. On the introduction of a pair of forceps in search of the stomach, the anterior wall of that organ was seen on withdrawing the instrument to have been grasped, and the gastric-epiploic artery on the greater curvature, two inches below the part, was seen to be held up. Through the part of the stomach-wall thus brought within the opening, two acupressure-needles were thrust, at a distance of one and one-half inch from each other. Having been passed through the organ, they were again thrust through the wall, and the ends made to rest on opposite sides of the wound. The stomach was now carefully stitched by ten carbolized silk sutures to the edges of the wound, and an incision about an inch in length made through the walls of the organ, between the rows of stitches, with a pair of scissors. A smaller transverse incision was now made, and the resulting corners secured to the lips of the wound in the abdominal wall by stitches. The operation, which had been performed under the spray, now being completed, a large acupressure-needle was pushed through a long india-rubber tube, about three inches from one end. This was then introduced into the stomach, while the extremities of the needle rested on the thoracic and abdominal walls. The tube was fixed in this position by lateral strings. Finally, the long end of the tube was bent downward, and the wound was dressed with antiseptic precautions, drainage being secured by the open tube leading from the stomach. During the three days immediately following the operation the tube was used for drainage purposes, and a small quantity of brownish bilious fluid was collected. Ten days after the operation it was taken out permanently. For a day or two after the operation the patient was fed entirely by enemata of beef-tea and brandy. On the fourth day the drainage function of the tube was changed into a nutritive one, half an ounce of milk and a drachm of brandy being introduced into the stomach. During all this time, although no untoward symptom had occurred, it was evident that emaciation was progressing in spite of the continued enemata and the feeding by the stomach, and on the thirteenth day he died of asthenia. At the post-mortem examination it was found that

there was a small oval tumor encircling the œsophagus about two inches and a half above the cardiac orifice of the stomach. The œsophagus passed through the centre of this swelling and was contracted for an inch of its length, so that a probe was with difficulty passed through it, even after the partial softening of the mucous membrane, which occurs soon after death. The upper orifice of this structure was plugged with a grape-seed, of which the smaller end was downward, so that it was fixed like a stopper in a decanter. The tumor was tough and firm, and its intimate structure was that of epithelial cancer.—*Lancet*, January 1, 1881.

Ligature of the Right Subclavian, Third Division, and the Right Common Carotid, at a Single Operation, for Aortic Aneurism.—In the *American Journal of the Medical Sciences* for January, 1881, Dr. John A. Wyeth has reported an original case, and the condensed histories of seventy-four cases of ligature of the large vessels at the root of the neck, for aortic or innominate aneurism. The conclusions drawn from clinical experience are lengthy and important. The following brief summary will show the relative dangers of distal ligature in the several aneurisms that may occur near the heart. For aneurism involving the aorta alone, eight cases are given. The left carotid was tied in all except two, one of which died. All of the cases in which the ligature was applied to the left carotid "recovered" with "improvement," as did the remaining instance in which the right carotid was tied.

For aneurism involving the innominate and the aorta, the right carotid was tied in five cases (all fatal), and the left carotid in two instances—one fatal, and one recovery with improvement.

For aneurism involving the innominate alone, the right carotid was tied in nine instances, of which six died and three recovered improved (one of these dying "later," from the progress of the disease; another seven months after the operation, from pressure of the aneurism).

For aneurism involving the innominate and one or both of its branches, the right carotid was tied in six instances, of which four died from the direct or indirect result of the operation.

For aneurism involving the carotid alone, the right was tied in five instances, with one death; the left carotid in two instances, with one fatal issue.

Pseudo-Polypi of the Colon; an Anomalous Result of Follicular Ulceration.—This paper, by Surgeon J. J. Woodward, is based upon the study of a specimen with a clinical history, presented to the Army Medical Museum by Dr. John T. Hodgen, of St. Louis. After an acute attack of dysentery the patient suffered for seven months from a chronic alvine flux, and finally died with the usual symptoms of follicular ulceration of the large intestine. As a result of chronic inflammation of the colon, the follicular ulcers had enlarged and adjacent ones coalesced, until for more than nine inches the infiltrated submucosa was laid bare as a raw, granulating surface, on which numerous islets of the thickened mucous membrane remained. Subsequently cicatricial contractions commenced in the infiltrated submucosa, constricting the margins of the islets of mucous membrane, which were further transformed by hyperplastic inflammatory processes, until ultimately they acquired the form of pedunculated excrescences, and projected into the lumen of the intestine like so many polypi. This condition is very clearly distinguished from that still rarer lesion described by Lebert and Luschka, which has received the name of colitis polyposa (Virchow). The appearance of the specimen is well exhibited in several beautiful illustrations taken directly from the specimen, and also in another giving the microscopical structure of one of these false polyps. A photo-relief facsimile of an etching of a somewhat similar specimen described by Menzel ("Acta Medicorum Berolinensium") is appended to the paper.—*American Journal of the Medical Sciences*, January, 1881.

Antipyretic Action of Chronic Nephritis.—That a febrile disease in a patient suffering from chronic nephritis can occur without any elevation of temperature, was noticed some time ago. Dr. Reymond (Vulpian's *Clinique médicale*, Paris, 1879) explained the absence of febrile movement in a case of convulsions, by the fact that the patient suffered from chronic nephritis, which counteracted the tendency of the muscular contractions to produce a rise of temperature. Prof. Botkin, of St. Petersburg, in his lectures advanced the idea that the diseased function of the kidneys leads to the accumulation in the system of substances preventing the occurrence of the febrile state. Dr. Bogojawlensky (Botkin's *Archiv*, vol. iv., p. 235) reported two cases relating to this question. A patient having nephritis was attacked with an exceedingly well-marked croupous pneumonia, but during the third to sixth days his temperature remained normal. Fever appeared at the close of the sixth day, terminating on the next, the critical day of pneumonia. Another nephritic was seized with pleurisy on the left side, and pericarditis with fever of an irregular type. A few days later a phlegmonous inflammation of the axillary glands appeared, extending toward the adjacent tissues; pleurisy and pericarditis became worse, urine diminished and uræmia developed, lasting three days. Despite the formation of an immense abscess and the aggravation of his pleurisy and pericarditis, pyrexia ceased, and the temperature continued normal, with the occasional slight elevations, entirely out of proportion to the extent and intensity of the inflammatory process. In the same volume (p. 306), Dr. Stolnikoff gives the account of the experimental study of this question. He induced chronic inflammation of the kidneys in rabbits by compressing the renal artery, and after the renal lesion existed from one and one-half to three months, he injected into their cranial and thoracic cavities various irritating and septic fluids. He states that, in the animals with diseased kidneys, the temperature was much lower than in healthy animals treated in a like manner, and that at times there was no pyrexia at all.—*Meditz. Obozrenïe*, 1880, xiv., p. 436.

Epidemic Optic Neurosis.—Dr. Reich had an opportunity of observing seventy cases of this disease among the workmen employed, after a heavy snowfall, in clearing a road leading to Tiflis, in the Caucasus. In the mildest cases only more or less marked hyperæmia of the palpebral conjunctiva, lachrymation, photophobia, and pain in the eyes were present. In only three cases of this group he noticed a slight degree of chemosis and of ciliary injection. In the severer forms the patients suffered from intense hyperæmia of the palpebræ, and at times also of the ocular conjunctiva, blepharospasm, photophobia, more or less severe ciliary injection, and even chemosis of the bulbar conjunctiva, the severity of the pain being in proportion to the latter symptoms. Intra-ocular pressure was increased. As a rule the mucous secretion was slight, and in only two or three

cases the typical catarrhal conjunctivitis was present. In 150 men examined he did not find a single case of follicular trachoma or of corneal affection. In darkness only a few could not open their eyes and could readily distinguish the objects; but they still complained of the pain in the eyes. In nearly all the patients the pupils were contracted, and in three cases where atropine (gr. j. to ℥ iij.) was applied no effect was produced. In two cases the pupils were dilated and the ophthalmoscope showed capillary hyperæmia of the optic nerve, with distention of the retinal arteries and veins. The field of vision was diminished. He did not meet with a single case of nictalopia or hemeralopia. The disease developed rapidly, pain in the eyes and photophobia very soon obliging the workmen to abandon their occupation.—*Vratch*, 1880, No. 47.

Gastric Absorption.—The question of the manner of absorption by the stomach is an open one, to decide which Dr. Anrep undertook a series of carefully and ingeniously conducted experiments. After having made a gastric fistula in a dog, he allowed it to recover entirely from the results of the operation. Then he introduced into the pyloric opening of the stomach, and down into the duodenum, an apparatus resembling Barnes' dilator, completely shutting off the cavity of the stomach from the rest of the alimentary canal. He then placed in the stomach a determined quantity of different substances, and after a lapse of time he examined it to see how much of them was left. He found that sugar was absorbed more quickly than anything.—*Vratch*, No. 46.

Cyanosis Due to Chronic Malaria.—Dr. Yazwitzky reports the following interesting case: Private A., during his service in the Caucasus, suffered constantly from malaria. On his return home he had two eclamptic attacks. After the first one he noticed a bluish discoloration about the lips and eyebrows, which extended to a larger area after the second attack. When he came under treatment his skin was flabby, covered with clammy perspiration of a disagreeable odor, and from the forehead to the middle of his trunk it was of a bluish tint, as if stained by a colored fabric, gradually passing into the normal flesh color. Even on the legs, particularly about the knees, the same tint was visible. All the mucous membranes that could be examined—palpebræ and ocular conjunctiva, buccal, nasal and pharyngeal membranes—were of a dark bluish color; even the teeth were bluish. The spleen was also enlarged, and he suffered from periodic malarial symptoms, during which the cyanosis deepened. He was ordered to take quinine, and very soon the symptoms rapidly passed away.—*Meditz. Obozrenie*, xiv., p. 276.

Peculiarities in the Temperature of the Insane.—Dr. Bechteref studied carefully the variations in the temperature of the insane (six cases of atonic, passive, and chronic melancholia, one case of periodical mania, and one case of progressive paralysis), and detected numerous interesting peculiarities. He finds that the temperature of the insane presents a greater range of diurnal fluctuations, even when no physical complications are present, than that of healthy persons. The difference between the morning and evening temperature frequently exceeds 1°. There are distinct successive periods of high and low temperature. The average daily temperature is not constant, and frequently the normal type is entirely reversed, the temperature in the morning being higher than in the evening. In two patients who suffered from pyretic physical disorders this reverse type was retained during the entire intercurrent illness. The writer ascribes these caloric irregularities to the disordered state of the centres regulating the temperature determined by the abnormal conditions of the cranial circulation. According to Landois and Eulenburg, we can readily judge of the state of these centres by the peripheral cutaneous temperature. He instituted a number of observations on healthy and insane subjects with the surface-thermometer, and with the following results: the morning temperature of the skin in the insane is also lower than in the evening, but the diurnal fluctuations are much greater; the peripheral temperature of different regions on the same side, as well as of symmetrical parts, always presented greater differences, frequently reaching 4°, which was never observed in healthy persons. He noticed, also, marked variations in the temperature of both sides of the brain, showing unequal circulation in different cerebral regions.—*Meditz. Obozrenie*, XIII., p. 525.

Symptoms following an Abscess of the Optic Thalamus.—Dr. Rostashinsky had under his care for a number of months a patient complaining of the following symptoms: left hemiplegia; loss of tactile perception; also of the impression of pain, and thermic and electric sensibility on the same side; unconsciousness of the position in which his paralyzed limbs were placed, or which muscles were made to contract by the induced current. There were present, also, temporary vaso-motor disturbances in the paralyzed limbs. On post-mortem examination a circumscribed collection of pus two inches in diameter was found in the depth of the right optic thalamus, at the junction of the middle with the posterior third of the organ. The adjoining parts of the brain were apparently in a healthy state. This case confirms the opinion of those who claim the thalamus opticus to be the centre of muscular sensation, and that the lesions of its internal capsule may produce motor paralysis and anæsthesia without its being the motor centre.—*Vratch. Vedamasti*, No. 440.

Pathology of Hallucinations.—Dr. Kandinsky, having suffered for two years from insanity with hallucinations, indorses the theory of Meynert as regards the origin of hallucinations. He considers them to be the manifestations of an exhausted state of the centres presiding over the mental functions located in the cortex of the anterior lobes of both hemispheres. They never occur with mental delirium, and they fade away with the return of the mental vigor. As a measure to combat them he recommends a judicious mental exercise to an extent which the patient's condition will allow.—*Meditz. Obozrenie*, xiii., p. 815.

Relation of Fetal to Maternal Circulation.—To determine the extent of communication between the two circulatory systems, Dr. Maas injected into the veins of pregnant rabbits different colored pigments and septic fluids. If the blood of the fœtus was examined from one-half to one hour after the injection, he could always detect in it the above granules, with bacteria and micrococci, similar to those introduced into the maternal circulation. But if the examination was made at a later period they could no longer be found in the blood, but were present in the liver and other organs. These facts are thought to explain why the statements of various observers are so contradictory, and, in some cases, negative.—*Przeglad Ckurski*, Nos. 33–35.

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GEORGE F. SHRADY, A.M., M.D., Editor.

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THE ABOLITION OF THE OFFICE OF CORONER.

We have seen that the proper exercise of the duties of the office of coroner involves the consideration of two essential elements: first, the medical examination, and secondly, the judicial inquiry. It is quite evident that no single individual can perform such duties properly: what would fit an officer for the duties of a medical examiner would disqualify him for those of a purely judicial character. To attain the highest perfection of function in each office requires a special training and a careful education. The coronership, as at present constituted, not only combines both of the important functions in one office, but the incumbents, as a rule, possess no qualifications for either method of examination—in fact, are, as a rule, quite ordinary individuals. To expect from the latter the proper exercise of the duties of coroner is, on general principles, absurd. Nor does it follow that a coroner's jury can either relieve them from responsibility or give character and force to the decisions rendered? The office of coroner being a purely elective one, it can easily be seen that there is no guarantee of fitness for the performance for any of the duties. The principal qualifications would appear to be some acceptable services at the ward primaries, successful manœuvreing in political caucuses, and other acts of disinterested kindness toward the dear people. At all events, the rule is that none but politicians can attain to the honor.

In attempting to reform the present system it is necessary to take into consideration the abolition of the coroner's jury, the division of the office of coroner into two distinct functions, and the creation of a new system of appointment, whereby fitness for the duties will be guaranteed. These are, on their face, reasonable propositions, and are capable of easy fulfilment by the enactment of a suitable law. The passage of such a law could be urged not only on the grounds of general utility, but on the score of economy. It has been proved time and again that the verdict of the coroner's jury has no possible bearing upon the subsequent judicial proceedings—in a word, is useless as a judicial measure, gives no security to the accused, is burdensome upon the citizen, and expensive to the State. The coroner, as an officer, is of no importance, qualified neither for medical nor judicial examinations; he is practically a direct incumbrance to the course of justice. All the valuable part of his services is performed by his deputy, who is the medical examiner. The combination of the duties of two offices into one could be made without any possible loss to the State as to actual service, while the salary of the coroner would be saved. Under the Massachusetts law, the saving to the State in criminal proceedings has been one-third, with the advantage of the services of skilled experts, and the smooth, prompt working of a perfect judicial process. The Massachusetts law is, with slight modification, the model for this State.

The medical inspectors must be appointed to their office by parties who can guarantee their fitness. The mode of appointment is a subject for grave consideration. The success of the Massachusetts plan has been due to the care the governor has taken in making his selections. On general principles it would be safe to assume that appointments could be intrusted to a similar authority in this commonwealth. But the practical difficulty in the way would be the impossibility of vouching for the necessary number of medical men throughout the State. Hence, the suggestion of Mr. Clark Bell, to give the appointment to the county judges is worthy of serious consideration. It appears to us that, taking everything into account, this would be the most satisfactory way of guaranteeing the fitness of every nominee in a given district.

IS THERE AN INHIBITORY THERMIC CENTRE?

An important contribution to the subject of the pathology of fever has been made by Dr. H. C. Wood. Some of the results of this author's studies have been presented before, but the complete work has only lately, by the wise liberality of the Smithsonian Institution, been given to the public. The results of Dr. Wood's studies, taken in connection with previous experiments by Jürgensen, Traube, Liebermeister, Senator, Sanderson, and others, make our knowledge of the essential character of fever, and of the mechanism by which it is produced, a tolerably complete one. And as there is no morbid condition more frequent than fever, or one of which a clear understanding is more necessary, we shall be excused for going into the subject now at considerable length.

The essential feature of fever was announced by Galen, eighteen hundred years ago, to be an abnormal elevation of temperature (*in caloris præternaturam*).

Some recent authorities, among them E. Wagner and Senator, have been inclined to doubt this view, and to believe that an increased tissue-metamorphosis is the primary and essential element. We are inclined to think, however, with Dr. Wood, that this later opinion cannot be sustained. It seems to have been demonstrated that elevations of temperature and the usual accompanying symptoms of fever may be produced without a proportionate increase in the chemical movements of the tissues. On the other hand, by various measures these tissue-changes may be very largely increased without their producing all the characteristic symptoms of fever, *i.e.*, disturbance of circulation, nervous disturbance, and elevation of temperature. The dictum of Galen is apparently confirmed by the exacter researches of the present day, so far as they have yet gone. Still, it must be remembered that abnormal elevations of temperature do occur sometimes without any notable constitutional disturbance. But, accepting the Galenic view as a demonstrated fact, Dr. Wood instituted a long series of carefully conducted experiments, in order to discover whether the production of this elevated temperature is under the control of, or connected in any way with, the nervous system. It is quite generally known, from his previous communications, that the experimenter is a believer in the neurotic origin of fever, but the elaborate and cautiously conducted experiments which have led him to this conclusion are now presented for the first time. We have space for only a brief and partial description of the work performed and results obtained in studying this branch of the subject.

It is to be remembered, in the first place, that heat-production and heat dissipation are the two factors which regulate animal temperature. There may be a fever, *i.e.*, its essential symptom, elevated temperature, when the actual heat-production is less than normal, provided heat-dissipation is also at the same time less. The mechanism which regulates heat-dissipation is generally acknowledged to be the vaso motor system and the nerves controlling the sweat-glands—two nervous agencies which are practically identical. By tetanizing the peripheral blood-vessels the circulation in the skin and the secretion of sweat is lessened. Heat-dissipation is synchronously diminished, and the temperature in the rectum will rise, even though the actual production of heat is less or is unchanged. The nervous mechanism, if there is any, controlling the *production* of heat, is the one, therefore, chiefly to be studied.

It is still very widely believed that this heat-production is also under the control of the vaso-motor system, and is dependent on changes in the circulation brought about by that agency. Dr. Wood cut the spinal cord of dogs, in the cervical region, and found that there was a decrease in heat-production at first, but that this was followed sometimes by increased heat-production. There seemed to be two antagonistic forces at work—one tending to depress, the other to increase heat-production. Destruction of or cutting off the connections of the vaso-motor centre showed that the depression of heat-production was due to the palsy or inaction of that centre. This can be easily understood, since in a complete vaso-motor paralysis the blood everywhere flows more sluggishly, and chemical movements in the tissues must also be less active. Sections were then made at the junction of the pons and medulla. This left the vaso-motor system intact, as was proved by various experiments. But it was found that the sections made in the locality referred to caused an immediate and large increase in heat-production, with a consequent increased heat-dissipation, the latter not being so great as to prevent a rise in the animal temperature. This increase in heat-production was found to be often independent of any change in the blood-pressure or rapidity of the heart-beat.

The experiments so far seemed to show that in separating the medulla from the pons some active inhibiting force, regulating heat-production, was cut off. But, as a large part of animal heat is doubtless produced in the muscular system, and as it has been thought possible that the medullary vaso-motor centre controls chiefly the circulation in the internal organs, the active heat inhibiting force might be only another and a muscular vaso-motor centre, situated higher up. Further elaborate experiments were made to locate this hypothetical centre, if possible. These experiments, which are in part confirmations of the work of other observers, show that destruction of the first cerebral convolution in the dog, posterior to and in the vicinity of the sulcus cruciatus, is followed at once by a very decided increase of heat-production, whilst after irritation of the same nervous tract there is a decided decrease of heat-production.

The influence of this cortical centre, however, is only temporary, and it is not considered likely that its influence over calorification is more than an indirect one. The important point established, however, was that the increased calorification brought about by destroying this centre was not accompanied by changes in arterial pressure; that this portion of the brain had some connection with producing heat, but was in no respect a vaso-motor centre of any kind.

The evidence from all the facts pointed, therefore, to the conclusion that the centre in the medulla dominates the vessels in every part of the body, and consequently that the rise in the heat-production following high section of the medulla, above this centre, is not due to an influence exerted upon the circulation, but directly upon a higher heat-inhibiting centre. This is situated, probably, in the pons.

The first half of Dr. Wood's work ends with this attempt at demonstrating the essential symptom of fever and the existence of a nervous centre concerned

in regulating the production of heat. The remainder of the experiments are devoted to determining whether the rise of temperature in fever is due to increased heat-production or to a retention of heat, and to a further elucidation of the neurotic theory of fever. These latter points we propose to present in a subsequent issue.

THE HARVARD MEDICAL SCHOOL AND REFORMS IN MEDICAL EDUCATION.

The annual report of Harvard University for the year 1881 is extremely interesting to those who care to know what progress is being made in elevating our methods of medical education. The medical department of this university is in a prosperous condition, and has great reason to congratulate itself upon the good work that it has done. The whole number of students in attendance during the three terms of the past year averaged two hundred and fifty-one. An appreciation of the advantages of spending the time of study at the college is shown by the fact that eighty-six per cent. of the graduates in the above year had been in attendance during six collegiate terms. The difference between this condition of things and that in most other medical schools, where two terms is the maximum, is very striking.

The plan of introducing preliminary examinations has had an extremely favorable effect upon the *personnel* of the college. Nearly one-half the students have literary or scientific degrees. The President of the college says, referring to this subject: "It is notorious that medical students have been, as a rule, a rougher class of young men than other professional students of similar age. In this university, until the reformation in 1870–71, the medical students were inferior in bearing, manners, and discipline to the students of other departments; they are now indistinguishable from other students. A corresponding change in the medical profession at large would be effected in twenty years if all the important medical schools in the country should institute a reasonable examination for admission."

The Harvard school is one of the few medical institutions which dares to publish the figures showing the number of students who come up for final examination and the per cent. rejected. The proportion last year was nearly one-third. It is the belief that in one of the largest, if not the largest, college in this city the proportion rejected is about one-fiftieth! —which means that all but a scant half-dozen are rushed through the tests, to the great financial comfort of the college and the shame and damage of the profession.

With the manifest benefits which a system of medical education like that of Harvard confers upon our profession, it is a duty, as well as for its interest, to encourage this particular school and all others conducted on a similar plan.

Reviews and Notices of Books.

A Treatise on the Principles and Practice of Medicine: Designed for the Use of Practitioners and Students of Medicine. By Austin Flint, M.D., Professor of the Principles and Practice of Medicine, etc., in the Bellevue Hospital Medical College, etc. Fifth edition. Philadelphia: H. C. Lea's Son & Co. 8vo, pp. 1,150. 1881.

"Flint's Practice" is recognized to be a standard treatise of high rank upon the principles and the practice of medicine wherever the English language is read. In the present edition we are told that the author's aim was to bring the work up to the level of the existing state of advancement in medical matters, and a careful study of its pages reveals the indisputable fact that in most respects this aim has been reached. The present fifth edition is modified from the fourth by many eliminations, substitutions, and additions. In making the necessary changes the author has "not been influenced by any sense of obligation to maintain consistency of views" with the previous issues of his treatise. Such an explanatory note in the preface was perhaps necessary to allow Dr. Welch the requisite freedom of expression on matters relating to pathology. It is the pathological portion of Flint's work which is most materially altered.

Perhaps it was a wise step on the part of the author to call to his assistance a younger member of the profession, whose studies have been specially directed to morbid anatomy. On the other hand, without extensive personal experience, a discriminating judgment concerning rival claims cannot be had—in pathology even less so than in general medicine. So that Dr. Welch's contributions were in all likelihood accepted without much critical alteration. This was undoubtedly conducive to a harmonious presentation of the subject of pathological anatomy. But, unfortunately, the digest of general and special pathology which he has contributed is somewhat one-sided. It does not fairly represent the weight of opinion on pathological matters, being rather a highly satisfactory *résumé* of Cohnheim's personal views and teachings than the outcome of independent investigation or unbiassed compilation.

This must be apparent to every one who takes the pains to read the book carefully. Nor is any attempt made to conceal the fact, though for obvious reasons it is nowhere explicitly stated. On not a few pages Cohnheim's name appears four and five times. On not a single page can Virchow be found more than twice, unless we have overlooked his name in its third appearance on some page. Rindfleisch, Eberth, Recklinghausen, Samuel Förster, Klebs, Birch-Hirschfeld, Billroth, Cornil and Ranvier, Stricker, Uhle, and Wagner, Weber, Delafield, Buhl, Lücke, Lancereaux, Lebert, Langhaus, Rokitansky, Waldeyer, Zenker, Cruveilhier, Sanderson, Grainger Stewart, Kelsch, and many other more or less prominent pathologists, are all exceedingly *raræ aves*, as compared with the unduly preponderating Cohnheim. Not that the latter is a writer or observer of inferior grade; we would merely remark that a more equable representation as regards personal opinions in pathological questions would not have been detrimental to the value of Flint's new edition. It is not pleasant to be informed in abundant foot-notes

that so and so thinks such and such to be the case, but Cohnheim believes this and this, and Cohnheim is right.

In the next edition of this treatise we hope to find a fuller and more equitable display of pathological luminaries. As regards the clinical histories and treatment of diseases, the portions of the work embracing their description leave nothing to be desired, and in this respect the book is a model of clearness, fairness, comprehensiveness, and good sense. The opinions everywhere reveal the man of extensive experience, diligent study, calm judgment, and unbiassed criticism. The work should be in the hands of every practitioner.

PHOTOGRAPHIC ILLUSTRATIONS OF CUTANEOUS SYPHILIS. By GEORGE HENRY FOX, A.M., M.D. New York: E. B. Treat. 1881.

PARTS iv., v. and vi. contain beautiful examples of the papular and pustular varieties of cutaneous syphilis, with accompanying descriptive text. Each picture is a photograph from life, and is carefully colored by hand.

Reports of Societies.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, January 24, 1881.

DR. A. E. M. PURDY, PRESIDENT, IN THE CHAIR.

THE paper of the evening was by DR. EMIL NOEGGERATH, and was entitled

ON A NEW METHOD OF PERFORMING OVARIOTOMY.

Having alluded to the remarkable success which of late had attended the operation of ovariotomy in the hands of the best surgeons, and especially since the introduction of antisepsis, he said he believed that even better results would be obtained in the future, and, therefore, that every step directed toward diminishing the dangers of the procedure was to be received with satisfaction. In regard to Listerism, he said that, from what he had seen in his own practice and in that of others, he had come to the conclusion that the more extensively antisepsis was applied, and the more varied was its use in a single case, the greater were the chances of recovery. He therefore considered it the safest policy to disinfect everything surrounding the patient, and, if possible, by different agents.

The plan now in vogue at the Woman's Hospital, of having isolated wards or cottages set apart exclusively for ovariotomy patients during and after the operation, he thought a great advance; but he believed that it was also possible to make a room in a dwelling, or a private room in a hospital, equally salubrious. Having described minutely his manner of preparing the chamber and all the surroundings of the patient so as to guard against the introduction of anything deleterious, he went on to consider the three principal sources of danger in ovariotomy: hemorrhage, shock, and septicæmia.

Regarding the avoidance of the first as a single cause, he had nothing to add to what we knew from the teachings of our ovariotomists. As to shock, it had been proved by G. Wezener's experimental researches, and, later, by observations on the human subject, that the principal element of shock was lowering of temperature, and it could easily be seen how this might occur in an operation like that of ovariotomy, where such a large surface was exposed to evaporation for a very considerable period. Another element in the production of shock was the prolonged contact of the contents of the abdomen with fingers, instruments, etc., and their unavoidable dislocation; a fact also proven by experiments on animals. In addition, there was the influence of narcotism from the anæsthetic, with its paralyzing effect upon the heart, its well-known tendency to lower the temperature of the body, and the injurious effect of vomiting, which added to the mechanical insult offered to the viscera.

As an anæsthetic he preferred chloroform to ether, because in his hands it had proved more efficient in producing complete narcosis, and because he had found that nausea, vomiting, and coughing during and after the operation, were less frequent than when ether was used. He was in the habit of giving bromide of potassium to the patient for two days before the operation, in accordance with the plan proposed many years ago by Dr. Lente; and for the last two years he had added another safeguard, viz., the administration of one or more doses of chloral by the rectum. Since he had been employing bromide of potassium before, and chloral after ovariotomy, vomiting had been an extremely rare occurrence.

Ovariotomists had long been in the habit of performing the operation in a room the air of which was moistened and heated; but, on account of the objections to this mode of applying heat (among which were the depressing influence of an atmosphere loaded with aqueous vapor, the difficulty of maintaining an equable amount of heat around the patient, and the liability to draughts from currents of air entering the room), Dr. Noeggerath had modified the method by applying warmth to the body by placing the patient on a rubber bed filled with water heated to 100° or 102°. One of its great advantages was its effect on the reflex centres of the spinal cord. Experimental researches had shown that abdominal hyperæmia was an essential element and a direct consequence of shock; and we could, therefore, measure to a certain extent the degree of shock which was developed during ovariotomy, by the amount of hyperæmia found inside the abdominal cavity.

His attention had been directed to this point for several years past, and he had observed that, even in operations where the viscera had been exposed more than an hour and a half, the abdominal blood-supply had not apparently been larger than in the normal state, since he had operated with his patients on the hot-water bed. Moreover, in operations which were protracted and very severe from the amount of handling of the pelvic viscera, the color of the face had remained natural, and the pulse large and soft, with only from seventy-two to eighty beats to the minute at the conclusion of the operation.

The third and most important danger connected with ovariotomy consisted in the formation of septic material in the abdominal cavity after the operation, and in order to prevent this Dr. Noeggerath had adopted a different method of operating from that ordinarily employed. His plan was to commence by incising the skin, the subcutaneous layer of fat, and the fascia superfacialis, to the extent of about three inches. Instead of going on incising the tissues down to and through the peritoneum, he plunged the trocar at once into the cyst and emptied it out.

If he found that the liquid was bland he proceeded with the operation; but if it contained pus, decomposed blood, or dark, grumous fluid, he injected through the tube attached to the trocar about half as much of a 2½ per cent. solution of carbolic acid as the fluid measured when removed. This was allowed to remain in the cyst for a while, and then withdrawn. It was done in order to remove the possibility of infecting matter passing from the cyst into the abdominal cavity during the further progress of the operation. After the cyst had been fully emptied, he depressed the handle of the trocar toward the skin below the umbilicus, thus carrying all that section of the tumor which lay below the opening of the trocar against the anterior abdominal wall. Now the uplifted portion of the latter was incised upon the trocar as a guide, down to the cyst-wall, which was lifted up out of the peritoneal cavity by the instrument inside it; after which the pedicle was tied and the cyst removed. The advantages of this procedure over the ordinary method were the following: 1. It simplified the operation considerably, since the search for and separate opening of the serous membrane were entirely done away with, thus removing the principal difficulty connected with that part of the operation which preceded the opening of the cyst itself. 2. The chances of air, instruments, and hands, contaminated with septic material, entering the abdomen, were considerably diminished. 3. The chance of noxious contents of the tumor running into the abdominal cavity is very much less as compared with the ordinary proceeding, and they could be rendered harmless by previous disinfection. 4. The opening in the peritoneum was, on the average, smaller than with the old method, it being adapted in every single instance exactly to the requirements of the case. 5. The shock which resulted from laying open the abdominal cavity was shortened by just so much time as it took to empty out the cyst, the greater part of the operation being reduced to that of simple tapping. There were two contraindications: 1. A preponderance of the solid over the liquid portion of the tumor, or when the whole mass consisted of very small cysts, or semi-solid contents too thick to pass through the canula. 2. A small sac, either originally so, or reduced by previous tapping, on account of the danger of encountering a loop of intestine in front of the cyst. A third possible contraindication might be the presence of ascites; but he had had no occasion to test this question practically. There was this about the procedure, however, that if anything unusual should occur after it had been commenced, it could be interrupted at any step, and the operation finished after the ordinary method.

In ordinary cases he was in the habit of leaving his patients for the following week on the water-bed, which he now filled with cold water as soon as any rise of temperature called for antipyretic measures. He had found it as efficient as Kibbee's cot, and it had the great advantage over the latter of putting less strain on the nurse and causing less disturbance of the patient. If symptoms of nervous depression, or even collapse, were to begin to develop it could be filled again with hot water, and its stimulating effects thus called into action.

The after-treatment properly began at the time when the cyst was being severed from its pedicle, because we had at this moment to decide whether the peritoneal wound (which was the peritoneal cavity) was to be treated as an open wound or to be closed. It was admitted that the question of the treatment of the pedicle was so far settled that in the large majority of instances the intra-peritoneal method was the one to be chosen; but still there remained a certain percentage in which drainage was the only proper treatment. After speaking of the dangers which had hitherto always attended the latter, he said that the only reasonable method of drainage was that proposed and performed with great success by Bardanheuer, of Cologne, which consisted of a modification of Sims' mode of draining through Douglas' cul-de-sac. But, even supposing we had an absolutely reliable method for draining Douglas' cul-de-sac, cases were liable to occur in which even this proceeding would fail. Dr. Noeggerath had, therefore, resorted to a new plan of after-treatment for cases where drainage was indicated, and this consisted in the use of the permanent full bath; the water being allowed to come and remain in contact with the peritoneal cavity. After giving the history of the first case in which it was employed, he described his bath for treating patients after ovariotomy in its now perfect state, and then went on to state that, although it was desirable to have a bath as complete as the one described, it could be very well substituted in a private dwelling by a common movable bath-tub with a double bottom for the reception of hot water; it being only necessary for the purpose desired to employ a bathing arrangement in which the water could be maintained at a certain temperature without the frequent additions of fresh hot water. The number of cases he had treated with the bath was as yet too small to shape any final indications for its use. Already, however, he knew of one contraindication, and within its scope were comprised patients with weakened constitutions, as the drain on the system from loss of serum and fibrine was severe. He proposed to employ the permanent bath as a substitute for ordinary drainage in ovariotomy, and, above all, after Freund's operation, after the removal of fibroid tumors, and after Cæsarean section.

In conclusion, he said that the title given the paper might at first sight appear somewhat presumptuous; but he thought it would be admitted that the principle which governed the several steps of the operation, in the manner described, was entirely new and original, and therefore he believed that he was justified in calling it a new method of performing ovariotomy. Furthermore, he wished the expression "new method" to be applied not to the operation alone, but rather to the combined plan of procedure before, during, and after the operation, including the use of chloral, the hot-water bed, the emptying of the cyst before opening the abdomen, and the use of the permanent bath after the operation.

Dr. T. A. Emmet, on being called upon by the Chair, said that in regard to the first point to be considered in the discussion of Dr. Noeggerath's suggestive paper, viz.: "Is antisepsis altogether necessary?" from the results that had been obtained in Germany and late in Italy, as well as from the experience with it in this country, its great utility could not be questioned. It had become important, however, to determine how far the methods at present employed might be simplified. He would not insist on the use of the spray, but at the same time he was not as yet exactly prepared to do without it. A great many held that in general surgery the spray was not really necessary on account of the thorough and deep drainage which it was possible to get; but as this could not be obtained in ovariotomy, he was of the opinion that it was better to retain the spray for the present at least. As to antisepsis in general, as he had said, there was no question in his mind as

to its very great usefulness. In regard to the point whether antisepsis was possible in private dwellings and in hospitals as well as in the isolated cottages used only for ovariotomy cases, he believed that such a thing was possible, though it would undoubtedly be difficult to carry out properly in all the details. The institution of the system of isolated cottages at the Woman's Hospital had made a wonderful difference in the mortality there. The year before this had been carried into effect there were nine cases of ovariotomy in the hospital, and every one of them had proved fatal. It was true that a defect was afterward discovered in the drainage, but as this trouble was at the other end of the building from that where such patients were kept, he thought it was hardly responsible for the mortality. The first year after the establishment of the cottage system, however, there was a mortality of only three out of thirty-three ovariotomy cases. It was about this time that antisepsis also was first resorted to at the hospital.

As to the question of chloroform *versus* ether, he advocated the latter on general principles, as he believed there was likelihood of its use being followed by shock. His experience with the two anæsthetics had been entirely different from that of Dr. Noeggerath; but at the same time it was only fair to state that he had not employed chloroform for several years now. Dr. Noeggerath's method of puncturing the cyst before opening the peritoneal cavity did not, he said, strike him favorably. If the cyst were single and the fluid were bland and thin, it might be practised very well; but even then there was great danger of doing the patient injury. Adhesions would render the procedure unadvisable, and it was possible that the bladder or other organs might be unconsciously transfixed. In one instance he had found both the stomach and the transverse colon retained directly in front of the ovarian tumor by firm adhesions; and in such a case as that great injury might be done by this method. With proper care he thought that one could guard very effectually against fluid getting into the peritoneal cavity.

As far as the treatment of the pedicle was concerned, he had no doubt that it should be dropped into the peritoneal cavity, after having been properly ligated, although the ligature unquestionably gave rise to trouble sometimes, and it was certainly a matter of interest to know just what became of the ligature. Mr. Keith, who attributed his extraordinary success to the use of the cautery and the great care with which he stopped all oozing, had told him that he lost quite a number of his cases at first, before he acquired that skill which had enabled him to attain a degree of success never reached by any other operator. He also used the drainage-tube more freely than it was customary to do in this country. Personally, however, he did not care to lose a number of patients in learning Keith's plan of operating, and he had not as yet had the courage to adopt it. Taking up the subject of the advantages and disadvantages of drainage, he remarked that it would revolutionize the operation of ovariotomy if perfect drainage could be obtained, but as yet this had been impossible to secure. Even when Sims' method of draining through Douglas' cul-de-sac was resorted to, the amount of drainage was exceedingly limited, and in those cases where we used the drainage-tube the most, viz., where there were adhesions in the pelvis, it was the least applicable. Dr. Noeggerath's plan of draining by means of the warm bath was an idea so new to him that he was not prepared to express any opinion in regard to it; but he certainly thought that it should be given a fair trial, so that it might speak for itself. In the after-treatment he preferred quinine to the application of cold, if there was sepsis present. Cold, however, was very grateful to the patient, and was useful in preventing "wear and tear," though it would not put a stop to peritonitis.

Dr. Garrigues stated that in the city where he came from (Copenhagen), antisepsis was used before any other place, except Edinburgh, it having been introduced into the hospitals in 1869. Before that there had been an enormous mortality in the surgical wards, and this had been entirely overcome by the adoption of Listerism.

In Germany one-half the patients died after ovariotomy, before its introduction, but since then the results had been very favorable. He agreed, therefore, with Drs. Noeggerath and Emmet in regarding antisepsis as essential. It was doubtful, however, whether the spray itself was more beneficial or hurtful. It had the great disadvantage of introducing not only foreign, but often dangerous substances into the peritoneal cavity, especially if carbolic acid was used. Several cases were on record in which the patients seemed to have died of carbolic poisoning. Then, it had the effect of lowering temperature, and, as Dr. Noeggerath had pointed out, lowering of the temperature was one of the principal features of shock. Many of the best surgeons, consequently, now practised Listerism without the use of the spray. Still another objection to the spray was that it was dangerous because it was apt to absorb the attention of the operator and his assistants to such an extent that other important points of the system were neglected. In this manner, instruments which had not been disinfected were liable to be used, while it was much more important that the instruments employed and the hands brought in contact with the tissues should be thoroughly carbolized, than that the spray should be constantly maintained.

Dr. Noeggerath's precautions when operating in private dwellings were most excellent, and he thought it would be a great advantage to carry them out fully. He also agreed with him in regard to chloroform, and was thoroughly in favor of its use in preference to ether. It was true that it was opposed in this part of the United States, but in other parts of the country, as for instance at Baltimore, it was constantly employed. In 1846 chloroform was introduced into Denmark, and since then it had been in exclusive use there, yet only one case of death from it was ever known to have occurred in that country, and he had been in a position to hear of them if other deaths had taken place. The claim for the safety of ether he believed to be exaggerated. Thus, he had heard a well-known surgeon remark that only two deaths from its use had occurred in New York, yet he himself had heard of no less than three fatal cases in New York or the immediate vicinity during the five or six years that he had been living here, and Dr. Emmet said in his book that he had lost half a dozen cases from the administration of ether to individuals suffering from disease of the kidney. This was a very important fact, and the thanks of the profession were due to Dr. Emmet for calling their attention to the matter, particularly since, in these cases, the existence of the kidney trouble was not indicated by the presence of either albumen or casts in the urine. In the prevention of shock, he thought Dr. Noeggerath's plan of employing a hot-water bath was a great advance, and considered the method much preferable to overloading the air with warmth and moisture. Another important point

in preventing shock was to operate as quickly as possible.

As Dr. Emmet had mentioned, there were certain disadvantages connected with puncturing the cyst before opening the peritoneal cavity. In one case in which he saw Dr. Noeggerath operate in this way, the bladder had been pierced by the trocar; but still it might have been necessary to wound the bladder any way. Afterward he saw a case in which Dr. Thomas, in operating in the ordinary manner, had to cut into the bladder. On the whole, however, he confessed that he was not very favorably impressed with the method. In applying cold in the after-treatment, he would decidedly prefer Dr. Noeggerath's plan to the use of the Kibbee cot, since wet cold was very depressing, while this was not the case with dry cold.

Dr. Janvrin believed fully in antisepsis, and said he had had extensive opportunities for observation in the cases of the late Dr. Peaslee and of Dr. Bozeman at the Woman's Hospital, as well as in his own practice. He preferred ether to chloroform, because, as the operation was apt to be a long one, he considered that there was much less danger from shock than if chloroform was used, provided there was no disease of the kidney present. As to the treatment of the pedicle, he had himself made over one hundred ligations, and in only one instance had he ever known a ligature to slip. This was six years ago in a patient of Dr. Peaslee's, and the patient died from internal hemorrhage. The ligature had been tied with great care, but the pedicle was very œdematous, and had, no doubt, retracted. At the present day he always used carbolized silk for ligatures, but he believed that it was never absorbed. Some seemed to think that Dr. Peaslee had claimed that it was, but this was not the case, although he believed that catgut ligatures might be absorbed.

In regard to Dr. Noeggerath's method, the whole thing was new to him, as he had never heard anything of it until this evening. It seemed to him that in many cases it would be admirable, while in others, the nature of which the author had himself pointed out, it would not be applicable. Adhesions, however, he thought, would not constitute an objection, as Dr. Emmet had suggested. The use of the bath also struck him very favorably, and it was nothing more nor less than the carrying to an extreme of the old method of washing out the peritoneal cavity with warm water with sufficient salt dissolved in it to make it approximate serum in character. Provided the patient was strong enough to stand the bath, he believed that it would prove a very excellent procedure. He had had no experience in the employment of drainage through Douglas' cul-de-sac, but the ordinary drainage-tube he had used frequently, and he then related a case illustrating the advantage sometimes to be derived from it.

Dr. William M. Chamberlain thought that Dr. Noeggerath had abundantly sustained the title of his paper by the originality of the various procedures described in it. In regard to the use of the hot-water bed, as well as the bath, he merely wished to suggest that the syphon-principle might, perhaps, be adopted with advantage. Some ten years ago he had read a paper before the Medical Journal Association on the application of the syphon-principle in medicine and surgery, and during the reading of the paper it had occurred to him that by means of it the temperature of the bed and bath described by Dr. Noeggerath might be regulated perfectly.

Dr. Bache Emmet spoke in confirmation of the advantages of the antiseptic system in general, but thought that great care was necessary in order to carry out all its details with success. Thus, in hospitals the dressings used were sometimes old, and if their antiseptic qualities had been to a great extent lost, serious trouble might perhaps arise in consequence. Chloroform, he believed, was more apt to produce vomiting than ether, and, as a rule, he preferred the latter. During the past year ether had been used in 365 cases at the Woman's Hospital, and in no single instance was there any bad result from it. The question of drainage was still *sub judice;* but it seemed to him that if every precaution was carried out in the matter of antisepsis, it ought to be avoided, if possible. If drainage was used, however, he would prefer to have it through the wound rather than make a second opening, since he believed it had been proved, at the time that Sims' method was proposed, that it was impossible to drain all the parts in this way. Like Dr. T. A. Emmet, he preferred quinia to cold where there was a high temperature after the operation.

In bringing the discussion to a close, Dr. Noeggerath remarked that the question of the advantage of the spray in ovariotomy, on the one hand, and in general surgery on the other, had come up several times, and that it was now for the most part admitted that in the latter it would gradually be supplanted by the practice of washing out wounds with carbolic acid solution. In ovariotomy, however, it seemed probable that the spray would be retained. At the Cambridge meeting of the British Medical Association, Mr. Keith had compared ovariotomy to operative procedures involving the pleural cavity. In the latter, if the spray was not employed, the cases did not do well, and the same seemed to be true in regard to ovariotomy. The latest contribution to the efficiency of the spray was a paper by Dr. J. N. Watson, in the *American Journal of the Medical Sciences* for October, 1880, in which he related a series of experiments which he had made. In these it was proved that if the spray was passed over test-tubes while the air was filled with dust, they were disinfected; but if the dust was put in the tubes without the spray, decomposition commenced at once. Like Dr. Emmet, he thought that the operation which he had described was as yet too new to enable one to decide definitely upon its merits; but the disadvantages connected with it he had endeavored to point out so far as they were known to him. In the case referred to by Dr. Garrigues, in which the bladder was punctured, he had afterward concluded that he would have had to cut into it at all events. The bladder here, however, was very much altered in character. In two cases on record the operator had met with this accident unintentionally where the operation was being performed in the ordinary way. As to the liability to injure the stomach, the condition which Dr. Emmet had mentioned was of such extremely rare occurrence as hardly to be considered as a contraindication.

There was undoubtedly a certain amount of danger from the use of the ligature, depending somewhat on the situation it reached. Sometimes it had been known to be passed by the bladder, and sometimes by the intestines, and it was often the cause of inflammation and serious trouble. He was not satisfied in his own mind as to what was the best article for ligatures, but, as a general rule, he preferred silk to silver, on account of the tightness with which it could be tied. The drainage question was one of the most important of the whole; but he thought

that Dr. Bardanheuer had made a great advance toward solving it. Before closing the wound, the latter was in the habit of injecting a solution of carbolic or salicylic acid into the peritoneal cavity, and he then placed the patient almost in a sitting posture, so that from the flanks and higher portions of the pelvis the fluid could reach the cul de-sac. His many successful operations of different sorts had proved that his plan was of enormous value and a very great improvement over the older methods of drainage. When the orifices of his tubes became clogged up with large pieces of fibrinous deposits, it was his practice to employ his carbolic acid injections again. As Dr. Bache Emmet had intimated, it was very important for the best success of the antiseptic system that only fresh dressings should be used, and, consequently, he always took the precaution of carrying such with him to every case in which he operated.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, January 26, 1881.

Dr. T. E. Satterthwaite, President, in the Chair.

ULCERATIVE ENDOCARDITIS.

Dr. William Osler, of Montreal, Canada, by invitation, read a paper on the above subject, illustrating his remarks by the exhibition of microscopic slides. He distinguished three classes of cases which were clinically known as ulcerative endocarditis :

First.—Those cases in which the disease appeared without any obvious cause, either spontaneously or in connection with rheumatism or some other affection. The term infectious, given by Jaccoud, might be applied to this class. It was the arterial pyemia of Wilkes—the primary ulcerative endocarditis of others.

Second.—Those in which the endocardial disease was secondary to some inflammatory focus—acute necrosis, puerperal endometritis, etc. To these the term septic might be appropriately applied.

Third.—In certain cases of chronic valvular diseases an acute endocardial process might be engrafted (recurrent endocarditis), presenting anatomical appearances similar to the infectious form, but not characterized by the same clinical manifestations, the patients dying with the symptoms of chronic heart disease.

The chief points brought out by the cases he had observed were : 1, that the majority of cases of infectious endocarditis occurred independently of rheumatism ; 2, the frequency with which infectious endocarditis was associated with pneumonia ; 3, the production of acute multiple aneurisms of the aorta in this disease ; and 4, certain histological features in the endocardial vegetations, and particularly a remarkable fungoid growth met with in one instance.

He had also found that the minute bodies found in the endocardial vegetations corresponded in their chemical and microscopical relations to micrococci. They were motionless, highly refractile spherules, less than a micromillimetre in diameter, arranged in groups or colonies without any perceptible stroma. Acids, alkalies, ether and chloroform had no effect upon them.

The question, however, of the relation of the micrococci to the diseases presented many difficulties, and we were probably not yet in a position to give a final answer to the problem. The occurrence of fatal septic cases, closely allied to or identical with those in which a bacteric endocarditis was found, but in which no micrococci could be detected either in the local process or in the blood, taught us that the same poison might exist without the intervention of bacteria. In any case their presence might be only a partial phenomenon in a general infective process.

On motion of Dr. Alonzo Clark a vote of thanks was tendered to Dr. Osler for his communication.

Dr. Alonzo Clark, then remarked that in some respects he agreed with Dr. Osler. The difficulty which presented itself to his mind, however, was that the micro-organisms were supposed to enter the circulation from without. The question was—could a minute body possess sufficient inherent force to overcome blood-pressure, and thus enter the vessels? Of course, formed particles within the vascular channels might easily get out. But he questioned whether the opposite was known to take place. Moreover, most recorded cases of this variety of endocarditis involved exclusively or mainly the left heart. Why should this be? If the micrococci entered the veins of the body, they ought to be found in the right heart as often as, or even more frequently than, in the left. Again, it must be asked, had such germs intrinsic septic power, or were they to be regarded merely as the carriers of the poison?

He pointed out that, in the rare cases involving the right heart, abscess of the lung had been observed. The experiments of Virchow with the injection of indifferent solid particles had resulted in the production of pulmonary stasis or embolism, but special inflammatory symptoms or metastatic abscesses had not occurred. Then it was well known that, in several instances in which minute organisms had been supposed to cause mischief in the body, they had been collected and allowed to multiply by cultivation. Had the doctor taken any steps in this direction?

Dr. Osler answered that his experiments in cultivation had invariably produced negative results.

Dr. Clark resumed, that in view of this fact, the questionable collections might be held to represent only some form of fibrin. Incrusted tubercle also would appear minutely granular. He had subjected such old tubercular deposits to the action of chemicals, and had found that while some would yield to ether and dissolve in dilute acids producing effervescence, others would resist even the action of strong acids. He questioned whether boiling and the influence of such reagents would not have power to destroy any granular collections of a vegetable nature.

Dr. Osler said that the difficulty suggested by Dr. Clark had also occurred to him. These bodies resisted almost too strongly to be classed with vegetable products, since other vegetations did not show a similar pertinacity. Nor did he wish to commit himself by positive assertions. His position was one of neutrality. It was further evident that those germs did not produce the characteristic features of the disease, because these symptoms had been observed without micro-organisms. A case in point was described. All such observations militated against the idea that these particles were the real *materies morbi*, and favored the notion that they were merely concomitants of disease. Klebs and his followers thought the germs entered the system through the intestinal or respiratory surface.

Dr. Satterthwaite asked how these collections behaved when the specimens containing them were stained with hæmatoxylin.

Dr. Osler answered that they took the tint, after the manner of all such germs.

Dr. Howe thought that it was hardly fair to class

cases involving double fractures or other extensive injuries, and followed perhaps by osteomyelitis, under the head of infectious endocarditis. The same objection also applied to cases in which meningitis of traumatic origin, or surgical pneumonia, were present, as in the second group mentioned by the doctor.

Dr. Osler replied that he wished to be understood as limiting the term infectious endocarditis to those cases in which the disease manifested itself without obvious cause. The cases alluded to by Dr. Howe would come under the head of ulcerative endocarditis following injury. As regarded the case in which meningitis was found, this affection was ascertained to be of non-traumatic origin, being a pia arachnitis such as occurred idiopathically. Allusion was here made to a case of similar nature, seen in conjunction with Dr. Peabody, at the New York Hospital.

Dr. Peabody stated that in the case just referred to there was no cranial fracture to account for the development of the meningitis. The post-mortem examination, however, revealed the presence of septic particles within the blood-vessels, especially those of the lungs, where colonies of micrococci were found to exist.

Dr. Heinemann observed that the granular masses would become stained when submitted to the influence of proper reagents.

Dr. Satterthwaite asked whether the infectious form of endocarditis was not identical with the diphtheritic endocarditis of German writers.

Dr. Osler replied in the affirmative, adding that the affection had received various names, and was also known in German literature as mycosis endocardii.

Dr. Satterthwaite remarked that the term diphtheritic, as applied to this form of endocarditis, was an unfortunate one, because the disease rarely appeared in conjunction with diphtheria. He agreed with Dr. Osler in regard to the nature of the bacteritic organisms, for he too was unable to see in them the cause of disease. Many such deposits unquestionably had a post-mortem origin, and even after death they might get into the vessels, fill the tubes of the kidney, etc. With reference to Dr. Osler's specimens, he was of the opinion that they showed true micrococci, such as he had seen in preparations sent here by Prof. Eberth. But that was no reason why these bodies should not have entered the tissues after death. In this connection he alluded to the recent experiments made by Wood and Formad *National Board of Health Bull.*, Suppl. No. 7), who had found abundant low organisms a few minutes after death, in animals which during life were entirely free from bacteria. Nevertheless, such bodies might also be present during life in certain cases. With regard to Klebs, that observer had in a measure retracted his steps in reference to germ theories. He had found that cross-sections through the minute rods would produce the impression of spherules; hence, the latter had been oftener seen than the former.

ABSCESS OF LEFT FRONTAL LOBE OF CEREBRUM.

Dr. E. C. Seguin presented a specimen of the above, which he said was interesting with reference both to its pathogenesis and to localization. He gave the following account of the case:

On April 11, 1880, I was asked to see a case in consultation. The patient was a young married woman, aged about twenty-eight years, who had formerly enjoyed good health and had borne several children. During the month of February one of these children had died after a severe illness, and she had undergone considerable fatigue. She seemed depressed, weak, and anæmic afterward.

About four weeks before the date of the consultation she complained of pain over the left eye. This was soon accompanied by pain and exophthalmus, and on March 24th Dr. Knapp was called in and diagnosticated orbital (sub-periosteal) abscess. This was opened on March 26th by Dr. Knapp.

It was remarked that the pus was under great tension, and that it spurted out a considerable distance when released. Pain ceased at once, the exophthalmus disappeared, and the wound quickly healed. During the first few days of April all seemed going on well; the wound was healed; the patient was free from pain; she was taking tonics, and on the 3d made a call on a near neighbor.

During the night of April 3d and 4th, one week before my examination, she awoke with severe headache and vomiting; ever since she has lain abed, presenting the following symptoms: headache, chiefly mastoid and through the base of the skull; occasional vomiting; irregular respiration; irregular and very slow pulse, varying from sixty to fifty beats per minute; stupor and general feebleness. As negative points there were no symptoms about the eyes, objective or subjective, except a partial ptosis of the left upper lid (which had been incised); no fever, chills, convulsions, paralysis, aphasia; at no time had there been coma. The urine was free from albumen. The patient was soporose, but could be roused by loud speaking; she answered questions as if half asleep, but in such a way as to leave no doubt as to the preservation of language. She put up both hands to the mastoid regions when indicating the seat of pain. A minute inspection showed no paralysis except about the left eye, whose upper lid drooped and whose internal rectus was inert. The pupil on the left site was not fully dilated, but it was a little wider than the right. The optic nerves appeared somewhat congested, and were dim at their periphery, but there was no actual choking. Patient appeared to feel pinching well everywhere. The thermometer showed no fever. The pulse varied from fifty-three to sixty-six beats per minute, and it was a reluctant, delusively full pulse, with no real strength. The breathing was easy and regular, but friends of the patient described quite well a Cheyne-Stokes breathing which they had observed. There was neither redness nor tenderness about the site of the orbital abscess.

I diagnosticated an abscess of the brain probably in the left frontal lobe, and expressed the opinion that the patient was in imminent danger. She died the next day in a comatose state, no new symptom having been observed.

It was then learned that for two years Mrs. F—— had suffered from frequent attacks of headache, lasting several hours. The pain was frontal, and sometimes extended along the nose and into the left temple. There had never been symptoms of chronic nasal catarrh.

The autopsy was made on April 13th, about thirty hours *post-mortem*. We found a large abscess the size of an English walnut in the left frontal lobe. It lay wholly under the cortex cerebri, in the convolutions of the orbital lobule and in the second frontal convolution. Viewing the hemisphere from the side, the apparent posterior limit of the abscess was the anterior border of the lower part of the third frontal gyrus. The external connections and origin of the abscess were most interesting. There was

only one point of adherence between the diseased frontal lobe and the dura mater, and that was over the orbital plate of the frontal bone, immediately under the swollen frontal lobe. There the dura mater was thickened and adherent to the pia mater and cortex cerebri, forming the inferior wall of the abscess, over a space as large as a ten-cent piece (about 15 mm.). Under this patch of pachymeningitis the orbital plate of the frontal bone was necrosed and perforated; a probe was easily passed into the orbit.

In the orbit, under its periosteum, pus was found, and a part of the roof and the inner wall of the orbit were carious. Careful dissection by Dr. H. Knapp showed disease of a similar kind in the ethmoidal cells and frontal sinus. I need say nothing more of the conditions of these parts and of the pathology of the orbital abscess, as the case has been fully reported from this point of view by Dr. Knapp.

The appearance of the necrosed orbital plate, and of the thickened, adherent dura mater, was precisely similar to what I have several times seen in cases of suppurative disease of the internal ear, with cerebral abscess by contiguity. The genesis of the abscess must have been alike in the two situations.

In December, the brain having been sufficiently hardened in bichromate of potash solution, I imbedded it in Gudden's microtome, and made several horizontal sections through the whole brain with the view of demonstrating the relations of the abscess. These cuts showed that the abscess was of quite as large a size as at first supposed, almost perfectly globular in shape, measuring about 38 mm. in diameter. It contained ordinary pus, and was lined by a distinct membrane 1 to 2 mm. thick. The anterior, inferior, and external limits of the abscess were thinned cortex and pia mater, and superiorly, posteriorly, and internally, it was bounded by apparently normal white substance. The whole of the white centre of the frontal lobe, except a portion near the convexity of the hemisphere, was destroyed to within 10 mm. of the folds of the island of Reil, and about 8 mm. of the head of the nucleus caudatus. The mass of white substance connecting the posterior part of the third frontal convolution, and the anterior gyri of the island of Reil, with the internal capsule, were uninjured.

This last fact is of capital importance in estimating the bearing of this case upon the current notions of cerebral localization.

The above description of the topography of the lesion, especially its posterior limitation, is made from the surface exposed by the lowest cut made, viz., one passing through the speech-centre of Broca, about 10 mm. above the apparent commencement of the fissure of Sylvius (pia still adherent). The rest of the brain was healthy to the naked eye.

This remarkable case seems to me of much importance as a negative contribution to cerebral localization. It is in exact accord with recent experimental data, and with the *post-mortem* findings of the last ten years, that an abscess placed like this one should give rise to no motor symptoms, and should not cause aphasia. It is wholly within what are now called the unexcitable districts of the brain. The only symptoms present were the partial paralysis of the left third nerve (more immediately caused by the orbital abscess?) and signs of intracranial pressure. Yet it is important to note that in spite of the enormous pressure which must have existed, there was no actual neuro-retinitis.

I have elsewhere reported another case of (smaller) abscess in precisely the same location (left frontal lobe), in which no symptoms referable to this lesion were present.*

On the other hand, numerous autopsies are on record in which a smaller lesion (softening, hemorrhage, etc.) placed a centimetre farther back in the left frontal lobe, involving the posterior part of the third frontal gyrus or the band of white substance between it and the nucleus caudatus, has given rise to severe symptoms, hemiplegia, or aphasia, singly or combined.

Dr. Ripley thought that, as a general rule, slowly progressive invasion was less likely to produce symptoms than one more rapid.

Dr. Seguin observed that this would largely depend upon the seat of the lesion. If the central region were involved, gradual invasion would certainly produce early symptoms.

Dr. Knapp stated with regard to the pus here found in the orbit and frontal sinus, that abscess of the latter region was but little known. Nevertheless, the frontal sinus not infrequently became the seat of retention-cysts, owing to its communication with the ethmoidal cells, or from the presence of polypi. But, as a rule, in such cases, the abscess would point at the inner aspect of the orbit. In the present instance, however, the abscess had pointed externally, and it was this circumstance which had misled many who saw the case to make an erroneous diagnosis. Such purulent collections might also simulate periostitis. In the present case there existed an extension of the orbital plate, forming an outward prolongation, and it was for this reason that the abscess had formed at the outer part, and not at the usual inner upper angle of the orbit. Primarily there had evidently been a retention in the frontal sinus; subsequently extensive caries was developed.

Dr. Seguin remarked that the consideration of this case had again suggested to him the propriety of surgical interference in similar instances, especially if the existing conditions so clearly pointed out the location of the abscess. It was to be remembered that the frontal lobes bore injuries well, being essentially unexcitable. He thought the life of this woman, who was otherwise enjoying perfect health, might have been saved by trephining, followed by evacuation of the pus.

Dr. Knapp stated that he, for one, would be willing to practice incision from the orbit in cases so clearly marked as the present one. He added that the orbit might be removed without incurring serious risks.

Dr. Seguin asked whether that would be as desirable a locality as the frontal region.

Dr. Knapp answered that it would be, if anything, better, on account of its being at a lower level, which would facilitate drainage.

Dr. Satterthwaite asked whether he would not prefer drainage through the frontal sinus?

Dr. Knapp replied in the negative.

Dr. Heineman alluded to Prof. Detmold's case, which was one of the first on record of trephining for cerebral abscess.

Dr. Howe remembered several cases, in one of which the patient had recovered after the operation.

Dr. Satterthwaite instanced a further case which he had seen at the New York Hospital, but which had terminated fatally.

* A Contribution to the Study of Localized Cerebral Lesions. Transactions of the American Neurological Association, vol. ii., pp. 122-124, New York, 1877.

RUPTURE OF THE KIDNEY FOLLOWING INJURY.

Dr. Heineman showed a specimen of ruptured kidney, in which the organ was almost completely severed, being held together only by a bridge of connective tissue at the renal pelvis. The specimen was removed from the body of a man who had sustained a fall from a height of fifteen feet, thus receiving a sternal fracture and the above renal injury.

Dr. Peabody had seen several cases of this kind, but in no instance had the rupture been so complete.

DIVERTICULUM OF SMALL INTESTINE SHOWING TYPHOID FEVER LESIONS.

Dr. Heinemann presented a second specimen, which was taken from the body of a patient who had died of typhoid fever. In the small intestine a diverticulum was found, and on examination it was seen to exhibit the characteristic ulcers of typhoid fever.

Dr. Peabody said that about two years ago he had found a similar diverticulum. The peculiar feature of his case was that there had been an attempt at formation of a special mesentery for this pouch. In this way a bridle was developed, and the man died of intestinal obstruction due to this cause.

Dr. Howe remarked that he had recently seen an intestinal diverticulum, about three inches long, in a case of strangulated hernia at the St. Francis' Hospital.

CAVITY OF LUNG COMMUNICATING WITH BRANCH OF PULMONARY ARTERY AND BRONCHIOLE.

Dr. Peabody presented a specimen consisting of the right lung of a patient who had died from the results of hæmoptysis. The man was twenty-six years of age, and had complained of dyspnœa, with cough and occasional bloody expectoration. An examination of his chest revealed subcrepitant râles, but no marked dulness. Slight bronchial breathing was heard over the base of the right lung. Profuse hemorrhage suddenly came on, the blood gushed into the trachea, and the man died.

At the autopsy, in addition to widespread bronchitis and peribronchitis, a cavity was found in the lower lobe of the right lung. It was about the size of a hen's egg, and leading into it there were found a rather large branch of the pulmonary artery and a bronchial tube. The mouth of the vessel was closed by a recent clot.

Dr. Peabody also exhibited a heart showing marked hypertrophy of the left ventricle, without the presence of any valvular lesion. The hypertrophy was found to accompany a condition of chronic diffuse nephritis.

OSTEOMA OF FRONTAL SINUS.

Dr. Knapp presented a specimen of the above, and gave the history of the patient from whom it had been successfully removed. The case has been fully reported elsewhere.

Dr. Knapp also briefly referred to another case in which surgical interference had resulted in death. In this instance the tumor extended into the cranial cavity.

Dr. Seguin remarked that this case went to support his position with regard to the inexcitability of the frontal lobes, for in Dr. Knapp's last case special paralytic symptoms had at no time been observed.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, February 3, 1881.

Fordyce Barker, M.D., LL.D., President, in the Chair.

Dr. R. Beverly Cole, of San Francisco, and Dr. John P. Gray, of Utica, were introduced to the Academy, and invited to occupy seats upon the platform.

The Statistical Secretary, Dr. F. V. White, announced the death of the following Fellows: Jacob A. Van Houten, M.D., Wm. C. W. Glazier, M.D., Robert D. Nesmith, M.D., and James Otis Pond, M.D.

The President spoke of the twenty-eight years of continuous and faithful service performed by Dr. Pond as Treasurer of the Academy, and appointed Dr. John G. Adams to prepare a memoir.

UTERINE HYDATIDS.

Dr. Wm. T. Lusk exhibited a specimen of uterine hydatids, and made some remarks concerning the pathology, the diagnosis, the prognosis, and the treatment of this form of degeneration. In this case, as in nearly all reported, it was supposed the condition was that of placenta prævia, and, indeed, it was chiefly with reference to the latter condition that differential diagnosis was to be made. The points relied upon by Dr. Lusk were: first, the size of the uterus does not correspond to the supposed period of gestation; second, after the sixth month most of the signs of pregnancy may exist, but there is absence of fetal movements and sounds of the fetal heart. In such a case only one of two conditions could exist: either the uterus was occupied by a dead fœtus or by hydatids, and usually the distinction could be made out by the general feel of the uterine tumor.

THE PRESIDENT'S INAUGURAL ADDRESS.

The President then delivered his inaugural address, in which he expressed his warm appreciation of the honor which he had received with such unanimity, and of the confidence expressed that the functions of the office will be performed with impartiality, zeal, and conscientious fidelity. All of his predecessors in office then living were present, and he was sure they all would concur with him in the statement that no one before him had been so lucky in the time of his service—a time in which circumstances had combined to make what reputation the position gave easily won. The fruit of years of zealous labor by his predecessors and other untiring, honest workers for the Academy, was ripe and ready for the harvest.

The President then gave a brief sketch of the career of the Academy from the time when, thirty-four years ago, all of the best men in the profession united in its organization for the purpose of the cultivation of the science of medicine, the advancement of the character and honor of the profession, the elevation of the standard of medical education, and the promotion of the public health, to the time when "we have our agreeable, convenient, well-lighted, and perfectly ventilated library-hall, which is a monument more enduring than brass or marble to keep the name of Abram Du Bois ever present in the memory of coming generations of the profession, and a legacy of the stamp of nobility for his descendants." The library now contains over 17,000 volumes, exclusive of pamphlets, and is daily increasing.

THE SCIENTIFIC WORK AND THE MEDICAL PRESS.

The scientific work of the Academy during the last two years had been of the most satisfactory character,

and he paid a special compliment to the medical press of this city for the painstaking and faithful presentation of that work to the profession. The President also expressed the hope that soon the Academy would devise some plan whereby it can publish all its papers and discussions at short intervals. He made special reference to the great value of the *Index Medicus*, and bespoke for it a most liberal professional support. Dr. Barker then spoke of the influence which the Academy had exerted upon

THE PUBLIC HEALTH,

and said:

"One of the avowed objects of the Academy is the promotion of public health, and it has earned in the past a right to recognition as the fountain-head of whatever excellence New York may boast as to sanitary regulations. To the Academy New York is indebted for the existence of its protecting Board of Health. It set in motion the efficient board that did the great work in stamping out the cholera; a work which saved untold lives to the State. This offspring of the Academy has inspired most of the legislation upon hygiene ever since, reforming our buildings, giving us improved sewerage, checking the adulteration of food, and especially punishing those who have destroyed unnumbered children with adulterated milk. If the public of this great commonwealth could only be made to appreciate the great pecuniary loss which is due to the violation of sanitary laws, it would be roused to most efficient action for its protection. Notwithstanding the fact that New York is more favorably situated than any other large city in the North or in Europe for the best sanitary conditions, its rate of mortality is in excess of others. A large part of this excess in our death-rate is undoubtedly due to causes which could and should be controlled by municipal regulations, and thus the lives of 6,000 persons might annually be saved. The pecuniary loss to this city from these causes can with difficulty be estimated, but it is safe to say that it amounts to many millions of dollars annually. The loss to Philadelphia, from the ravages of small-pox in 1871 and 1872, has been estimated by competent statisticians at nearly $20,000,000. The pecuniary loss to this city the present year from diphtheria, scarlet fever, typhoid fever, pneumonia, and other diseases generated by preventable causes, such as defective plumbing, bad sewerage, filthy streets, and a poisoned atmosphere, beyond all question would exceed our city debt and reduce our taxation, if it could have been saved and applied to this purpose.

"A few weeks ago I had the pleasure of perusing a paper entitled 'What the State Owes the People; Public Health is Public Wealth,' which was read before the American Public Health Association at its meeting in New Orleans, La., in December last. It struck me that it would be wise to borrow the plan of religious propagandists, and publish the paper as a tract. Such information is needed. I have found the error very prevalent among our citizens that the dangers which arise from the public neglect of sanitary laws are chiefly confined to the poorer classes and those living in crowded tenement-houses. All, however, agree that it is a burning reproach to the civilization of the age, and a still greater stigma upon our governing authorities, that the avarice of a few hundreds should be permitted to make miserable, unhappy, and, as I absolutely know in some cases, positively ill, hundreds of thousands of our population, by establishing manufactories in our suburbs which fill our atmosphere with noisome, offensive, and unhealthy influences. The truth is that, in some respects, the peril to which those who are able to live in the most comfortable and even luxurious circumstances is greater than those of the poorer classes. The danger to which all of us are exposed, despite such precautions as most take, is infinitely greater than that from assassins and desperate burglars.

"Medical men, who have a good professional reputation, have great power in moulding public opinion on all subjects on which they are expected to be better informed than the average man. On all these matters which I have just been describing they ought to be able to influence legislation. I believe that I am warranted in asserting that the Fellows of the Academy of Medicine are in sympathy with the purposes of the New York Sanitary Reform Society, and are most anxious to give it all the aid in their power. I am sure that every one of us feels the importance of an improvement in tenement-houses as regards an adequate supply of air and light, and the prevention of defective and dangerous plumbing, the abatement of nuisances which afflict public health, such as those at Hunter's Point, and to secure the supervision of the Board of Health over the plumbing of all buildings hereafter erected in this city. Bills designed to attain these various ends are now before the Legislature, and intelligent, zealous action on the part of the profession in instructing those whom they know among its honorable members, may contribute essentially to secure their passage."

With reference to

THE ACADEMY,

the President remarked that "within the last eighteen months $18,000 have been subscribed and paid by members for building its hall and the improvement of its library. The value of the property now belonging to us, as represented by its hall, its equipments, and its library, was appraised last year at $81,430. On this there is a mortgage of $10,000, which constitutes the whole debt of the Academy. Its income from annual dues of its members and admission fees from new members is sufficient for its current expenses, although the interest on the mortgage would have left only a small surplus for keeping up the library, in the purchase of books and for appropriations for binding the journals, had it not been for the generous gift of Mrs. John Jacob Astor."

With reference to

THE PROFESSION

in this city, he doubted whether, in any former age, the medical profession had been held in so high esteem, and whether in any other city in the world it had held so high a position socially, or was, on the whole, better remunerated for its labor than in New York. "Many of our wealthy people do not content themselves by paying the bills sent to them, but often add a most generous honorarium. We should not expect such generous avowals of our services, but we should aim to deserve them. We can see very clearly how largely the community is indebted to the profession; let us be careful not to forget what we owe to the community."

There has been a great change in the profession within the last thirty years, and while it should not be said that mistakes had been made by opposing errors, it might be said that they had been made in our methods of opposing them. Errors kindly exposed, and spurious doctrines treated with a wise charity at the hands of a liberal profession, would soon cease to have an existence.

On motion by Dr. Gouverneur M. Smith, the Academy tendered a vote of thanks to the President, and requested him to place at the disposal of the Council a copy of his address for early publication.

Brief addresses were then made by Drs. Willard Parker, Austin Flint, S. S. Purple, Beverly Cole, of San Francisco, and John P. Gray, of Utica.

The bearer of "The Loving Cup" was then followed by the President, the ex-Presidents, the officers, the guests, and the Fellows of the Academy to the basement, where a bountiful collation was served.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from February 13, 1881, *to February* 19, 1881.

Baily, E. I., Lieut.-Col. and Surgeon. The leave of absence granted him December 30, 1880, from A. G. O., extended one month. S. O., 35, A. G. O., February 11, 1881.

Gibson, J. R., Major and Surgeon. To accompany Battery A (Light) and Battery D, 2d Artillery, from Fort McHenry, Md., to the U. S. Barracks, Washington, D. C., for temporary duty thereat. S. O. 26, Department of the East, February 11, 1881.

Elbrey, F. W., Capt. and Asst. Surgeon. Relieved from duty at Fort Bayard, N. M., and assigned to duty at Fort Union, N. M., relieving Asst. Surgeon Kane. S. O. 31, Department of the Missouri, February 12, 1881.

Bryne, C. B., Capt. and Asst. Surgeon. To accompany Battery C, 2d Artillery, from Fort Johnston, N. C.—abandoned—to Washington, D. C., and then proceed to Fort Barrancas, Florida, and report to the commanding officer of that post for duty. S. O. 11, Department of the South, February 11, 1881.

Hoff, J. V. R., Capt. and Asst. Surgeon. To accompany the four batteries of artillery from Fort Monroe, Va., as medical officer to Washington, D. C. S. O. 27, Department of the East, February 11, 1881.

Finley, J. A., Capt. and Asst. Surgeon. To accompany the Battalion, 3d Artillery, from New York Harbor, as medical officer to the U. S. Barracks, Washington, D. C. S. O. 27, Department of East, February 11, 1881.

Kane, J. J., 1st Lieut. and Asst. Surgeon. When relieved by Asst. Surgeon Elbrey, to proceed to, and report for duty at Fort Bayard, N. M. S. O. 31, C. S., Department of Missouri.

Medical Items and News.

Distribution of the Hospital Fund.—The subcommittee of the Distributing Committee of the Hospital Saturday and Sunday Association, appointed recently to prepare a plan for the distribution of the $22,617.15 collected on Hospital Saturday and Sunday, reported yesterday in favor of the following schedule, which was adopted: Institution for the Relief of the Ruptured and Crippled, $2,000; Mount Sinai Hospital, $6,000; German Hospital, $3,000; Presbyterian Hospital, $2,000; House of Rest for Consumptives, $2,000; Hahnemann Hospital, $2,000; Home for Incurables, $1,500; New York Infirmary for Women and Children, $1,000; New York Eye and Ear Infirmary, $500; Orthopedic Hospital, $500; Women's Hospital, $1,000; Ophthalmic Hospital, $500; Manhattan Eye and Ear Infirmary, $617.15. Total, $22,617.15.

Improved Dover's Powder.—Dr. Isaac W. Chisholm, New Concord, Ohio, writes: "Permit me to state, in reply to Dr. S. Mitchell, Jr., of Hornellsville, N. Y., in regard to 'improved Dover's powder,' which he published in Medical Record, February 12, 1881, that I recommended the substitution of the bromide of potassium to the old sulphate in the *Ohio Medical Recorder*, Columbus, Ohio (see March number, 1880, page 473), and was afterward copied into *New Idea*, giving me *due credit*. The gentleman may not have seen it. I have been using it for a number of years—in fact I use no other, considering it *far superior* to the old sulphate."

Coroners and Calomel.—At a quarterly meeting of the Westchester County Medical Society, in Mount Vernon, February 15th, the case of Dr. P. R. H. Sawyer, of Bedford Village, who had been censured by the coroner's jury in the case of the late John W. Williams, of Poundridge, whose body had been exhumed last fall owing to suspicions that he had been poisoned, was taken up for consideration. Dr. George H. Magness, of White Plains, to whom a small portion of the intestines had been submitted for analysis, testified before the coroner's inquest that he had found a grain and a half of corrosive sublimate, and that the membranes were very much perforated by the poison. It also came out in the evidence before the coroner that Dr. Sawyer had given Williams, who was a confirmed inebriate, "twenty grains of calomel for a first dose, and left twenty grains more to be taken in four hours; also, a large dose of compound cathartic and four blue pills." It was believed that that large quantity of calomel had, by mixing with the hydrochloric acid in the stomach, formed the corrosive sublimate found, and which Dr. Magness thought sufficient to cause death. Dr. Sawyer, who is a member of the society, reported the case to that body and demanded an examination. Dr. Magness is not a member of the society. The society endeavored to get a copy of the testimony taken at the coroner's inquest, but the coroner said he did not have it in his possession, having lent it. Both the disputing doctors made their statements before the society at the meeting referred to. After a hearing and discussion, the society passed a set of resolutions in which it censured the coroner for not having in his possession and not having filed in the County Clerk's office the testimony taken at the inquest; secondly, it censured the coroner's jury in having found their verdict "censuring" Dr. Sawyer in his treatment of the case upon the evidence; and, thirdly, it exonerated Dr. Sawyer from any malpractice in the case and approved his treatment, which they considered entirely professional. These resolutions were passed with but one dissenting voice, that of Dr. Augustus Van Cortlandt, of New Rochelle, who considered the prescription given above enough to kill any man, and branded the whole action of the society as a "whitewashing arrangement." The question now arises, since poison was found in Williams's stomach, how did it get there? Did the doctor's dose of calomel produce it, or was he poisoned, or did he commit suicide? Whatever answer be given to these questions, we consider that the case shows the necessity of abolishing or changing our present system of coroner's juries.

Legislation Against Bogus Medical Colleges.—A law has just been enacted by the Ohio Legislature making it a criminal offence to buy or sell or use a fraudulent medical diploma, *i.e.*, one not issued from a chartered medical college, to persons who have regularly studied medicine for the usual length of time.

Legacies to the City Hospitals.—The late Augustus F. Miller, a broker of this city, who died last January, left in his will $4,000 for the German Hospital and $5,000 for St. Luke's Hospital. The will is, however, now being contested by his alleged widow.

The Change in By-laws of the Medical Society of the State of New York.—Dr. Wm. Manlius Smith, Secretary of Medical Society of State of New York, writes as follows: "I have just received the Medical Record of February 12, 1881, and of course turned at first to the report of the late annual meeting of the State Society. It strikes me as an unusually full and *correct* report. There is, however, one error of such a character that it needs correction or it may lead persons interested astray. It is in the second column of the 194th page, at the commencement of 'New By-Laws,' which, by the way should be 'New By-Law.' The first line of this paragraph, and part of the first line up to and including 'and,' should be omitted. The by-law should begin with: 'Permanent members of the age of sixty years and upwards,' etc. The error doubtless arose from the reporter taking from the piece of paper on which I wrote out the by-law, a line or two which I had written as commencing the by-law, and then abandoned as not expressing what was intended. I left a space, and then wrote out the by-law as it was adopted. The reporter has got the abortion and the full-grown fœtus mixed into a monstrous birth.

"Please see the error corrected in the next issue of the Record, or I shall have lots of applications from permanent members of ten years' standing who are not sixty years of age."

New Medical Schools.—Two new medical schools, one regular and one eclectic, have recently been organized in St. Louis.

A Death from Ether has occurred at Jefferson College Hospital, Philadelphia. The patient, a woman, aged twenty-six years, was a patient of Dr. J. R. Levis, who was to operate upon her for fibrous anchylosis of the hip. She had taken ether previously without ill effects, and her viscera were all healthy. She took between two and three ounces of ether, and the operation was safely performed. She did not rally from the anæsthetic, however, and in spite of stimulants, an hour and a half after etherization commenced, she died. Post-mortem revealed nothing abnormal. Shock may have had something to do with the fatal result.

Governor Long, of Massachusetts, in his inaugural address, recommends the building of less costly asylums for the increasing number of the insane; he also recommends such classifications of them, and such freedom from restraint and increased medical care as has been constantly advocated in the Record. Public opinion is gradually shaping itself to the more enlightened views, and proper legislation will surely follow in time.

Professor Huxley has been appointed to the position of Inspector of Fisheries, left vacant by the death of Mr. Frank Buckland, M.R.C.S.

Peptone in Pus.—Peptone, which was formerly thought to be exclusively the product of digestion, has recently been found by Hoffmeister in pus. He found it first in the pus of empyema. It exists in the corpuscles only, and is in the proportion of gr. v. to gr. xv. per ℥ j. of pus.

Failure of the Anti-Vivisection Bill.—Mr. Bergh's bill to prohibit experiments on animals, which was introduced into the New York Legislature during the present session, and referred in both branches to the Committee on Public Health, was reported adversely on the 18th instant by the Assembly Committee, and the report agreed to by the Assembly. This finishes the business, we presume, for the present session. The bill was the same with that introduced last year, and which met with a similar fate in the Committee on Judiciary.

The Quarantine Establishment.—The State Senate has passed a resolution offered by Mr. Jacobs, calling on the Quarantine Commissioners to inform the Senate within ten days what amount of money had been expended by the commission since the date of the last appropriation, with detailed items of the same; also, what money was now due and owing by the commission; also, whether, in its opinion, the Quarantine establishment should not be made self-sustaining by appropriating a portion of the large fees now accruing to the Health Officer of the Port to the maintenance of the same, without injustice to that officer.

In the subsequent discussion it was shown that during the past year from $75,000 to $100,000 in fees went into the pocket of the health officer. Yet last summer $5,000 of the State's money was spent in repairing the house in which the health officer lives and pays no rent.

The Death of Dr. Andrew Wood, M.D., LL.D., Edin. and Cantab, etc., occurred on January 25th, at the age of sixty-nine years. The deceased was a member of the General Medical Council, and had for a long time been prominently connected with the cause of medical education. Dr. Wood was noted for his work in general as well as in medical literature. He made excellent translations of Horace and of several of Schiller's poems. He had continued his practice up to the day of his death, which occurred suddenly from rupture of a valve in the left ventricle.

The Catgut Ligature.—The absolute value of the catgut ligature has not yet been established, and some recent experiments of Dr. G. F. Arnaud, recounted in a memoir entitled "Contribution à l'Etude de la Ligature dans le Traitement des Anévrismes," have especial interest. Dr. Arnaud ligatured the carotid or femoral artery of dogs fourteen times with carbolized catgut, and examined the parts from four to sixteen days afterward. In nine cases the ligature had entirely disappeared; in two it was partially absorbed; in three it was little altered. In twelve cases the inner coat of the artery was not cut at all. In twelve the middle and inner coats were divided. The clot, when not absorbed, was very small, and the obliteration of the artery was complete and firm. Arnaud concludes that the action of catgut is like that of hemp, with the important exception that the outer coat of the artery is not ulcerated. The fact that catgut is absorbed is corroborated by these experiments.

British Geography.—The *Lancet* announces the death of Dr. David P. Smith, Professor in the Yale Medical School, and one of the most distinguished surgeons in the State of New York.

Chian Turpentine takes a new lease of life from a successful case under its use reported in the *Lancet* by Dr. H. A. Allbutt.

Clothes for Night-Calls.—An English physician has invented a suit of clothes for use in night-calls. He can dress himself completely in it within a minute and a half. If a person sleep in his shoes the time of dressing can be reduced to thirty seconds.

The late Thomas Carlyle, in his "Sartor Resartus," made some suggestions in regard to this matter. He observes: "The simplest costume which I anywhere find alluded to in history, is that used as regimental by Bolivar's cavalry in the late Colombian wars. A square blanket, twelve feet diagonal, is provided. In the centre a slit is effected eighteen inches long; through this the mother-naked trooper introduces his head and neck, and so rides, shielded from all weather, and in battle from many strokes (for he rolls it about his left arm); and not only dressed but harnessed and draperied.

"With which picture," says the author, "of a state of nature, affecting by its singularity and old Roman contempt of the superfluous, we shall quit this part of our subject."

We do not know enough of the details of our English inventor's dress to say whether he has simply seized upon the "Colombian idea" or not.

The Electric Properties of Dried Collodion are said by Dr. Seure to be very great. It is negatively electric to gutta-percha and sulphide of copper. If the outside of a bottle be covered with dried collodion and then rubbed, small sparks can be easily obtained. Dr. Seure thinks that some therapeutic effects may be obtained from the substance, and suggests that collodionized silk be worn by hemianæsthetic subjects.

High Potencies.—At the recent meeting of the New York State Homœopathic Society, Dr. H. M. Paine had the candor and boldness to say: "Our experience in the use of high potencies is based, as Hahnemann's was, on theoretical gronnds only. It is one of the most singular forms of idealism ever seriously entertained by the medical profession. I firmly believe that when our reputed cures are reported in connection with all cases treated we shall find that their frequency is not greater than those of daily occurrence, without medicine of any kind."

Priapus Redivivus.—Any one walking along Broadway just now may see at intervals some miserable-looking wretches parading aloft a placard with the following announcement: "Use Damiana Bitters. Extract of Damiana, the Great Aphrodisiac and Stimulant to the Sexual Organs of both Sexes, etc.!" The creatures carrying this very bestial advertisement crowd their way among the ladies on the sidewalks up town, as well as among the men down town. We might suppose that the days of the Bacchantes and of the processions to Priapus had been revived. It is certainly humiliating to think that such a flagrant appeal to sensuality and transparent device of the brothel-keeper should be tolerated by our authorities, the more so since damiana has but rarely and incompletely the powers ascribed to it. It will often help a flabby bladder, but is no aphrodisiac, according to the experience of most of those who have used it.

A Monument will be erected in memory of the Russian surgeons who died during the war with Turkey.

The Leprosy of the Bible, according to Dr. Geo. E. Post, of Beirut, is not the elephantiasis Græcorum of the present day, but was a form of *lepra* (now generally called *psoriasis*). In a condensed statement of his views in the *S. S. World*, Prof. Post says: "Lev. 13 and 14 are the chief authorities on that subject. If any one will take the trouble to follow the descriptions of the rise, spread, and decline of the malady as there given, he will see that the essence of it is a white or lurid or gleaming spot, producing more or less baldness in places covered with hair, often arising from a boil. Now, in point of fact, the *aleppo button*, which is in appearance much like a boil, and which lasts for many months—often for a year or more, so that the Arabs call it *Habbat es Sinj, the year boil*—is frequently followed by a tetter or lepra, a spreading scabby eruption, following much the course described in Lev. 13: 18–23. As these often occur in the face, they greatly disfigure their unfortunate victims by eating away a portion of the nose or cheek or lip, or by leaving an unsightly scab, and after years a lurid contracted cicatrix. The same disease—*lepra*—occurs from other causes. It is a malady having some tendency to wear itself out and get well. This is in accord also with the description of the disease of the Bible. By simply waiting, the unfortunate unclean often become clean. No modern leper ever wore out his malady.

"On the other hand, none of the well-known signs and appearances of the greater leprosy are described in Lev. 13 and 14.

"The writer is aware that the adoption of this view would take away the force of innumerable commentaries and fine poetic allusions to the deadly elephantiasis of the Oriental lepers. But it will not in any way diminish the force and point of the ceremonial distinctions in regard to leprosy. *Lepra vulgaris*, especially the spreading chronic form of it, is a more visible and disgusting disease than elephantiasis, very intractable, and suitable as a legal and ceremonial illustration of moral uncleanness, incurable by ordinary medicinal means, loathsome to the beholder, and impairing the usefulness of those parts of the body which are attacked."

A Government Investigation of the Causes of Insanity.—Mr. Morton, of New York, introduced in the House, on Feb. 14th, a bill directing the National Board of Health to make a thorough investigation into the causes of insanity in the United States and the methods of treatment practised in the several States and to submit a report to the next Congress, giving the result of their investigations, with any recommendations which may seem well adapted to prevent an increase of insanity and to secure its better treatment.

Mr. Lister has been elected President of the London Clinical Society.

Books Received.

Diagrams of the Nerves. By W. H. Flower, F.R.S. Third edition. Philadelphia: Presley Blakiston. 1881.

Health Primers. Heart and its Function. D. Appleton & Co.

Drugs that Enslave. The Opium, Morphine, Chloral, and Hashisch Habits. By H. H. Kane, M.D. Philadelphia: Presley Blakiston. 1881.

John Hunter and his Pupils. By Prof. S. D. Gross. Philadelphia: Presley Blakiston. 1881.

Fournier on Syphilis and Marriage. Translated by P. Albert Morrow, M.D. New York: D. Appleton & Co. 1881.

Original Communications.

THE PREVENTION OF LACERATION OF THE PERINEUM.

By H. G. LANDIS, A.M., M.D.,

PROFESSOR OF OBSTETRICS, ETC., IN STARLING MEDICAL COLLEGE, COLUMBUS, OHIO.*

According to Tacitus, the ancient Germans punished some offences in a conspicuous manner; hanging the culprit on a tree; others they buried in mud, desiring to hide even the mention of the crime. For some mysterious reason, the laceration of the female perineum in labor seems to have been placed by the profession in the list of disgraceful occurrences which are not to be investigated nor acknowledged as existing. The subject is seldom brought before a medical society, that some one does not arise, and with owl-like gravity declare that he has no *personal* experience with the accident, has not met with it in twenty years' practice, and so on; as though some moral turpitude was involved in witnessing a laceration, or as though we have such perfect knowledge of the means of prevention that its occurrence reflected upon the skill of the practitioner. But as a matter of fact it is very frequent, occurring in the practice of the skilled and unskilled. I speak, of course, of all degrees of laceration, slight as well as great, for even a small rent is undesirable, and to be prevented if possible. For myself I freely confess that I have witnessed it in successive cases to a disgusting extent, and again a season of immunity would prevail, when every perineum escaped scatheless, and this, too, no matter what was done or left undone. I find, also, from this strange professional reticence, that it is difficult to obtain either statistics or well-grounded opinions as to the value of any of the methods which have been from time to time recommended for the prevention of this accident; and that every one is forced to rely almost exclusively upon his own experience or to accept the enthusiastic statements of those who have invented methods and are noisy in their advocacy. It is to urge upon the profession a more careful study of methods and more readiness to communicate results that I make these remarks, having no new views to champion and few facts to declare. I will not detain this learned body with any elementary statements as to the structure of the perineum or the nature and effects of the laceration, but will briefly submit the following propositions as to the physiology of the perineal stage in labor, with a running commentary:

1. The perineum is the seat of a secondary force in labor, due to its inherent elasticity, by which the direction of motion of the child's head is changed after passing through the pelvis. That is to say: the uterine force impels the head toward the coccyx, or as reflected by the curved walls of the pelvis upon the posterior segment of the perineum. The elastic resistance of the perineum pushes back the head; but not exactly back, but more toward the symphysis pubis. Hence the head moves in the resultant of the two forces and glides over instead of through the perineum. This fact is the key to the mechanism of the act, and its knowledge essential to any study of the subject.

2. If the uterine contractions are too strong to be resisted by the perineum, the latter gives way and the head does not move upward but directly onward and through the perineum. The matter of strength is relative, for a perineum strong enough to resist some uterine contractions may be lacerated by others.

3. The ability to resist the uterine force depends upon the degree of inherent elasticity in the perineum, which is a variable factor and is influenced by several circumstances. Thus, a large head, which greatly distends the perineum, impairs its elasticity directly as compared with a smaller head. Or the same head, if extended so as to present with its occipito-frontal circumference, will be larger than when it presents well flexed, with its cervico-bregmatic circumference. Again, if the second stage of labor is long delayed and the circulation in the perineum thereby impaired, it may become sodden and elastic. Also, during pregnancy the perineum becomes developed to about double its former bulk. This development may fail to take place, and there seems at times to be a congenital deficiency or malformation of the perineum. A too straight sacrum may also result in bringing the head so posteriorly upon the perineum that it is necessarily taken at an advantage and torn. These and other circumstances must all be taken into consideration in observing the ability of a given perineum to resist the strain put upon it or the influence of methods designed to assist its strength.

4. A distinction must be made between the resisting force-supplying capacity of the perineum and its capacity for stretching without giving way; in other words, between its elasticity and its mobility, or rather cohesive properties. Thus it may happen that a perineum is capable of being stretched to an extent fully admitting the passage of a large head, and yet has so slight a power of elastic resistance that it does not repel the head, and therefore does not furnish the secondary force needed for its advance and delivery. It stretches, but only stretches; and the mere stretching of the perineum cannot advance the head in the proper direction, since the uterine force cannot act around a corner unless there is something to deflect it. In such a case the uterine force drives the head against the perineum, which readily yields until the vulvar outlet is amply sufficient to allow the head to pass; but there being no elastic resistance to oppose it the uterine force continues to impel the head in the only direction in which it is capable of acting, until the perineum can no longer dilate and its substance is torn. What is needed is not a more *distensible* perineum, for distention is generously provided for, but the artificial replacement of the missing secondary force, which should change the direction of the uterine force and propel the head over instead of through the perineum.

5. A perineum which, either from imperfect development, congenital defect, recent infiltration, or any other cause, is incapable of stretching sufficiently to admit of the passage of a given head, cannot be prevented from laceration by any method. Episiotomy may determine the point of laceration—a doubtful good—but if there is no "stretch" in the perineum it must be torn or the head cannot be delivered. There are, then, cases in which no method will prevent the accident, and it is a step in advance if this fact is clearly recognized. The next step would be to be able to recognize the condition in each case, and thus know fully the necessary limitations of our science. There remain cases, no doubt the majority, in which the disposition to dilate is ample, but in which the elastic resistance is too feeble to combat the uterine force, and in which, after the fullest dila-

* Read before the Franklin County and Central Ohio Medical Societies and published at their request.

tation requisite for delivery, the unresisted uterine force drives the head through the perineum to a greater or less extent. It is also to be recognized that the shoulders, etc., are subject to the same conditions, but I speak of the head only and in a generic sense. The prevention of laceration should therefore be sought in a method which will supply the secondary force when absent or abnormally deficient. To which we must add another clause, viz., that the method employed shall not itself do mischief; otherwise we need scarcely look further for the method which is on theoretical grounds to be preferred, than to one of the oldest methods—the direct support of the perineum by the opposed hand. For in this venerable custom we practically replace the perineum by the hand. When the uterine force advances the head the hand presses it back again, or, as Miller recommends, also somewhat forward toward the pubes, and thus the head is properly directed; but while we are doing this we are also subjecting the perineum to a cross-fire. The head from above is forcing its particles asunder, and the hand from without is doing the same thing from the opposite direction, and so from foes within and foes without the perineum is very apt to come to grief. Absolute abstinence from any attempt to save the perineum is better than an indiscriminate resort to this in every case. The able paper published by Dr. Goodell in the *American Journal of Medical Sciences* for January, 1871, so effectually disposes of this that I have no doubt the practice is largely abandoned. The method recommended by Dr. Goodell is the application of a method spoken of by Ould and Smellie for the extrication of the head rather than for any care of the perineum. The original statement by Ould, as given in a note to Smellie (Sydenham edition), is as follows: "When the child is very near coming into the world, with the top of its head just at the labia pudendi, and that there is no obstacle to its expulsion but either the weakness of the mother, the size and inflexibility of the cranium, or the dryness of the parts, the fore-finger must be well greased and introduced into the anus with the back of the hand toward the sacrum. When it is thrust in as far as may be, by bending you will easily fix it under the child's jaw-bone, near its articulation with the cranium; thus the mother's efforts may be very much assisted by pulling the child forward with the finger bent under the jaw." Goodell more specifically directs us to seize the head between two fingers in the rectum applied over the child's face, and the thumb placed in the vulva upon its occiput. With this grip we may assist or retard the advance of the head, regulate its degree of flexion or extension, and guide it in the proper direction. Other incidental advantages are claimed for it not necessary to detail at this time. Notwithstanding the theoretical advantages of this method there will be little hazard in asserting that others as well as myself have seen a laceration occur while faithfully employing it. The hold which we have upon the head is too slippery and uncertain to enable us to guide it during a powerful contraction of the uterus, nor do I find that the other hand can render much assistance at such a juncture. What we cannot do with our fingers may be perfectly achieved by the obstetric forceps. With them we have it in our power to determine when and how far the head shall advance, and in what direction, which is all that can be asked, and I know of nothing so likely to save a doubtful perineum as the skilful use of the forceps. The objections to the forceps are, that the risk of laceration alone hardly justifies their use, and that their unskilful use will cause instead of prevent the accident. The first objection is a practical one, for in many rapid labors we have no time, nor could we gain assent for their application. There remain many cases of first labor in which a long perineal stage furnishes ample time and excuse for their employment. The second objection must be left to the conscience of the individual, and applies as well to all important resources in medicine.

In a limited number of cases I have found the veritable method of Ould very useful, not only for the purpose recommended by him, the extrication of the head, but also for the protection of the perineum. And not exactly his method unless, as is probable, he deviated from it in practice, since it is often difficult as well as unnecessary, to place the fingers under the child's chin—instead of placing them over the forehead or malar bones—which is the better procedure. Thus, when the head distends the perineum so that at the end of a pain the head is not retracted, but remains at its furthest point of advance, hugged against the subpubic arch and making the perineum bulge considerably, the head may usually be at once pressed through the vulva by the fingers in the rectum without any fear of rupturing the perineum. And why? Because the uterine force is not driving the head against the perineum, but the fingers alone are propelling it in exactly the right direction, so that *the perineum is only called upon to stretch and not to resist into the bargain*. The philosophy of this manœuvre is at the bottom of any sound method of prevention, namely, to bring the head over the perineum during the absence of the uterine contraction. For it is the uterus which ruptures the perineum much oftener than the size of the head—a result often due to the conjoined impatience of the woman and physician. The one is in a hurry to be delivered, the other is tired and anxious to escape from an irksome attendance, and while the woman bears down vigorously the physician does not discourage her efforts, but, at most, vainly attempts to resist the tremendous uterine force with the pressure of his fingers.

I am convinced that a mistake in theory, and consequently in practice, is contained in the supposition that the *suddenness* with which the perineum is made to dilate is the important factor in laceration. We hear much more of the necessity of preparation and gradual dilatation than of the powerful disruptive efforts of the uterus. There is, no doubt, some truth in this view, but it is greatly exaggerated. Too many women are delivered in ten minutes, after full dilatation of the os uteri without harm to the perineum from the rapid descent, to make the minority a rule. In many women one pain brings the head from the superior strait to the perineum, and the next brings it into the world. The perineum is undergoing a preparation for distention throughout the entire labor, and, as Goodell suggests, is even actively dilating before the head approaches it. When the head begins to press upon the perineum its tonicity is directly impaired by every degree of continuance of the labor. The longer the head takes to distend the perineum the more its circulation is impeded and its powers of cohesion diminished. What is needed is not less suddenness of dilatation but less powerful and disproportionate uterine contractions. Such a case as this which I saw recently is common enough. A young primipara had been long in labor, and the head was beginning to press feebly upon the perineum. The vulvar opening was so small that there was scarcely

room for the introduction of the second blade of the forceps. The head was made to distend the perineum fairly as soon as the instrument was applied, and allowed to retract. This was repeated four or five times, at intervals of a minute or so, when a very large head was withdrawn over an entirely unscathed perineum. The experience of all will enable them to judge whether the hour or more which would have been required for the natural delivery in this case, would have been safer for the perineum than this comparatively rapid dilatation and delivery. I do not, therefore, see that anything is gained by the mere prolongation of the perineal stage of labor by arresting the progress of the head until the perineum is supposed to be ready for the end. It may indirectly be prolonged by the prohibition of bearing down efforts, since a considerable amount of force may be needed for dilatation. In the cases where the accident is presumably due to an inherent defect in the perineal structure, we would seem to have no resource, and it is important to recognize this condition before the value of any method can be exactly determined. There is one kind of perineum which I think I have seen often enough to recognize and describe. Its appearance when the head begins to press upon it is as follows: About a finger's-breadth in the median line, extending from vulva to anus, is smooth tissue and quite thin, while on either side of this the perineum is thick, elevated, looking not unlike the labia majora on a small scale, and with a rather rough cutaneous covering. The median strip appears to be the only dilatable part of the perineum, and in spite of all precautions more or less of a tear occurs as the head escapes. As I have noticed it only in primiparæ, I had inferred that it was a congenital or developmental defect in the structure, the lateral thickening being probably due to adipose deposit. Among the methods I have tried, and about abandoned as futile, is one which may be of little service in such cases. The ball of the thumb is pressed upon one of the nates, and the skin, etc., is crowded over toward the perineum, while the fingers reaching across, pull the skin of the opposite buttock in a similar direction. In this way we crowd skin and cellular tissue into the perineum and afford a larger distensible surface. We cannot increase the size of the perineal body or muscles, but by increasing the thickness of the cutaneous covering may add a little strength to the whole structure.

A New Departure in the Treatment of Purulent Ophthalmia is described in the *American Practitioner* by its London correspondent. It consists in the application to the entire conjunctival surface of an ointment of one grain of the nitric oxide of mercury, one-fifth of a grain of sulphate of atropia, and one drachm of vaseline. When the ointment is applied, the patient lies down, and, if restless, is put under the influence of an anæsthetic (chloroform is used but nitrous oxide will answer better). Next, the eye being well cleansed from discharge with tepid water, with a large camel's-hair brush, the ointment is freely pushed beneath the upper and then the lower eyelid, so as to touch the entire surface of the conjunctiva. As long as the eyelids are swollen this operation is repeated three times each day, but when the eyelids open freely, one application daily suffices until the cessation of the discharge. Mr. Bader, author of this treatment, says that it has had the best results, both in children and adults. It is especially successful when adopted at the outset of the disease.

FALLACIES OF PHYSIOLOGICAL EXPERIMENTATION REGARDING ATROPIA.

By THOMAS W. POOLE, M.D.,

LINDSAY, ONT., CANADA.

In Dr. Ringer's excellent "Therapeutics," fifth American edition, p. 462, we read: "Atropia excites the cord, and heightens reflex action; an effect long undetected till it was pointed out by Dr. Fraser, for the paralyzation of the motor nerves prevented the drug's action on the cord displaying itself on the muscles; but if the motor nerves of an extremity are protected, by ligature of its blood-vessels, from the paralyzing action of the atropia, then its stimulating action on the cord manifests itself in the protected leg. The afferent nerves are unaffected by atropia."

It is here asserted:

First.—That the spinal cord and its motor nerve-trunks may be, and are, in directly opposite conditions of functional excitation at the same time and by the action of the same drug.

Second.—That these motor nerves are more influenced by peripheral blood-supply (although the sheaths of nerve-fibrils are not penetrated by blood-vessels) than they are influenced by their proper nervous centres in the cord, and that the nerves require to be protected peripherally, in order to be influenced from their centres in the cord.

Third.—It is also asserted that in the final stage of atropia-poisoning the tetanic convulsions then witnessed are evidences that the nervous centres are undergoing the exhilaration of increased stimulation, and even in the very act of dying are discharging their proper functions of generating nerve-force with extraordinary vigor.

It is only in the entire absence of any rational explanation of the phenomena of this state that ideas so preposterous could have been entertained or tolerated.

The "stimulating action on the cord" and the "heightened reflex action" here mentioned, as the effect of atropia, are held to be indicated by the passing of the limb into tetanus, as will presently appear from the report of the experiment. But what is such an inference worth in the face of the fact that in the hands of Prof. Stannius ligaturing the vessels of the extremity (as in the experiment mentioned by Dr. Ringer) produced a similar tetanus of the muscles without the employment of the atropia at all (Dr. C. B. Radcliffe's "Lectures," etc., pp. 85–94). It is by overlooking just such sources of fallacy as is here indicated that professedly scientific experiments are brought into contempt.

I have not before me the details of Dr. Fraser's experiments, but Dr. Isaac Ott, in his "Action of Medicines," furnishes an abridgment of them, from which the following is quoted entire:

"*Experiment.*—Four-fifths of a grain of sulphate of atropia was injected with eight minims of distilled water into the abdominal cavity of a frog weighing four hundred and fifty-three grains. In eight minutes its movements were sluggish, and some weakness occurred in the anterior extremities. In six hours *the nerve-paralysis was more complete;* stimulation did not excite any reflex movement, and even galvanic excitation of an exposed sciatic nerve failed to produce any muscular contraction, although the muscles themselves readily contracted [through the action of the current on the unpoisoned intramuscular terminal

nerves]. Sixty-eight hours after the dose a change of position had occurred; the anterior extremities were flexed, and formed an arch-like prop, on which the raised head and thorax were supported. On the fifth day tetanic attacks supervened, and lasted in all seventeen days" (p. 52).

The other experiments quoted by Dr. Ott do not differ from this one in any notable particular except that the procedure is varied to illustrate the special action of atropia on the cord alone. In the experiment quoted in full from Dr. Ott it will be noticed that the stage of motor nerve *paralysis* was prolonged till between the second and third day, or, if it be preferred, we will say till the fifth day, when tetanus began to show itself strongly. We are expected to believe that the *paralysis* then gave way to a still longer term of nervous *excitation;* this being the alleged condition of the cord during the final stage of tetanic spasm, and up to the last moments of life. During all this time the frog was slowly dying, and had the theory of the day not required that its spinal cord should be acting with undue functional vigor, surely such a supposition would have been deemed incredible. There are men who scoff at "mere theory," but here is a practical illustration of how a mere hypothesis, entirely unproven and incapable of proof, can influence conclusions which leave their mark upon all future time.

Dr. Ott assures the reader that "this experiment demonstrates that atropia in small doses paralyzes and then convulses," which might as well read "paralyzes and then excites." In a subsequent experiment he refers to atropia as "a paralyzer and spinal stimulant," and points out that in the case of small doses the stage of stimulation follows that of paralysis, but where the dose is large, both occur together. He writes: "Now the theory is that the *paralytic and spinal stimulant actions coexist* in frogs after the administration of large doses of atropia" (p. 54). Further on in the same work, while treating of belladonna, he states: "It paralyzes the motor nerves of frogs at the same time that it excites the spinal cord; after they recover from the motor nerve paralysis the tetanic symptoms of spinal stimulation appear" (p. 138).

This is a specimen of the latest scientific (?) teaching on this subject, as developed by recent physiological experimentation. It is certainly not encouraging. If the process goes on it will soon be a matter of extreme difficulty to prescribe drugs at all. For who would care to employ belladonna as an excitant to the spinal cord, believing that at the same time he was paralyzing its motor nerves?

If the reader will refer to the experiment with atropia, he will find that there is no proof to be found there of spinal stimulation. The presence of this latter state is a mere inference drawn from premises which are unproven, as the following will show. Here is the process of induction:

Atropia produces tetanus; *tetanus is due to spinal stimulation.* Therefore atropia is a spinal stimulant.

The allegation placed in italics is unproven. As a consequence, the conclusion is worthless as a logical inference, and is of no value, except as a makeshift at the explanation of phenomena where no other explanation is possible.

But the allegation placed in italics is not only unproven; it is untrue. There is proof that tetanus proceeds from spinal paralysis, direct and reflex. Dr. Ringer states that "certain poisons, like gelseminum and buxus sempervirens produce *at the same time* both weakness of natural co-ordinated reflex action (cord-paralysis) and tetanus. Thus in the case of these drugs, soon after poisoning, *the reflex function becomes much weakened, then distinct tetanus ensues.*" . . . . "In such a case it is impossible that the tetanus should depend on stimulation of the cord; for we have seen that *the tetanus was preceded by considerable depression of the cord, and continues till the depression ends in extinction of cord function.*" So also in some experiments on frogs, in which the spinal cord was cut and the brain destroyed, reflex action continuing for several days, Dr. Ringer observed that "soon after, but sometimes before co-ordinated reflex action began to decline, on striking the animal between the shoulders, the legs shot out in a tetanic manner, and *as the co-ordinated reflex action further declined, tetanus increased and became distinct.*" . . . "Here it is *impossible that tetanus could depend on stimulation of the cord, for it occurred in a dying cord*" (*Lancet:* Braith. Retros., July, 1877, p. 99).

The experiment of Prof. Stannius, mentioned above, in which ligature of the vessels leading to the limb produces tetanus, is an example of this state from simple reflex paralysis. Dr. W. B. Carpenter states that the complete arrest of blood in a limb produces paralysis of the sensory nerves ("Human Phys.," p. 353), the reflex effect of which on the spine and motor nerves is necessarily paralyzing also.

As tetanus has never been proved to be due to stimulation of the cord, there is no reason to assume that examples like the foregoing are isolated or exceptional, since, for anything that appears to the contrary, they may be illustrations of the general rule. Indeed, the most complete and prolonged contractures of muscle are invariably associated with the worst forms of paralysis, as pathological records fully prove.

The facts just detailed therefore justify the following syllogism:

Atropia produces tetanus; tetanus is due to spinal paralysis. Therefore atropia is a spinal paralyzer.

The objection taken to the former syllogism cannot apply here, because each of the premises is fully proven, and the conclusion follows in a proper logical manner. It will hence be apparent that the experiments relied on to prove that atropia is a spinal stimulant do not prove this, and that the conclusions based upon these experiments have been fallacious and unjustified. It is indeed surprising how such an idea could have been seriously entertained as that a drug, the embodiment of a natural force, after inducing the profound and prolonged paralysis recorded above, which in one experiment is admitted to have lasted several days, could then *reverse its mode of action* of its own accord, as it were, and thenceforward assume the *rôle* of a stimulant for *many days thereafter, during which life is slowly dying out.* Such an explanation of the phenomena is surely one which itself requires explanation more than the simple facts themselves; and were its merits other than they have been shown to be, it would still be of value only so long as no other equally rational explanation is offered.

But this experiment with atropia admits of another explanation, which accords with the facts and is justifiable and consistent with itself and with other physiological data. It is, that with the minimum *fatal dose,* the spinal cord and motor nerves die slowly. The ever-progressing paralysis at length renders nervous life wholly extinct, and then the muscles are free to exert their "great property of contractility, as they do, by passing from spasm into

tetanus. With a large dose, the life of the motor nervous system succumbs more promptly; and hence the muscles are sooner set free to contract, thus blending the earlier and later effects of the drug together—paralysis with tetanus—a condition which, interpreted in the fallacious light of the theory of the day, gave rise to the assumption that these states represent opposite conditions of the motor centres, whereas, in reality, they are parts of the same process; the paralysis indicating the withdrawal of the nerve from the influence of the central ganglia, and the tetanus the cessation of nervous control over the muscle. The facts of pathology abundantly illustrate this doctrine.

The experiments of the Edinburgh Committee, as reported by Dr. J. Hughes Bennett, show, both in rabbits and dogs, a uniform progression from *weakness and immobility to "paralysis, tremors, spasms, convulsions," and tetanus*, as the result of atropia poisoning. What folly to attribute the symptoms of the latter stages of this fatal descent to a process of stimulation, at the very time when death is about to close the scene!

The apologist for this doctrine may here demur, and claim that the tetanic spasms are not attributed to a *healthy* increase of normal nerve-activity, but are due to "a *morbid* exaltation of the functions of the cord, as a nerve-centre." (Dr. Hammond.) This "morbid exaltation" also passes under the name of "augmented irritability," and is evidently something separate and distinct from normal nerve-action. Is there any proof that nerve-cells generate two kinds of nerve-force, one normal, the other morbid? Until this is proved, how is the presence of this intruding force to be accounted for? It must have some origin, and as normal nerve-force is admittedly enfeebled, or in abeyance, the "morbid" variety must have its source extraneous to nerve-function. This is all the more evident, since it feeds upon exhaustion and grows stronger as life grows weaker. Paracelsus and Van Helmont had their "imaginary demon," the Archœus, residing in the tissues and organs, to perform offices of this kind; and it would really appear that modern medicine has not yet been able to dispense with him. If there is any other or better explanation of the origin of this extraneous "morbid" force, than that of Paracelsus, it is for those who invoke it to explain its presence.

How true it is that nerve-force proper is really here enfeebled, is shown by Dr. W. B. Carpenter, who, while in accordance with the theory of the day, regards tetanus as consisting in "an undue excitability of the whole series of spinal ganglia," nevertheless attributes the idiopathic form of the disease to "malnutrition of the cord, consequent upon impoverishment or deprivation of the blood," just as Dr. Hammond attributes it to "cold and damp," "poor diet," "ill-ventilation," etc., all of them being conditions highly unfavorable to nervous vigor. The cure of a larger percentage of cases of tetanus by "stimulants," than by any other class of drugs is a striking fact in this connection (Dr. Hammond), and is also a singular commentary on the alleged excitement of the spinal nervous system in this disease.

In the production of tetanus by atropia there has been no pretence that the stimulation the spinal cord was said to be undergoing was of the "morbid" kind. No Archœus was invoked here. The cord was excited to generate increased nerve-force of the normal type; but as Dr. Ringer states in the opening quotation, the simultaneous paralysis of the motor nerves prevented this increased nervous activity from displaying itself! And what is still more wonderful, it is said that the spinal cord and its motor nerve-trunks could only be brought into accord by excluding the atropia-poisoned blood from the periphery of these nerves. The statement that tetanus does not result from atropia, unless the motor nerves are protected from its influence by ligaturing the vessels, appears to be in contradiction to the facts of other experiments, as it is of the one quoted in a previous page, and also of the experiments of the Edinburgh Committee, in all of which tetanus speedily resulted without any ligature of the blood-vessels. After what has been already advanced, these contradictions and anomalies are simply left with the reader, as a curious specimen of modern medical literature.

Dr. J. Milner Fothergill is enthusiastic in regard to the good qualities of atropia, as a "direct stimulant to the respiratory centres." He offers no special proof of this statement, beyond conclusions drawn from its clinical use; and such conclusions, by themselves, are eminently unsatisfactory and open to contradiction. Thus, while Dr. Fothergill holds that atropia antidotes opium, directly through its stimulating effect on the respiratory centres in the medulla ("Antag. of Ther. Ag.," pp. 98, 99, 114), Dr. J. H. Bennett, in his report of the Edinburgh Committee, finds, that any beneficial action of atropia here is only "within a limited area," and then that its mode of action is "by *contracting the blood-vessels*, and thus diminishing the tendency to cerebral and spinal congestion," produced by the opium or morphia (pp. 46, 97). Here the effects of the atropia are accounted for, by a high authority, without any reference to the alleged stimulation of the respiratory centres.

Dr. Fothergill further tells us of belladonna, that "there is a whole mass of evidence from various sources, that it has a powerful action on the respiratory centres" (*Ib.*, p. 112). But all he adduces is a statement from Meigs and Pepper that this drug is useful in whooping-cough; an observation from Dr. Kelly, that children require larger doses and are more tolerant of it than adults; and that Dr. Hyde Salter found it "useful in cases of asthma." This "mass of evidence" may be true, without implying any special action of the drug upon the respiratory centres. As a proof of the thesis he advanced it is eminently unsatisfactory.

Dr. Fothergill quotes Bezold and Bloebaum to prove that atropia does not produce its effects on the respiration through the vagi (p. 99). If not through the vagi (which are the chief agents—the very arms, so to speak—of the medulla oblongata) the presumption is, that the "acceleration of breathing" referred to is produced otherwise than through the respiratory centre: through the circulation for example, which belladonna modifies by reducing the calibre of the arterioles, with the characteristic effects of this result; a quickening of the blood stream, increased oxygenation of effete materials and temporarily improved nutrition, all of which this drug accomplishes in strict accord with its character as a paralyzer, as has before been pointed out.

The tendency has been of late to over-rate this *quasi* stimulation. The results of the Edinburgh Committee show that as an antidote to calabar bean its antagonism is "very limited," "even more limited than Dr. Fraser has indicated." As an antidote to morphia, besides finding its antagonism only "within

a limited area," they add, that "in man it would be too dangerous and uncertain a remedy to depend on in cases of poisoning by opium, or any of its salts" (pp. 55, 97). Dr. J. Harley, indeed, denies this antagonism altogether, and as the results of his experiments, holds that "belladonna cannot, in any sense, be regarded as an antidote to opium, but in large doses is the very reverse." The enthusiasm which incites Dr. Fothergill to regard atropia as "decidedly stimulating" in these cases, is consequently dangerously misleading.

Even the delirium and hallucinations which are among the characteristic effects of this drug, and which have been sometimes regarded as evidence of a stimulating action, are shown by Dr. Anstie to be "symptoms developed in the midst of a spreading paralysis of the nervous system, and rightly understood, they form an important part of the evidence of this paralyzing process" ("Stim. and Nar.," p. 182). It is to be hoped that in regard to few drugs have so many fallacies been promulgated as has been the case with balladonna and its alkaloid atropia.

In view of the foregoing facts and considerations, how much credence is properly due to the statements on the relations of the nervous system to muscular spasm and tetanus, in our *quasi* scientific publications? Is it not time that the basis on which opinions rest were looked to, and where this is found to be purely imaginary, or at best hypothetical, and at the same time at variance with reason and common sense, as well as with physiological science, ought it not to be discarded, and a basis sought for the explanation of the phenomena, at once natural, rational, and in full accord with sound physiology? Will not the MEDICAL RECORD lend its powerful influence in favor of this good work, and lead the van in a reform, which may be delayed, but is sure to come?

SYMPATHETIC NEURO-RETINITIS.

By DAVID WEBSTER, M.D.,

NEW YORK.

(Read before the Medical Society of the State of New York, at its seventy-fifth annual meeting, February 1, 1881.)

ALTHOUGH the great Von Graefe, the father of modern ophthalmology, recognized the existence of such an affection as sympathetic neuro-retinitis, and reported two cases of it that came under his observation, the literature of the subject is still somewhat scanty, very little reference to it is to be found in the standard text-books on the eye. Stellwag, whose work is justly celebrated for its comprehensiveness, makes only a single allusion to it. "In individual cases," he says, "sympathetic inflammation of the retina is said to have been caused in the second eye" (Fourth American Edition, page 297). Schweigger mentions it only to throw doubt upon it. "It is very difficult," he says, "in observing any particular case, to be convinced of its sympathetic character. For instance, the case of choroido-retinitis described by Von Graefe, which I know perfectly well, since I observed it with him, presented such a peculiar appearance that Von Graefe regarded its sympathetic nature as probable. But it requires a number of such cases to furnish satisfactory proof of the correctness of such an opinion" (Farley's Translation of the Third German Edition, page 351). More is to be found on the subject in the Third American Edition of Wells than in any other of the text-books. The editor discusses the subject briefly but judiciously, basing his remarks upon the paper by A. Alt, M.D., "On Sympathetic Neuro-retinitis," in the "Transactions of the International Ophthalmological Congress for 1876," and the paper by the same author "On the Anatomical Causes and the Nature of Sympathetic Ophthalmia," in the "Archives of Ophthalmology and Otology," vol. v., page 395 et seq.

Neither Carter nor Macnamara makes the slightest allusion to the subject. Carter, however, says: "I believe, indeed, that many more cases are sympathetic than those in which the course of events can be clearly and unmistakably traced" (American Edition, page 116), and in this opinion most of us, I think, are ready to concur.

Von Graefe published his cases in 1866. Dr. Thomas R. Pooley, of this city, was the next to call attention to the subject. In 1871 he reported "Two Cases of Sympathetic Ophthalmia distinguished by the Occurrence of Neuro-retinitis" ("Archives of Ophthalmology and Otology," vol. ii., page 284).

Alt, in the paper referred to above, gave a resumé of Von Graefe's and Pooley's cases, and added to the number three that had come under his own observation, making seven in all. To these seven I beg leave to add the following two cases, one of which occurred in the private practice of Dr. C. R. Agnew, the other in his clinic at the Manhattan Eye and Ear Hospital.

CASE I.—F. G——, a boy eight years of age, came under observation August 29, 1879. His father said that fifteen months before, while stooping down in the garden, he struck his right eye against a stub, and "burst" it. The lacerated globe healed with a high degree of atrophy, a few lines of semitransparent cornea remaining. The shrunken eye is soft, and the child shrinks from pressure upon it through the lids, and says it hurts him.

Less than three weeks ago his parents first observed that he did not see well with his *left* eye. The vision of this eye is now reduced to $\frac{1}{200}$. The eye is somewhat sensitive to light, but painless, not tender on pressure, and its external appearances are normal.

For the better examination of the interior of the eye the pupil was widely dilated by atropine.

Ophthalmoscopic examination revealed floating opacities in the vitreous humor, great swelling of the optic disk and adjacent retina, and plaques of retinal exudation and retinal hemorrhages scattered over nearly the whole of the fundus. The retinal blood-vessels were extremely tortuous, and were in many places obscured by the exudations and blood extravasations. The optic disk could only be located by the convergence of the retinal vessels, and by its greater elevation.

The atrophied eyeball was enucleated on the same day and placed in Müller's fluid. It was found to be adherent to the surrounding tissues all the way back to the optic nerve entrance.

The patient was at once placed upon mercurial inunction, which was continued until his mouth was slightly touched. The ointment was then washed off, and a saturated solution of iodide of potassium given internally, commencing with five minims thrice daily, and increasing the dose two minims a day.

September 23d.—The dose of the iodide has been increased to seventeen minims. The patient comes to the office for the first time since the enucleation. His vision has risen to $\frac{20}{200}$. The intraocular appearances are much improved.

September 30th.—The dose of the iodide has been increased to thirty-one minims. The patient has diarrhœa. The vision has continued to improve, and

is now $\frac{15}{100}$. To reduce the dose of iodide to fifteen minims of the solution.

October 9th.—Vision $\frac{20}{100}$. There is no sensitiveness to light, and the vitreous opacities have mostly cleared up. The ecchymoses and exudation plaques have mostly disappeared from the retina, and the outline of the optic disk begins to appear.

November 8th.—Vision remains $\frac{20}{100}$. The vitreous is perfectly transparent. The optic disk is white and atrophic-looking, and there is a crescent of choroidal atrophy at its temporal edge. The retinal vessels, both veins and arteries, remain quite tortuous, and are decidedly smaller than normal. There are no remains of the hemorrhages and exudations.

The patient was directed to take one one-hundredth of a grain of sulphate of strychnia twice a day. This was continued for several months, when all treatment was abandoned.

April 5, 1880.—Vision $\frac{20}{70}$. The appearances of the fundus have not changed since the last examination.

The enucleated eyeball was examined by Dr. T. Mitchell Prudden, who has kindly given me the following report:

"June 7, 1880.—The examination of the eye of F. G. revealed most extensive changes of nearly all parts of the organ except the sclera.

The cornea was drawn to one side, and thickened at that side, and was permeated with small blood-vessels, especially in the periphery.

The atrophied iris and ciliary body, a mass of new-formed connective tissue growing from the region of the sclero-corneal junction of one side, together with the remnant of the lens capsule, were intimately joined together, forming a dense, shapeless mass in the anterior segment of the eye, nearly obliterating the anterior chamber. This condition of affairs was evidently the result of an extensive plastic cyclitis with subsequent atrophy and retraction.

The lens body had almost entirely disappeared, a small fragment only being left over the remnant of the displaced ciliary body at one side.

The retina was separated from the choroid in the entire circumference (in a meridional section) and, for about two-thirds of its extent, was shrunken together into a consolidated mass near the centre of the globe. For the rest of its extent it lay nearly parallel with the choroid, but separated from it by a narrow space. It presented throughout the lesions of diffuse, interstitial retinitis with atrophy, a few small cysts being found.

The vitreous was replaced by a finely granular, structureless substance (probably fluid), containing a few scattered cells.

The choroid was separated from the sclera over a considerable area, but its minute structure was not much changed.

The larger cavity on one side, between the retina and choroid, and the smaller one on the other, between the choroid and sclera, were filled with a structureless (probably fluid) substance, containing here and there single or groups of pigmented retinal epithelial cells."

Case II.—William H., twelve years of age, got some unslacked lime into his left eye in the early part of August, 1880. When he presented himself at the Manhattan Eye and Ear Hospital, about two weeks after the burn, the eyeball and eyelids were inflamed, and the formation of symblepharon had already proceeded so far that all attempts to prevent it proved abortive. The eye healed with total adhesion of the lids to the globe. The lids were also attached to one another, for a line or two at both ends of the palpebral fissure. The very narrow strip of cornea which could be exposed being opaque, there was, of course, only perception of light. The cicatricial contraction incidental to the healing process had also produced inversion of the eyelashes.

It was feared that this unfavorable condition of the left eye might give rise to sympathetic inflammation, and the friends of the patient were instructed to watch the right eye, and if any unusual symptoms presented themselves to bring him to us without delay.

On November 30th his mother brought him to Dr. Agnew's clinic at the College of Physicians and Surgeons, and stated that only the day before she had noticed, for the first time, some redness of the fellow eye.

We found the condition of the injured eye unchanged. The ciliary region of the right eye was deeply injected, and sensitive to pressure, the pupil was small and sluggish, and the eye was watery and sensitive to light.

We dropped in some of an eight-grain solution of sulphate of atropia, ordered a four-grain solution of the same to be dropped into the eye several times that night and the next morning, and instructed the mother to bring him to the hospital the following afternoon for enucleation.

The boy was brought to the hospital the next day (December 1st), as directed. The ciliary redness, lachrymation, and photophobia still persisted; the pupil was dilated to about one-half its maximum size, but was perfectly circular. Vision was $\frac{20}{30}$ without a glass, and was raised to $\frac{20}{15}$ with a + $\frac{1}{20}$. The sensitiveness of the eye to light and the lachrymation interfered considerably with the visual and ophthalmoscopic tests, but it was noted that the supero-nasal border of the disk was blurred, that the nerve and retina were hyperæmic, and that some of the retinal veins were tortuous.

It was decided to enucleate the injured eye, not so much on account of the commencing neuro-retinitis of the right eye as on account of the high degree of hyperæmia of the ciliary body and iris, which it was believed would, if not promptly checked, lead to irido-cyclitis, and the eventual loss of the eye.

Accordingly, the child was at once placed under ether, and the eye was, with some difficulty, excised. No speculum could be inserted until the external canthus was freely slit, and the eyelids cut away from the anterior surface of the eyeball. The globe was everywhere attached to the surrounding orbital tissues by a tough material which was divided, with the use of considerable force, by means of the strong curved scissors commonly used for cutting the optic nerve.

The day following the operation, the ciliary redness and lachrymation of the fellow-eye had mostly passed away, and the pupil had become dilated nearly to its normal extent. His urine was carefully examined, chemically and microscopically, and found normal.

On December 8th, one week after the operation, the right eye was normal in its external appearances, the redness, photophobia, and lachrymation having entirely passed away, and the pupil being widely dilated by the atropine which had been assiduously used from the first.

The ophthalmoscope showed well-marked symptoms of neuro-retinitis. There was swelling of the optic disk (H. $\frac{1}{6}$), with obscuration of its whole outline, increased fulness and tortuosity of the retinal veins, and radiating from the *fovea centralis*

were fine, hair-like opacities, lying closely side by side, and occupying a region about twice the size of the optic disk. Vision $\frac{20}{70} : \frac{20}{20}$ with $+ \frac{1}{18}$ s. $\supset + \frac{1}{42}$ c. ax. 10°.

December 13th.—Examined by Drs. Agnew, Pomeroy, Risley, and others. Disk H. $\frac{1}{2}$ and distant parts of fundus H. $\frac{1}{4}$,—showing an increase in the swelling of the disk and retina.

December 14th.—The patient was placed upon mercurial inunction.

December 21st.—The mouth being slightly touched the inunction was stopped. The local use of atropine was also stopped.

December 31st.—The patient comes with his ciliary region again slightly reddened, and with some lachrymation and photophobia. Dropped in a four-grain solution of atropine, and after an hour the pupil was dilated about two-thirds, and circular. He was directed to resume the use of atropine three times daily. Disk H. $\frac{1}{4}$ and the neuro-retinitis evidently subsiding.

January 3, 1881.—Pupil widely dilated. All external symptoms of irritation have passed away. To use the atropine once a day.

January 14th.—The neuritis has nearly disappeared, the diskal edge being indistinctly visible throughout its whole extent. The retinal striations radiating from the macula lutea remain about the same. Vision $\frac{20}{70} : \frac{20}{20}$ with $+ \frac{1}{18}$ s. $\supset + \frac{1}{42}$ c. ax. 180°. Visual field and color-perception carefully tested by Dr. J. B. Emerson, and found normal. The cavity of the enucleated eye has so healed that the eyelashes are everted, and thus do not irritate the conjunctiva.

The following is Dr. Prudden's report of the microscopic examination of the enucleated globe :

"In the eye of W. H., the general relation of the parts was so much disturbed artificially that I must content myself with a somewhat brief description of them.

The sclera in the anterior half of the ball was covered on the outside by an unusual amount of loose connective tissue, containing, especially near the sclero-corneal junction, a considerable number of dilated blood-vessels. The sclera itself was normal in structure.

The cornea was excessively atrophied, and converted into a richly cellular, irregular mass of connective tissue, over the middle of which, in front, a small lenticular mass of very vascular granulation-tissue lay. Over the surface of the atrophied cornea, as well as at the sclero-corneal junction, a very considerable proliferation of the epithelium had occurred, with hypertrophy of the papillæ in the latter region.

The atrophied cornea was bound behind firmly to the iris by well-formed new connective tissue, and the iris, lens, and ciliary body were drawn strongly to one side by a cyclitic membrane which was much more considerably developed on one side than on the other, so that the lens lay behind the ciliary body on the side of the most considerably developed cyclitic membrane. These parts, iris, ciliary body, and cyclitic membrane, formed a solid mass of tissue enclosing the lens, which was little changed except for the presence just beneath the capsule of numerous very small ovoidal cavities. The iris itself was unusually dense in structure, and thickly infiltrated with small round cells.

The vessels of the choroid were distended with blood throughout, and its tissue infiltrated with thickly-scattered, small, dense collections of pus-cells.

The *pars ciliaris retinæ* was involved in the anterior changes, while in the posterior half of the globe the retina seemed normal, except that the rods and cones, especially the latter, were considerably swollen, and the ganglion cells of the inner layer partially disintegrated. The eye was preserved, however, in too small a quantity of Müller's fluid, which, I presume, had not been frequently changed. So that I doubt if any considerable significance should be attributed to such changes in the delicate nerve-elements—although the swelling of the cones *was very marked.*

The anatomical diagnosis would accordingly be : symblepharon, conjunctivitis, keratitis atrophica, irido-cyclitis, choroiditis purulenta (and possibly commencing atrophia retinæ)."

In the seven cases reported by Alt both eyes were lost in only two instances. In one case the visual result was not given, but is inferred to have been good, as the "degree of diminution of sight is stated to have been slight," and after enucleation of the blind eye the other "gradually improved." In the four remaining cases the final vision was $\frac{5}{200}$, $\frac{1.6}{200}$, $\frac{20}{30}$, and $\frac{20}{20}$, respectively. In my first case the final vision was $\frac{5}{200}$, and in the second case $\frac{20}{20}$.

It may be worthy of remark that in five of Alt's cases and in one of mine—that is, in six out of the nine cases—detachment of the retina was one of the lesions in the eye producing the sympathetic inflammation.

My second case here reported is the only one I remember to have seen in which sympathetic ophthalmia was caused by symblepharon.

Dr. Mathewson, of Brooklyn, informs me that a case has fallen under his observation in which both eyes were lost by sympathetic inflammation caused by symblepharon in one of them.

EYE SYMPTOMS IN LOCOMOTOR ATAXY.

By A. D. ROCKWELL, M.D.,

ELECTRO-THERAPEUTIST TO THE NEW YORK STATE WOMAN'S HOSPITAL.

In an extract * from a paper by Dr. J. Hughlings Jackson on the above topic, he refers to the very frequent association of atrophy of the optic nerve with locomotor ataxy, as well as to the fact that as far back as 1868 Charcot had pointed out that the great majority of women admitted into La Salpêtrière for amaurosis have, sooner or later, manifestations of tabes.

This has recalled to mind two cases that have lately come under my observation, and which are the more interesting from the fact that the patients were brothers.

Mr. H. W——, aged forty-five years, came to me in April, 1879, with well-marked symptoms of spinal sclerosis.

The sight was much affected, and further examination, in connection with Dr. W. A. Hammond, revealed evidences of atrophy of the optic disk. It was found necessary, of course, to give an unfavorable prognosis, and the patient passed from under my care. He died about a year subsequently, and it is but justice to say that this speedy termination of the case was predicted to me by Dr. Hammond. It may, however, be said that death was undoubtedly hastened by the industrious aid of a charlatan and so-called electrician at Saratoga, who informed him that "his spine was healthy, but that his liver was

* New York MEDICAL RECORD, February 12, 1881.

diseased," and who submitted him to daily séances of an hour each.

Mr. J. W——, aged forty years, brother of the above, consulted me in January, 1880. He suffered from persistent insomnia, and stated that for several months his eyesight had been gradually failing. The patient was quite healthy in appearance and vigorous physically, and presented no symptoms characteristic of ataxy. An ophthalmoscopic examination by Dr. H. Knapp, with whom a consultation was requested, readily revealed the existence of white atrophy of the optic nerve. The patient soon after left for his home in a distant city, and from information lately received I learn that his general health continues fair, but that there has been a steady increase in the gravity of the local trouble, so that the sight is now very indistinct.

Although as yet no symptoms have appeared indicating that the cord is involved, it is to be feared that sooner or later ataxic symptoms will follow. Dr. Jackson states that in one case optic atrophy preceded the spinal complication by ten, and in another by twenty years. In looking over the notes of the first of my two cases above given, I find it recorded that the patient first observed some impairment of vision associated with slight darting pains in the legs before there were any observable symptoms of inco-ordination of movement. This accords with Dr. Jackson's observation that "many men who had white atrophy of the optic disks had also lightning pains in the limbs; and later, on making a distinction as to the kind of atrophy, he concluded that the pains were a symptomatic link between *uncomplicated* amaurosis and locomotor ataxy."

A CASE OF
CICATRICIAL CONTRACTION OF THE THUMB AND FINGERS, AND OF THE PALM OF THE HAND, RESULTING FROM A BURN.

By ALFRED C. POST, M.D., LL.D.,
NEW YORK.

(Presented to the Medical Society of the State of New York, February 2, 1881.)

Emily Louisa Barnum, eight years of age, presented herself at my clinic in the medical department of the University of the City of New York, December 11, 1880, with the following history: At the age of two years she fell with the palm of her left hand resting on a hot stove, by which the integument of the hand was severely burned. After the separation of the sloughs the sore was slow in healing, and no efficient means were employed to guard against deformity. The consequence was that the thumb and fingers were drawn toward the palm of the hand, and their motions were very much restrained. When she came under my observation the hand was bent somewhat backward at the wrist. The palmar surface was occupied by dense cicatricial bands passing off to the thumb and fingers, and fixing the fingers in a bent position, at the metacarpo-phalangeal articulations, at an angle of about 110°. They could not be extended beyond this angle, but the flexion could be increased. The cicatricial band passing to the middle finger was more dense than the others. The next in density was that passing to the little finger. The index and middle fingers were joined together by a dense cicatricial web, extending from the normal situation of the commissure, half way to the articulations of the first and second phalanges with each other. On December 11th I had the patient etherized, and operated by making transverse incisions through the cicatricial bands, throughout their whole breadth and thickness. Four parallel incisions were made through the band which passed to the middle finger, three to that which passed to the little finger, and two through each of the bands passing to the thumb and to the index and ring fingers. After these incisions had been made, the hand could be unfolded, and the thumb and fingers fully extended. The wounds were then washed with a solution of carbolic acid, 1 to 40, and a felt splint stiffened with shellac was moulded to the dorsal surface of the forearm, hand, and fingers, separate divisions of the splint being adapted to the thumb and to each of the fingers. The different parts of the limb were secured to the splint by strips of adhesive plaster and a roller-bandage. The patient was then sent to the Presbyterian Hospital for further treatment. At the next dressing narrow strips of hoop-iron were attached to the digital portions of the splint, extending along their dorsal surfaces, and continuing up the dorsal surface of the hand and forearm, more than half way from the wrist to the elbow, being firmly secured to the felt splint by strips of adhesive plaster. The object of these bands of iron was to resist the tendency of the flexor muscles to bend the felt splint, and with it the fingers. The dressings were repeated at intervals of two days, the wounds being washed at each dressing with carbolic acid, 1 to 40. Passive motion was also freely resorted to, the whole hand, and each joint of the thumb and of each finger being alternately flexed and extended. These movements, especially those of flexion, were quite painful to the patient. But the pain was transient, ceasing almost immediately when the movements were discontinued. As the wounds granulated, nitrate of silver was applied, as soon as the granulations became exuberant. Care was also taken to restrain the growth of granulations by compressing them with strips of adhesive plaster.

On January 17, 1881, the wounds having all healed, I made a free division of the cicatricial web uniting the index and middle fingers, extending the incision both on the dorsal and palmar surfaces, a little further up the hand than the commissures of the other fingers. After the oozing of blood had ceased I applied narrow strips of adhesive plaster around each of the separated fingers, crowding them closely up to the newly formed commissure. This process was repeated at each dressing, and a free application of nitrate of silver was made to keep down the growth of granulations which might have reproduced the web. The consequence has been that the two fingers have almost completely cicatrized, and the space between them has not been encroached upon. On January 21st the portion of the splint supporting the thumb was cut away, so that the thumb was left at liberty, and the patient was directed to give it as much exercise as she conveniently could.

On January 28th the portion of the splint supporting the little finger was in like manner removed, and similar directions were given with regard to the exercise of this member. In a few days I propose to remove the splint altogether. The cure of the case is virtually complete. The fingers are fully extended, and there is no trace remaining of the cicatricial bands by which they were drawn into a flexed position.

Note.—On February 4th, two days after presenting the case to the State Medical Society, I removed the splint, and directed the patient to exercise all the fingers as freely as she could.

Reports of Hospitals.

PRESBYTERIAN HOSPITAL, N. Y.

Service of Dr. ANDREW H. SMITH.

(Reported by John A. Wells, M.D., House Physician.)

CASES ILLUSTRATING THE USE OF ENEMATA OF DEFIBRINATED BLOOD IN PHTHISIS.

Case I.—Archibald Sinclair, aged twenty years, admitted August 18, 1880. The patient, at the time of his admission, was in the third stage of catarrhal phthisis. There was a cavity at the apex of the left lung. He was exceedingly anæmic, and had been rapidly emaciating. There was very pronounced hectic, with frequent and exhausting night-sweats. He had been losing steadily in weight before commencing the blood-treatment, notwithstanding the usual treatment of cod-liver oil and iron, combined with a most nutritious diet. His weight before commencing the blood-injections was 101 pounds.

November 25th.—Four ounces of defibrinated bullock's blood, to which four grains of chloral hydrate had been added, were administered per rectum at bedtime, in addition to the usual treatment.

December 9th.—The injections of blood have been administered every night since the previous note. After several injections had been given it was found necessary to reduce the amount to two ounces, the rectum not tolerating the original amount. By continuing the smaller amount for a few days, and then adding five drops of tincture of opium to each four ounces of blood, no difficulty was subsequently experienced in retaining the full amount. The weight of the patient, after two weeks' treatment, shows a gain of seven pounds. His entire appearance is changed. He has an excellent appetite, has had but one slight night-sweat, and is decidedly less anæmic. He expresses himself as delighted with his evident improvement. A steady improvement in weight and in his general condition has continued up to the time of this report, one month from the last date.

Case II.—Maria Durnin, aged twenty-two years, admitted November 13, 1880. The patient gave a very direct phthisical history for eight months past. There was very marked hectic, the evening exacerbations varying between 103° and 104° F. The cough was paroxysmal and violent. She was emaciated, without appetite, and for two months had been subject to constant vomiting. Her weight before commencing treatment was 101¼ pounds. A physical examination revealed a large cavity at the apex of the right lung, with a smaller cavity at the left apex.

November 27th.—Four ounces of defibrinated blood were administered per rectum at bedtime. Seven grains of oxalate of cerium were administered night and morning. The diet was limited to milk and beef-tea. No other treatment was employed.

December 11th.—The injections have been retained without difficulty. The weight of the patient has remained unchanged, but the improvement in her condition is beyond question. Food by the mouth is retained without difficulty for the first time in two months. There is an improvement in the appetite, the heavy coating has disappeared from the tongue, the cough is less frequent and less severe. There is a considerable color in the lips and cheeks, which were completely bloodless before commencing treatment. The patient is able to sit up the greater part of each day. Several weeks later the improvement continued.

Case III.—Edward Haggerty, aged forty-eight years, admitted November 19, 1880. Tubercular phthisis; third stage. There was a cavity at the apex of the right lung, with advanced consolidation at the left apex. An examination of the heart revealed aortic stenosis with mitral insufficiency. The urine contained one-third of albumen per volume, and large and small hyaline and granular casts. The patient was strikingly anæmic. Emaciation had been progressive and rapid. For several weeks he had been suffering from a profuse diarrhœa, with much gastric irritability. His condition was such that it was impossible to obtain his weight. For five days after his admission to the hospital he was unable to retain the simplest food. All the ordinary means for checking vomiting were employed ineffectually. The pulse was feeble and rapid, and there was such evidence of a rapidly approaching termination that an immediate unfavorable prognosis was given to the patient's friends. At this junction the defibrinated blood was exhibited in the following manner: four ounces of the blood, containing four grains of chloral hydrate, were injected per rectum every five hours. The precaution was taken to wash the rectum out with warm water once during each twenty-four hours. Three drops of laudanum were subsequently added to each injection, as the irritability of the rectum increased. Milk and lime-water in very small quantities was the only food allowed. The injections were employed every five hours for four days, during which time the patient was entirely free from vomiting. At the end of that time the stomach tolerated food, and the enemata were administered but twice in the twenty-four hours. Owing to the existence of internal hemorrhoids the rectum became very sore and irritable, after pursuing the treatment for two weeks, necessitating the discontinuance of the injections. The change in the patient's condition was very striking. He was able to sit up for several hours daily, his appetite was excellent, and he had no further difficulty with his stomach during the remainder of his stay in the hospital. There was an evident gain in weight, the cough was less troublesome, and a steady improvement in his appearance continued for the month following, when he was able to leave the hospital.

Death from Aneurism of the Aorta Pressing upon the Descending Vena Cava.—Dr. W. H. Taylor relates a case of thoracic aneurism which caused death in a somewhat curious manner. The patient, a man aged thirty-eight years, developed symptoms of aneurism quite suddenly, attacks of laryngismus being the most marked feature. A few days before death the face and neck suddenly became very œdematous; the neck especially was so swollen that it was as large in circumference as the face. The diagnosis of thoracic aneurism had been made. Upon autopsy a medium-sized aneurism was found upon the ascending arch. Its position was such that it undoubtedly pressed upon the superior vena cava.

A Case of Enteric Fever, without Lesion of Peyer's Patches, was reported by Dr. J. W. Moore at a late session of the Dublin Pathological Society. The patient died on the forty-sixth day, from croupous pneumonia. She had had all the typical symptoms of typhoid, including the roseola.

Progress of Medical Science.

Gastrostomy—Death on the Nineteenth Day after the Operation.—This operation by Prof. Sclifasowsky is another to be added to the list for cancerous disease of the œsophagus. At the time of the operation the patient's general condition was tolerably good, and during its performance nothing occurred to imperil the chances of his recovery. Immediately after its completion, sufficient food was injected into the stomach, and his daily nourishment afterward consisted of from ten to forty ounces of liquid food—beef-tea, milk, koumyss, wine, juice of meat, eggs, etc. Although the food was well digested and absorbed, the patient's condition grew rapidly worse, and he died from asthenia on the nineteenth day after the operation. Prof. S. advises the use of a double suture, a deep one made of catgut and a superficial one of silk, to secure a better adhesion of the stomach to the abdominal wall.—*Vratch*, No. 21.

Statistics Relating to Valvular Diseases of the Heart.—Dr. Nojnikoff, having examined the clinical records of 148 cases of cardiac diseases treated at the clinic of the Charkoff University, makes the following deductions: Valvular lesions formed 89 per cent. (132 cases); the remaining cases embraced other forms of cardiac disease. Valvular lesions of the left heart alone formed 93 per cent., of the right heart alone, 2 per cent.; both combined, 4 per cent. Insufficiency of valves formed 77 per cent.; stenosis, 22 per cent. They were distributed among the various valves in the following order—insufficiency of the mitral valve, 65 per cent.; of the aortic valves, 30 per cent.; of the tricuspid valve, 4 per cent.; stenosis of the left auriculo-ventricular ostium, 86 per cent.; stenosis of the aortic and pulmonary orifices, 6 per cent. each. Of these 132 cases of valvular lesions, 30 per cent. were associated with acute articular rheumatism. In 33 per cent. of the cases, the previous history of the patients mentions only the occurrence of malarial diseases; in 19 per cent. of the cases these two elements were found combined. In the remaining 16 per cent. he finds acute febrile diseases: endocarditis, from exposure, syphilis, alcoholism, sexual excesses, etc. Prof. Laskewitz was the first to point out the connection between the malarial poison and cardiac diseases. He frequently observed in patients suffering from acute malaria or malarial cachexia, painful palpitation, dyspnœa, and a peculiar irritability of the heart, indicating a pernicious action of the malarial poison on the organ, these effects yielding readily to quinine and arsenic. He considers the malarial intoxication as an important etiological factor in valvular diseases of the heart.—*Meditz. Vestnik*, 1880, Nos. 16–20.

Dermalgic Action of Quinine.—Dr. Zolatowitch states that every time he took quinine with a medicinal or experimental purpose it had a special effect on his skin. Once it occasioned an intolerable itching about the lips and anus, on two occasions it produced a severe balano-postitis, and again labial and anal herpes. A medical friend of his witnessed in one patient herpes of the prepuce, and in another the same condition of the prepuce and glans penis. —*Meditz. Obozrenie*, xiv., p. v., 90.

Treatment of Dysentery.—Dr. Enko used the following mode of treatment in 500 cases of dysentery: a dose of castor-oil is given, and if after copious evacuations the bloody mucus reappears, an enema composed of half a drachm of dilute muriatic acid to one pint of water, or of one grain of nitrate of silver to the same quantity of water, is given. The temperature of the enema should be between 60–65° F., and it is to be retained as long as possible. This is repeated in two hours. Dysentery usually ceases in two to four days, and it is very seldom required to repeat the treatment. In some severe cases, to prevent the recurrence of the symptoms, he orders pills containing nitrate of silver, $\frac{1}{10}$ grain; aqueous extr. rhubarb, $\frac{1}{3}$ grain; alcoholic extr. nux vomica, $\frac{1}{12}$ to $\frac{1}{4}$ grain; one pill three times a day. Coarse food should be avoided.—*Meditz. Obozrenie*, xiv., p. 291.

Faradization of the Large Intestine for Catarrhal and Ulcerative Colitis.—Dr. Karetzky has adopted the following plan of treatment in a case of chronic colitis, with ulcerations and atony of the intestines, which had resisted for five years every mode of treatment. The positive pole was introduced into the rectum, while the negative was moved along the entire length of the colon for a few minutes. After each application he also faradized with the brush the skin over the affected region. After the first few seances a very marked improvement was noticed in patient's general and local condition, and he recovered entirely after fifteen applications had been made.—*Vratch.*, 1880, No. 43.

A Case of Labor Obstructed by Complete Vaginal Atresia.—The patient was a young, healthy woman, twenty-three years old, of strong build, primipara. She menstruated for the last time July 20, 1879, but could not remember when she noticed the first fœtal movements. Labor-pains began on April 7th, and she remained in that condition until May 3d, when Dr. Berejsky was called in. He found her in a fair general condition, but the temperature was elevated, and the pulse 108. The pains were strong, and occurring every half-hour. External examination revealed transverse presentation. Fœtal movements were absent. Patient stated that they had ceased on the fourth day of labor. Neither fetal heart-sounds nor placental bruit could be heard. External genitals were found flabby, of normal size, and dry. The entrance into vagina was closed with an unyielding yellowish rose-colored membrane. On inquiry she stated that she noticed the closing of her vagina about the beginning of the second half of pregnancy, but the doctor could not obtain from her any explanation of its cause. There was no evidence of syphilis. An operation being consented to, he cut through the septum, which was composed of a dense, almost cartilaginous, cicatricial tissue, extending from the vulvar opening to the cervix. Toward the end of the operation a severe hemorrhage occurred. Child being dead, craniotomy was performed, and it was extracted. The woman recovered slowly, appropriate local treatment was adopted, and at the time of her discharge vagina permitted the introduction of the index finger.—*Vratch*, No. 10.

Changes in the Cutaneous Sensations and Urinary Secretion in the Course of Rheumatic Affections.—One of the most important recent contributions to the pathology of acute articular rheumatism has been that of Drozdoff, who has shown that during the presence of this disease there exists a marked alteration of the cutaneous sensation in the regions corresponding to the diseased joints. According to him, the sensation of pain is very much diminished, electro-cutaneous feeling is depressed to a marked

degree, and the appreciation of pressure may be almost entirely abolished, while the tactile and thermic perceptions remain normal or are even exaggerated. Dr. Vernjsky finds these statements correct in the main. In some cases he has noticed almost entire suspension of every form of sensation; but, on the other hand, he does not find any parallelism between the cutaneous and articular symptoms. Patients with severe joint-lesions may present very slight anæsthesia, and *vice versa*. He regards these two symptoms as coincident and depending upon a common cause. The cutaneous manifestations are also present in the chronic rheumatism of joints, and the intensity of both presents greater similarity. They are met with also in myalgia, but less regularly, and it is only when the lesion involves a very large group of muscles that they are distinctly marked.

He finds, also, that patients with rheumatic affections are apt to suffer from polyuria. In acute cases polyuria may be present throughout the entire sickness and for some time after recovery, or increased urinary secretion was observed only during an exacerbation. The same is true for chronic articular rheumatism. It occurs also in patients affected with myalgia of a severe type, and involving a large number of muscles. He publishes the histories of a number of patients illustrating the above statements. His conclusions are that polyuria and cutaneous anæsthesia are essential symptoms of rheumatism, and, together with the articular symptoms, are due to a lesion in the central nervous system. He points to the peculiar disposition of diabetics to suffer from rheumatism, and to the ease with which it can be produced in them by artificial means.—*Meditz. Obozrenie*, 1880, Nos. 23–33.

Action of Chloral Hydrate and Camphor Combined.—According to A. Doctman, equal parts of chloral hydrate and camphor produce a fluid resembling dilute glycerine, almost colorless, having the odor of both substances, and of a sweetish, burning taste. Half a drachm produces in man unconsciousness, deep sleep, acceleration of pulse and breathing. The pupils become dilated and do not react to light. Such were the symptoms in a case of poisoning he was called to treat. In five hours the patient awakened and entirely recovered. In animals, 0.25 to 1.5 c.c. of this fluid injected under the skin, produces, in five to ten minutes, a rapidity of pulse that cannot be counted, and an acceleration of breathing (160 per minute). The animal responds to the cutaneous irritation, but what is the most peculiar, a state of artificial catalepsy is produced; the animal will retain any position of limbs, trunk, or of the entire body we may give it. This condition of waxy flexibility lasts until the animal wakes up. In a larger quantity it produces fatal narcotism.—*Transactions of the Kazan Med. Society*, 1880, No. 22.

On the Action of Drugs on the Fœtus through the Medium of the Mother.—Dr. Kubassoff (Inaug. Diss.) states that even moderate doses of chloroform and chloral hydrate act on the fœtus, and apparently in the same manner as on the mother. The effect is produced in a few minutes after the beginning of the experiment. It consists at first in excitement, the fœtal movements are more active, the heart's sounds are louder, and the pulse is accelerated; then comes depression, manifested by the reversed state of the above symptoms. The action of opium and its alkaloids shows itself at a later period, and lasts longer than in the case of the first two drugs. It consists in marked irregularity and an intermittent state of the fetal cardiac action. He made a single experiment with digitalis, and the effect on the fœtus was very marked. He was always able to discover the presence of chloral in the fetal blood, its quantity corresponding to the relative weight of the mother and child. In some cases it reached 1.5 grains, being twice the normal dose for a child three months old. As the child gets one-twentieth of the amount given to the mother, he advises not to prescribe doses exceeding thirty grains.—*Meditz. Obozrenie*, xiv., p. 432.

Anæsthetic Action of Benzoate of Sodium on the Throat.—Dr. Fronstein recommends to spray the throat with a four per cent. solution of benzoate of sodium when the act of swallowing from any cause is painful, and in all cases where we desire to diminish the sensitiveness of the throat. He gives the history of two phthisical patients suffering from tubercular ulcers, who abandoned the use of solid food entirely, and in one of them even the swallowing of liquids (milk) caused great distress. In both cases an entire relief was obtained, but no improvement in the ulcerative process was noticed.—*Vratch. Vedamasti*, No. 447.

Local Use of Tincture of Iron in Erysipelas.—Dr. Hopadze has treated eighteen cases of erysipelas by painting the affected parts with the undiluted tincture of iron, which in all cases relieved the burning sensation. In a few cases it was necessary to repeat in ten to twelve hours. In four cases of spreading erysipelas this treatment localized the morbid process. After repeated painting the patient experiences a disagreeable puckering of the skin, which, however, readily yields to glycerine.—*Vratch. Vedamasti*, No. 447.

Physiological Action of Duboisin.—According to Epifanoff (Inaug. Diss., St. Petersburg), the physiological action of duboisin closely resembles that of atropine. After a temporary excitation of the cardiac inhibitory centres they are depressed, and the same effect is produced on the cardiac excito-motor centres. The vaso-motor centre is first irritated, afterward paralyzed. Although the breathing is accelerated, duboisin does not act on the respiratory centres. It dilates the pupil, paralyzes the muscular coats of the stomach, intestines, uterus, and bladder. Salivary secretion is depressed. Motor paralysis is produced by smaller doses of duboisin than of atropine.—*Meditz. Obozrenie*, xiv., p. 487.

Resection of the Intestines.—Dr. Cherni has reported to the Heidelberg Medical Society three resections of intestines performed within the last three years. In two cases it was made for the removal of the gangrenous parts due to strangulated hernia, and in the third for the removal of a cancerous growth. One of the first two cases died before the completion of the operation from the entrance of the intestinal contents into the lungs; the patient was almost in collapse at the time of the operation. The second case recovered entirely without any complications. Bowels moved on the eighth day. The third case recovered also, the operation resulting in a marked improvement of patient's general and local symptoms. She died six and a half months later, from the recurrence of her former illness. He insists upon the use of the spray and of Lister's dressing in this operation, and recommends the application of double sutures.—*Vratch. Vedamasti*, Nos. 446, 447.

A Case of Glossitis.—At the Clayton Hospital, Wakefield, the following case came under observation: W. H——, aged thirty years, entered the hospital with well-marked glossitis. The tongue was protruded two and a half inches beyond the teeth, and could not be retracted. The whole organ was very greatly enlarged and of a brawny hardness, due to exudation. A deep, ulcerated fissure existed where the tongue rested on the lower incisors. There was difficult, hurried respiration, the breath was fetid, and saliva constantly dribbled from the mouth. The dorsum of the protruded portion of the tongue was parched. The affection began twenty-eight days before. The patient said that he was nearly suffocated first, and that an abscess had burst at the root of the tongue a week from the commencement of the attack, and with only slight relief of the symptoms. On admission the temperature was 101° F. The mouth and all its contents were thoroughly cleansed with a strong solution of chlorate of potash in glycerine and warm water, and a piece of lint frequently wetted with water was kept over the protruded part of the tongue. The mouth was frequently syringed out. No perceptible improvement followed. Four days after admission a gutta percha support was made for the tongue, and fitted to the lower incisors. This afforded great relief to the patient, and the exudation began to disappear rapidly, so that forty-eight hours afterward he could retract the tongue within the teeth, after having been unable to do so for more than a month. The fissure simultaneously disappeared. Seventeen days after admission he was discharged cured. He had not had syphilis, nor did he show any signs of scrofula.—*The Lancet*, January 22, 1881.

Inception and Duration of Menstruation.—Dr. Bensenger found, from a series of five thousand six hundred and eleven women examined in Moscow and the surrounding provinces, that the first menstruation, on the average, began at the age of fourteen years, eight months and fifteen days. Among the upper classes it generally appeared earlier than among the lower classes. This, in the opinion of Dr. Bensenger, results partly from the more favorable hygienic condition of the former, and partly from their superior intellectual activity. Menstruation ended between the forty-third and forty-eighth years. The average number of years during which menstruation persisted was thirty-two. On the same subject Schlichtling concludes from a series of ten thousand five hundred and twenty-two cases in the Munich clinic, that the sixteenth year is the most common age for the first appearance of the menses in the city as well as in the country. The average duration of pregnancy is from 269.84 to 270 days. The minimum time in which a child can be developed and be viable is 236 days. The maximum duration of pregnancy is 334 days. Gestation terminating in summer continues on an average three days longer than gestation terminating in winter. Children born in summer are slightly longer and heavier than those born in winter.—*Med. Press and Circular*, February 2, 1881.

Catarrhal Pneumonia and Tubercle in the Human Lung.—In a series of papers which appeared in *The Practitioner*, Dr. D. J. Hamilton has extensively reviewed the subjects indicated by the title. The following is a synopsis of the main conclusions which he has arrived at:

1. Croupous pneumonia and catarrhal pneumonia are two totally different diseases, and ought not to have a common designation. Croupous pneumonia is merely an exudation of blood-constituents due to suddenly increased blood-pressure, while catarrhal pneumonia essentially consists in the over-stimulation and proliferation of the epithelial cells lining the alveolar walls.

2. Catarrhal pneumonia runs through three distinct stages: *a*, the acute or subacute; *b*, the caseous; and *c*, the excavating. The disease usually passes through all these in adults, but in children frequently proves fatal in the first or second.

3. In the acute stage the alveolar epithelium proliferates, and the cellular products derived from this process accumulate in the air-vesicles.

4. In the second stage these dry and become caseous, thereby losing their characteristic form.

5. In the excavating or third stage, the necrotic caseous material softens, and this softening is a purely chemical process, corresponding to the "ripening" of cheese.

6. When tubercle occurs in the lung, or in any other organ, it is always preceded by a caseous source of infection. This infecting source may be situated in the lung itself, or in some distant part. When situated in the lung itself, the tubercle is the secondary disease (secondary tubercle); but when in a distant part, the tubercle is the primary disease of the lung (primary tubercle).

7. The caseous virus in these two varieties is carried by a different set of vessels. In the secondary it is transported by means of the lymphatics, and the tubercles have merely a local distribution. In the primary it is conveyed by the blood-vessels, and in this case the tubercles are distributed generally, and usually throughout both lungs.

8. A tubercle, in all cases, when fully developed, consists of the following parts: one or more giant-cells, a surrounding reticulum formed by their processes, and a peripheral capsule.

9. The chief infecting sources of secondary tubercle of the lung are catarrhal pneumonia and interstitial pneumonia, accompanied by bronchiectasis. In both of these caseous matter is developed, and, being absorbed, excites the formation of tubercle in the surrounding connective tissues. The main causes of primary tubercle of the lung are softening cheesy glands and strumous abscesses.

10. Tubercle is liable chiefly to two degenerations. The commoner is the caseous. The other is the conversion of the whole of the tubercle elements into fibrous tissue, and is to be looked upon more in the light of the natural termination of tubercle development than as a degeneration. When it occurs extensively it produces a cirrhosis of the part.

11. Tubercle, under any circumstances is a connective-tissue growth, arising from the action of an acute irritant. The irritant is probably a ferment, generated in the softening of a caseous mass.

12. The hereditary tendency to phthisis is probably owing to an abnormally great susceptibility of the pulmonary epithelium to irritation. This seems to be borne out by the fact that, as persons advance in life, and when naturally epithelial cellular structures become more stable, the tendency to attacks of catarrhal pneumonia diminishes.

13. There is a form of catarrhal pneumonia in which the nodules are of small size, and are widely disseminated throughout the organ. It closely resembles tubercle in its naked-eye characters, but it is totally different from it in its actual structure and mode of development.

THE MEDICAL RECORD:

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GEORGE F. SHRADY, A.M., M.D., Editor.

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THE ENFORCEMENT OF THE MEDICAL LAW.

THE medical law in force in this State has attracted a great deal of attention, not only among medical men living within its jurisdiction, but among others of the profession in sister States. With the former it is generally conceded to be as perfect and consistent a law as can be enacted at present, while with the latter there is a general desire to accept it as a working model for their own wants.

On former occasions we have given the details of its provisions and commented upon their practical bearings. Unlike other similar legal instruments, it is simple in its design, liberal in its spirit, and consistent in its requirements. It is based upon a system of registration of all legally qualified practitioners. The responsibility of registering properly is thrown upon the individual who registers. Improper or fraudulent registration renders the individual guilty of the same liable to punishment for perjury. Medical men coming from other States to New York receive their licenses from the faculties of any of the incorporated medical colleges of the State. All persons who are not registered, or who are practising under cover of a diploma illegally obtained, are to be deemed guilty of a misdemeanor, and, on conviction, are to be punished by a fine of not less than fifty nor more than two hundred dollars. One-half the fine goes to the person or corporation making the complaint, and one-half to the county.

Such in brief are the provisions of the law. Their enforcement is as yet, however, a dead letter. The law has been in force for several months, and no conviction for violation of its provisions has yet been made. Not that there are too few persons throughout the State who are fit subjects for prosecution under the act, but that no means have been taken to bring them to justice. It is just upon this point that all the present interest in the law centres. The question why it is not properly enforced is one which is daily growing in importance. Not only is a large majority of physicians in this State waiting for some practical answer, but outsiders, residents of other districts, are manifesting the same concern.

It is quite evident that a start should be made in some way. The State Society at its recent meeting called the attention of the various county societies to the matter, and urged the adoption of some simple plans for testing the efficacy of the law. The State Society very properly did this in its official capacity, and it is to be hoped that some good will come of the recommendation. Each county is capable of taking care of offenders in its own district, and should do so with as little delay as possible. The official registration of each county is the natural basis for such proceedings. Some county societies have already published such lists, and have circulated the same among their members. But the movement is by no means as general as it should be. In some counties this list is still incomplete, that is to say, many legal practitioners are yet unregistered. But this is the fault of the delinquents only. It is not necessary to wait for them any longer. The action of the law is equal upon all. Such physicians as have stubbornly refused to comply with its provisions, should bear the penalty accordingly. It is misapplied indulgence to cater to their prejudices, and make the majority suffer for their shortcomings. If respectable physicians presume to transgress the law and place themselves on a par with the quacks, they have themselves to answer for the consequences.

Having obtained a complete list of registered physicians, it would be comparatively easy for each county society to enforce all the provisions of the law. It is well known that in several parts of the State there are many fraudulent registrations. For the majority of the latter conviction of perjury would be comparatively easy. All that is necessary is to make a beginning. It is asked from several quarters, with good reason, why the necessary movement is not made at this end of the line—why the lead is not taken by the Medical Society of the County of New York. It will certainly not lack for abundant material to work upon. Its first duty, however, will be to call to account such qualified practitioners as have not yet registered. The way will then be opened for the prosecution of the quacks.

QUACKERY AND THE RELIGIOUS PRESS.

WE find the following very interesting statement in a recent number of the *New York Observer*. Referring to the subject of charlatanry, it says: "Clairvoyants, mediums, *quacks*, and all the host that prey on the credulity of the public, would starve to death if their business depended on the patronage of the positively Christian portion of the community." Now this may

be largely true, and we trust that it is; even if not, no one can say that there is anything immoral in being gulled. But, that the assertion is not true as regards the religious journals, the columns of the *Observer* and all the rest of them show very plainly. Further than this, the religious editors are not the parties that are deceived, but they assist most flagrantly in imposing upon others. There is nothing innocent in their performances, for they do not buy the bottles, but are paid for their help in selling them. What are we to think when a religious journal announces that its patrons are the persons who least of all support quacks, yet publishes in another column the advertisement of a cancer-cure, of a specific for consumption, or some other preposterous cure-all? We find that nearly every religious journal publishes each week from two to three columns of quack advertisements. If the "truly Christian portion of the community" does not patronize charlatanry it is not because the Christian editor is not well bribed to induce it to do so. From corns to cancers there is no disease he will not announce in flaming head-lines to the public as a genuine specific.

> "What damned [mixture] but some sober brow
> Will bless it and approve it with a text."

Running down the last page of the *Observer* is an article on the prayer-meeting, and beside it another on blood-syrup—twin rivulets of spirituality and flaunting quackery. What truly Christian man can read the one without feeling a little tenderness for the other, especially if he has the stomach-ache (which the "syrup" invariably and permanently cures). Yet, says the *Observer*, quackery would totter if only truly Christian men supported it. And so perhaps it would if the religious press did not parade its claims with the exuberance and *abandon* of Barnum proclaiming his What is It?

It seems about time that at least the feelings of the medical profession on this point should be made plain to the clergy. Since first bringing up the subject we have been receiving numerous letters from every part of the country, and all expressing the same feeling of sympathy with our protests, and of indignation at the obstinate adherence of the religious press to its bargains with Mammon. We do not believe that there is one of the readers of the RECORD, nor one of the sixty thousand medical men in the country, who does not share the views we are expressing. Can the clergy and the religious press afford to ignore so widespread and deep a sentiment? And it is a sentiment which will easily end in a contempt for the Christianity that sees no harm in encouraging quackery and parading deceit.

That our Christian editors may know we are not expressing individual views, we quote here from a recent work by Dr. H. H. Kane, on the opium, morphine, and hashisch habits. Speaking of the causes leading to the extension of these habits, he says:

"Another matter in this connection needs attention, viz.: the lying pretensions of a few charlatans, notably in the West, who, by specious advertisements and deceitful lies, induce the victims to these habits to buy their medicines or come under their care or treatment. Their so-called specifics are simply preparations of opium or morphine, and their treatment is based upon the plan of substituting one form of the drug for another. . . . It is a shameful fact that the religious press tolerates the advertisements of these charlatans in their columns. *As a rule, the vilest advertisements are to be found in these newspapers.* Owing to the moral weight supposed to be carried by these sheets, owing to their large circulation among people who look upon every word contained as truth, these announcements and endorsements do the people an infinite amount of harm. Can it be that the financial 'backers' of these papers overrule the scruples of the religious editor? If so, while a good investment financially, it must be a very poor one morally."

We are very glad to see and acknowledge the fact that two journals, the *Evangelist* and the *Congregationalist*, have had no quack advertisements in their last few issues. We hope that it is more than a coincidence or than an indication of depression in the nostrum trade.

A MEETING TO CONSIDER THE PREVENTION OF INSANITY.

The National Association for the Protection of the Insane held a meeting in Boston recently which was notable in many ways. There was a large attendance, and the audience and speakers included the governor of the State and many prominent public and medical men.

The interest in the work of the association was shown by the very full reports and comments published in the daily press. The society has of late been receiving many new members, among whom are a dozen asylum superintendents, and two of these latter spoke at the meeting referred to. This and other facts tend to show that some impression is at last being made upon the closeness and conservatism of the Association of Insane Asylum Superintendents. The more liberal-minded in that body seem quite ready to appreciate the spirit and aims of the younger organization.

But, while making additions to its membership in all parts of the country, the remarks at the recent meeting indicated that considerable progress had been made in exciting public interest and securing practical reform. Governor Long, in a recent message to the Massachusetts Legislature, urged a number of new measures regarding the care of the insane upon that body. Some action in the matter, especially of classifying the insane, will undoubtedly be

taken. A bill has also been prepared providing for a staff of visiting physicians to the asylums. The work which has been done in Pennsylvania and the difficulties that have attended it, were pointed out very forcibly by Dr. Hiram Corson, Trustee of the Pennsylvania State Insane Hospital, in a letter read at the Boston meeting. He says, referring to the Association of Insane Asylum Superintendents: "Your counsel would be of infinite service in aiding our efforts to counteract the selfish, pernicious influence of this association. It may seem strange to you to hear me talk thus, but let me ask you what reform in management of the insane has originated in that society? What but the invention and use of closer confinement, more means of restraint and seclusion of patients, and determined resistance to the reforms urged by philanthropists, who have witnessed how greatly they have ameliorated the miseries and contributed to the successful treatment of the insane. I will not include all superintendents in this class of hostiles. There are many noble, humane, philanthropic men among them. . . . With much effort we have succeeded in preventing this association from having any participation in the erection of the Eastern State Hospital at Norristown, and in reorganizing the hospital at Harrisburg."

One of the topics of discussion, opened by a letter from Dr. Joseph F. Parrish, was that of the etiology and prevention of insanity. Dr. Parrish referred to the fact that insanity arose so largely among a wearied and restless class in whom bodily and mental vigor were sadly disproportionate. He believed that there ought to be more institutions for the treatment of persons who are only on the border-lines of insanity, in the "crazy circle" of Crichton-Brown. Dr. H. B. Wilbur, referring to the same subject, expressed his belief that insanity depended on predisposing causes —hereditary, social, and individual—rather than on exciting causes. While our civilization increased it, education and study did not, if applied in the proper way. Dr. Nathan Allen, speaking perhaps with the bias of a sanitarian, said that in his experience ill-health caused more insanity than any other agency. Dr. Allen and Dr. Kenniston, in a subsequent speech, asserted that intemperance was a great cause of insanity, and that any diminution in the former would equally affect the latter. Dr. W. W. Godding feared that we must accept brain disease as one of the penalties of a higher development, hinting a possible future arrest of a growth of mind aspiring to be god-like.

There were many other letters and speeches upon the above and kindred subjects. The discussions contained much that was suggestive, and the result of the meeting will undoubtedly be the giving of a fresh impulse to a cause which deserves so entirely the encouragement and support it is receiving.

NATIONAL APPROPRIATION FOR INVESTIGATING THE DISEASES OF ANIMALS.

The United States Senate recently passed a bill, sent up from the House, appropriating $10,000 for investigating the diseases of swine. Before passing it, however, an amendment was added appropriating $15,000 for investigating pleuro-pneumonia. It seems very probable, at the present writing, that the above sums of money will be expended by the Agricultural Department for the purposes indicated.

About a year ago we referred to investigations made by this department, and gave them some praise, as showing effort in the right direction. There has recently appeared, however, a report on "Contagious Diseases of Domesticated Animals" of a character so astonishing in some respects that it is but a duty to call the attention of our law-makers to it. The report contains the results of a few experiments, and it contains some statistics which are not without practical value. As regards original or scientific work, however, it is almost absolutely deficient. The pathological experiments and speculations are crude and ridiculous, and are generally but puny elaborations of the views of certain imaginative European experimentalists. More than half of the work is simply "padding," being composed of extracts from foreign or home journals, or reprints of long-forgotten monographs. The report also is gorgeous with many colored lithographs that have absolutely no value except to impress the minds of Congressmen.

We make these criticisms not because we would oppose any further appropriations, but because it seems a great misfortune that money, when granted for scientific purposes by our government, should not be used in the best manner possible. And if the Agricultural Department is supplied with money for further investigations, Congress ought to see that such investigations are carried on in a more efficient way than has just been done.

International Medical Congress at London, August 2 to 9, 1881.—The following programme has just been decided on for the Section of Medicine, of which Sir William Gull is President. List of subjects for discussion: 1. Localization of Disease in Brain and Spinal Cord so far as Pathognomonic and Diagnostic. 2. Trophic Changes of Nerve-Origin. 3. Vascular Changes, Functional and Organic, in Disease. 4. Primary Diseases of the Lymph System. 5. Gout, Rheumatoid Arthritis, and Rheumatism. 6. Forms of Renal Diseases. 7. Methods of Physical Diagnosis. 8. Therapeutic Methods: Revulsions, Bloodletting, Diet-Cure, Uses of Heat and Cold, Drug-Cure, etc.

A New Medical College in Japan.—An enterprising Englishman, named Dr. Palm, has established a hospital in Niigata, Japan, where he treats 5,000 cases annually. In connection with the hospital he also runs a medical college, and has English medical journals translated for the use of the students.

Reviews and Notices of Books.

A Practical Treatise on Diseases of the Skin. By Louis A. Duhring, M.D., Professor of Diseases of the Skin in the Hospital of University of Pennsylvania, etc. Second edition, revised and enlarged. 8vo, pp. 644. Philadelphia: J. B. Lippincott & Co. 1881.

The present edition of this excellent work gives abundant evidence of thorough and careful revision in every part. In all, nearly a hundred pages of new material have been added. The chapter on the anatomy of the skin, one of the most satisfactory ones in the book, has been largely re-written. Two new and excellent illustrations, drawn by Dr. Van Harlingen, have been added, showing the general anatomy of the integument and the minute structure of the epidermis. In this chapter also many points referring to the physiology of the skin are presented in a very clear and intelligible manner. New articles are added at more or less length on phosphorescent sweat, urticaria pigmentosa, uridrosis, impetigo, herpetiformis, dermatitis exfoliata, fungoid neoplasmata, perforating ulcer of foot, myoma cutis, dermatitis medicamentosa, and several other interesting cutaneous troubles. Additions have been made to almost every chapter in the original edition, and the work as a whole may now be considered a very complete and thoroughly practical exposition of the present state of dermatological medicine. The classification is that of Hebra, and this appears to be at once the most simple and rational that can be adopted for the thorough study of skin affections. Its excellence as a clear and practical therapeutical guide for the student is further enhanced in the present volume by the introduction of the various new remedies which have so freely abounded in the medical literature of the past three or four years. The work is well printed, and the illustrations are admirably executed.

How to Use the Forceps; with an Introductory Account of the Female Pelvis and the Mechanism of Delivery. By Henry G. Landis, A.M., M.D., Professor of Obstetrics and Diseases of Women and Children, Starling Medical College, Columbus, Ohio. New York: E. B. Treat. 1880.

Professor Landis has given us a very practical, comprehensive, and interesting work upon the mechanism of labor and the use of the forceps. It can be read and studied with profit by every general practitioner.

A Manual of the Practice of Surgery. By Thomas Bryant, F.R.C.S., Surgeon to Guy's Hospital, etc. Third American from third revised and enlarged English edition. Edited and enlarged for the use of the American student and practitioner, by John B. Roberts, A.M., M.D., Lecturer on Anatomy and Operative Surgery in the Philadelphia School of Anatomy, etc. 8vo, pp. 1005. H. C. Lea's Son & Co. 1881.

Mr. Bryant's work has long been a favorite one with surgeons. As its name indicates it is of a thoroughly practical character. It is distinctly individual in that it gives the results of the author's large and varied experience as an operator and clinical teacher, and is on that account prized deservedly high as an original work. The style is necessarily condensed, the descriptions of surgical diseases and their treatment brief and to the point. The illustrations are well-chosen and the typical cases on the author's experience are full of interest and are of more than ordinary value to the working surgeon. The work may be considered as an *exposé* of British surgery from the standpoint of a thinking, practical surgeon who has used his clinical opportunities to the best advantage. The treatise does not aim to be an exhaustive one, to comprise a review of the literature of the different subjects treated, but rather as a summary of what Mr. Bryant knows—which is so far saying a great deal. The third London edition was somewhat enlarged, much new material was introduced and more than eighty new woodcuts were added. The general plan of the work remains the same, the subjects being for the most part amplified by text and woodcut.

The American edition is in a single volume of large size and handsome appearance, although the print is too small for the size of the page. The American editor has done his best to adapt the work more particularly to the wants of American surgeons. It can hardly be expected in the space alloted to him that he should be able to bring American surgery as a whole to its desired level as compared with British surgery. He has done his best, however, to advocate the claims of the surgeons of his own city, and so far his task has been well and conscientiously performed.

John Hunter and His Pupils. By S. D. Gross, M.D., LL.D., D.C.L., Oxon., LL.D., Cantab., etc. Philadelphia: Lindsay & Blakiston. 1881.

This neatly printed work of one hundred and twenty-three pages is the elaboration of an address delivered by Professor Gross before the American Academy of Surgery of Philadelphia. It is an interesting account of the life and character of Hunter, in which are contained many anecdotes illustrating his peculiar traits of character. To this biography is added sketches of several of his pupils. The whole is presented in the pleasant style peculiar to the author, and makes very entertaining reading. The volume contains a portrait of Hunter, copied from Sharpe's steel engraving of Sir Joshua Reynolds' picture.

Diagrams of the Nerves of the Human Body. By William Henry Flower, F.R.S. Third edition. Philadelphia: Presley Blakiston. 1880.

This is an atlas exhibiting in diagrammatic form the origin, division, connections, and distribution of the cranial and spinal nerves. It is admirably arranged, and will be of incalculable aid to the student of anatomy. Each of the large and beautiful plates is accompanied with explanatory text.

Drugs that Enslave: the Opium, Morphine, Chloral, and Hashisch Habits. By H. H. Kane, M.D. 8vo, pp. 224. Philadelphia: Presley Blakiston. 1881.

Dr. Kane has furnished the profession with a very useful and readable little work on the subject of the various habits. It opens with a heliotype of the Laocoön group facing the title-page, while after the preface is a table of statistics showing the great increase in the importation of opium to this country during the last decade. The whole is very well contrived to catch the attention of a casual opener of the book, whether he be a professional man or a layman; and his attention would be further fixed by the now well-known illustration of the Bellevue Hos-

pital nurse whose body was riddled with abscesses from the use of the hypodermic. This unfortunate has now, we think, fully expiated his folly by having served so long as an awful example.

Having bared the above little artifices on the part of the author, which are legitimate enough after all, we are inclined to give the book nothing but praise. It contains a large amount of information, collected with much labor, and presented in a systematic manner. The author's investigations of the chloral habit, his remarks upon the accidents of hypodermic medication, and upon the treatment of the opium habit, are particularly good. The subject of the chloral habit has not been investigated by any one, we believe, so thoroughly as by Dr. Kane. The London Clinical Society attempted the matter, but failed. We should judge from Dr. Kane's statistics that the chloral habit, though more or less prevalent, is not a very injurious one, or one that cannot be quite easily broken. The danger from chloral is not in the "habit" chiefly, but in the results that may occur from individual over-doses.

The author's style has improved since writing his first book. Some of his descriptions are forcible and vivid. We trust, however, that in any subsequent edition he will correct his inadvertence in referring to a lady patient who during the use of morphine "found her *virile* power in no ways impaired!"

Health Primers. The Heart and its Functions. New York: D. Appleton & Co. 1881. Price, 40 cents.

This is an excellent exposition of the physiology of the heart's action and its relations to health. As regards the latter point also there is considerable that is new and which will be likely to prove especially useful on that account.

Reminiscences of Dr. Spurzheim and George Combe: and a review of the Science of Phrenology from the Period of its Discovery by Dr. Gall to 1840. By Nahum Capen, LL.D. New York: Fowler & Wells. 1881.

This book is forty years old, in thought, though written less than a year ago. It has no scientific, and in our opinion no philosophical value. Those interested in biography may find something in it worthy of perusal. Spurzheim is to be esteemed greater than his theories.

On Certain Conditions of Nervous Derangement. Somnambulism—Hypnotism—Hysteria—Hysteroid Affections, etc. By William A. Hammond, M.D. 8vo, pp. 256. New York: G. P. Putnam's Sons. 1881.

Dr. Hammond's contributions to literature, especially those which like this book are of a popular as well as medical nature, are always timely and readable. Dr. Hammond deserves some credit also for furnishing to the public scientific explanations of many widely believed delusions. The present work is made up largely of a previous work on Spiritualism, etc., and of a short treatise on "Fasting Girls"—published, we believe, last summer. There is also incorporated a clinical lecture on metallotherapy and allied topics; and the subject of modern miracle-working is dealt with at some length.

Altogether there is a good deal of curious and interesting information in the book. Measured as a contribution to the philosophy or physiology of the subjects treated, it is incoherent, shallow, and without originality.

Syphilis and Marriage. Lectures delivered at the St. Louis Hospital, Paris. By Alfred Fournier, Professeur à la Faculté de Médecine de Paris, etc. Translated by P. Albert Morrow, M.D. 8vo, pp. 251. New York: D. Appleton & Co. 1881.

The translator of this work states in his preface that there is no work in the English language which treats of the relations of syphilis to marriage. This furnishes an excuse, if any were needed, for republishing the book in this country. The subject is truly one of the supremest importance, involving, as it does, questions not only of pathology, but of morality and domestic happiness. It is treated by Professor Fournier in a manner that is above criticism. Exhaustive clinical knowledge, discriminating judgment, and thorough honesty of opinion are united in the author, and he presents his subject in crisp and almost dramatic style, so that it is a positive pleasure to read the book, apart from the absolute importance of the questions of which it treats.

The opinions of Professor Fournier on the subject of syphilis and marriage have already been made known quite widely in reviews of the original work in French. We refrain, therefore, from giving any analysis of them now. Previous criticisms have shown a general unanimity of opinion with Professor Fournier, that syphilis is only, as a rule, a temporary bar to marriage.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, February 9, 1881.

Dr. T. E. Satterthwaite, President, in the Chair.

Dr. Willard Parker, Jr., on behalf of a candidate, presented a

"COMPOSITE TUMOR OF THE TESTICLE."

Dr. W. H. Porter, on behalf of a candidate, presented a specimen of

TRANSPOSITIO CORDIS, WITH ABNORMAL DEVELOPMENT OF THE ORGAN.

The President asked if the malformation was a common one, and Dr. Porter answered that it was not, and further remarked that the pulmonary veins sometimes rise from the descending aorta. In the specimen presented, they seemed to come from the ascending aorta, probably because there was only one ventricle and auricle in the heart.

The President said that this deformity is more rare than that in which there is one ventricle and two auricles.

FIBRO-MYOMA OF THE UTERUS.

Dr. R. Tauszky presented what seemed to be a fibrous tumor, removed from the uterus of a patient, twenty years of age, with the following history: She began to menstruate at the age of fourteen, and the monthly discharge was regular for about one year, when she began to suffer extremely from dysmenorrhœa, for which she consulted many physicians, but received only temporary relief. About two months ago she began to suffer from profuse menorrhagia and metrorrhagia, became very anæmic, and was obliged to remain in bed. Dr. Tauszky saw the patient in consultation with Dr. Strew, who had

diagnosticated retroflexion, as had Dr. Skene, of Brooklyn, some time previously, but the condition did not seem to explain the severe dysmenorrhœa and menorrhagia. After dilating the cervix a tumor in the cavity of the uterus was diagnosticated. The dilatation was increased, and the tumor was removed. But, despite the dilatation, Dr. Tauszky found it necessary to divide the tumor, and also incise the cervix before complete removal could be effected. It was attached to the posterior wall of the uterus, high up, and was so situated that it could easily escape recognition in an examination made with the uterine sound.

ANEURISM OF THE THORACIC AORTA.

Dr. W. H. Porter presented a specimen accompanied by the following history, furnished by Dr. J. A. Wells, house physician, and in the service of Dr. Alexander Hadden: P. T——, aged forty years, born in Ireland, single, and conductor, was admitted to the Presbyterian Hospital December 23, 1880. Family history good; intemperate habits. Had a chancre twenty years ago. Good health prior to two years ago, when a cough developed, which was paroxysmal in character, and continued until death. The cough had been accompanied by more or less mucopurulent expectoration, that had been at times tinged with blood. He never had any distinct hæmoptysis. Considerable dyspnœa, especially marked upon exertion. Persistent pain in the right side. No hectic. General health became impaired. Two weeks before admission all the above symptoms became aggravated, and were accompanied by high fever and general constitutional disturbance. Pain, dyspnœa, and expectoration were especially increased.

When admitted he was suffering from severe dyspnœa, with flushed face, but his temperature was nearly normal. His cough was paroxysmal, expectoration scanty and viscid. Moist râles over both lungs, anteriorly and posteriorly. Voice and breath heard, except over lower lobe of right lung. Dulness below right scapula, also bronchial voice and breathing. Heart-sounds very feeble; no murmurs. Pulse 140. Stimulants and diuretics were administered.

December 25th.—Patient slightly improved.

December 29th.—Dyspnœa less severe. Dry cups applied and stimulants continued.

Physical examination.—Over the superior portion of right lung the breathing and voice-sounds were nearly amphoric in character. The heart was carefully examined with a stethoscope, but no murmurs could be detected. The dyspnœa became so excessive that the patient could not lie down while in the hospital. No episternal pulsation.

January 3, 1881.—The patient coughed up four ounces of bright red blood. The hæmoptysis seemed to yield to the free administration of ergot.

January 4th.—At 3 A.M. the patient coughed up three ounces more of bright red blood. This hemorrhage also yielded to rest and ergot. The patient remained comfortable until 7 P.M., when another slight hemorrhage occurred, and he fell back dead.

Necropsy thirty-eight hours after death: Rigor mortis well marked; body well nourished.

Thoracic cavity.—The pericardium contained one ounce of serous fluid. Left heart hypertrophied; weight of organ, fifteen ounces. One of the segments of the pulmonary valve had a small hole through it; otherwise the right side of the heart was normal. One segment of the aortic valves had one hole in it, a second segment three. Both the mitral and aortic valves, as well as the aorta, showed evidence of acute inflammation by the deep congestion and numerous ecchymotic spots. At the base of the aortic valves there was marked atheromatous degeneration. The aorta, from the heart to its termination, was one mass of fatty and atheromatous degeneration. Near the aortic valves there were several cicatricial depressions. At the posterior and upper part of the transverse portion of the aorta there was a small aneurism. The aneurism encroached upon and dilated the commencement of the innominate artery, while the left common carotid appeared to be perfectly normal. The aneurism had ulcerated through the trachea at two points, one opening being between the fourth and fifth rings above the bifurcation, the second one higher. The aneurismal sac, not larger than a good-sized hen's egg, was partially filled with a clot, which had apparently at times acted as a ball-valve.

The left lung was deeply congested, and in the most dependent parts in a stage of hypostatic congestion; weight twenty-five ounces. The right lung would float in water, although the lower lobe presented the gross appearances of the third stage of pneumonia. Weight of right lung, forty-eight ounces. Spleen enlarged; weight nine ounces. Kidneys deeply congested; capsule non-adherent; weight eight ounces each. Liver enlarged; weight eighty-eight ounces.

Dr. Porter presented a second specimen with the following history:

CHRONIC ALCOHOLISM, MENINGEAL AND CEREBRAL HÆMORRHAGES, ANGIOLITHIC TUMORS OF THE CHOROID PLEXUS.

A woman of unknown age, but thought to be upwards of sixty years, was arrested for habitual drunkenness January 31, 1881. Having been taken to a police station, she became unconscious and an ambulance was accordingly sent for. Dr. Duffield, who then assumed charge of the case, found on examination that there was no evidence of intoxication, but his attention was directed toward a large ecchymotic spot over the right eye, and an extravasation in the tissues about the orbit. The patient was removed to the Presbyterian Hospital in an unconscious condition and died a few minutes after admission. At the necropsy, fifty-six hours after death, it was found on removing the calvarium, that the whole surface of the left hemisphere was covered by a blood-clot weighing eight ounces, and located between the dura and pia mater. Both ventricles contained bloody serum in excess, and their walls were the seat of small extravasations. The fourth ventricle likewise contained bloody serum in excess. There was a blood-clot within the substance of the pons, upon the right side. No fracture or fissure of the skull was found in connection with the clot. The occurrence of the multiple coagula was, therefore, regarded as the result of a general systemic condition, and violence was rejected as the cause of death. The rupture of several vessels in such cases has been observed in a number of instances. Unfortunately, there was little information that could be obtained which would throw light upon her previous condition.

The *contents of the thoracic cavity* appeared to be normal, the only organ having any noticeable lesion being the heart, which exhibited slight atheroma in the valves on the side.

In the abdominal cavity the organs were not mark-

edly diseased, the liver alone excepted. This was enlarged, fatty, and weighed eighty-seven ounces.

An interesting feature in the cranial contents was the presence of two tumors, one in each choroid plexus of the lateral ventricles. The larger was the size of a hazel-nut, yellow, streaked by blood-vessels upon the exterior, and having contents which seemed to bag out irregularly, much as a sack would that had been filled with large stones. On section of one tumor, the smaller, about half the size of the larger, there was a gritty sensation under the knife as if there were calcareous particles present, while there was much matter that appeared sebaceous. On microscopic examination it was found that the neoplasm was composed of a fibrous basis in which blood-vessels were very numerous, and contained concentrically formed granules, of various size, together with pigment, while cholesterine in plates was freely intermixed throughout the solid portions. It was not thought that the tumors had occasioned any symptoms.

The President remarked that these tumors are probably not sarcomatous, but simply fibrous tumors, in which there is a large development of blood-vessels. In connection with them are found these curious sand-particles, which have concentric markings and are probably calcified epithelial corpuscles in compressed balls, having the appearance of epithelioma. Again, the existence of cholesterine indicates a further retrograde metamorphosis of epithelial tissue common in this locality.

Dr. E. C. Wendt presented specimens taken from the body of a patient who died of

HODGKIN'S DISEASE.

They were accompanied by a history furnished by Dr. Haig, assistant house physician to St. Francis' Hospital.

J. B——, aged eighteen years, United States, single, plumber. Father died of cancer of the stomach; mother cut her throat while insane. About eighteen months ago the patient first noticed a small enlargement beneath his right ear. It was movable, rather hard, and painless. For six months it slowly enlarged, and then quite suddenly it rapidly increased in size, so as to soon occupy the side of the neck from the clavicle to the ear. From the median line this nobby tumor extended to the anterior border of the trapezius muscle. At this time he applied for relief at a clinic, and was there operated upon. It was stated that sixty-two enlarged lymphatic glands were removed from the lateral region of the neck, the patient being nearly five hours under ether. He was afterward removed to Bellevue Hospital, where he remained seventeen days. When discharged the cervical wound had nearly healed. At this time he noticed a small nodule below the inferior maxilla, and also several nodules above the clavicle on the right side. These swellings immediately began to increase in size, their growth being a very rapid one. The glands on the opposite side of the neck also began to enlarge. He entered Roosevelt Hospital, but was refused the desired operation; was next admitted to Bellevue, but Dr. Wood also refused to interfere. The glands continued to increase in size, the patient became intensely anæmic, at the same time losing flesh and strength. He was admitted to St. Francis' Hospital on November 17, 1880. At that time he had a hard nodular tumor, extending from the median line to the edge of the trapezius muscle, and from the lobule of the ear and the base of the skull behind and lower border of the inferior maxilla in front, to midway between the inferior maxilla and the clavicle. There were also several small movable nodules above the clavicle. He also had a tumor filling the supra-spinous fossa of the right side. In the right axilla there were several nodules. On the left side he had similar enlargements, as on the right side of the neck. There was no cough, neither dyspnœa nor dysphagia, neither interference with phonation nor respiration, and no pain. Patient was put on Fowler's solution and tonics, but did not seem to improve. A sinus that had remained from the operation continued to discharge. The tumors on both sides steadily enlarged. He grew more anæmic; still the appetite was poor. About December 10th his feet became œdematous, the urine showed albuminuria (fifty per cent.), and remained albuminous, ranging from thirty to seventy per cent. until death. Patient continued to grow worse. Glands beneath chin were quite soft, and seemed as if they were undergoing suppuration. Electricity was tried, but produced no effect. From this time until death he suffered great pain in the abdomen. He died suddenly on January 11, 1881.

[Dr. Howe added that for several days before death the patient suffered from dyspnœa like that seen in croup.]

Autopsy.—Abdominal cavity contains a small amount of serum. Spleen very much enlarged, its capsule thickened. On section there appear numerous round, yellowish white nodules. Its substance is abnormally hard, and the remnant of pulp is sprinkled with granules resembling sago grains. Treated with iodine, these granules assume a dark brown tint. At the hilum a large cluster of hard, lymphatic glands appears. Kidneys are very much enlarged, resembling "large white kidney;" some of the pyramids, however, are normal in appearance. The retro-peritoneal and mesenteric lymphatic glands are very much enlarged, especially the former. Pancreas, of abnormally firm consistence, appears to be hypertrophied. Lymphatic glands at hilum of kidneys are enlarged, forming a hard bunch. Left lung shows marginal emphysema and brown induration. Right lung in same condition. Liver is enlarged and very pale. Whitish nodules like those in the spleen are found throughout its substance. Stomach quite small. Inguinal glands are enlarged and hard. Axillary, supra- and infra-clavicular, mediastinal and bronchial glands, at the lesser curvature of the stomach, all participate in this universal increase of volume. Wherever lymph-glands occurred in the body they were found conspicuously enlarged. They had not a uniformly hard consistence; those beneath the jaw were especially soft.

Remarks.—"The blood of this patient was not examined during life, but on post-mortem inspection an increase in the proportion of the white globules was not found. It appears, therefore, that the case was one of so-called pseudo-leukæmia (Cohnheim), or better, Hodgkin's disease. Of the true nature of this affection we know but little. The progressive enlargement of lymphadenoid structures has led Trousseau to call the disease adénie. The essential lesions are similar to those of true leucocythæmia, and it is not easy to understand why in the one case the leucocytes are so enormously increased in number, whereas in the other their relative proportion remains quite or nearly normal.

"A remarkable feature of this case is the presence in the spleen of amyloid degeneration of the malpighian bodies, in conjunction with diffuse hyperplasia and the multiple occurrence of lymphadenomatous tumors. Microscopical sections show these

pathological conditions very beautifully. Granules of blood-pigment, variously tinted, brown, yellow, or almost black, are scattered in heaps throughout the new-formed adenoid tissue. In the liver the neoplasms have a structure identical with that of the splenic nodules. It has been described by Virchow as lympho-sarcoma. The evident malignancy of these cases perhaps justifies Billroth's appellation of these new-growths as "malignant lymphomata." Laughaus called the disease malignant lympho-sarcoma, which is a superfluous pleonasm. As regards the knobby tumors of the lymph-glands, which in some places appeared in confluent lumps, their cut surface in general presented the ordinary encephaloid appearance of most hyperplastic processes involving these organs. It is a fact deserving of mention, that their gross appearance was not altogether uniform, the variations corresponding to histological differences of structure. Most of the glands were hard, firm, rather inelastic. These were found to show a comparative preponderance of the new-formed connective-tissue reticulum over the accumulated small round-cells. On the other hand, the softer glands showed such an overabundance of lymphoid corpuscles, that all other structures were veiled by their presence. It seems that the older collections were the harder ones, and the most recent ones those of softest consistence. But this point was not clearly settled. The latter had certainly grown most rapidly. I am not aware that sago-spleen is a frequent, or, for that matter, even a rare concomitant of Hodgkin's disease. Perhaps the prolonged suppuration following the surgical interference may be considered an etiological factor in bringing about the amyloid degeneration.

"As for the many different names the disease has received, they indicate the unsettled condition of our knowledge regarding it, this being in part due to the relative paucity of well-observed cases of this kind. It may be mentioned that Schulz (*Arch. der Heilkunde*, 1874), proposed the term dermoid carcinoma for the characteristic neoplasms of this affection. This is a pathological term of questionable propriety. From a clinical standpoint Wilks has coined the word lymphatic anæmia. Gowers and Ranvier have termed the disease lymphadenosis; we might with equal justice speak of scrofula as lymphadenosis. In view of the difficulties in the way of choosing a term which may be satisfactory in all respects, it seems best to retain the non-committal expression—"Hodgkin's disease."

THE PRESIDENT also presented specimens taken from the body of a patient who died of

HODGKIN'S DISEASE.

They were accompanied by the following history, furnished by Dr. R. T. Bang, house physician.

HODGKIN'S DISEASE WITHOUT LYMPHATIC TUMORS IN INTERNAL ORGANS—OCCLUSION OF ILIAC VEIN.

THE PRESIDENT then presented the cervical, inguinal and retro-peritoneal glands in a case of the above disease, with the following history, furnished by Dr. Bang, house physician to St. Luke's Hospital.

B. F——, aged eight years, of German parentage, was admitted July 17, 1880. The mother stated that three years previously she first noticed a lump the size of an almond behind the child's right ear. At the end of a year she thought there was only a single tumor, now the size of a small orange. At the end of the second year this mass had reached half-way down the neck. More recently a large number of smaller tumors the size of chestnuts appeared.

On examination, the following points were noted: On the right side of patient's neck is a tumor measuring 5½ inches in length by 4 in breadth. It is made up of distinct nodules varying in size from a cherry to a hen's egg. The smaller lumps are on the borders, and are quite movable.

Below, the mass hangs over the right clavicle. Above, it is limited at the insertion of the left sterno-cleido-mastoid muscle. It reaches to the median line anteriorly and posteriorly.

In the left groin there is also a tumor which is the size of a small egg, and made up of three distinct nodules. In the right groin is a single movable lump the size of an almond. All the enlargements in the groins have appeared within the past five months. Further points noted by the attending physician were as follows:

The glands forming the central portion of the tumor in the neck are not movable one upon another, but form a conglomerate mass.

The smaller glands included in the mass, and located on the periphery, are movable and have less consistency. The skin covering the mass is everywhere freely movable. No soft glands anywhere in the mass. No enlargement of tonsils. No stomatitis. No enlargement of follicles at the root of the tongue. No indications of pressure upon the œsophagus, trachea or recurrent laryngeal nerve. A single enlarged gland in the left axilla. There is a conglomerate mass of glands in the left groin the size of a hen's egg, and a single gland of the size of a walnut in the right groin.

Physical examination fails to make out any enlargement of the liver or the spleen. The belly is protuberant. No enlargement of the epitrochlear glands. The veins over the upper portion of the chest on both sides are distended. Examination of lungs negative. Heart in natural position—sounds normal. All visible mucous membranes anæmic. Patient has had no diarrhœa or vomiting.

October 5th.—The tumors have grown softer under the oleate of mercury. The sternal end of right clavicle is movable in its articulation.

November 29th.—Patient has been having the tumors daily injected with Fowler's solution (from 1 to 10 minims). The blood is extremely watery and pale in color. No bad effects from use of arsenic.

January 2d.—Without warning the patient was taken with choreic movements of the left arm. These continued all day. Previous to this occurrence the patient had no alarming symptoms. She never complained of suffering in any way, yet had no inclination to romp and play with the other children. Her face was extremely anæmic and waxen in appearance.

Examination of the urine on several occasions gave negative results.

The choreic movements of the left arm and occasional general convulsions continued for two days, at the end of which time, while in one of the latter, she spat up some purulent fluid, and expired, January 3, 1881.

At the post-mortem examination there was found great emaciation, anæmia, and œdema of the feet; the glands implicated were found to be the left cervical, superficial and deep, and the axillary to a slight degree; and on the right side the lumbar sacral iliac and inguinal and mesenteric. The submaxillaries, sublingual, parotids, the liver, spleen, kidneys, and intestinal tract contained no nodules, no special variation from the normal seen in the organs, except as

already mentioned, if we except a purulent bronchitis. It was noticeable on removing the lumbar and iliac nodules that they completely encircled the vessels, occluding the right common iliac and portions of the internal and external iliacs. On exposing the occluded portions, they were found filled with a clot which at one point had broken down into a puriform fluid.

Weight of child, 30 pounds 10 ounces; liver, 1½ pound; right kidney, 4½ ounces; left kidney, 5 ounces; spleen, 3½ ounces.

Usually the nodules were separated by a more or less well-marked septa; but sometimes they were agglomerated together. In sections of the growths they were quite uniformly pinkish white in color, and soft; some had indications of caseation at their centres, though this was infrequent. On microscopic examination they gave the appearances of lymphatic tissue, in which the corpuscular elements were very numerous and the framework slight.

The President remarked further, that it was not always easy to distinguish this disease from splenic leucocythæmia, because in Hodgkin's disease, as now described by English writers, the spleen is enlarged in a small proportion of the cases. He should prefer to base his diagnosis in such cases on the occurrence of these peculiar glandular enlargements, especially when in the cervical region, and if they showed a tendency to coalesce; other important symptoms were progressive emaciation and anæmia. It might be difficult to decide as to the blood unless the hæmatometer were used. In this case there was a diversity of opinion, perhaps because no one had used the instrument. He would certainly expect a diminution in the red corpuscles, but less frequently an increase in the white.

Dr. Sell referred to a case in which a boy, twelve years of age, had an enormous enlargement of the cervical lymphatic glands, the glands in the right axilla and left groin, and also had bronchitis with chronic pneumonia, and had had diarrhœa. His blood had not been examined.

CANCER OF THE RECTUM.

Dr. J. W. Howe presented a specimen taken from the body of a man upon whom he had performed lumbo-colotomy in November, 1880. H. L——, sixty-one years of age, German. Family history unimportant. Never had rheumatism or syphilis. Had typhoid fever fourteen years ago, and was sick two months. Nine months previous to admission to the hospital the blood and fæces escaped from the anus at the time of micturition. He also suffered from tenesmus, and with each stool lost considerable blood. This condition of affairs continued with loss of flesh and strength, and three weeks previous to his admission he was unable to evacuate his bowels even by the use of cathartics and enemata. The calibre of the rectum was closed entirely by the cancerous mass. Two days after admission, Dr. Howe performed lumbo-colotomy according to Bryant's method, which was followed by relief from pain and all the distressing symptoms from which he had previously suffered. The patient died February 6, 1881.

Dr. Geo. F. Shrady asked if there was any discharge of fæces per rectum after the operation.

Dr. Howe replied that there was. He further remarked that in one hospital the operation of lumbo-colotomy was refused, and complete extirpation of the rectum was proposed.

Dr. Briddon regarded extirpation as a very dangerous procedure, and thought that the only safe method of offering relief was in lumbo-colotomy. He then referred to a case in which he performed lumbo-colotomy for stricture of the rectum in 1879, and the patient yet remained well. He thought it was a common result for the stricture to gradually disappear, especially if of syphilitic origin, after the fæces began to pass through the opening in the loin. But he never saw a case in which fæces passed through the rectum beyond two or three weeks after the operation.

Dr. Howe said that in his case fæces passed through the rectum during the last three weeks of the patient's life, but he believed it to be due to the sloughing of the cancerous mass.

CONCEALED UTERINE HEMORRHAGE.

Dr. Van Gieson presented a fœtus and placenta removed from a primiparous woman twenty-seven years of age, who was taken in labor on January 30, 1880. At about 10 P.M. she began to have inefficient pains at long intervals, and at the first vaginal examination he noticed that the woman had an anæmic appearance, frequent and rather weak pulse, and, when she raised her head from the pillow, there was a tendency to syncope. There was no external hemorrhage. Pregnancy had advanced to between the seventh and eighth month, and from the fact that she had been under his care during the last two years, and he had seen her frequently with similar symptoms due to neurasthenia, he was somewhat misled with regard to diagnosis. He returned to his patient at about 1 A.M., January 31st, and then found that the symptoms of debility had increased and the pulse was 120, the tendency to syncope very marked, and the pains still irregular and inefficient. At the second examination he found the os dilated sufficiently to admit the index and middle fingers, and *dilatable*. There was no external hemorrhage. His diagnosis was concealed uterine hemorrhage, and he determined to dilate the cervix as quickly as possible and deliver the woman. The dilatation was done by a circular, sweeping motion of the fingers, and at the end of an hour and a half he was able to introduce the forceps. In the meantime the pulse increased in rapidity and also the tendency to syncope. The uterus seemed much larger than would be expected from the size of the fœtus. The uterus, through the abdominal walls, had a distinct, boggy, doughy feel, and there could not be obtained, by the most careful examination, any trace whatever of fetal sounds. He delivered the woman as rapidly as possible with the forceps, the placenta followed immediately, and with them not less than half an ordinary pailful of dark, grumous blood. By kneading the uterus it was made to contract. He gave the woman whiskey, ergot, and opium, and at the end of an hour and a half she was left in comparative safety.

The child was white as marble when delivered, and the placenta showed distinctly where the detachment occurred. It was the third case of this kind which he had had, two of which he had reported to the society. The importance of early diagnosis could be readily seen, and the diagnostic points upon which he would rely were, the marked anæmic condition of the patient without external hemorrhage, the tendency to syncope, the doughy feel of the uterus, the slow and inefficient labor-pains, and the absence of fetal heart-sounds. His patient was doing well. The only paper which he had seen that treated the subject exhaustively was that published by Dr. Goodell, of Philadelphia, in the *American*

Journal of Medical Sciences, some seven or eight years ago.

CARIES OF THE ELBOW-JOINT—AMPUTATION.

Dr. C. K. Briddon presented carious bones of the elbow-joint removed by amputation from a patient fifty-two years of age, single, a sailor, intemperate, and syphilitic, who was admitted to the Colored Home, January 17, 1879. He had been previously treated for arthritis four months, left the hospital improved, and resumed his occupation. The joint again became inflamed, suppurated, and was opened, and he was readmitted December 27, 1880. The condition of the joint was such that exsection would probably have been followed by osteo-myelitis, and amputation seemed to be the only admissible operation, and accordingly it was performed January 31, 1881. For two or three weeks before the operation the patient's temperature had been high, sometimes 104 and 105 F., but the day before the operation it fell to 100° F.; and advantage was taken of the remission and the amputation performed. Immediately after the operation his general condition began to improve.

FIBRINOUS CAST OF THE EDGE OF THE TONGUE.

Dr. L. Elsberg presented a fibrinous cast of the edge of the tongue, that formed within twenty-four hours, independent of the appearance of pseudo-membrane in any other part of the oral cavity. When he removed it the tongue was swollen, but not ulcerated. There was an ulcer in the pharynx. There was no history of syphilis. A second membrane formed within twelve hours, but it was not so thick as the first. When the cast was removed the mucous membrane was not divested of its epithelium, but it showed bleeding points. The new formation was elevated above the surrounding mucous membrane, and was limited to the edge of the tongue.

The President presented a specimen with the following history:

CARCINOMA OF THE PANCREAS—OCCLUSION OF THE DUCTUS COMMUNIS—CAVERNOUS METAMORPHOSIS OF THE LIVER.

J. McE——, twenty-three years of age, single, stationer, was admitted into the Presbyterian Hospital August 9, 1879. The patient gave the history of a young man who had not suffered from any inherited or acquired disease. His first marked symptoms were those of pain in the epigastrium about one year before admission to the hospital. Soon after these symptoms set in he was taken with vomiting, and began to emaciate and rapidly lose strength. Jaundice followed, with œdema of the legs. The bowels were now very much confined. After a while the jaundice disappeared, but the pain continued. Just before admission his symptoms suddenly became aggravated, and the stools had a clayey color.

On admission, in addition to the symptoms just noted, purpuric spots were observed over the lower extremities, and oozing of blood from the anus. Dyspnœa and pain were soon marked. The patient died on the following day in a comatose condition. The urine had not indicated any renal difficulty, though it contained blood.

Autopsy by Dr. W. H. Porter, twenty-one hours after death. Body deeply jaundiced. Lower extremities œdematous. Thoracic cavity: the pericardial sac contained one ounce of clear, straw-colored, serous fluid. The ventricular cavities were distended with fluid blood. Valves free and sufficient. Heart-substance slightly fatty; weight of organ, ten and one-half ounces, which was deficient, considering the size of the man. Right lung entirely free from pleuritic adhesions, but the left was firmly bound throughout to the chest-walls and diaphragm. Lungs œdematous, otherwise normal. Weight of both, thirty-two ounces. *Abdominal cavity:* spleen firm and very dark in color; weight, nine and one-half ounces. *Kidneys* intensely congested and stained yellow, probably with bile-pigment. Capsules slightly thickened and adherent; weight, five and five and one-half ounces each. The *stomach* showed slight evidence of chronic gastritis. When the duodenum was opened the ductus communis choledochus was found absolutely occluded by a growth, which surrounded the bile-duct, and was posterior to, but did not involve the gut. The whole portal circulation was to a considerable extent interfered with by the new growth pressing upon the main trunk. The common bile-duct above the occlusion was enormously distended, being at least one inch in diameter. The gall-bladder, also, was greatly distended, and contained about twelve ounces of bile. The liver was also distended with blood, and stained yellow by biliary pigment. Weight, one hundred and eight ounces, or more than double the normal.

No abscesses were found at any point. The head of the pancreas was the seat of a new-growth about the size of a small orange. This new-growth lay behind the duodenum, and had grown in such a way as to completely encircle the ductus communis choledochus and occlude it. The common duct seemed to end in the centre of this growth.

Microscopic examination gave the usual evidences of scirrhous carcinoma. The greater portion of the liver was the seat of cavernous change. It looked and felt like a sponge. By using a colored injecting fluid, and syringing through one of the smaller vessels of the liver, the cavernous tissue was injected. It was not easy to determine which vessel communicated with this new tissue. At any rate, injections through the portal and its tributaries did not reach the cavernous tissue, and other injections, through the hepatics presumably, were no more successful. As all the vessels were much dilated, it was difficult to decide precisely which they were.

This change in the liver had not produced any marked hepatic symptoms during life, though nearly the whole gland was affected, a fact which probably made the specimen a unique one. It was also to be observed that, notwithstanding the occlusion of the common duct, there were no abscesses of the liver, as are frequently observed in such cases.

Dr. John C. Peters remarked that one case of cavernous transformation of the liver had been reported to the society, and that its history could be found on pages 25 and 26 of the third volume of the transactions.

The President presented, by card, a specimen of ROUND-CELLED SARCOMA OF A KIDNEY, FROM A COW.

The society then went into Executive Session.

Dr. André Poulen, a most promising young physician of Paris, was recently murdered by the *concierge* of the house where he resided. The murderer had just been discharged by his landlord from his position as *concierge*, and he attributed his discharge to the influence of Dr. Poulen. The murdered man had just ended a four years' course in the Paris hospitals. He had also won a prize medal and had been appointed *chef de clinique* under Prof. Hardy.

MEDICO-CHIRURGICAL SOCIETY,

LOUISVILLE, KY.

Stated Meeting of January, 1881.

DISCUSSION ON PLACENTA PRÆVIA.

AT the previous meeting of the society, a case of placenta prævia having been reported by Dr. Clemens, it was then decided to devote the present session to the discussion of that subject. The case, as stated by Dr. Clemens, is as follows:

I was called to see a woman seven months pregnant with her fifth child. She had been suffering from hemorrhage for two weeks, but had lost no considerable amount of blood until the night before I was called to see her. In the afternoon, some two or three hours before I was called, she had a fearful flow, and was thought to be dying. On examination I found the os dilated to about the size of a silver dollar and the placenta protruding. I sent immediately for ergot, but before it came I had succeeded by artificial means in establishing uterine action, and by introducing two fingers I dilated the os, and as soon as the ergot arrived she was given a drachm of it and I soon succeeded in delivering her. An unfavorable prognosis as to her recovery was given, and I explained to the family the danger of septicæmia from the drain of the lochia over the mouths of the vessels where the placenta had been attached. I ordered ergot to be procured and given in case she should suffer an attack of hemorrhage, and viburnum prunifolium for slight hemorrhage, and also McMunn's elixir to be given night and morning. I repeated the instructions two or three times to a stupid nurse, and placed the bottles separately on the mantelpiece—one at each end and one in the middle. She succeeded in getting them mixed, and gave the ergot two or three times, although there had been no hemorrhage. When I returned the next morning the lochia was arrested, and I was not able to restore it. I believe the imprudent administration of the ergot had much to do in bringing about the fatal result which followed. Without it the drain might have been sufficient to prevent septicæmia.

I detached the placenta as rapidly as possible, as the best means of arresting the hemorrhage.

DR. LARRABEE.—The point of the greatest interest and practical bearing to the physician is this which Dr. Clemens has referred to—the detachment of the placenta. We find, according to statistics, that the mortality under the older management was much higher than at present. In attempting to deliver without this procedure we have, according to English statistics, a mortality of 33⅓ per cent. to the mother and of 65 per cent. to the children. While, after the plan of Simpson, going in boldly and detaching, the mortality is reduced to one in fourteen to the mothers, while the mortality to the children is increased to 69 per cent.

Naegley gives the proportion of cases occurring in practice as 11 to 600. It is somewhat strange, this being the case, that I have attended four cases at full term, and this winter saw one case at the seventh month, the result being that, out of the four cases at full term, two were lost and two were saved. The last case was saved, of course, and had I sooner seen one of the cases mentioned as fatal, I think I would have saved it. A midwife was in charge for two days, and on the occurrence of hemorrhage a physician was called in, who tamponed the vagina, and upon being recalled made a hasty visit, prescribed some ergot, and left, after which he never could be found at home when wanted. I saw the case at the urgent request of the parties, with the knowledge that another physician had been in attendance. I found the woman in articulo mortis, sitting up in bed with a face white as marble, there being a pool of blood on the floor. The first thing done was of course to put her in the horizontal position; she gasped several times and finally regained respiration, breathing tolerably well. I placed my hand in the vagina, introduced my finger into the os, and made a partial detachment; then, with a piece of ice as a wedge, completed it and delivered the child, but the woman died as it emerged from the vulva. The other fatal case was lost by reason of the hemorrhage the woman had suffered for three months, which from her account, was excessive. When she came into labor she could not lose, without compromising her life, six ounces more of blood. She had a fluttering heart when she commenced to have the pains.

The other two cases Dr. Thompson saw with me. Being prepared for these, I took a Davidson's syringe and—using ice-water—Dr. Thompson manipulated the syringe while I directed the nozzle of it, detaching the placenta. As soon as it was delivered the uterus contracted firmly upon my wrist. I met with little difficulty, however, in getting hold of a foot and pulling it down, and at the completion of the delivery the woman had lost but little blood—not so much as the day previous from the dilatation.

In the case delivered at the seventh month the hemorrhage began at the fourth month, and the bleedings were mistaken for menstrual periods. When I was called I placed her in the horizontal position, and kept her so, using the viburnum three times a day. The hemorrhages, however, became more severe, and I was called to her one night with profuse hemorrhage, when I found it was not a central attachment, but a flap; I could feel it distinctly. It seemed to have been detached and rolled upon itself. In this case the mother made a good recovery. The child breathed a few times, but died. This mode of using the syringe is not original with me. I read it long ago in Galliard's journal, when it struck me as being sensible, and under similar circumstances I would use it again.

DR. THOMPSON.—I had one instance of this kind six or seven years ago. The case was one of partial placenta prævia only. The hemorrhage was not very severe, but the discharges after a time had a fetid odor, which induced me to give an unfavorable prognosis. In spite of all efforts to ward it off, pueperal fever set in two days after labor and terminated the case fatally.

DR. HOLLOWAY.—I must confess I am not posted as to any new plan of treatment of placenta prævia. I have had three cases at nearly full term—the children viable—and I have saved all of the mothers, two of the children being dead before I was called; in the the other case the child, at the seventh month, lived three days. My plan has been—I judge from what Dr. Larrabee says—the old plan of introducing my hand and arm, and as soon as possible getting hold of the feet of the child, allowing my hand and arm to act as a plug to prevent hemorrhage until I can get the child down to take its place. With reference to Dr. Larrabee's partial occlusion of the os, I would say we do not call those cases placenta prævia alone, but placenta prævia modified. In these cases it is the simplest thing in the world to pass the hand beside the placenta, and turn the child

and deliver. Waiting to detach the placenta, it seems to me, would increase the danger. Again, it is not always that the doctor has an assistant to labor with him. In the partial placenta prævia the plan strikes me as unnecessary, and altogether it shocks me. If you detach the placenta first you are going to lose the child, and it seems inevitable that, just in proportion as it is detached, hemorrhage will be severe; while if it is still attached a little, it offers more hope for the salvation of the child. It appears to me, sirs, that I would pay little attention to new plans of procedure when I found it necessary to put my hand in there to stop the bleeding. It must be a large vagina that my arm will not fill up, and I know they cannot bleed so very much so long as my arm is in there; and so soon as my arm is removed, I take care to have the child substitute it. Professor Williams called me to the country to see a case he had been watching for some time. I advised him to introduce his hand and deliver the child. In doing so he penetrated the placenta, and the woman did not lose enough blood to affect the pulse. I must say I am free to condemn this procedure of waiting to detach the placenta rather than to turn and deliver.

Dr. Bailey.—There are some questions of interest in the management of these cases, of which I would like to speak: the proper time to interfere, and whether it is proper to give ergot in cases of this kind at full term. I have my views as to the propriety of administering ergot for the control of hemorrhage in these cases, inasmuch as in the majority of cases relief comes by turning, which manipulation will be somewhat compromised or hindered by the influence of ergot; and moreover, whether by uterine contraction hemorrhage is controlled, or whether it is not rarely increased. The effect of uterine contraction to complete dilatation would be to separate the section of the placenta next to the os, and I see no reason why by each contraction hemorrhage should not be increased. I would hesitate, then, if I had a case of placenta prævia, to administer ergot, because I would expect to have to turn the child and deliver, and I believe that in such cases more can be accomplished without than with it.

The intention, I think, was first, in this method of detaching the placenta for the purpose of controlling hemorrhage, to remove the placenta by means of that procedure from that portion of the os least covered by it, leaving it attached elsewhere with the view of prolonging the life of the child. I was astonished to hear that the total detachment of the placenta before delivery does not increase the mortality to the children over four per cent. I do not see how it is possible to save 31 per cent of children where the placenta is brought away before the child.

I would like to speak of one other point, and that is at the present the practice of allowing these cases to go to full term. I know that a practitioner has been criticised by many of the best and ablest practitioners and obstetricians in the city, because he permitted a case to go to full term, and then, by plugging the vagina and waiting for dilatation, that he lost both woman and child. It is held by those who criticised, that the woman ought to have been delivered as soon as the child was viable; and I think myself that the sooner delivery is accomplished after that period is reached, the less the liability to death of the mother. In partial placenta prævia the detachment of the flap causes the hemorrhage to stop, whether labor comes on or not, and that I regard as good practice; but I cannot indorse that practice which would go on to the complete detachment. It is very seldom an attachment completely central will be found but the edge on one side will be reached soonest. When it is completely central I think it not only possible, but good practice, to go right through it and deliver the child, or detach first and then deliver.

For my part, I do not think the salvation of the child is at all comparable with that of the mother. When it comes to a question between the child and the mother I would have no hesitancy; and if I had a case now of placenta prævia, I would, if possible, conduct it on to such time as the child was viable and then deliver. I would assume that responsibility just as soon as there was a prospect of saving the child, but I would not feel warranted in giving ergot previous to delivery.

Dr. Senteny—I would like to say a word in reference to the statistics of cases of placenta prævia compared to the whole number of cases of labor. I wish simply to say this: that statistics upon this subject, as upon most others, are, in my judgment, unreliable. I arrive at this conclusion, however, from my own experience. I have been practising about forty years, and I suppose that in about twenty years of that time I had upon an average fifty obstetric cases per year, and the other twenty, perhaps twenty cases each year, making in all about 1,400, and in all that number of cases I have seen but one of placenta prævia complete. I have seen two others—possibly three—where there was a flap of the placenta covering over the os, but which did not interfere particularly with the result of the case. There was some hemorrhage in this case; though not enough to endanger the life of the child or the mother. In the case of central attachment, both the mother and child died. This occurred, however, in my early practice, when I was a little under the influence of older men, and being called to the case because another physician, who was the family doctor, could not be obtained. The case had gone to nearly full term and the flow was very alarming. I tamponed, as was the practice in those days, and sent for another physician, who had seen a great deal of obstetric practice. When he came he said I could do nothing but wait. I told him then, that I thought death would be the result of waiting. "Well," he said, "you can't do anything but wait." He stayed an hour or two and left. Being called to the case under those circumstances, and not feeling that it was my own case, and having the opinion of this man who had had a great deal of practice, I felt my way hedged in, and I did wait. Labor-pains set in; the head came down and advanced tolerably rapidly, the placenta preceding the head, and both placenta and child were delivered while the woman was yet alive; but she was so much exhausted from the loss of blood that she also died.

Should I have another similar case, I would adopt the expedient spoken of by Dr. Bailey. In speaking of the little value of statistics, I base my opinion wholly upon my own experience; but of course I do not intend to set that up in opposition to that of men who have had perhaps five times as much experience. I am inclined to think, however, that every case where there is partial attachment of the placenta attended by hemorrhage, has been called placenta prævia.

Dr. Clemens—I wish to say that, in speaking of the treatment of placenta prævia, I had reference only to the case I had in hand at seven months, with an attachment almost central. The woman was thought to be dying when I came. The os was dilated to about the size of a dollar, and it was impos-

sible for me to force my hand and arm in there; and as to perforation, I do not believe that plan is practicable in even a large per cent. of cases. If it is a central attachment it is exceedingly difficult to go through near the cord, where the membranes are much stronger than elsewhere, and reinforced also by the umbilical vessels. It does not occur to me as being a practical plan, though it may serve in some instances.

I have been impressed with the value of a treatment I saw reported in the proceedings of the Obstetrical Society of Cincinnati. I have forgotten the name of the author of the paper, but he reported most excellent results in two or three cases of placenta prævia by the injection of Monsel's solution of iron, which completely and at once arrested the hemorrhage, and thus enabled him to conduct the cases to a successful termination, both as respects the women and the children. I do not remember whether they were central attachments or not; my impression is that the os was covered, and it struck me as being a valuable method of treatment. I concur in the opinion that the nearer to full term the case can be conducted, the better. I do not see how anything can be gained by inducing labor prematurely.

THE CHICAGO BIOLOGICAL SOCIETY.

Stated Meeting, February 2, 1881.

W. S. Haines, M.D., President, in the Chair.

IS THERE AN ERUPTION IN DIPHTHERIA?

Dr. Lester Curtis reported a case of albuminuria in a child, ten days after an attack of sore throat. Diphtheria was present in the vicinity. Similar cases recurred often last winter. Were they cases of diphtheria?

Dr. H. M. Bannister thought they were cases of scarlatina without eruption.

Dr. H. M. Lyman said such cases were common in epidemics of scarlatina, but the eruption is sometimes overlooked by the physician; neither is it a necessary concomitant.

Dr. Curtis remarked that his case could not be referred to scarlatina: there were none in the neighborhood, and they did not give rise to any such case afterward.

Dr. Lyman said that cases of scarlatina do not always spread the disease, even among children that sleep together.

Dr. Bannister referred those cases to a *hybrid form* of scarlatina, not to be confounded with roseola or measles; yet that would not protect the patient from a subsequent attack of scarlatina.

Dr. Curtis again remarked that he had seen such cases in connection with epidemics of diphtheria. That he asked if albuminuria may not be a sequel of diphtheria, or of a common sore throat.

Dr. Lyman said that might be the case sometimes, and that there was some connection between mild and diphtheritic sore throats.

Dr. Roswell Park alluded to the activity of the scarlatina virus, which he had seen spread despite any precaution. He referred to cases which he called *pharyngitis with eruption*, not feeling justified in calling them scarlatina. He asked if an eruption can accompany diphtheria? which fluids in the body contain most contagious elements? what symptoms will justify the name scarlatina?

Dr. Lyman answered, saying that the diagnosis could not be positive if the case under consideration could not be traced to pre-existing cases, unless the albuminuria and rheumatism were present as well as the eruption. He never had seen an eruption in a case of diphtheria. It is doubtful which discharge is most poisonous—probably that emanating from the organs most affected.

Dr. Davis spoke of an epidemic of diphtheria in Columbus, O., some years since, in which mild attacks had been followed by albuminuria.

The society proceeded to a discussion of a paper on

THE GERM THEORY,

read before the last meeting by Dr. H. Gradle.

Dr. Curtis said every one should be on his guard against that theory, because it had become a fashion, and was likely to run into excesses. Some contagious diseases contain no bacteria, as, for instance, vaccinia, the particles of whose virus are all dissimilar, do not at all resemble bacteria, have the amœboid movement, when *micrococci* move by vibrations, and are nothing but degenerated bioplasm. A plausible objection was that many diseases referred to vegetable germs were caused by the irritation of those on the animals attacked, while the latter would recover as soon as the irritating parasites were removed. Another point: he coul dnot believe that bacteria had been isolated and cultivated. That during such a process there might have been invisible germs or substances accounting for the symptoms subsequent to an inoculation with the solutions. He said there was the shadow of a doubt in Pasteur's experiments, while, besides the results obtained with fowl-cholera, and with the silk-worm disease, all others were devoid of accuracy, and did not command confidence. For his part he was not convinced, and supposing the question settled in the affirmative in regard to a few diseases, there was no reason to ascribe others to the same cause.

Mr. R. S. G. Paton, chemist, observed that we cannot produce life in laboratories; that it is impossible thus to produce digestion, and thereby obtain living cells; that the cultivation of bacteria in living tissues, he thought, would give totally different results from those of Pasteur. Besides, there is a *basis of life*. The same fluid in plants goes to form a twig, a leaf, or a fruit, but how is that accomplished except through the intervention of germs or ferments? In the same manner in animals, one fluid goes to form bone, muscle, and nerve. But the ferment or germs which induce the change of the liquid into the substance of an organ may be deficient or in excess: as in phthisis, in which there is an excessive growth of bone. In either case, the equilibrium of healthy life being destroyed, a disease is the result. According to that theory, the lack of a ferment, or the deterioration of one, might account for many diseases.

Dr. Lyman defined germ diseases a "class of diseases produced by organized beings growing and multiplying in an animal" in the manner of parasites. There is no doubt as to the existence of parasitic diseases of that form, and such is anthrax. But only a few of them have been demonstrated, and we generally refer the rest to ferments. Some think the action of these is catalytic, acting through their mere presence. Yeast fungi act that way in the fermentation of sugar—at least that view is held by many—and it is a fact that the greater portion of the alcohol is formed outside the parasite. Its presence more than its growth is the cause of the fermentation; which, however, does not take place with healthy, but with diseased yeast-cells. This fact throws much light on the cultivation of hay bacteria: the virus,

innocuous at first, becomes poisonous in the process of cultivation. From this we might infer that those diseases depend upon the presence and growth of bacteria, though they are not their product. These facts being admitted, would bring more accordance between the views of many authors, which seemingly disagree and at the bottom are the same. In anthrax the disease does not depend directly on the bacterium, but on the changes caused by the latter in the fluids of the body, through its presence acting like a ferment to modify healthy nutrition.

We may well imagine a living cell undergoing some modification, and thereby becoming capable to cause a disease which would end as the cell would resume its normal condition. Cell-life is unquestionably influenced by ferments. The glands of the stomach produce organized cells—pepsine—which will transform food into peptones, with which they go to modify all the cells of the body, some of these again becoming gland-cells. Thus the same form returns after a while. In hydrophobia the cells of certain glands become a virus, and this, in a second animal, occasions a similar change in the gland-cells. It is a question whether bacteria or accidents of nutrition are the prime cause of the disease under consideration.

Germs exist in all living bodies; why is not their alteration accountable for the disease of the body at large, as well as for a recurrence of the disease through generations, since they may resume their normal form, or return to a former unhealthy modification? Thus, an abnormal change will account for septicæmia, while there is no reason to refer it to extrinsic agents; a ferment has simply originated in the body from normal cells undergoing a change. It is unnecessary to avoid germs through disinfection, and Lister's method of dressing wounds is a "badge of ignorance." The bacteria in the air may be quite harmless, while a morbid action in the fluids of the wound may, through resorption, give rise to the constitutional symptoms, spray or not. In proof, cases treated according to Lister's method have not done much better than others. The care bestowed on the wound keeps the cells in vigor, and thus cleanliness accounts for the benefits of that method which will be soon abandoned.

Mr. Paton asks if it could not be that germs which would not feed on normal blood, might do so when the latter was diseased. Thus it would not be the condition of the atmosphere, but that of the living cells, in wounds that would hinder healing. May not carbolic acid prevent the cells from contamination by bacteria, cutting out the latter?

Dr. Lyman said that if the liquids of the wound are prevented from assuming unhealthy action, or if a free exit of discharges is secured, there will be no resorption determining disease. Carbolic acid acts in that manner. It has the disadvantage of diminishing the vitality of cells through anæsthesia, and retards healing. There are many antiseptics superior to it.

The President called attention to the fact, as yet overlooked, that a liquid, after a removal of its germs through filtration, is incapable to inoculate the disease. The claim is thus for bacteria, not for their secretions. But that the fluid is innocuous is not conclusive. Germs may have adhering to them substances which cause the disease: as alumina, which takes up the coloring matter of a solution, and retains it so that usual processes will not deprive its particles of it, though it is not itself coloring matter. Charcoal and strychnia is another instance. In the same manner, bacteria might have adhering to them a substance which they would not give to any fluid, acid, or alkaline, except to the blood of animals.

Dr. H. Gradle, answering the above objections, remarked that alumina will not increase the quantity of coloring matter taken up. But as to the *germ theory*, its admirers based their opinions on the evidence of facts, while its opponents simply throw on it doubts which demonstrate nothing. Manipulating the parasites, cultivating them, and reproducing the disease, whose virulence is in exact proportion to the quantity of virus inoculated; killing the parasites, in raising the solution to a high temperature, and thus destroying the virulence of the inoculated fluid, these are positive facts which leave no doubts. We must admit that the virulence depends on something exactly corresponding to the size, number, and vitality of the bacteria. It is so in splenic fever. Then, in fowl cholera, the bacteria increase fast in the first two days, attain their maximum quantity at the fourth day, remain stationary for months, and then die. A want of food, not the accumulation of their secretions, checks their growth, as experiments demonstrated. A definite inoculation, a typical course, immunity from a subsequent attack, are also clear results.

Bacteria are not the disease, they are its cause. Disease is a condition of the body in which the play of organs can no longer adapt itself to the surrounding condition. It is produced, in cases under consideration, whenever the resistance to bacteria is no longer maintained. Bacteria may secrete a ferment or not. Urea may or may not depend on bacteria, since it can be produced also chemically. Yeast-cells are not essential to the alcoholic fermentation, for electric currents have produced it. "We do know that symptoms just like those of septicæmia have been produced by the injection of a chemical substance called septine." But in such cases of poisoning the course of the disease is neither regular nor typical. Pasteur finds that the inoculation of various substances causes symptoms resembling cholera. But the blood in those cases is not poisonous, and will not convey the disease. In anthrax, no symptoms arise before the *bacillus anthracis* has developed to some extent. At any rate, "no one has found any substance, except fungi, which will give rise to such symptoms when inoculated."

Dr. F. E. Waxham presented the greater portion of a small cambric needle which he removed from the arm of a patient, who could give no clue to its introduction, and did not remember having broken any needle in his hand nor arm.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from February 20, 1881, to February 26, 1881.

Meacham, Frank, Capt. and Asst. Surgeon. As soon as able to travel, to report in person at Department Headquarters, for assignment to a station. S. O. 32, Department of the East, February 19, 1881.

Gardiner, J. de B. W., Capt. and Asst. Surgeon. Granted leave of absence for one month, to take effect when relieved by a medical officer, with permission to apply for an extension of five months. S. O. 16, Department of Arizona, February 8, 1881.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending February 26, 1881.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Feb. 19, 1881.	0	4	151	7	43	104	15	0
Feb. 26, 1881.	0	8	171	9	50	104	12	0

MEDICAL NIGHT SERVICE REPORT.—Dr. Ewing, executive officer of the Night Medical Service has reported to the Health Board yesterday that, during the month of January, 41 calls for medical assistance were responded to by 27 physicians of the service. Of these visits but one was paid for by the patient.

AMERICAN VETERINARY COLLEGE.—The sixth annual commencement of the American Veterinary College was held on February 24th, at Chickering Hall, before a large gathering of the friends of the college and of the veterinary profession. The prayer at the opening was made by the Rev. Dr. Newman. The conferring of degrees of D.V.S. to twenty graduates was made by the President of the Board of Trustees, Samuel Marsh, Esq. The valedictory address was delivered by David J. Dixon, D.V.S., of the graduating class, and the address to the graduates, by Jerome Buck, Esq., on the motto of the college *non nobis solum*.

The Trustees' prize of a gold medal was given to Robert H. Harrison, D.V.S., of Mossac, for the best general examination.

The Alumni prize, a set of standard works, was awarded to John Dougherty, D.V.S., for the second best general examination.

The New York State Veterinary Society prize, a gold medal, for the best practical examination, was given to John Dougherty, D.V.S., of New York.

Prof. Liautard's prize was given to James Ed. McNicol, of New York, for the best anatomical preparations; and John A. Leyton, of New York, obtained the silver medal for the best anatomical examination in the junior class.

THE SANITARY CONDITION OF NEW YORK CITY STABLES.—In the city of New York, the animals of all kinds, for labor and for food, foot up to the enormous total, in round numbers, of six millions and a quarter (6,250,000). For the year 1879, the New York Produce Exchange furnishes the following tabulated figures: Beeves, 567,837; cows, 7,336; calves, 156,227; sheep, 1,507,739; hogs, 1,725,537. While living, the manure and filth accumulated by them will not fall short of 50,000 tons; and, including the offal after being slaughtered, the accumulations must reach the total of not far from 75,000 tons of the fittest soil for the propagation of contagious diseases. At the same time, and added to these food-animals, New York houses and feeds 50,000 horses. The accumulations of manure and filth from these horses, in a year, amounts to 100,000 tons. For these 50,000 horses there are only 10,000 stables. Of these stables not more than one in a hundred is in perfect sanitary condition. About one-quarter of the horses are kept in dark, damp stables, or places equally bad. Of the two thousand cow-stables there are not ten which are in a sanitary respect perfect. Of the ten thousand horse-stables about three thousand have sewer-connections. The stables of the road-horses are much better than those of the truck, cart, and other work-horses. These latter occupy mostly damp, dark, illy-ventilated stalls, the plank floors being saturated with accumulations of urine and filth, which cause disease of the feet of the horse. —*Journal of Comparative Medicine and Surgery.*

CINCHONA CULTIVATION IN INDIA.—The reports upon this subject for the past year show that progress is continually being made. Cinchona cultivation in India, though its results as yet are by no means great, is at least an assured success. In 1879–80 there were produced 361,590 lbs. of dry bark, against 261,659 lbs. in 1878–79. Most of the bark is made up into an extract known as the "Cinchona febrifuge." This seems to act nearly as well as preparations of the pure alkaloids.

A new experiment has recently been made in the attempted cultivation of the Bogota barks.

SEX IN PHTHISIS.—Dr. T. S. Sozinsky has recently written an article (*Philadelphia Medical and Surgical Reporter*) upon the relation of sex to phthisis pulmonalis. According to the statistics given by him the disease is far more prevalent and fatal among females than among males, and this is especially the case between the ages of 10 and 15 years. According to the mortality statistics of the United States, during the year ending June 1, 1870, it appears that in Alabama 8 males between 15 and 20 years of age died of the disease, and 36 females; in Rhode Island, 14 males and 43 females; in Delaware, 4 males and 13 females; in Connecticut, 22 males and 50 females; and in Kentucky, 72 males and 170 females. Between the ages of 10 and 20 years it may be considered that twice as many females as males die of consumption. The proportion decreases with advanced age up to about 35 years; thus: at 25 about one-fourth more females die than males; at 30 about one-sixth more; and at 35 the number is about the same for the two sexes; beyond this age more males than females die from this cause. During the year ending June, 1870, there were 33,971 deaths of males and 35,925 of females from this disease in the United States. It is Dr. Sozinsky's opinion that the cause of the relatively large number of deaths among females early in life is not due to sex, but rather to unhygienic living. If the young of both sexes were similarly brought up he believes the difference would disappear in great part. Girls are not generally allowed to exercise as freely as boys, and they are too much confined within doors. The statistics given indicate that consumption of the lungs is largely due to other than hereditary causes; constitutional degeneracy, induced by improper modes of living, is the primal cause, and measures that will improve the general health will lessen the mortality from consumption of the lungs as well as from many other diseases.

PYÆMIC ORIGIN OF RHEUMATIC FEVER.—In discussing the question of the frequent occurrence (70 per cent. of cases) of throat affections with acute rheumatism, Mr. Wm. Stewart (*Lancet*) announces his belief that acute rheumatism is always caused by the absorption of pus. This absorption, generally, is of pus from tonsillitis, but it may come from an otorrhœa, a gonorrhœa, etc. Mr. Stewart proposes to publish a paper upon this subject.

Original Communications.

UPON THE SIGNIFICANCE OF FACIAL HAIRY GROWTHS AMONG INSANE WOMEN.

By ALLAN McLANE HAMILTON, M.D.

(Read before the New York State Medical Society, February 1, 1881.)

The significance of alteration in the growth of hair, and the condition of the skin and its appendages, have attracted the attention of many modern observers, and it has come to be generally acknowledged, I think, that such appearances have more than ordinary import as symptoms of nervous diseases. It is not uncommon, as we know, to find hair upon the faces of women, though, when discovered, it is not in any considerable quantity, and is the indication, as a rule, of a tendency toward masculinity or the arrival of that age when uterine and ovarian functions have ceased. It cannot be denied that when such growths take place in young women, in localities where hair does not usually grow, they are suggestive of some pathological process which may naturally be supposed to involve the sympathetic nervous system. Fabre* has quite lately drawn attention to the production of very striking hair-changes in consequence of various mental states in women, and other observers allude, at length, to the excessive growth of hair in paralyzed parts. Fabre refers to several instances. In one the patient was a mother who had suffered great mental anguish through the loss of a child. Another woman, who suffered from a uterine disease complicated by nervous symptoms, lost all her hair, but it returned as rapidly and grew vigorously under the use of appropriate treatment.

The appearance of hair, slight though it may be, is, I think, an inevitable result of an overactive and continuous exercise of functions of the uterus and ovaries, and is but part of the process which in the early stages of pregnancy is expressed by deposition of pigment in various places, by the bronzing of the skin, and the lively excitement of the organic nervous system. Kaposi† mentions the liability of women who have borne children to hairy facial growths, but believes that the appearance of hair upon the chin is found more often after the climacteric period than at any other time.

Enough is shown by the meagre literature of the subject to prove that there is a very close connection between the irregular or excessive performance of the functions of the female pelvic organs, and the phenomena of cutaneous malnutrition; and moreover that when their innervation is taxed, some peculiar exhibition of disordered vaso-motor function occurs in a remote part. My own experience leads me to divide the subjects of abnormal hairy growths into two groups:

1. Those in whom trophic cutaneous changes, such as acne, depositions of pigment, lesions of the nails, or hangnails, as well as slight hairy growths, occur in young women in connection with ovarian irritation, and with mental trouble or emotional disturbance evidenced by melancholia, and perverted moral sense; the altered sexual state being often connected with masturbation.

2. Those cases in which prolonged vaso-motor changes have existed, and in which uterine and ovarian function have disappeared.

In such cases the unlooked for development of hair may occasionally appear, and its site, time of growth, and character, may suggest its pathological character. Ollivier reports the case of a young woman of fair, soft skin, who, after an attack of typhoid, presented a curious appearance. The skin became rough, and a general growth of fine black hair took place all over the body. From time to time I have seen insane women who were the possessors of beards or growths of hair. Some of these cases, in fact most of them, presented some history of sexual trouble, and in nearly every instance the growth of hair was coincident with the development of mental diseases. In the beginning I was not prepared to attach much importance to the existence of beards or patches of hair upon the face, but lately I have been inclined to view the peculiar appearance and connection of this condition with others which I am convinced play as important a part, when they exist, as the condition of the hair of the insane mentioned by Bucknill and Tuke* and Darwin†. Godfrey‡ has observed the abnormal growth of hair upon the face of idiots and epileptics. A patient consulted him whose mother was insane; the patient had one sister in a lunatic asylum, "another nearly raving with neuralgia, and she herself epileptic. She was but thirty years of age, and grew a famous moustache and beard."

During one of my visits to the Hudson River State Hospital for the Insane I was shown a woman of middle age, upon whose chin an extraordinary growth of hair was visible—such growth having made its appearance since the development of her insanity. The subsequent discovery of other cases suggested to me that this condition of affairs might exist elsewhere, and I afterward made, with the kind assistance of Dr. Livingstone Hinckley of the resident staff, a careful search among the insane women at the Blackwell's Island Lunatic Asylum, and found many others. It will not be amiss to briefly allude to the history of several of these patients.

Case I.—Johanna G——, Westchester County, admitted to the Hudson River State Hospital for the insane, February 22, 1879; forty years of age; housekeeper; married; four children; good habits; common education; German. Patient was brought by the superintendent of the poor, who knew but little of her case. Was supposed by him to have been insane but two weeks. Said that she was the daughter of Christ. Neglected her family; prayed much and out of season; took food and slept irregularly, but was quiet and easily managed. General strength fair.

February 23d.—Wanders through the ward, whispering in German; was noisy last night; ordered chloral, ʒ ss., tr. hyoscy., ℥ ij., nightly. No special change till the morning of March 3d, when she became suddenly very destructive, tore up in the course of fifteen minutes eight pillows, then became as before, not noisy, but talked continually in a low voice to herself.

April 16th.—Refuses all medicine. Sleeps but little at night, but is not noisy.

May 2d.—At times is noisy. Stoops down to the floor and converses with imaginary persons, spirits, etc. *Quite a beard has grown on chin since her admission:* had a few short hairs then, but these have very

* Les Relations Pathogenique des Troubles Nerveux. Paris, 1880. P. 513.

† Hebra: New Sydenham Society's Translations, p. 69.

* Manual of Psychological Medicine, third edition, p. 457.

† Expression of the Emotions, p. 207.

‡ Diseases of the Hair, p. 31.

greatly increased in numbers and length. Says she has had hair on her face during the past four years, but not previous to this. Menstruates regularly. No special change has occurred in her mental or physical condition for many months, or, indeed, since admission. Occasionally will be noisy. Talks to and gesticulates at imaginary persons almost continually. Resists all treatment.

The above notes were taken by Dr. C. H. Langdon, who assisted me materially in my examination.

Mrs. G. is a spare woman of medium height, of decidedly disagreeable personal appearance, much of which is due to a long moustache and two or three peculiar tufts of wiry black hair which droop from the chin. There are tufts of considerable thickness on the left side, which I have seen upon two occasions, and find to have grown more than half an inch in three months. The skin is the seat of discoloration. There are "bronze spots" on left temple and chest. Both sides contain spots of pigment, the left, however, more than the right. There is no difference in the size of the mammary or other glands, but the left nipple is, if anything, more prominent than the right. The left side is cooler than the right. Dr. Langdon took a number of surface-temperature observations, and the average is as follows:

	Right side.	Left side.
Face	99°	98°
Ovary	99°	100°
Palm of hand	99°	90°

The right axillary temperature was 98⅛°, the left 98⅝°. The nails of both hands, but especially left, were crenated and irregular in growth, and there were hang-nails. There was, if anything, a slight increase of size of the left side, the various circumferential measurements giving a difference of from one-half to one inch in favor of the left side. Uterine examination revealed a very small uterus. The growth of hair upon the pubes was normal, but slightly thicker on the *right* side. The new growth of hair is wiry, black, and extremely dense in places. Heart-sounds normal.

Case II.—Nancy S——, *dementia*, colored, forty-five years of age, chronic mania. Admitted to the Hudson River State Hospital for the Insane, December 8, 1877. Has had no children. She has not menstruated since admission (present date, August, 1880). The patient has irregular tufts of hair upon her chin and just anterior to ears, upon both sides (see cut). She has a slight moustache. The hair is longer upon the right side, and it is of active growth and quite wiry and black. The temperature of the left side of the body is lower than the right. Her hair-growth began with her insanity. She is often violent and destructive, and will not permit physical examination.

Case III.—Sarah H——, forty-five years of age. Admitted to the Hudson River State Hospital for the Insane, September 23, 1879. Prostitute. Syphilitic insanity, followed by dementia, duration two years. Patient has goitre of recent growth, which is larger on right side than on left. Marked tufts of hair upon upper lip, chin, and sides of face. The growth is of comparatively recent date, and is about one and one-half inch long. Lowered temperature on left side. Has bronzed spots upon body, and general mottling. There is no heart trouble. She has not menstruated since her admission.

Case IV.—Sarah Ann S——, admitted to the Hudson River State Hospital for the Insane, February 16, 1878. Aged thirty-two years. Mother's mother insane; insane three years; acute mania, followed by dementia. Has had two children. Separated from husband. This patient has abundant beard and moustache of light color, which appeared with commencement of insanity, and since has grown to a considerable length, the beard being nearly two inches in length. She has menstruated regularly. The growth is

very marked on the left side. The eyebrow of the same side is much heavier and the eyelashes are perceptibly larger. The left iris contains spots of pigment, which are absent on the other side. The surface temperature is lower on the left side. The nails are crenated and horny. Small anginoma are found scattered over the left side of the body, and these are about the size of a large pin-head and confined to the upper part of the trunk. There is slight thyroid enlargement, but no heart-murmur. The left breast seems larger than the right.

At Blackwell's Island my search was attended with great difficulties, because so little was known of the patient's age or antecedents, but with the assistance of Dr. Hinckley I found several women who presented appearances resembling in every respect those already mentioned. Most of these cases were well advanced in life, and the hairy growth had not the significance it would have had in younger women; still the excessive length of the beard of these women, the luxuriance of the hair and its preponderance upon one side, gave it a different appearance from that usually found in old women. In two of these cases the beard began at an early age, and was quite dense. An unmarried woman was thirty-nine years old, and her insanity began twenty-four years before, in melancholia, which developed into mania, and she subsequently became demented. The hairy growth began ten years ago, and is quite dense and longer on the right side. It has changed color within the past two or three years, the original color having

been brown. It now contains tufts of gray. There are many moles scattered on body, but particularly on right side, and some bronzing. A second case, thirty-seven years old when seen. Her trouble began ten years ago as mania followed by dementia. She was also unmarried. She possesses a moustache most abundant upon the left side, and a collection of stiff, long, black hairs upon the chin.

Of four other women in whom the diagnosis of dementia was made, the beard was longer and more dense on the right side in three, in the other it preponderated on the left side. In one case the growth was white, with sharply defined patches of black. In another case there was a small displaced uterus. In two others there was dysmenorrhœa. In all there were spots of skin-discoloration and angioma; the hair of the head was abundant and coarse; the temperature was lowest upon the side where the hair was most developed.

Arnozan* refers to the rapid development of hair as a result of various nerve-lesions, and says traumatic neuritis is most apt to be followed by hairy growths, which disappear when the neuritis is cured. As a very rare accompaniment of paralysis it is occasionally the case that a dense growth of hair makes its appearance in paralyzed parts. Such a case is detailed by Jelly,† the patient being a young Spaniard, eighteen years of age, who, after a fall, suffered from complete paralysis commencing at the last dorsal vertebra. Coincident with the paraplegia his body below the point of injury became the seat of a hairy growth, which extended about the nates and down the legs to the ankles. In some places it grew to such a length that it could be readily curled. I have seen cases of paralysis in which the hairy growth occurred in places which were the seat of trophic paralysis, and cases of infantile paralysis in which the limbs were covered by an active growth of new hair have been observed. Buchner,‡ in speaking of baldness of nervous origin, refers to the trigeminal and occipital nerves as those involved in cases of abnormal hair change, and Virchow is disposed to assign the pathological seat of facial hairy growths to the trigeminus, a conclusion he came to after his investigation of the celebrated Ava cases, in which two men and a woman were the subjects, the dense and peculiar growth of hair being confined to the face and neck.

From the foregoing, and from a consideration of the well-established fact that mental shock and the influence of powerful emotions are productive of trophic degeneration and loss of hair, it may be assumed that diminution of innervation is apt to be followed by trophic alteration, evinced either by the loss or increase of hair; that disorders of the fifth nerve are connected with such changes, and that the condition is one of a neuropathological character there can be little doubt. This is still further borne out by the circumstance that in cases of migraine connected with cerebral functional alteration, the trigeminal neuralgia not unfrequently results in external vaso-motor changes of the most varying description.

Of course the remote pathology must be considered from a purely theoretical and consequently unsatisfactory standpoint. It would appear that the normal balance between the cerebro-spinal filaments and those belonging to the sympathetic system concerned in the control of vessels engaged in nutrition, was lost in such cases, and that the energy before expended in the innervation of the pelvic organs was directed in a new channel. Dr. Emmet, in his work upon diseases of women, makes the statement that those women in whom normal uterine innervation is not exercised, are usually those who suffer from new growth of various kinds. The same reasoning might apply in the case of peripheral disorder such as that which forms the subject of the paper I have just read.

A consideration of the cases to which I have alluded, I think, will show that:

First.—Abnormal growth of hair, especially upon the face, is frequently closely connected with disturbed function of the pelvic organs of women.

Second.—That in the insanity of women, especially when it lapses into dementia, and cutaneous nutritive changes exist, such growths of hair are by no means of uncommon appearance.

Third.—That their unilateral character, so far as preponderance in growth is concerned, and their association with unilateral cutaneous lesions, such as bronzing and nail-changes, indicate their nervous origin.

Fourth.—Their appearance chiefly upon the face in insane patients, and relation to trophic disorders incident to facial neuralgia, points to the fifth nerve as that concerned in the pathological process.

Fifth.—The development of hair, with the deposit of pigment and skin lesions, and occasional goitrous swellings suggests the inference that the neuropathological process which leads to the growth of hair in the chronic insane, is akin to that which gives rise to Addison's disease.

As I have said, there are many cases which do not impress us because they include women of advanced age. These I exclude altogether, but I shall be satisfied if I succeed in convincing my hearers that when any considerable growth of hair occurs upon the face of female insane patients, it is indicative of an unfavorable form of insanity, and such especially is the case in those women who have not reached middle age.

Veterinary Education in England cannot be in such a vastly superior condition to that in this city, if we may judge by the following quotation from an editorial in the *Veterinary Review*. The editor says: "We cannot be accused of exaggeration when we venture to assert that scores of young men, very imperfectly educated—scarcely able to read and write their own language—who may have failed in other pursuits, and are without any idea of the requirements of a veterinary surgeon, have entered our schools, and in due time received their diploma without ever having given a dose of medicine, performed the slightest operation, or gained the slightest insight into the ordinary routine practice."

There is a very active discussion going on in the same journal, as to whether the English veterinary students keep themselves as clean as they ought. This important matter has not yet been decided.

Such comment and discussion as the above cannot occur in the colleges of this city, at least. We should add, perhaps, that the Royal College of Veterinary Surgeons has recently resolved that no student shall receive a diploma without having had a year's pupilage.—*Journal of Comparative Medicine and Surgery.*

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* Des lésions trophiques aux maladies du système nerveux. Paris, 1880. Pp. 155, 156.

† British Medical Journal, January 14, 1873, p. 671.

‡ Kritische Bemerkungen zur Ætiologie der Area celsi. Virchow's Archiv, vol. lxxiv., p. 527, 1878.

CHLORAL HYDRATE.

By H. H. KANE, M.D.,

NEW YORK.

Part III.

THE DOSE—POISONING BY AND ITS TREATMENT.

It is interesting to note how rapidly the dose of chloral has diminished from those tremendous ones so commonly employed when the drug first came into notice. Liebreich[1] gives as the proper dose for new-born infants 0.04 gramme ($\frac{2}{3}$ grain) and 0.09 gramme ($1\frac{1}{2}$ grain) for children above one year of age. Bouchut[1] and Giraldès[1] have prescribed one gramme at four years, and three to four grammes at from five to fifteen years. Labbée[2] says that the dose for an adult should not be above five or six grammes (75 to 90 grains) although as high as ten grammes (150 grains) have been given without accident. At its first introduction, chloral was given regularly in from four to ten-gramme doses, especially in France and Germany. Sixty grains were given as a dose in England and America, but from twenty to thirty grain doses were most commonly employed. From the literature of the subject, and from the letters of my correspondents, I find that the average dose is about ten grains, occasionally fifteen or twenty, and less often thirty and forty grains. Professional opinion has greatly changed in the past seven or eight years, and to-day the feeling of distrust, owing to the large number of recorded cases of poisoning and death from this drug, keeps the dose within reasonable limits. As a rule, one third of a grain may be given to a new-born child, one grain to a child one year old, two or three grains to a three-year-old child, five grains to a child from five to ten years of age, from five to eight grains to youths from ten to sixteen, and after that from ten to thirty grains, as the case may require. Children bear larger proportional doses of chloral than adults.

Certain severe spasmodic affections, as tetanus, puerperal and infantile convulsions, etc., require larger proportional doses, and they must be often repeated in order to get the desired effect.

The question as to whether it is better to give small doses frequently repeated, or a single large dose, has created considerable discussion. In insomnia, and indeed in the majority of diseases, functional and organic, I find it to be the opinion of the best men in the profession that a single good impression is preferable to saturation with small amounts, the latter being more liable to give rise to the evils of cumulative action.

Surprisingly large amounts of chloral have been taken in the course of twenty-four hours, oftentimes without any appreciable ill effect. Dr. James J. Healey,[3] of Newburyport, Mass., reports the case of a man, forty years of age, who, while suffering from the effects of a two weeks' debauch, took, in the course of ten hours, six hundred grains of chloral, "with the effect only of producing five or six hours of restless sleep."

Dr. P. C. Williams[4] relates a case where a similar amount was believed to have been taken, and where the patient recovered without any treatment. The case of a very sleepless man (mentioned in the *Lancet*) is not so extraordinary. Failing to procure sleep from smaller doses, he took, in all, four hundred and twenty grains. The only inconvenience was a temporary loss of power in the legs.

Dr. Ballantyne[5] of Dalkeith, gave 1,440 grains in twenty-four hours, in a case of tetanus. The patient recovered.

The case of a child twelve and one-half years old is recorded,[6] where, to quiet tetanus spasms, two hundred grains of chloral was given daily.

The following are some of the largest amounts given in twenty-four hours by my correspondents: H. G. Dearborn, Nashua, N. H., 240 grains; J. H. Arton, Hamilton, Bermuda, 240 grains; J. D. McCleary, Indianola, Iowa, 240 grains; C. A. Bryce, Richmond, Va., 480 grains; O. D. Abbott, Manchester, N. H., 100 grains; E. Y. Chilton, Albany, Ky., 180 grains; C. H. Greenough, New York City, 480 grains in five hours; T. C. Tipton, Williamsport, Ohio, 180 grains; Wm. B. Davis, Grapevine, Texas, 600 grains; E. N. Tull, Fairland, Ind., 180 grains in nine hours; Virgil O. Hawdon, Providence, R. I., 160 grains; E. H. Coover, Harrisburg, Pa., 480 grains; E. P. Easley, New Albany, Indiana, 180 grains; Norton Folsom, Boston, Mass., 240 grains; A. P. Hayne, San Francisco, Cal., 200 grains, N. C. Husted, Tarrytown, N. Y., 240 grains; J. Foster Burt, Boston, Mass., 480 grains; R. W. Bruce Smith, St. Thomas, Ontario, 250 grains; C. L. Wilson, Atlanta, Ga., 160 grains; A. Atkinson, Baltimore, Md., 120 grains; E. A. Cobleigh, Athens, Tenn., 496 grains, etc.

Dr. F. L. Forsyth, of Providence, R. I., gave ʒ j., q. 2 hor., in a case of tetanus. In none of these cases did death result from the use of such large amounts.

Having seen how much may be taken without producing symptoms of poisoning or jeopardizing life, it will be of interest to study a few of the many cases of poisoning from both small and large doses.

Laboulbène[7] gave fifteen grammes a day to a girl seventeen years of age, and cured chorea. Mr. Worms, of the Hospital Rothschild, gave twenty grammes a day, for a week, without any appreciable bad effects. Patient, a female, seventeen years of age, hysterical.

The subject of poisoning by chloral hydrate has already received full and careful study at the hands of competent observers in England, France, and Germany. Richardson[8] was one of the first to study the matter in detail.

There are really two conditions that result from a poisonous dose of this drug: one in which coma is prominent, anæsthesia marked, with slow pulse and slow respiration; the other where the drug seems to have suddenly and forcibly thrown itself upon the heart and paralyzed it. The former are by far the most frequent, and the difference in the action of the drug seems to be due to some peculiarity of the individual, possibly an inherited or acquired tendency to death by the heart.[9] It cannot be accounted for, I think, on the score of impurities in the drug.

Let us suppose a patient to have taken an overdose of chloral hydrate on an empty stomach. The first symptom will be sleepiness, soon growing so intense as to render the individual no longer able to hold the eyelids open. He sinks into a quiet sleep that momentarily becomes more profound. Stertor gradually develops, the face becomes faintly flushed, then of a deep red color, possibly mottled with

[1] Quoted by Labbée: Bullet n gén. de thérap., 1870, p. 230.
[2] Du chloral: Bull. gén. de thérap., 1870, t. 2, p. 331.
[3] New Remedies, May, 1878.
[4] MEDICAL RECORD, 1871, p. 228.
[5] Practitioner, August, 1877.
[6] Le Progrès médical, July, 1875.
[7] Quoted by Révillont: Gaz. des hôpitaux, 1872, p 618.
[8] British and Foreign Medico-Chirurgical Review, January 1, 1875.
[9] Kane: Therapeutics as Based on a Study of Tendencies. MEDICAL RECORD, September, 1880.

blotches and streaks of purple. The pupils, at first normal, gradually contract, momentarily dilating if the individual is disturbed. Respiration becomes more labored. The pulse rises to 100 or 120, full, but feeble; the eyes become bloodshot, the lips dry, parched, and swollen; the temperature is found to have fallen from one to five degrees. The respiration may now grow slower and more stertorous, occasionally intermitting, or it will increase in frequency, becoming rapid and shallow. The hands and feet will be found cold, and sometimes covered with a clammy sweat. Anæsthesia is marked everywhere. The cornea may be touched with impunity—the conjunctivæ have lost their sensitiveness. Pinching and pricking the skin, tickling the soles of the feet, the application of a strong electrical current, elicit little or no response. The individual usually remains in this condition for hours; then, if it is to be death, circulation and respiration gradually or suddenly fail, and the chloral sleep eventuates in the sleep of death. If it is to be recovery, the temperature gradually improves, the pulse increases in force, the respiration becomes less labored; signs of returning consciousness, slight but positive, show themselves. He moves the hand and possibly a leg, the pupil commences to dilate, the dark color of the face clears somewhat, and gradually, step by step, he traces his way back to the condition existing before the drug was taken. For days afterward he may feel sleepy and stupid, the eyes may smart, the throat feel dry, and there may be a paralytic condition of some part or organ, as the leg, arm, bladder, pharynx, or rectum.

Cases of poisoning where the symptoms have followed about this course may be found as follows: B. W. Richardson,[10] 240 grains, in three doses; breathing 28 and regular; *pupils dilated*; pulse 64, soft, full, and steady; occasional intermission of heart-sounds; recovery. Dr. James Rodman,[11] of Hopkinsville, Ky., 270 grains; pupils contracted; recovery. Dr. J. E. Halbert,[12] over 400 grains; *pupils irregular*; later slightly contracted; recovered. Dr. A. G. Craig,[13] 80 grains, in divided doses, during labor; pulse 150, small and weak, respirations 10 and stertorous; pupils slightly contracted; death on second day from exhaustion, child having been born in the meantime. ——,[14] 180 grains; recovery. Dr. Stone,[15] at St. Thomas's Hospital, 150 grains; pulse 108, feeble; temperature 98.6° F.; respirations 42; pupils contracted; recovery. Dr. P. E. Bishop,[16] 165 grains; recovery. Dr. Francis F. Brown,[17] 80 grains; sudden collapse after an hour; pupils contracted; recovery. Dr. Edmund White,[18] 190 grains; recovery. Mr. Hulke,[19] 320 grains; recovery. ——,[20] 460 grains, recovery. Dr. R. J. McKay, 300 grains; several clonic spasms; pupils contracted, but would at times dilate. Chouppe,[21] quantity unknown; temperature 30.2° C.; pupils contracted; recovery. Dr. D. Young,[22] 180 grains; recovery. ——,[23] 200 grains; recovery. Dr. Manjot,[24] 186 grains; recovery. Levenstein,[25] 360 grains; recovery. In one of these cases clonic spasms showed themselves, a very unusual thing in man, but not so in certain animals. The following correspondents have sent me histories of poisoning by chloral: M. L. Holbrook, New York, 200 grains; Roswell Park, Chicago, Ill.; James Donaldson, London, Eng., 60 grains; A. P. Hayne, San Francisco, Cal., 60 grains; A. Atkinson, Baltimore, Md., 160 grains. H. Hunt, Beloit, Wis., 240 grains; F. D. Lente, New York City, 15 grains, prolonged sleep; A. R. Kilpatrick, Navasota, Texas (in practice of another physician), 240 grains; F. L. Forsyth, Providence, R. I., 150 grains; George B. Twitchell, Keene, N. H., 180 grains, pulse slow, respiration slow; W. P. Bolles, Dorchester, Mass., 8 grains to infant eight months old, temperature 103°, pupils contracted when still, dilated when moving; A. Ady, West Liberty, Iowa, 180 grains.

In the case related by Dr. Bolles, the high temperature, 103°, is very unusual, it being generally below normal.

The question has often been asked, "What is the smallest amount of chloral known to have produced decided symptoms of poisoning?" The following, from a letter from Dr. W. R. Upham, of Yonkers, is interesting in this connection: A woman, thirty-four years of age, of nervous temperament, and at times hysterical, was given ten grains of chloral hydrate to procure sleep. She soon became profoundly comatose, with congested eyeballs and contracted pupils. There was slight twitching of the arms and legs. She fully recovered after some hours under appropriate treatment.

Information of the largest amount from which a patient has recovered, is sent me by Dr. Charles Warrington Earle, Professor of Diseases of Children in the Women's Medical College of Chicago: "A young man, about twenty-eight years of age, a *triple* inebriate (alcohol, opium, and chloral), took at once fifteen grains of morphia, and one-half of a mixture containing

600 grains chloral hydrate,
240 grains potass. bromid.

In twenty minutes he took the remainder. He was in a very critical condition for hours, and was only saved by the administration of stimulants, strychnia, and electricity."

Dr. Paul Kretschmar, of Brooklyn, writes me of the case of a woman who recovered after taking 420 grains.

Dr. O. A. Gorton, of New York City (letter), saw a nearly fatal result from about seventy grains; temperature normal; pupils sometimes dilated, sometimes contracted.

I shall now give a few of those cases where the heart seems to have been rapidly overwhelmed, and in consequence the symptoms were somewhat modified.

Dr. Minot[26] relates the case of a lady forty-five years of age, who was given forty-five grains of chloral. This was followed by deep sleep. On awaking, fifteen grains more were given, when profound collapse occurred.

The case of a man thirty-four years of age, suffering from an attack of delirium tremens, is related by Dr. Frantz,[27] where no sleep following one and one-fourth gramme of chloral on one night, the same

[10] British and Foreign Medico-Chirurgical Review, January, 1875.
[11] American Practitioner, New Remedies, January, 1872.
[12] New Orleans Medical and Surgical Journal, May, 1876.
[13] American Practitioner, December, 1879.
[14] Lancet, August 13, 1870.
[15] Medical Times and Gazette, September 11, 1869.
[16] Boston Medical and Surgical Journal, September 6, 1877.
[17] Ibid., January 29, 1880.
[18] Lancet, February 26, 1876.
[19] Ibid., December 5, 1874.
[20] Medical Press and Circular, January, 1871.
[21] Gazette hebdomadaire, February 5, 1875.
[22] British Medical Journal, December 25, 1875.
[23] Boston Medical and Surgical Journal. MEDICAL RECORD, 1872, p. 415.
[24] Gazette des hôpitaux, 1875, p. 826.
[25] Berlin. klin. Woch., July 3, 1876.
[26] Boston Medical and Surgical Journal, 1871, p. 184.
[27] Berlin. klin. Wochenschrift, No. 37, 1876.

dose was given the next night. He slept all night, but awaking was followed by profound collapse, in which he died. Also a case of like nature, where death followed two doses of thirty grains. The man slept all night, but died in collapse in the morning. An autopsy was made in each case, but nothing was found sufficient to account for death, and therefore Frantz believes that it was due to the chloral.

Dr. J. R. Reynolds[28] relates the following peculiar case. The chloral hydrate seems to have affected the vessels without affecting the heart in like manner. A middle-aged lady, who was in the habit of taking chloral for the relief of neuralgia, gradually increased the dose, until one day she took forty-five or fifty grains. There was complete relief to pain, but in an hour "faintness" appeared, and soon became alarming. Cold extremities, sinking at pit of stomach, dyspnœa, and confusion of thought. Pulse weak, irregular, and intermittent, *but heart at same time acting regularly*, with increased frequency and diminished force. On stimulants she rallied and seemed doing well. In another hour the same condition of collapse suddenly showed itself. Dyspnœa and sense of suffocation marked. She fully recovered on stimulants.

"Attacks of pallor with great præcordial pain in few minutes after taking chloral. Morning headaches follow doses of even ten grains in the neurasthenic." —*Geo. M. Beard.*

"Occasionally seen great depression, feeble and slow pulse, with sinking tendency. Promptly relieved by alcohol, ammonia, or nux vomica."—*J. H. Nordlin*, Rome, Ga.

"One patient, a female, cannot take it without becoming very faint. Cannot explain it."—*J. W. Parsons*, Portsmouth, N. H.

In the *Lancet* appears the case of a man of middle age, with a boil on the buttock. It was lanced, and at bedtime he took nine grains of chloral. Shortly after he became "stone-cold," his teeth were fixed, and he stared about wildly. Cold perspiration wetting pillows and sheets. Warmth, and brandy and water revived him. The next morning he was pale and anxious.[29]

In a case of hysteria and dysmenorrhœa, Dr. Paddock[30] produced profound collapse, with four fifteen-grain doses of Schering's chloral. Chloral had been well borne the previous night. The patient was well stimulated and recovered.

Dr. H. W. Fuller,[31] in an article entitled "Dangerous and Fatal Results from the Use of Hydrate of Chloral," relates the case of a man suffering with slight anasarca and bronchitis due to Bright's disease. Thirty grains chloral produced burning in chest, then violent delirium, followed by almost fatal collapse. He recovered. Thinking this might be due to rapid conversion into chloroform from excessive alkalinity of the stomach, he repeated the dose again in a strong acid solution, but with the same results.

The following peculiar case of this type is sent me by Dr. T. B. Camden, of the West Virginia Hospital for the Insane, Weston, W. Va.: "A lady in the hospital has taken chloral twice. At each time she became cold, had a peculiar dead or numb feeling, with great oppression about the heart, and unconsciousness; believe a large dose would be fatal to her. She was relieved in both instances by emetics and stimulants."

[28] Practitioner, 1870, p. 189.
[29] New York Medical Journal, 1872, p. 332.
[30] Boston Medical and Surgical Journal, August 11, 1870.
[31] Lancet, June, 1871.

Dr. G. G. Davis, of Frewsburg, N. Y., produced alarming symptoms in a typhoid fever patient in a very short time by a single dose of ten grains. Liebreich has cautioned against its use in this affection, but others have used it with success to quiet restlessness and reduce temperature. A case of sudden collapse is also given by Dr. Brown.[32]

In still another class of cases, a large dose of chloral simply throws the patient into a profound sleep,[33] lasting sometimes for days. After awaking there are seldom any bad symptoms beyond the fact that the sleepiness sometimes continues to be felt for some days.

In still another class the drug produces no sleep whatever, the patient remaining in a stupid state, but not sleeping. Occasionally delirium, vascular excitement and hallucinations are produced.[34]

In considering the cases of death caused by morphia when used subcutaneously, I took occasion to suggest that there might possibly be great danger in giving morphine after having given chloral or bromide of potassium in large doses.[35] Since then I have received the history of two cases, one from Dr. Roswell Park, of Chicago, and the other from Dr. A. Ady, of West Liberty, Iowa, that lend weight to this view, as also do the following:

G. P.[36] reports the case of a man aged thirty-five years, suffering from delirium tremens; no sleep for a week. Was given one hundred and twenty grains of chloral in twelve hours, then one grain hydrochlorate of morphia in two hours. Sleep followed. Then one-half grain morphia in course of a few hours. Snoring at 8 A.M. Dead at 9 A.M.

A homœopathic doctor of Canada was killed by another of the same school.[37] He had fissure of the anus. Operation under chloroform; then forty grains of chloral hydrate, soon repeated; then one-fourth grain morphia. Death in one-half hour.

Prof. N. R. Smith records[38] a case of death from an unknown amount of chloral and the subcutaneous injection of one-quarter grain of morphia for neuralgia. Prolonged sleep resulting in death.

T. S. Shields, M.D., of Crawfordville, Ga., reports (*Southern Medical Record*) the case of a woman who had been taking daily forty to sixty grains of chloral before she came under his care, and who subsequently became habituated to the use of opium. She was subject to attacks of hysteria, against which the commonly used remedies were employed. In an attack characterized by active delirium, wakefulness, with a pulse of 120, respirations 24, and no fever, ten grains of chloral in water were administered. An hour or two before, the patient had taken six grains of gum opium. A quarter of an hour after the chloral was taken, symptoms of opium-poisoning supervened, and in a very short period progressed to complete arrest of respiratory movements. After great efforts respiration was restored by means of caffein, atropia, and galvanism. Since the patient had been accustomed to the use of opium, the writer attributes

[32] Boston Medical and Surgical Journal, January 29, 1880.
[33] J. B. Andrews; American Journal Insanity, July, 1871; Anstie (two cases); Practitioner, 1871, p. 127; R. F. Lewis, Lumberton, N. C., 100 grains (letter); D. N. Rankin, 120 grains, Weston Penitentiary of Pennsylvania, Alleghany, Pa.
[34] Dobbs: Medical Times and Gazette, October 8, 1870; M. S. Holbrook (letter); Dixon (Medical and Surgical Reporter); Druggist's Circular, March, 1879; Kane: Chloral Delirium. Phila. Med. Times, January 15, 1881.
[35] The Hypodermic Injection of Morphia: Its History, Advantages, and Dangers. New York, 1880, p. 175.
[36] Lancet, May 25, 1872.
[37] N. Y. Medical Journal, 1873, p. 225.
[38] Boston Medical and Surgical Journal, 1871.

to the chloral the intense effect produced in this instance.[39]

Dr. H. W. Boyd, of Chicago, writes: "I also used it in a case of tetanus from gunshot-wound of the knee-joint. The spasms were severe and I had used a great deal of morphine hypodermically, and had also kept him under ether and chloroform for many hours at a time. Finally I gave him an injection of between thirty and forty grains per rectum; in twenty minutes he went to sleep with loud, distressing snoring. His temperature went down, his pulse failed, and after ten hours of snoring he awoke perfectly conscious, talked perfectly rational for thirty or forty minutes, and then sank back and in three hours more died. Now, what killed that man? I was ever so careful with my morphine injections; quit them several hours before I gave the chloral. The chloral certainly stopped the spasms. But do you think the forty grains chloral, given after the morphine and inhalation of chloroform and ether, caused that death? He had no spasms when he died."

Dr. A. R. Kilpatrick, of Navasota, Texas, writes me as follows: "Two or three cases of the following character have occurred here in the practice of one of the physicians. One is a stout Northern (Connecticut) lady, fair complexion, blue eyes, good general health, and no organic disease, mother of two or three children, and then about thirty-four years old. I do not recollect what her ailment at the time was, but think it was catarrhal fever, and the doctor gave chloral to procure sleep, as she failed to rest well, and that seemed to be what she needed most He gave chloral in preference to opiates, to avoid constipation. After waiting, himself in the house, a sufficient length of time for the morphine to exert its influence and it failing to produce sleep, he gave her about ten grains of chloral in camphor-water, and, I believe, either syrup or sugar. In fifteen minutes or less time she ceased to breathe and presented signs of complete syncope, and the usual remedies for restoration were promptly resorted to and she was relieved. One or two other similar cases have occurred in his hands, where chloral was used *consecutively* with opiates. It seems immaterial whether the chloral is used first or last—these unfavorable effects follow; but, if chloral is given at the same time *with* the morphine or opiate, no bad symptoms arise. I have used both together with the happiest results, nor have I observed any phenomenal or abnormal consequences from using them consecutively; but since I heard of these cases I am particular not to run a risk."

The danger is sufficient to justify care in the use of one drug in full doses, after full doses of the other. In Dr. Ady's case, one sixth grain of morphia was injected subcutaneously after twenty drops of a saturated solution of chloral hydrate had been given. Complete anæsthesia, deep sleep, etc., ensued, and life was despaired of. She was finally restored by means of atropia and whiskey hypodermically, and whiskey by the rectum. In Dr. Park's case the amount of chloral was small, that of morphine large. Both were given subcutaneously.

At 11.45 he was summoned, to find her gasping for breath, face and lips livid, pupils contracted, pulse about 100, perspiration profuse, extremities warm, temperature, 99½°, respirations 3 to the minute, comatose. Injections of atropia and brandy, electricity, and artificial respiration, finally restored her.

The pupils are, in the majority of cases, contracted, occasionally irregular,[40] and rarely dilated. Richardson and Cleveland claim that the pupil is usually dilated, as also Coghill,[41] who quotes them. He seems to think that contraction of the pupils occurs where the action of the drug is rapid and chiefly on the lungs, while when action is slower and chiefly on the heart the pupils are dilated. He bases his treatment on this distinction, using amyl in the first case, strychnia in the second. This theory is, however, entirely disproved by the letter of Dr. William Sedgewick,[42] which reads as follows:

"SIR—In a case of poisoning by chloral hydrate, recorded in your journal, June 28, 1879, it was noted that the pupils were 'strongly contracted to the size of a pin's head,' and Dr. Coghill, in his report of the case, after referring to the observations of myself and others on this subject, has suggested that any apparent discrepancy in the condition of the pupils 'must be sought for in the difference of the amount of the drug swallowed, and the corresponding rapidity of its action.' But clinical observation has shown that dilatation of the pupil occurs only as a very rare and as an exceptional condition during the hypnotism produced by this drug. In some 'Clinical Notes on Poisoning by Chloral Hydrate,' which I read before the Harveian Society, in October, 1878, I gave a careful analysis of the recorded cases of poisoning by chloral hydrate, and I pointed out that contraction of the pupils had been almost invariably observed during the hypnotism produced by it. Among the observations in this paper are a well-marked case of recovery from 240 grains of chloral hydrate, observed by myself (*Lancet*, August 3, 1878), in which there was extreme contraction of the pupils; Dr. Levinstein's case of recovery from 300 to 360 grains of the drug, in which, six hours after the poison had been swallowed, there was 'extremest contraction' of the pupils (*Medical Times and Gazette*, September 9, 1876); and a corresponding non-fatal case, recorded by the same observer, in which 360 grains of chloral hydrate had been swallowed in one dose, and in which it was noted, one hour and a half afterward, that the pupils were contracted (*Lancet*, February 21, 1874); a non-fatal case observed by Dr. David Young, of Florence, in which 180 grains of chloral hydrate had been swallowed in one dose, and in which it was noted, three hours afterward, that the pupils were firmly contracted, whilst, six hours later on, it was again noted that the pupils were contracted (*British Medical Journal*, December 25, 1875); a non-fatal case observed by Dr. G. W. Cole, in which an elderly man had swallowed 240 grains of chloral hydrate in one dose, and in which it was noted, three hours afterward, that the pupils were 'strongly contracted' (*Lancet*, November 11, 1876); a non-fatal case, observed by Mr. Hulke, in which 320 grains of chloral hydrate were swallowed in one dose, and in which it was noted, very soon afterward, that the pupils were extremely contracted (Clinical Society, November 27, 1874); a non-fatal case, observed by Mr. Snell, in which apparently more than 480 grains of chloral hydrate had been taken in one dose, and in which, almost immediately after the poison had been swallowed, it was noted that the pupils were 'much contracted' (*British Medical Journal*, March 27, 1875); and a non-fatal case, observed by Dr. Tizard, in which 160 grains of chloral hydrate had been taken

[39] New Remedies, May, 1878.

[40] J. E. Halbert: New Orleans Medical and Surgical Journal, May, 1876.

[41] British Medical Journal, June 28, 1879, p. 999.

[42] Ibid., September 20, 1879.

in one dose, and in which it had been noticed, soon afterward, that the pupils were 'moderately contracted' (*British Medical Journal*, September 21, 1878). A fatal case has been recorded by Mr. Thomas Chambers, in a lady, aged seventy years, who died in about nine hours and a half after taking only ten grains of chloral hydrate, and in which the pupils were observed to be 'slightly contracted' about fifteen minutes after death had apparently occurred (*British Medical Journal*, May 25, 1872). Among the more pronounced symptoms of poisoning by chloral hydrate, referred to by Dr. Erlenmeyer (*Med.-Chir. Rundschau*, October, 1872), and by many later writers on the subject, is contraction of the pupils: and Dr. McKendrick, in a paper on the 'Physiological Action of Chloral and Bromal Hydrates and Iodoform' (*Edinburgh Medical Journal*, vol. xx., 1874–75), has demonstrated that the pupil contracts with great rapidity to its smallest diameter after the administration of bromal hydrate in rapidly poisonous doses.

"This more or less strongly marked contraction of the pupils in poisoning by chloral hydrate (which is antagonistic to the local action of atropine on the iris) appears to be simply an exaggeration of their condition during the hypnotism produced by the drug when given in medicinal doses; and M. Labbée, in his article on Chloral (*Dict. encycl. des sciences méd.*, tome 16), states that there is contraction of the pupils after twenty to sixty grains of the drug have been administered either by the mouth or by the rectum. Previous to the occurrence of hypnotism, I have observed, in common with others, that there is a tendency in the pupils to dilate. According to the observations of Dr. Hammond (*New York Medical Journal*, February, 1870, quoted by M. Labbée), this preliminary dilatation of the pupil is associated with decided vascularity of the inner structures of the eye; but when, soon afterward, sleep has occurred, this hyperæmia is succeeded by an exsanguine condition of the retina and contraction of the pupil. I have, moreover, had the opportunity of observing, in common also with others, that when, by galvanism or by any other means, a chloralized patient has been temporarily roused from sleep, the contracted pupils at once dilate; and Van Lair has remarked that the contraction of the pupils, during the hypnotism produced by chloral hydrate in non-poisonous doses, can be overcome, and that the pupils can be made to dilate by irritating strongly the skin, or, better still, by uttering a loud cry close to the ear of the sleeper. On the other hand, Dr. B. W. Richardson (*British and Foreign Med.-Chir. Review*, January, 1875) has recorded the case of a middle-aged man who had dilatation of the pupils some hours after taking 240 grains of the drug in divided doses; and Dr. Cleveland lately stated, at a meeting of the Harveian Society, that dilatation of the pupils occurred in an otherwise exceptional case of poisoning by chloral hydrate, under his own observation.

"With reference, therefore, to the condition of the pupils in cases of poisoning by chloral hydrate, it must be admitted that contraction is the rule, and that dilatation is an altogether exceptional phenomenon during the hypnotism produced by this drug in the human subject. MM. Feltz and Ritter have observed dilatation of the pupils after the injection of chloral hydrate in poisonous and rapidly fatal doses into the veins of a dog. But the value of the clinical evidence adduced seems to be in no degree lessened or impaired by experimental observations on the effects produced by this or by other narcotics on any of the lower animals; and it is, moreover, well known that the effects produced by opium in causing contraction, and by belladonna in causing dilatation of the pupils in the human subject, are not in accordance with experimental observations on such of the lower animals as are physiologically capable of resisting the usually poisonous influence of these drugs.

"Yours, etc.,

"WILLIAM SEDGWICK.

"12 Park place, Upper Baker street."

(To be continued.)

TRUE CYST OF THE VOCAL CORD.

PARTIAL APHONIA—SPONTANEOUS RUPTURE—CURE—WITH REMARKS.

BY GEORGE M. LEFFERTS, M.D.,

CLINICAL PROFESSOR OF LARYNGOSCOPY AND DISEASES OF THE THROAT, COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK; CONSULTING LARYNGOSCOPIC SURGEON TO ST. LUKE'S HOSPITAL, ETC.

THE following case, aside from its rarity, is, I think, of diagnostic interest as suggesting the possibility, not to say probability, that others of similar character may, in default of a laryngoscopic examination, be readily mistaken for cases of so-called hysterical aphonia, and for the following reasons: the main and striking symptom in each affection is, without apparent cause, sudden loss and ultimately as sudden recovery of the voice. No other local symptoms of import present themselves aside from this one, and either affection may occur unexpectedly, in an otherwise to all appearances perfectly healthy individual; moreover, in the recorded instances of cyst of the vocal cord, the percentage is in favor of the female sex. It is not difficult—bearing these facts in mind—to see how readily they may be confounded, if rational signs alone be considered, and the evanescent character of the laryngeal tumor, probably rarely forcing the patient, on account of increasing vocal distress, to an early examination. No direct inspection of the larynx is considered necessary, and refuge is taken in that most comforting and convenient shelter in time of diagnostic doubt—hysteria—until the sudden restoration of voice in the previously aphonic patient dispels any lingering suspicions and apparently confirms one in his mistaken diagnosis.

I am willing to admit that this supposition, so far as it concerns diagnosis, is somewhat hypothetical, but at the same time the question that I raise has its practical bearing.

Mrs. X——, aged thirty years, consulted me November 18, 1880, at the request of her family physician, Dr. A. H. Campbell, on account of a marked hoarseness, which had very suddenly commenced three weeks previously, and without known exposure or direct cause. It caused her uneasiness, but no local distress; interfered, however, very materially with the singing voice and, not passing away under the influence of the ordinary remedies which had been employed, determined her and her physician to seek further advice.

In an otherwise perfectly normal larynx, one unusually free from all catarrhal inflammation, I found, upon laryngoscopic examination, a small, spindle-shaped, perfectly translucent, smooth, shining tumor, looking exactly like a clear glass bead or drop of clear mucus, situated upon the edge of the right vocal cord, or rather curling over it, if I may be allowed the expression, at the junction of the anterior

and middle thirds. The cyst was not larger than a good-sized pin's head, and suffered no alteration in shape or position during the physiological movements of the larynx. Its location accounted for the interference with vocalization, preventing, as it did, perfect approximation of the free edges of the vocal cords.

There being no question as to diagnosis, although this was my first experience with a cyst in this locality, I explained to the intelligent patient that two courses were open to her so far as treatment was concerned: first, to allow the removal of the little growth with appropriate laryngeal forceps (either by crushing it or tearing away its wall, or by using the pointed laryngeal lancet to incise it; in either case experience proves that the sac rarely refills); and second, to leave it undisturbed until it had attained a certain size, when it would spontaneously rupture and disappear; that such was the natural history of the affection, the time of the latter occurrence being indefinite, but that there was no danger to her in delay. My patient naturally chose the latter alternative, and, as the result proves, not unwisely. On December 14th she returned to inform me that on December 9th her voice, after having been continuously and even progressively hoarse since the date of her first visit to me, had suddenly cleared—in a moment, as she expressed it—and had since remained good. A careful examination of the larynx failed to detect the slightest evidence of the former existence of the cyst.

Remarks.—I have alluded to the rarity of recorded instances, and presumably, therefore, of cases of cyst of the vocal cords. Cyst of the epiglottis, on the contrary, though very infrequent, can hardly be considered extremely rare (in 100 cases of laryngeal growth tabulated by Mackenzie, 2 were cysts of the epiglottis, and in a series of 50 cases of my own, 4 were cysts, all in the same locality—the present case is not included in this category), and constitute the one form of the disease which is alone alluded to in even the most recent works on laryngology. Cysts of the epiglottis are not, then, to be confounded with cysts of the vocal cords. Of the latter, Sommerbrodt has published a report of four cases, three of which he operated upon (one refilling and requiring a second and successful operation), and alludes to five others in which the diagnosis was doubtful. Such cysts of the vocal cords have likewise been observed, recognized as such, and successfully treated, according to Heinze—even before Sommerbrodt's article awakened renewed attention to the subject—by Gibb, in 1863; Merkel, in 1866; Fauvel, in 1869; and again by the same operator in 1873, in the case of a child, aged fourteen. Finally, Tobold had, up to 1871, observed nine cases, and operated upon five. Further evidence of the infrequency of laryngeal cysts in general (including those of the epiglottis, laryngeal ventricle, and vocal cords) is afforded by a glance at the statistics of different operators of large experience. The figures embrace intralaryngeal growths of all varieties of pathological nature. Tobold, in 206 cases of "polypi" occurring between 1861 and 1874, met with 21 examples of cyst (see above), of which 9 were operated upon; Fauvel, in 300 cases observed between the years 1862 and 1875, treated only 2 (see above). Mackenzie, in a record of the published cases of all observers, up to the issue of his classical essay, numbering 189, finds but 5 cases of cyst (Gibb and Merkel, alluded to above, Durham, Bruns, Johnson); and, finally, in his own series of 100 cases also, but 2 (of the epiglottis).

These figures, taken from the most accessible sources at hand at the moment, and by no means including a vast number of cases of laryngeal polypi of varied nature which may be found scattered through medical literature, will serve the purposes of illustration for which they are quoted, and certainly seem to prove the statement already made, that cysts of the epiglottis are rare, while those of the vocal cords are comparatively seldom met with. Finally, the most recent contribution to the subject is a case reported by Cervesato, together with the statement, concurred in by Zawerthal and Massei, that the presence of glands in the mucous membrane covering the vocal cords having been proved by recent observations, the etiology and pathology of cysts of this region has been fully explained. Sommerbrodt does not fully concur in this view, and I believe that he is in accordance with the majority of observers when he states that no glands are found *upon* the normal vocal cord.

Waldeyer has shown, however, that muciparous glands are found *below* the true cords and in the mucous membrane, which often have one or two openings at or near the lower edge of the vocal cord. The invariable location of the cyst on the edge of the vocal cord (though it may subsequently extend by growth upon the upper surface) is thus explained—by simple occlusion of the gland-duct.

It may be interesting to state, in conclusion, that Sommerbrodt gives the following signs as diagnostic of the affection: first, a nodular or spindle-shaped thickening of the edge of the vocal cord of the same white tendinous color as that of the normal cord; and second, its soft consistency, which permits of its indentation by the laryngeal probe, with an elasticity which serves to quickly restore its contour when the pressure is removed. Heinze adds that the sudden veiling and as frequent rapid improvement of the voice constitute a valuable sign, which the frequent repetition of the process, as in his reported case, only serves to confirm; and I would modify the statements of both authors by claiming attention especially for the peculiar translucent appearance of these little growths, an appearance which alone serves to distinguish them from the other varieties of intra-laryngeal neoplasm. The difficulty which has been alluded to of diagnosticating, in certain instances and by rational signs alone, the affection under consideration from hysterical aphonia, will be simplified by remembering one of the main characteristics of functional aphonia, viz., that though the voluntary power of phonation is lost, the reflex function is not affected, for both cough and sneeze are accompanied by a distinct phonetic sound, a condition that manifestly cannot exist when the mechanical barrier offered by the interposition of a laryngeal growth of the glottis prevents perfect approximation of the vocal cords. The certainty of diagnosis afforded, however, by the use of the laryngeal mirror, renders a further consideration of rational signs superfluous.

GUY'S HOSPITAL.—Dr. Hilton Fagge and Mr. Davies-Colley (having promised to obey the nurses) have been elected respectively Physician and Surgeon to Guy's Hospital, in place of Dr. Habershon and Mr. Cooper Foster, resigned.

ANOTHER MEDICAL DIGNITARY.—Dr. Alverenga, of Madrid, has been appointed member of the Privy Council, with the dignities of a royal councillor.

NOTES ON DISLOCATIONS OF THE HIP.

By WILLIAM T. BULL, M.D.,

SURGEON TO THE CHAMBERS STREET AND ST. LUKE'S HOSPITALS, NEW YORK.

(A paper read at the meeting of the New York Surgical Society, January 12, 1881.)

THE following cases of dislocation at the hip-joint have come under my notice at the Chambers Street Hospital within the past five years. The chief interest which attaches to them is the method by which reduction was accomplished, and I shall limit myself to the consideration of this point. I should say in advance that I have been indebted wholly to Bigelow's monograph for the ideas which I have put into practice.

CASE I.—A mechanic, thirty-three years of age, while wrestling, was thrown forcibly to the ground and sustained a dislocation of the left femur, on the dorsum of the ilium, presenting all the characteristic signs of that injury. Twelve hours later ether was administered. The patient being laid on his back on the floor, the knee was flexed and the leg firmly held between my left forearm under the calf and my right hand over the ankle. The thigh was flexed on the abdomen and rotated slightly outward, then abducted and extended. The head of the femur could be felt to pass to the edge of the acetabulum with the first three motions, but resistance was met when extension was attempted. This was the case in two trials. A third effort, with a little lifting up of the limb just before extension was made, was successful.

CASE II.—A laborer, fifty-four years of age, was hit on the back by an iron girder of the elevated railroad, while he was bending forward to pick up something from the ground. He sustained a dorsal dislocation of the right hip. Six hours later, under ether, the patient being on the floor, reduction was accomplished in one effort by flexing the thigh in the adducted position in which it lay, rotating slightly inward, then abducting as far as the perpendicular, jerking it quickly upward.

CASE III.—A laborer, thirty-six years of age, jammed between the spiles of a pier by a ferry-boat, was brought to the hospital an hour later with a dorsal dislocation of the left femur. Ether was administered at once, the patient lying on the floor and the pelvis being steadied by an assistant, and the head of the bone was replaced in one effort, as in the preceding case.

CASE IV.—A deck-hand, thirty-three years of age, while sitting on the rail of a ferry-boat, was struck on the back by another boat, and his knee jammed against a post or the rail. The right hip suffered a dorsal dislocation. I saw the man four hours after the accident, and asked the house surgeon, Dr. Wilkin, to reduce it by the method which was successful in the two previous cases. His first manipulation succeeded, and reduction was completed in twelve minutes from the time the etherization was begun.

CASE V.—A workman, thirty-one years of age, fell in front of a street-car. His left knee was caught by the platform and he was pushed along in front of the car. The left femur was dislocated on the dorsum of the ilium. After two hours I tried to reduce it, under ether, by the method above mentioned. The head of the femur could be brought to the margin of the acetabulum easily, but resisted every effort to lift it into place. I then circumducted the limb to lacerate the capsule more, and repeated the manipulation in vain. Both Dr. Wright, the house surgeon, and myself then tried flexion, followed by circumduction outward and rotation outward, both with and without the "jerking up." These efforts were made both while the patient was on the floor and when on the operating-table. In the latter position the second manœuvre was then practised by Dr. Murray, the junior assistant surgeon. As the head of the bone reached the margin of the acetabulum and resistance to extension was felt, the thigh was rotated alternately inward and outward while being lifted, and it slipped into place. Half an hour was consumed in these attempts.

In one of these five cases of dorsal dislocation, reduction was accomplished by flexion, circumduction outward and rotation outward with a jerk upward. One case, the last mentioned, required the further manipulation of free circumduction (to lacerate opposing capsular or muscular fibres), and a sort of rocking motion of the head on the edge of the acetabulum, which probably enabled it to slip by some portion of the capsule which had not been ruptured. In both cases the lifting up was apparently necessary in order to restore the head of the bone. This method of reduction has been frequently employed. Bigelow, who terms it the "rotation" method, especially insists on the value of this "upward jerk," both in this method and that by simple traction; and all five cases testify to the correctness of his views. In the three cases which were so easily reduced, this "upward jerk" was the prominent feature of the manipulation after flexion had been made. The thigh was flexed as it lay in a position of adduction, and carried as far outward as the perpendicular; then, on lifting it up, the head of the bone glided into place. In a sixth case the head of the bone could be felt lower down on the dorsum (in the sciatic notch).

CASE VI.—A sailor, thirty-four years of age, was jammed between two piles by a ferry-boat, while defecating. He was brought to the hospital immediately. The right limb was shortened one-half inch, the thigh lightly flexed, adducted and rotated inward, the knee resting on the opposite one. Two efforts were made by flexion, adduction, and lifting up, but the head of the bone slid into the thyroid foramen before it was lifted. On a third effort great care was taken not to carry the limb beyond the perpendicular, and it was easily jerked into place. This case illustrates the fact noticed by several writers, that carrying the thigh too far outward in reducing the dorsal dislocation is apt to produce a thyroid dislocation.

In all these cases the after-treatment was the same. A thick layer of cotton was bound firmly about the hip with a spica-bandage, which was changed twice a day. After a week or ten days, according to the amount of tenderness, massage was practised twice a day. At the end of two or two and a half weeks movements were permitted, at first on crutches, which were laid aside at the close of the third or fourth week. No impairment of the functions of the joint followed in either case.

CASE VII.—An instance of dislocation toward the perineum, with fracture of the great trochanter, occurred in a man who died after three days, from fracture of the base of the skull. A muscular workman, thirty-seven years of age, fell from the track of the elevated railroad to the ground. The precise manner in which his injuries were received could not be ascertained. He had a severe scalp wound on the top of the head, much contusion over the left hip, a superficial wound on the outer side of the left leg, just below the knee, and was greatly prostrated. The left thigh was rotated outward and lying on its

outer side, slightly flexed, so as to raise the knee about two inches from the bed, and so much abducted as to occupy almost a right angle to the median line. The knee was flexed, the foot reaching nearly to the opposite knee. The trochanter was much depressed, could barely be felt through the soft parts, but appeared to move with the shaft of the femur. A firm, hard prominence could be detected beneath the muscles to the outside of the ramus of the pubes and ischium, and about midway between the symphysis and tuberosity. It was proved to be the head of the bone on displacing it slightly by moving the knee up and down. Two hours later the patient was conscious, with a good pulse and regular respiration, but restless. He was put under ether, placed on a table, with the pelvis resting on its edge and grasped by an assistant. A number of efforts were made to reduce the dislocation by flexion and circumduction inward, lifting up, and then extension. The head of the bone moved readily to beneath the acetabulum and back to its original position. Finally, in trying to depress the knee (extension), or to pry the head of the bone upward while it was steadied by the Y-ligament, it was reduced. This manœuvre was repeated several times with both inward and outward rotation before it succeeded, and I am unable to say in which direction it was rotated at the moment of sliding into place. It was then found that the trochanter was movable, with bony crepitus, when it was grasped and pushed backward and forward, and a fracture through it, in a vertical direction, was diagnosticated. A few hours later the man regained consciousness, and was less restless, but gradually relapsed into a condition of coma, and died on the third day. The cause of death was found in a fracture extending across the posterior fossa of the base of the skull, with extensive laceration of the frontal and sphenoidal lobes of the cerebrum. The left hip exhibited, externally, merely a slight ecchymosis over the trochanter major. Extravasated blood was found in the subcutaneous tissue of the groin and about the trochanter, and an extensive clot under the fascia lata, between the rectus and the cruræus muscles. After dividing the sartorius, rectus, tensor vaginæ femoris, adductor longus and pectineus, extravasated blood was found between the pectineus and psoas, and the contiguous fibres of the latter muscles were lacerated, and through the rent the head of the bone could be felt. The psoas and iliacus and adductor brevis were next divided, and the capsule of the joint found lacerated beneath them. Under the glutæus was more extravasated blood, but the glutæus medius and its underlying muscles were uninjured. It was then seen that the trochanter major was fractured through a plane running from the junction of the neck and trochanter almost vertically downward to the inferior border of the trochanter. The portion of bone thus separated included the attachment of the glutæus medius and minimus, the pyriformis, obturator internus and gemelli, and obturator externus, and the greater part of outer branch of the Y-ligament. The periosteum, strengthened by the aponeuroses of insertion of the muscles, held this fragment so firmly that only a slight antero-posterior motion, with separation of the fractured surfaces to the extent of one-eighth of an inch, was possible. On flexing the thigh and circumducting it outward, the head of the femur came through the rent in the capsule and through the upper fibres of the obturator externus muscle, till it reached the innermost edge of the thyroid foramen, overlapping the descending ramus of the pubes, a portion of its circumference touching the horizontal ramus. The ruptured ligamentum teres pointed directly upward, and the thigh assumed the position in which it was first seen, abducted to a right angle, slightly flexed, and rotated outward. The manipulation which accomplished reduction before death, was repeated; but it was found that, after bringing the head of the bone to the lower edge of the acetabulum—that is, after flexion and circumduction inward had been made, and while the thigh was held flexed nearly vertically upward—it was easily replaced by pushing it from below upward and outward. [This manœuvre at the time of reduction, attempted by either drawing on the thigh by a towel or loop of bandage, or by having an assistant push or pull on it, would have undoubtedly hastened the process, since the separation by fracture of the portion of bone to which the obturator internus and outer branch of the Y-ligament are inserted, rendered these structures less effective than usual in the effort to pry the head over the edge of the cavity.] The uppermost fibres of the obturator externus were torn through and separated from their attachment to the obturator membrane. After dividing all the muscles, it was found that the rent in the capsule started from its attachment to the edge of the acetabulum, half an inch inside of the anterior inferior spine of the ilium, and passed along the brim of the acetabulum to just beyond the trochanter minor. The Y-ligament was intact, also the acetabulum, but the fatty tissue at its bottom was infiltrated with blood.

I was able to secure the femur only, which I present for your inspection. It seems to me rational to conclude that the trochanter was torn off at the moment of displacement by the traction on its muscular and ligamentous attachments.

A SUCCESSFUL CASE OF TRANSPLANTATION OF SKIN ACCORDING TO WOLFE'S METHOD.

By EDWARD T. ELY, M.D.,

NEW YORK.

It seems desirable to record the successful results of skin-grafting according to Wolfe's method, and I can add one to those already reported by Wolfe, Wadsworth, Noyes, Matthewson, Howe, Zehender, and Aub.

My patient was a man aged fifty, whose face and eyes had been burned in a powder explosion. The right eye was lost. In the left eye the lower conjunctival cul-de-sac was obliterated, and the lower eyelid (which was cicatricial) was adherent to the globe so as to cover most of the cornea. Through the narrow strip of cornea which remained free the patient had good perception of light when the pupil was dilated with atropine.

On September 30, 1880, the lid was separated from the globe, so as to restore the normal space. A piece of skin a little more than an inch long and three-fourths of an inch wide was taken from the patient's forearm. It was applied to the raw, inner surface of the lid, and a few sutures were used to aid in keeping it in place. The dressing was cotton and a bandage. The graft united by first intention along the edge of the lid, and no sloughing occurred, except of a small point at one end. A thin superficial pellicle was exfoliated from the entire outer surface. The sutures were removed October 5th and 6th. I was unable to prevent the lower edge of the

graft from being gradually crowded upward in the subsequent cicatrization, so that the final result was to enlarge the exposed portion of cornea by only a small area, and this has never become clear enough to be of much use. The patient's eye is more comfortable, but he has not vision enough to go about alone. An upward iridectomy may improve it. But, so far as the vitality of the graft was concerned, the success was very gratifying. No antiseptic precautions were used, and in holding the skin over the end of my finger to scrape off the fat and cellular tissue, it was rather roughly handled, and dropped twice upon the floor.

I have employed this method once in operating for ectropion, and the graft (which was larger than the one described above) sloughed almost entirely. The patient was a very young boy, who could not be kept quiet or be prevented from crying after the operation.

In the case of a woman with symblepharon in Charity Hospital, I operated by transplanting a piece of conjunctiva, about half an inch square, from a man's eye affected with panophthalmitis. The graft lived. I thought that the hyperæmic condition of the transplanted conjunctiva was perhaps a favorable influence. The result for the symblepharon was only partially successful.

Progress of Medical Science.

The Physiological Action of the Active Principle of Piscidia Erythrina (Jamaica Dogwood).—Dr. Isaac Ott has undertaken a series of experiments with the active principle of Jamaica dogwood, which demonstrate the narcotic properties of this drug (*Archives of Medicine*, February, 1881). The following are his conclusions: 1, piscidia is a narcotic; 2, it does not paralyze or excite the motor nerves; 3, it does not act on the extremities of the sensory nerves, but their central connection—the sensory ganglia of the spinal cord; 4, it produces convulsions, partly by stimulation of the spinal cord and partly by heightened excitability of the voluntary striated muscles; 5, it reduces the frequency of the pulse by an action on the heart itself, probably on its muscular structure; 6, the arterial tension temporarily rises by stimulation of the vaso-motor centre—soon, however, it falls, which is due to a partial paralysis of the centre and of the heart itself; 7, it at first contracts and then dilates the pupil.

The Physiological Action of Conium Maculatum.—At a recent meeting of the Académie des Sciences (*Bull. général de Thérap.*, p. 365, 1880), M. Bouchefontaine alluded to the fact that in 1878 he had, in connection with M. Tiryakian, presented a paper on conium maculatum which went to show that hemlock owes its properties to two active principles—one, conine or cicutine, paralyzing the central nervous system, the other acting like curara. In 1879 M. Prévost, of Geneva, presented a note to the academy, in which he considered the bromhydrate of cicutine as a paralyzer of the motor nerves.

Bouchefontaine, by recent experiments, has satisfied himself that conine diminishes or abolishes the physiological properties of the nervous centres before acting, like curara, on the nervo-muscular cement substance (*substance jonctive*). On the dog and frog this alkaloid always ends by abolishing the nervous excito-mobility, provided it be given in sufficient quantity; but it is then fatal to batrachians and mammals. Its action is therefore different from that of curara. The effects of the bromhydrates extracted from hemlock in a crystallized condition are as follows:

They are to be divided into two groups: one is composed of amber-colored crystals, is more toxic than the other, acts like conine, and represents the most active principle of hemlock; the other variety of crystals, which are less poisonous, are colorless or of a pearly lustre, and resemble those obtained by Prévost. They act differently, however. As to the comparative action of hemlock and curara it may be formulated thus: hemlock may act like curara, but it produces, in addition, certain physiological effects not observed in animals to whom curara has been administered.—*Philadelphia Medical Times*, January 15, 1881.

The Communicability of Secondary Syphilis.—In a paper read at the St. Louis Medical Society Dr. Maughs (*St. Louis Medical and Surgical Journal*, January, 1881) elaborately discussed certain points relating to the pathology of syphilis. His views are in direct opposition to those entertained by the Hunter-Ricordian school of syphilographers and held by the majority of the profession. Maughs thinks that, 1, secondary syphilis is communicable as secondary syphilis; 2, that the accidents of secondary syphilis may be transmitted from a diseased to a sound person by contact of the secretions, without abrasion or lesions of surface, and, as a law, such accidents are transmitted in kind; 3, that when lesions do exist at the point of contact, such lesions are not chancres.

Syphilis as a Cause of Locomotor Ataxy.—In 1878, in a paper read at the Bath meeting of the British Medical Association, Dr. Gowers expressed the opinion that syphilis must be regarded as a cause of locomotor ataxy in one-half of the cases of that disease. Since then the subject has received much attention at the hands of Erb, Westphal, Remak, and others. In the *Lancet*, January 15, 1881, Dr. Gowers offers thirty-three cases of the disease in men as some evidence in support of his assertion, made in 1878. Of this number twenty-three (about seventy per cent.) had suffered either from a primary sore or secondary symptoms, and in fifty-three per cent. there had been undoubted constitutional symptoms, of which, in several, the indications were still present. The significance of these facts depends on the proportion of the male population of the county who have had primary sores, or constitutional syphilis. Before assuming a causal relationship in these cases between the antecedent venereal disease and the subsequent locomotor ataxy, we ought to deduct from the coincidences that proportion which the prevalence of venereal disease may have rendered accidental. Unfortunately, we have not the necessary information, but it is probable that the proportion of adult males, over twenty-five, who have had venereal sores, or symptoms of constitutional syphilis, is much smaller among the middle classes than among the poor. It is therefore of interest to inquire whether syphilis precedes ataxy with equal frequency in the two classes. Of the thirty-three cases, twenty-one were seen in hospital practice, and twelve in private. Of the former there was a history of constitutional syphilis in ten, and of a venereal sore alone in five, making a total of two-thirds of the hospital cases. Of the twelve cases seen in private, there was a history of secondary syphilis in eight, and of a venereal

sore alone in one, a total of three-fourths of the cases. These facts suggest that syphilis is an antecedent of ataxy, at least as frequently in the well-to-do classes as among the poor.

As a rule, the interval between the syphilis and the first symptom of the ataxy is considerable. It was noted by Erb in only seventeen cases. In five it was between two and five years; in eight between six and ten; in four between eleven and fourteen. In Gowers's cases the exact interval was, as a rule, longer than in Erb's cases. No case of simple tabes was met with earlier than seven years after infection, the actual numbers being: at seven years, one; at nine, three; at ten, two; at thirteen, three; at fourteen, two; at fifteen, one; at seventeen, one; at twenty, three; at twenty-one, one; at twenty-five, one. Thus two-thirds of the cases occurred more than ten years after the primary disease.

Treatment of Sprains by Massage.—Dr. Berenger-Ferand (*L'Union méd. du Canada*) has treated successfully some four hundred sprains with massage. His method consists of gently manipulating the injured part (the foot for instance), beginning at the toes and making passes as lightly as possible, with the pulp of the four last fingers, anointed from time to time with olive oil, on the dorsal surface of the foot, going from the root of the toes to the leg, following the direction of the extensor tendons. These frictions, which ought always to be directed from the extremity toward the root of the limb, and never in a contrary direction, are to be very gentle. They begin quite far above the painful part, and are prolonged as far below. They ought not to be painful, and in the cases in which, in spite of their gentleness, the subject finds them too painful, it would be necessary to begin at some remoter region. Little by little the pressure is augmented, and after some time, which varies from one to five minutes, friction may be applied with greater and greater force, and soon strong pressure no longer provokes pain. A *seance* ought to continue until all feeling of distress and pain have disappeared. When the operation is once terminated a retentive apparatus is applied.—*Monthly Review of Medicine and Pharmacy*, January, 1881.

The Radical Cure of Varicocele.—Dr. Henry Lee read a paper before the Royal Medical and Chirurgical Society (*British Medical Journal*, January 22, 1881) on this subject. The operation advocated was that of removing a portion of the anterior skin of the scrotum, and subsequently dividing the veins which were to be obliterated. All the steps of the operation were conducted through the wound made by the removal of the skin. The veins were compressed temporarily so as to prevent hemorrhage, and then divided. The cut orifices of the veins were sealed with the black, hot cautery which, if of proper temperature, was allowed to adhere to them for five or six seconds. The ligatures and needles used in compression were then removed, and the edges of the skin brought into apposition from below upward by carbolized sutures. Union by first intention took place more or less perfectly, and the patient was allowed to follow his usual avocation in three or four days. The risk of septic poisoning was obviated by the use of the actual cautery, which closed with the veins and the arteries, though the latter often required to be pulled out that the cautery might reach them. He had never seen sloughing in his cases; there was no difficulty in healing the wound of the scrotum.

The Tuberculosis due to the Inoculation of Indifferent Substances.—In a communication to the *Société de Biologie*, some time since, M. Martin claimed that the histological structure of tubercle nodules was devoid of special significance, since inoculation with indifferent foreign bodies produces the same anatomical lesions as those obtained with tuberculous matter. The pseudo-tubercular eruptions thus produced, in no way differ in their anatomical arrangement from the bodies held to be characteristic of genuine tuberculosis.

M. Martin then sought to determine whether or not the tubercles produced by the inoculation of tubercular matter differed in other respects from those following ordinary inoculations. He found that the tubercles of tuberculosis possessed the property of infection, whereas the pseudo-tubercles lacked this quality (*Gaz. méd. de Paris*, January 22, 1881).

It was ascertained that in a series of consecutive inoculations on different animals the infective properties of the original tuberculous matter became more and more active. In this respect it resembles the virus of septic processes, which Davaine has ascertained to acquire additional virulence with every repetition of inoculation on a new animal. The tubercles of indifferent substances acted in an entirely different manner. No matter how much of such material was employed, the lesions produced were merely local in extent. This was invariably observed. In no case did any tendency to generalization manifest itself, and not even the neighboring vessels and lymph-glands became inflamed or showed tubercular changes.

The non-infectious nature of pseudo-tubercles was best shown by attempting serial inoculations. The second animal subjected to inoculation from the pseudo-tubercular matter of the first, showed scarcely a local lesion, and the third showed no effects at all. It appears, therefore, that in addition to the true or infecting tubercle, there exists a second kind of granulum, anatomically identical with the former, but totally devoid of all specific properties.

Certainly this is another important contribution to our knowledge of general pathology, and it seems to corroborate Cohnheim's previous assertions concerning the infectious qualities of tuberculosis. Martin is apparently ignorant of the work of Cohnheim, but this makes his results and conclusions all the more valuable, because they were evidently obtained independently of the German pathologist.

Inflammation of the Lachrymal Gland.—From a study on inflammatory processes involving the glandula lacrymalis, D. Galezowski (*Recueil d'ophthalmologie*, February, 1881) draws the following conclusions: 1st, inflammation of the lachrymal gland is a very rare affection, but when it occurs it has almost the character of an epidemic; 2d, the most characteristic symptoms of the disease are swelling at the border of the lid and partial chemosis at the extreme angle, tumefaction at the cul-de-sac, engorgement of the lymphatic glands of the parotid region, and peri-orbital neuralgia; 3d, antiphlogistic treatment, scarifications where chemosis exists, in conjunction with preparations of iodine, are amply sufficient to establish a cure and prevent complications from participation of the eyeball in the inflammation.

An International Congress of Electricians is to be convened at Paris.

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GEORGE F. SHRADY, A.M., M.D., Editor.

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THE JEOPARDY OF SCHOOL CHILDREN.

THE deplorable unsanitary condition of Grammar School No. 17 of this city has at last awakened public attention. For a long time sewer-gas has found its way into the classrooms, and teachers and children have been sickened in consequence. The condition of affairs to which we refer was duly reported to the Board of Education two years ago, but in consequence of a method of procrastination peculiar to that body when sanitary reforms are to be considered, nothing has been done. Now, however, that the amount of sickness in the school is so great, and, on the general principle that "the last straw breaks the camel's back," even the Committee on Buildings are beginning to unwind some of the red tape that has for so long a time hindered the necessary repairs to the building. Of course no one is to blame save the poor children who get sick. The Board of Education, with its various committees, the inspectors, the trustees, and other school officials, make up a ring, of the responsibility of which there is no beginning or end.

The *New York Herald*, which has been tireless in its efforts to bring about reform in the sanitary management of our schools, thus tersely and truthfully describes the present disgraceful condition of affairs:

"It is true that those class-rooms are the habitation of four thousand children and their teachers six hours a day, and five days in a week; it is true that several teachers have been prostrated and that the children have suffered to an indefinite extent from these gases; it is true that this condition of affairs was understood by the Board of Education and the ward trustees two years ago; true that a contract for making the necessary improvements was prepared at the time; true that it was never executed; true that the Board of Education again 'has the subject under consideration.' But it is equally true, as was originally asserted, that Grammar School No. 17 is a long way off from repair. When the Board of Education 'has a subject under consideration' it means that at some future period of time, after this committee shall have consulted with that committee, and that committee has reported to the Board of Trustees, and the Board of Trustees have communicated with the Board of Education, then the party of no part —*i.e.*, the Board of Education—will authorize somebody to do something—always provided, in the meantime, that nothing has transpired to interfere with the evolutions of the official tape. If any of the four thousand children or their teachers are physically unable to await the consummation of these decent and orderly proceedings, so much the worse for them."

And yet all this culpable inactivity exists with our school board in the face of the oft-repeated assertion on their part, that there is no need for sanitary inspection of our schools, that the school committees are competent to attend to the health of the children, and that the class-rooms are in good sanitary condition. We have repeatedly shown that this has not been the case; that the schools are, as a rule, in bad sanitary condition, in that they are overcrowded, improperly heated, badly ventilated, deficient in light, and very often permeated by the foul and noxious gases of the sewers. There are other schools than No. 17 that demand attention. In fact, it will be difficult to find a single class-room which does not need the visit of a sanitary inspector.

Although on one hand it is deplorable that so many children and teachers should suffer from the neglect of school officials, it is a matter of congratulation that they have suffered in a good cause; that by such widespread sickness public attention has been aroused, and that at last the necessary steps may be taken to remedy the evils.

In the meantime, however, the school should be closed; nor should it be reopened until a thorough inspection is made by the Health Board, and a suitable guarantee that all the defects in sewerage have been permanently and effectively remedied. While this is being done, let the Health Board send its inspectors into other schools, and learn how many matters pertaining to the health of the scholars require immediate attention and prompt action. It does not appear that relief can come from any other quarter. If anything has been demonstrated in the recent discussions concerning school hygiene, it is that the Board of Education is not only incompetent to deal with the great question, but culpably obstructive regarding the efforts of all others who have the health of the school children at heart. Year after year bills have been introduced into the Legislature for the sanitary improvement of the schools. These bills have been repeatedly defeated by the efforts of members of the Board of Education. This board has time and again solemnly declared that it could easily attend to health matters connected with the schools, and this is one of the ways in which it does it.

HEAT-PRODUCTION AND THE THEORY OF FEVER.

The existence or not of an inhibitory thermic centre is a matter which has more of physiological than of practical interest. Such is not the case, however, with the question whether there is increased heat-production in fever, and of the relation of this heat-production to its dissipation; for the solution of this problem has a most important bearing on the treatment of febrile conditions. It has been asserted by Liebermeister and Leyden that there is increased heat-production in fevers, and that this causes the rise in temperature. Traube, on the other hand, contends that heat-retention is the great factor. Certain American observers, Walton and Witherle, showed very ingeniously the errors in Liebermeister's experiments, and deduced the conclusions that heat-retention was certainly a prominent factor in the febrile rise of temperature. Dr. Wood, by a large number of experiments, confirmed and greatly elaborated this latter view. He induced septic fevers in dogs and rabbits. He then measured their heat-production upon various diets, and when starving. The heat-production was also measured in healthy dogs, both when on a rich animal diet and when fasting. It was found that a dog on a low diet produced more heat when in a fever than when its temperature was normal, the diet being the same. But the amount of heat produced in fever on a low diet was generally less than that produced in health on a rich diet of animal food. These conclusions are corroborated by evidence obtained in another way. An approximate estimate of the amount of heat produced in the body can be obtained by comparing the heat-value of the food ingested with its chief ultimate products—urea, carbolic acid, and water. This mean heat-production, in a man of average size, living on an adequate diet, is two thousand two hundred kilogram units (Ranke). Now, further calculations of the heat production, under various conditions, show that in fever, on a low diet, it averages less than the above amount, though it is more than the heat-production in health on this same low diet. These studies also seem to prove that in fever the overplus of heat is produced chiefly by a consumption of the tissues, *i.e.*, of tissue-albumin, especially the protoplasm of muscle and blood-corpuscle. On the other hand, the overplus heat produced in health by large amounts of animal food comes from a consumption of this excessive food, after it has been turned into the albuminous constituents of the blood-corpuscle and plasma (forming "store-albumin"). There appears to be a tissue-heat and a food-heat, the former rising in fever, the latter in health, under a rich diet.

Both deductive reasonings, based on the heat-value of food and direct experiment, lead them to this conclusion, which Dr. Wood believes to be demonstrated for dogs, and practically assured for man:

"Fever is a complex nutritive disturbance, in which there is an excessive production of such portion of the bodily heat as is derived from chemical movements in the accumulated material of the organism, the overplus being sometimes less, sometimes more, than the loss of heat-production resulting from abstinence from food. The degree of bodily temperature in fever depends, in greater or less measure, upon a disturbance in the natural play between the functions of heat production and heat-dissipation, and is not an accurate measure of the intensity of increased chemical movements of the tissues."

According to this, of course, the temperature may be normal, although an increased tissue-metamorphosis is going on. On the other hand, there may be a high temperature when the heat-production is actually less than normal. Any practical inferences from these propositions must as yet be made with caution. It is probably true that increased heat-retention (by a tetanus of the peripheral blood-vessels?) will cause increase of heat-production and a rise of temperature. On the other hand, the use of cold baths to dissipate heat will often cause an increase in its production.

The antipyretic effect of quinine, the salicylicates, alcohol, and similar drugs, act, most likely, by lessening tissue-metamorphosis, and, consequently, tissue-heat. But agents of this kind affect only one of the factors in producing temperature-rise. Plainly, there are not yet enough data to lay down the ideal antipyretic treatment. But the use of quinine or some similar drug, and of cool or tepid spongings, or wet coverings, is most in accordance with our present knowledge of the mechanism of heat-production.

The concluding portion of Dr. Wood's work is devoted to demonstrating what his previous experiments had led up to—the neurotic origin of fever. The genesis of septic fever very well illustrates this theory. Septic fever is produced by a poison circulating in the blood and acting upon the nervous centres. It is demonstrated that in septic fever the elevation of temperature is brought about almost entirely by the retention of heat. This retention can only be produced through the intervention of the nervous system, no conceivable influence of the poisoned blood upon the general protoplasm being able to cause the superficial capillary contraction to which this retention must be in a measure due. The fever of septicæmia must, therefore, be neurotic in origin. Stated more fully, the theory of the origin of fever is this: a poison circulating in the blood depresses or benumbs the inhibitory thermic centre, and consequently tissue-change and heat-production are increased. At the same time the vaso-motor centres are so affected that they do not provide for the normal dissipation of heat, and the temperature consequently rises. In some cases of sudden and

excessive fever, as in one form of the so-called cerebral rheumatism, the enormous and almost instantaneous rise of temperature appears to be due to a complete paralysis of the nervous centres presiding over heat-production and heat-dissipation.

The above is stated as a "theory of fever." A simple recital of deductions, however, can hardly do justice to what has been made by Dr. Wood's laborious experiments much more than a plausible hypothesis.

HUNTER'S POINT NUISANCE.

The Sanitary Committee of the State Board of Health have been busy for some time past in investigating the Hunter's Point nuisance. Much testimony has been accumulated tending to prove that Hunter's Point is accountable for the noxious vapors that so frequently pervade the atmosphere of Murray Hill. It seems almost ludicrous to believe it necessary to take testimony on this point. There is no difficulty in obtaining the necessary facts. The trouble will be in abating the nuisance. The Hunter's Point stench propagators are influential in many ways, and have thus far been able to evade every law created for their suppression. The State Board of Health has an opportunity now offered to it of abating the nuisance, and thus proving its usefulness. Let us hope that good will come of its present effort. The nuisance in question is just one of those which come under the jurisdiction of the State Board. If the latter is incapable of suppressing it, the people will have to content themselves by falling back on the good promises of the Health Board of the city, which, judging from past experiences, will be equivalent to giving up in despair.

BELLEVUE HOSPITAL MEDICAL COLLEGE.

Several weeks ago the Faculty of Bellevue Hospital Medical College assembled its students together and announced that the plan of having a three years' course would be abandoned. It was with great regret, they said, that a project which had been so long and widely advertised was abandoned, but the number of new students since last fall was only fifty, and at that rate of decrease the college would be unable to sustain itself. The faculty having made this sad announcement, retired—which was decidedly the best thing they could do. We now have, therefore, in all the colleges of this city, except the Woman's, the old-fashioned two years' course again.

There are very few who will learn of this relapse of the Bellevue College without feeling a keen regret, and perhaps some contempt at the performance. For it is certainly a discouraging check to the cause of educational reform. And even the friends of the college cannot be proud of an institution which, having "put its hand to the plough," has so suddenly and ignominiously turned back.

When it was decided by the faculty to introduce a three years' graded course into the college, we still remember with what firmness the plan was announced, and with what moral intrepidity it was asserted that the cost had been counted and that no discouragements could interfere with the execution of a project that would be of so much value to the American medical student. Yet before the first term of trial is two-thirds out, this beautiful conception is given up. It attracted the imagination, but not the students. By this course the college has unquestionably injured its reputation and lessened the respect which will be felt for it. It may claim that the profession did not support it, and that the other schools only gloated over its diminished numbers. Such cannot be taken as an excuse for the course taken. Considering the "generous rivalry" for large classes, this feeling should have been duly anticipated and bravely met. The plan should either not have been tried at all, or it should have been adhered to for a longer time. To have given in at the end of a paltry three months is simply contemptible. It will now appear to all that the learned but cautious faculty became badly frightened, and, being very weak of knee, they skipped back with rapid steps into their old courses. Toll the bell then for another "good intention" gone, for another lofty purpose shrivelled in an unthrifty soil. Write as its epitaph that Bellevue tried to be better than its neighbors, but it lacked the stamina and returned from a moral to a commercial basis, leaving behind its high resolves. Learn from its action that money seemed better than educational elevation, and students than medical reform.

The outlook for medical education is at present very discouraging—in this city at least. There is hope, we are told, in the West. New York, though still a great medical centre, and a place unrivalled in its advantages for studying medicine, is so to a large extent in spite of the medical colleges rather than because of them.

A BILL TO PREVENT THE ADULTERATION OF FOOD OR DRUGS.

Last October the National Board of Trade, in accordance with a previous advertisement, gave three prizes for the three best acts, accompanied by essays, designed to prevent injurious adulteration of food and drugs. A committee of this same board has now drawn up a bill based on those furnished by the prize essayists. This bill has been forwarded to Congress with a memorial praying for its passage. Its provisions are simple and deserve attention. Regulations preventing the importation of adulterated food or drugs are first made. In order to keep the country in general free from adulterations, certain special inspectors and public analysts are to be appointed by the Secretary of the Treasury from names submitted to him by the National Board of Health. Through the agency of these or other officers, the

National Board of Health is to make examinations of specimens of food and drugs collected in different parts of the country, and publish the results in its weekly *Bulletin*. If from the result of these examinations it is found that the law has been violated, the secretary of the board is at once to notify the proper United States District Attorney, who will institute proceedings against the offending parties. To prevent this law falling too severely in any case, the National Board of Health is authorized to publish from time to time a list of articles, mixtures, or compounds, declared to be exempt from the provisions of this act.

Reviews and Notices of Books.

Die Operative Gynäkologie mit Einschluss der Gynäkologischen Untersuchungslehre. Von Dr. A. Hegar, Prof. der Geburtshülfe, etc., und Dr. R. Kaltenbach, Prof. extr. für Gynäkologie an der Universität zu Freiburg i. B. Zweite Auflage. I. Hälfte. Mit 134 in den Text gedr. Holzschnitten. Stuttgart: F. Enke, 1881.

Operative Gynecology. By Profs. Hegar and Kaltenbach. Second edition. Part I.

The first edition of this work appeared in 1874, and rapidly established itself in Germany as a standard treatise on operations upon the genital organs of women. In fact, so large and comprehensive a work, specially devoted to this department of surgery, had not hitherto appeared in any language. The student or practitioner was obliged to glean his information from the ordinary text-books on diseases of women; and often the surgeon had to lose time in finding, among a mass of general information, the special directions needed for a particular operation. Hegar's book has, however, not been translated into English, and if we are not mistaken, is little known even to American specialists.

We have before us the much amplified first half of the second edition, and, as the reader can judge from the indication of the contents about to be given, in its present form the work will probably furnish the most complete exhibition of the various minor and major gynecological operations of any book on diseases of women, even including the excellent treatises of Thomas and Emmet. Of course, the present volume can in no sense replace such works, but it can justly maintain its position by their side. It may supplement, by a full account of technical details, whatever could find no place in other manuals, and, by systematically combining the scattered information found in the various monographs and journal articles, present a harmonious picture of gynecological surgery in its present advanced condition.

Indeed, this has been the aim of the authors, although it is not distinctly stated, there being no preface to the book. Of course, this manual can hardly be said to be suitable for beginners; but the specialist will scarcely wish to do without it, and quite particularly the American gynecologist, if he cares to obtain a very good idea of the status of his science as it obtains in Germany.

The first portion of the work deals with preliminaries, containing a complete account of the methods and objects of gynecological examinations. The authors prefer hard-rubber uterine bougies to spongetents, etc., for effecting the dilatation of the cervical canal. The different kinds of douches and injections, then the various pessaries, modes of practising tamponade, of cauterizing, of bandaging the abdomen, and similar every-day manipulations, are fully described. Artificial insemination is explained in a separate section; similarly uterine and general massage. Wound-treatment, and, as a matter of course in a German book, antisepsis, come next. The authors are not blindly enthusiastic advocates of the Lister method, and they consider the spray a dangerous rather than a beneficial precaution in all laparotomies (p. 193). The subject of ovariotomy is then fully exposed, and this section alone embraces 118 of the entire number of 386 pages.

Ovarian hernia is next considered from a surgical point of view, and then comes the topic of "castration," preferably called "oöphorectomy" or Battey's operation. Hegar wrote an exhaustive monograph on this subject, and he is therefore particularly well qualified to speak of its merits or demerits; for he alone has performed fifty such operations, with only seven deaths. The recorded cases of all other surgeons amount to 76, with 17 deaths. Thus, Hegar's mortality percentage was 14, while the conjoined average of all others amounted to 22.37 per cent. Hegar formulates precise indications and contraindications for oöphorectomy, and altogether it must be said that he has fairly weighed the pros and cons, the result being that he pronounces the operation safe, reasonable, and altogether desirable in certain well-marked cases of ovarian disease. This portion of the book closes the volume, and, though it is an exceedingly interesting subject, we must take leave of it here, hoping soon to see the work completed, with a second half as complete and excellent as its first.

A Practical Treatise on the Surgical and Medical Uses of Electricity, Including Localized and General Faradization; Localized and Central Galvanization; Electrolysis and Galvano-Cautery. By Drs. Geo. M. Beard and A. D. Rockwell. Third edition. Revised by A. D. Rockwell, M.D. With nearly two hundred illustrations. 8vo, pp. 758. New York: William Wood & Co. 1881.

This work has already established itself as a standard treatise on electricity, with special reference to the wants of medical men. The present edition, while not materially differing from the former ones, has nevertheless been improved in several respects. It has been the aim of Dr. Rockwell to condense wherever practicable, and the result has been to give much more information than was found in the previous issues, without any considerable increase in the bulk of the volume. We find that two valuable chapters have been added to the work, one on the sequelæ of acute diseases, and the second on exophthalmic goitre. It would appear from a consideration of the cases of Graves' disease cited in the volume, that general faradization may greatly benefit patients afflicted with this malady.

Other additions have also been made to the work, then the chapter on diseases of women has been amplified by the enumeration of interesting clinical points, and a satisfactory discussion of extra-uterine pregnancy from the standpoint of the electrologist. Taken all in all the book in its new shape will form a valuable addition to the library of the general practitioner, while it is almost indispensable to the physician who needs a competent guide to direct his electro-therapeutic manipulations.

A Treatise on Albuminuria. By W. Howship Dickinson, M.D., Cantab., F.R.C.P., etc. Second edition. Wood's Library of Standard Medical Authors. New York: Wm. Wood & Co. 8vo, pp. 300. January, 1881.

The present work is one of three written by the author upon "Diseases of the Kidneys and Urinary Derangements." It is intended to be a complete treatise upon albuminuria, or at least renal albuminuria. There are nineteen chapters all told, and they embrace a comprehensive account of the pathology, symptoms, and treatment of the various renal diseases associated with the presence of albumen in the urine. A special chapter is devoted to alcohol as a cause of diseases of the kidneys. The last chapter of the volume gives an interesting description of climate in relation to renal disease.

This second issue of Dickinson's works has been amplified by numerous additions to the text, and the insertion of many illustrations, some of which are quite good. The colored plate representing a pair of granular kidneys, does not give a very good idea of the characteristic appearance of this renal lesion. Scattered through the pages of the book numerous clinical histories, illustrating more or less typical cases of kidney trouble are found, and they give to this volume the character of an eminently practical treatise.

Recent literature is, however, not duly recognized, and as important contributions to the subject of albuminuria have been made within the past few years, the book is not fully up to the ideal of a modern treatise on renal diseases. Nevertheless it will repay a perusal of its pages, and as the leading views on treatment remain much the same as they were found a few years ago, the parts of greatest interest to the practitioner will be found useful, suggestive, and satisfactory.

The Bacteria. By Dr. Antoine Magnin, Licentiate of Natural Sciences, etc. Translated by George M. Sternberg, M.D., Surgeon U.S.A. Boston: Little, Brown & Co. 1880.

At the present time, when we hear rather more of micro-organism, germs, different cocci, in fine the host of vegetable particles known as bacteria, than the average mind-medical can digest, assimilate, and utilize, a work of the kind before us must be very welcome to the profession. Dr. Magnin is no enthusiast, his judgment is not warped by luxuriant imagination as to what great changes may be wrought by the myriad germs supposed to float everywhere in the air. He gives us merely a concise résumé of what we actually know regarding questionable little particles, not what some persons think they know and would have others believe to be true. As the translator has justly pointed out, this little work is written in a truly scientific spirit. Moreover, the author's lack of bias makes him a fair judge of conflicting claims, and makes him cautious of inferences and generalizations. This is nowhere better shown than in the list of conclusions found at the end of the subject-matter of the book. The severity of these conclusions we cannot refrain from giving in full, as indicating at once the fairness of the author's position. He says: "As to their rôle in fermentations, in putrefactions, in contagious diseases, and in surgical lesions, notwithstanding the considerable number of labors of which the bacteria have been the object in those different points of view, it is not yet possible to define it in a definite manner."

The value of this little work, so excellent in its way, is enhanced by a copious bibliography, brought up to date by the translator, who certainly deserves credit for his English rendition of a valuable contribution to a subject which daily interests and agitates the professional mind, sometimes completely capsizing its clear judgment, and often disturbing its delicate equipoise.

Reports of Societies.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, January 11, 1881.

Dr. H. B. Sands, President, in the Chair.

Dr. A. C. Post presented a patient on whom he had performed

ADAMS' OPERATION FOR THE RELIEF OF A CICATRICIAL DEPRESSION

on the face. The depression was the result of an abscess beneath the periosteum of the upper jaw and connected with disease of the teeth. After a tooth was removed the abscess healed, leaving the skin drawn down so as to form a depressed cicatrix. The operation, suggested by Mr. Adams, consisted in making a subcutaneous dissection and introducing two pins at right angles to the base of the depression, so as to keep the cicatrix elevated for three days. The result of the operation is to cause the cicatrix to remain elevated for a time, but it gradually subsides to its normal position. It seemed to promise well as an operation for the relief of such cicatrices on the face, especially among ladies. The cicatrix remains, but the depression is relieved.

Dr. Sabine referred to a lady who had two depressed cicatrices—one just below the left angle of the jaw, and the other in front, upon the same side of the neck, below the mental foramen. He operated upon the anterior one by excising the cicatrix and then sliding in a flap of skin, and the result had been so successful that the patient proposed to have the other one operated upon in the same manner. In that case Adams' operation could not have been done, because the skin was so thin that it would not have been possible to raise it properly, and a scar would still have been present.

Dr. Wm. T. Bull then read a paper entitled

NOTES ON DISLOCATIONS OF THE HIP.—[See p. 290.]

Dr. Markoe said that throwing the head of the bone over into the thyroid foramen, while attempting to reduce a dorsal dislocation by manipulation, had been quite a common accident in his experience.

Dr. Post had always found that, in such cases, it was easy to reduce the bone to its proper place by avoiding abduction.

Dr. Briddon thought this accident occurred much less frequently since Bigelow had brought forward his method than it did when the exaggerated movements were made.

Dr. Markoe said that Reid, in his original paper, stated that it was not necessary to abduct the thigh strongly in bringing it down.

Dr. Post had not seen evil result from the accident.

Dr. Markoe regarded it as somewhat embarrassing,

and to a certain extent it might do mischief by tearing up additional spaces.

Dr. Sabine referred to a case of ordinary dorsal dislocation of the femur, which he saw when house surgeon in the New York Hospital in 1865. He attempted reduction by manipulation and threw the head of the bone into the thyroid foramen two or three times. Finally it was necessary to resort to pulleys, and reduction was accomplished by the late Dr. Allin with a great deal of difficulty. In the following week he met Dr. Van Buren and mentioned the case, and the doctor remarked that the thigh ought not to have been carried out so far when the head of the bone was beneath the acetabulum, but should have been lifted up—the very manipulation which Bigelow emphasizes so much.

The President inquired whether any member had had an experience similar to that related by Dr. Sabine, where manipulation failed to accomplish reduction? He supposed such failure was rare. About fifteen years ago, as he then understood it, he was unable to reduce a dislocation by this method. The patient was a stout, muscular man, whom he saw in consultation with Dr. Frothingham. Dr. Sands did not practise the lifting movement, but resorted to ordinary manipulation, and, after spending some time, became satisfied that further efforts by that method would be unavailing. It was decided to use the pulleys, and Dr. F. arranged the apparatus, screwing the staple into the wood-work beneath the window. Bracing his feet against the wood-work, he pulled with increasing force until, suddenly, the staple was pulled out, and as the doctor tumbled over upon the floor the bone slipped into place.

Dr. Post remarked that in a large proportion of difficult cases reduction takes place, not while the extending force is being applied, but when sudden relaxation occurs after extension has been kept up for some time.

The President remarked that he was unable to recall a single case of recent dislocation in hospital practice in which an attempt at reduction by manipulation had failed.

Dr. Post remarked that he had not known it to fail.

The President inquired with reference to mischief following the treatment by manipulation. He remembered one patient who lost his life after reduction of the dislocation by this method. A man sixty-three or sixty-four years of age was admitted to the City Hospital in Broadway with a perineal dislocation, which was reduced by manipulation, and, it was thought, without the application of undue force. An enormous abscess, however, developed after the operation, and the patient died in consequence of the extensive suppuration that followed.

DISSEMINATED CANCER.

Dr. A. C. Post narrated a case as follows: On the 18th of December he was called in consultation to see a woman forty-nine years old, who had menstruated up to that date, and had enjoyed good health up to the preceding August, when she first noticed an induration of both breasts. When Dr. Post saw her in December, both breasts were extremely hard and closely adherent to the skin and subjacent parts. They were not painful, and were insensible to pressure. The right axilla was filled with hard deposit involving the skin, and the right arm, forearm, and hand were œdematous. There were some hard deposits in the left axilla, but it was not filled, and there was no œdema of the left upper extremity. There was œdema beneath the left clavicle, and there were numerous hard nodules in the skin of the trunk, face, and extremities. The indurated breasts were hemispherical in shape, and not more than eight centimetres in diameter. It was a case of disseminated cancer, and he regarded the condition of the breasts as quite remarkable because of the close attachment to the skin and subjacent tissues, and the parchment-like condition of the integument. He had never seen a case in which there was such extensive adhesion and excessive induration.

Dr. Sabine referred to a case sent to him by Dr. Van Buren, in which the patient had had her right breast removed for cancer about a year previously, and the disease had returned in her left breast, and she also had disseminated cancerous nodules over her chest and abdomen, varying in size from that of a pea to the end of his little finger. Dr. Peaslee also saw the case, and what was most remarkable in its history was that, two or three months before death, which occurred about fifteen months after the operation, every one of the supposed cancerous nodules disappeared and left a depression in the skin like a scar. There was absence not only of cancerous nodules, but of subcutaneous tissue. She died of internal cancer.

Dr. Markoe said that Mr. Paget spoke of the disappearance of myeloid tumor, as it had been observed in numerous instances. He also referred to a case in the New York Hospital, in which the patient died from tumors upon the head and side of the face, and in whom that history was repeated several times. The early tumors disappeared entirely. That case, however, was believed to be one of soft cancer, and not myeloid disease.

CYSTIC TESTICLE.

Dr. Sabine presented a testicle which he had removed from a patient forty years of age, who came to the hospital on December 31, 1880, with a swelling upon the right side of the scrotum. The swelling was soft on the inner side, rather firm on the outer side, elastic, not translucent, and the testicle could not be felt anywhere. The man gave the history of a hydrocele, saying that he had been tapped once or twice without special benefit. There was a thick sac-wall, and Dr. Sabin concluded to perform Volkman's operation or a modification of it. After the patient was etherized he introduced the needle of a hypodermic syringe and drew off a few drops of a fluid which was yellowish but not perfectly clear, and he supposed there was no doubt that the case was one of hydrocele. He then introduced a small trocar, intending to draw off all the fluid, but not more than four or five drops of fluid of the same character as that drawn by the hypodermic syringe was obtained. Another puncture was then made, but even a less quantity of fluid was obtained than by the first. He then made an incision, by suggestion, about an inch long, and after cutting through the tissue there protruded a number of small cysts, showing that the testicle was cystic. Not having consent to perform any operation except that for hydrocele, the patient was returned to his bed.

On January 11, 1881, Dr. Sabine removed the testicle, which had the appearance of a cystic adenoma. With reference to the different tappings and the amount of fluid drawn, the man gave the following history: Four years ago he had double hydrocele, which was treated by drawing off the fluid and injecting iodine. The hydrocele did not return on the

left side, but it reappeared on the right side, which was tapped the second time about seven months after the first tapping, and twice since, at the Massachusetts General Hospital. The last tapping was some eighteen months ago, at which time the tumor was about the same size it was just before the testicle was removed.

In the specimen there was no evidence of tunica vaginalis.

The history of previous tappings, and the close resemblance of the tumor to a hydrocele with thickened tunica vaginalis, led to the error in diagnosis.

METHODS OF TREATING THE CORD IN CASTRATION.

Dr. Sabine asked Drs. Markoe and Sands what they considered the best method of treating the cord in castration? Erichsen and Bryant recommended tying the cord *en masse*, while others believed it to be better to hook up the cord and divide it gradually, tying the blood-vessels as they are reached. Dr. Sabine adopted the latter method in his case, and considered it very much better than grasping the cord and cutting it off directly.

Dr. Markoe remarked that the method was regulated somewhat by the distance from the external ring at which the cord was divided. In cases in which he had complete control of the cord, and was at liberty to cut wherever he might choose, he had tied particular vessels, and then cut it with one sweep of the knife. But where he could not get that control, he had cut gradually.

Dr. Post referred to the practice of scraping off the cord in castrating pigs.

The President said that he had practised several methods. He had tied the cord *en masse*, and thought it an unnecessarily rude procedure, and in the single case in which he did it considerable inflammation followed, which, he thought, was due to constriction of the tissues; at a later period a slough of some size came away. He had secured the cord with forceps or a strong thread, divided it with one sweep of the knife, and then tied the arteries upon the face of the stump. The method which he preferred was that practised by Dr. Markoe. He usually put a ligature through the cord above, and then, taking the testicle in the palm of the hand and putting the cord upon the stretch over the index finger, divided the different layers in succession, and tied the arteries as they spurted. He thought the plan had the advantage of enabling the surgeon to secure every artery. He had sometimes allowed the string to remain in the cord for a day or so. He had adopted this expedient with advantage recently in a case of sarcoma of the testicle. The arteries were tied with catgut, and as they did not seem to be very tightly embraced, the traction-ligature was allowed to remain. In the course of the night hemorrhage occurred, one of the catgut ligatures having slipped, and the string through the cord above facilitated the ligation of the bleeding vessel.

Dr. Sands thought that Dr. Sabine's cautious procedure with reference to permission to perform the operation was commendable. He recalled a case in Bellevue Hospital. At a meeting of the medical board a man was brought in and placed against the wall, while the house surgeon was made to incise a supposed hydrocele. One long, deep incision was made, and the knife cut directly into a cancerous testicle. As the patient was not under the influence of an anæsthetic, his consent to castration was promptly obtained, and the testicle was at once removed.

Dr. Briddon thought the particular objection to tying the cord *en masse* was the time required for the ligature to come away. He referred to a case in which the ligature remained six months, and was then so firm that he was unable to pull it away. He had seen several cases in which the ligature remained several months before it came away.

Dr. Markoe remarked that, if obliged to cut the cord near the external ring, there was no other way except to tie it *en masse*.

The President said that he had divided the cord at the level of the internal abdominal ring without tying it *en masse*, but he opened up the inguinal canal.

Dr. Markoe said that was a resource, but one not commonly adopted.

Dr. Post presented a portion of a tongue containing an

INDURATED ULCER,

which he had removed by making a V-shaped incision. A ligature was passed through the tongue, so that after the mass was removed the stump could be drawn out for the purpose of securing the vessels.

CANCER OF THE MALE BREAST.

Dr. Post presented the breast removed from a man fifty-eight years old. It was cancerous. The patient became conscious of the presence of an induration four months ago. There was no history of traumatism.

CICATRICIAL CONTRACTION FOLLOWING A BURN.

Dr. Post exhibited a plaster cast of a hand that had been deformed by the cicatricial contraction following a burn. The middle finger had a denser band than the others, but all the fingers were drawn more or less into the palm. The patient was a girl eight years old, and the deformity had existed five years. Dr. Post operated by making multiple divisions of the cicatricial tissue in the palm of the hand. The band opposite the middle finger was divided in four places, the little finger, three, the ring, the index and thumb, each two. The incisions extended through the entire breadth and thickness of the bands to the soft tissue beneath. The fingers and thumb were then straightened and secured with adhesive plaster to a splint made of felt, adapted to the fore-arm, hand, and fingers, and stiffened behind with narrow strips of hoop-iron. The operation was performed four weeks ago, and the hand was almost perfect in shape. The fingers were completely straight. The wounds had all healed except one which was nearly healed. A slight induration remained in the palm of the hand. The patient had imperfect power of flexion, but extension was perfect. Passive motion was being practised. Dr. Post thought great importance was to be attached to multiple division of the cicatricial tissue.

Women's National Hospital.—The Women's National Hospital, designed for the treatment of women addicted to the excessive use of alcohol or narcotics, was recently chartered by the Connecticut Legislature. The Board of Corporators met on March 2d and elected the following officers: *President*, Dr. J. Marion Sims, of New York; *Vice-Presidents*, Dr. Frank H. Hamilton, of New York, and Dr. George B. Hawley, of Hartford; *Secretary*, T. D. Crothers, of Hartford. The trustees are leading physicians from ten different States. The hospital will probably be erected in Fairfield County.

CLINICAL SOCIETY OF MARYLAND.

Abstract of Proceedings for the Months of December and January.

T. S. Latimer, M.D., President, in the Chair.

CHEYNE-STOKES RESPIRATION.

Of three cases of this anomaly, reported by Dr. O. J. Coskery, the following summary represents the chief features.

First.—Man with apoplexy. On fourth or fifth day, when apparently getting well, Cheney-Stokes respiration appeared; he would lie quiet for a few seconds, then, on the commencement of the peculiar breathing, he would spring up in bed panting for breath. The pulse exhibited no variation. Death ensued within thirty-six hours. Fatty degeneration of the heart on post-mortem.

Second.—Woman, over sixty years of age, with second attack of apoplexy. As respiration increased in depth and frequency, pulsations diminished; could not be roused; died in forty-eight hours; no post-mortem.

Third.—Boy. No brain trouble; muscular twitchings always accompanied the incipiency of the breathing. Respiration ceased entirely for seven seconds, then commenced and reached its maximum in eight seconds, diminishing gradually for eight more seconds, and followed by the pause. Thirty seconds were thus consumed in each of the periods or intervals. Number of respirations per minute, 13. No increase in volume of pulse, but increase in its frequency as respirations increased.

Dr. J. W. Chambers had observed two cases: one in a girl poisoned by opium; death in eight hours. The other, in a case of crushed foot; here pulse quickened with respiration; death in twelve hours.

SECONDARY SYPHILIS AGGRAVATED BY MERCURY, AND RELIEVED BY IODIDE OF POTASH.

Dr. Theobald saw two cases of syphilitic iritis grow worse under the use (for several weeks) of biniodide of mercury and atropia; ulcers also appeared on the soft palate and tonsils. Cure was effected on substituting iodide of potash.

DOMESTIC LEPROSY.

Dr. I. E. Atkinson exhibited a patient with leprosy, *who had never been outside of the State of Maryland.* She lived in Baltimore until the age of sixteen, then moved to the Eastern Shore—a malarious locality. Married and has several children. Symptoms began eighteen months ago, during pregnancy, with yellow spots on thighs, which gradually spread to trunk, chest, back, neck and face, and finally arms. Numerous minute nodules, from the size of a pinhead to a pea are now apparent, scattered through the superficial portions of the skin. Conjunctivæ congested, mucous membrane of throat and posterior nares thickened and granulated. The spots are anæsthetic. The case is one typical of the tubercular form, but has not advanced sufficiently for the leonine appearance to be manifest.

Dr. F. T. Miles had seen several cases in Charleston. It is not confined to the poor, but affects equally persons of high social position.

SUCCESSFUL LIGATION OF BRACHIAL ARTERY FOR TRAUMATIC ANEURISM OF ULNAR.

The patient, a tall, muscular young man, was exhibited by Dr. T. P. McCormick. The aneurism appeared in July, 1878, in consequence of a stab received the month previous. Two months after, when operated on, it had attained the size of a fist. The wound healed without suppuration, but the ligature did not come away for a month. In two weeks after the operation the tumor had disappeared entirely. The radial on that side shows feeble pulsation as compared with the opposite side.

IODINE IN INTERMITTENT FEVER.

Dr. R. B. Morison reported satisfactory results from the use of this remedy, in ℥ xv. doses, administered in mucilage and water; since November 1st, all the cases applying at the University Dispensary, twenty-five in number, had been treated with it. Less than one-half had been heard from, which he took as an indication that the greater part had recovered. Only one case of iodism was observed—in a woman who continued it after the chill had been checked; in this case the symptoms disappeared on the disuse of the remedy. No other treatment is now employed for intermittent fever in the dispensary department under Dr. Morison's care. The idea was gotten from an article in *Braithwaite's Retrospect.*

Dr. R. Winslow said he had known of the influence of this agent in intermittent fever for a long time. His father had used it many years ago in North Carolina, employing a pill containing powdered iodine, gr., ¼, quinine, gr. ij., powdered sulphate of iron, gr. ½, and ipecac, gr. ¼; one of these pills to be given three times a day for one month, in obstinate cases.

LITHOTOMIES WITH PECULIAR FEATURES.

Dr. L. McL. Tiffany reported the two following cases:

First.—A boy, three years of age, with the usual symptoms of stone; could find none, however, with the sound. Six months afterward the examination was repeated, with the same result; nevertheless, a probable diagnosis of encysted stone in the upper part of the bladder was made. Eighteen months afterward the patient was again brought, when by jerking the sound upward and depressing the bladder above the symphisis pubis, the stone was detected. The lateral operation of lithotomy was then done, but neither forceps nor finger could be gotten on the stone. The bladder was then pumped full of water with a Davidson's syringe and the water allowed to flow away; by this means the stone was dislodged from its sac and fell to the floor of the bladder, and thus became accessible to the forceps.

Second.—Man, twenty-three years of age; symptoms of calculus from birth. On introducing a sound, the stone was struck before entering the bladder. No instrument, however small, could be gotten into the bladder. The sound being passed down so that its point rested on the stone, Dr. T. cut down upon it. He found two faceted stones, upon removing which, he could get his finger in the bladder, where he found a third one, two inches long and one and one-half inch wide; this was crushed with the lithotrite and removed piecemeal through the perineal opening. The urine was alkaline. The walls of the bladder were found encrusted with phosphatic deposit. The bladder was washed out with a Davidson's syringe, to get rid of the fragments. Four days after the operation the surface of the wound was found covered with phosphatic deposit. The urine was rendered acid by the use of benzoic acid,

and the bladder was washed out with a solution of dilute nitric acid. Both cases recovered.

Dr. B. B. Browne mentioned a peculiar case of a girl, eight years of age, who had a stone in her bladder four inches in length. It was thoroughly encysted and extended into the urachus, reaching from the urethra nearly to the umbilicus. On grasping it with the forceps to extract, the traction could be felt from the umbilicus downward. As she lived in the country, Dr. Browne insisted that she should be brought to town before undertaking any further operative procedures. This was not done, however, and she subsequently died from the effects of the vesical trouble.

CANCEROUS GROWTHS.

Dr. J. Shelton Hill read a paper upon this subject, in which he dwelt chiefly upon their histological characters. There is no specific cancer-cell, yet the cells possess a certain amount of diagnostic significance, depending upon their size, shape, and number of nuclei. Their variety of form is due to mutual pressure. They usually contain fat, which is due to retrograde metamorphosis. The cells are collected into alveoli, formed by intercellular fibrous tissue, which is dense and firm in proportion to its age and slowness of growth. Some pathologists maintain that they arise from epithelial cells only, and they bear a remarkable resemblance to these; but, on the other hand, cancers originate in tissues (as periosteum) where no epithelial cells are found.

Dr. I. E. Atkinson said: Formerly the term cancer related to the malignancy of the growth, not, as now, to its histological features. Lately it has been applied to carcinomata, in which epithelial elements predominate. It may last twenty years. It is difficult to determine where the benign ends and where the malignant begins. What makes a wart of the skin malignant? According to some authorities, the crowding of epidermic cells causes a change of direction of growth. The stroma is a secondary formation, due to the development of the cells and the resulting displacement; hence also arise the alveoli. The blood-vessels, passing along the walls of the alveoli, are pressed upon and destroyed, leading to fatty degeneration and ulceration. The new view (Thiersch, Waldeyer, Billroth) is very definite and beautiful, viz., that cancerous growths can only originate from epithelial elements, not from muscle, bone, etc. It seems to be confirmed by the fact that when it attacks the latter tissues they are always in continuity or close proximity to epithelial tissues. In scirrhus we have without doubt a new growth of connective tissue; to what extent the influence of this tissue, and to what that of the epithelium prevails, it is hard to determine. The so-called cancer-cells are not distinguishable from epithelial cells. There are certain sarcomata (as the alveolar) which it is not impossible to tell from carcinomata. According to Rindfleish, the wander-cell makes its way into the epidermis, and there undergoes epithelial contagion; it must come in contact with epithelial cells before it assumes the malignant phase of growth. What the cause of the connective tissue new-growth is Dr. Atkinson thought not definitely settled.

THORACIC ANEURISM.

Dr. R. B. Morison exhibited a patient, forty-one years of age, with the following history and symptoms: he was a bricklayer by trade; fifteen years ago he had syphilis. Last October a year, whilst stooping down in such a way that his knee pressed upon his chest, he felt a sharp pain, and shortly after noticed a pulsating tumor on the anterior surface of the chest. In consequence of this he was obliged to give up work. Eight months ago he came under the speaker's observation with a strongly pulsating tumor, having a distinct bruit, and situated at the junction of the third and fourth ribs, on the left side, with the sternum. Iodide of potassium was prescribed, the dose being gradually increased, until it now amounts to gr. lxxv. per day; compression was made by means of an elastic band, and rest on the back enforced (except when it was necessary to answer the calls of nature). Examination by the sphygmograph shows the carotid on the affected side to be uninvolved, which would indicate the location of the aneurism to be about the junction of the arch with the descending aorta. According to Tuffnell, a cure can almost be assured if the treatment by rest, etc., be thoroughly enforced. Should this fail, the speaker would resort to electrolysis; this seemed devoid of danger, and he had not found any author who had tried it and was opposed to it.

Dr. I. E. Atkinson had examined the urine of this patient and found it loaded with pus. There was no urethral trouble and the origin of the pus was not apparent, though the acidity of the urine would indicate an origin not in the bladder.

Dr. Morison referred to the theory of Myers that the great prevalence of aneurism in the British army is due to the collar worn by the troops. A medical friend, who attended the Paris hospitals saw no case of aneurism there during three years; yet on first reaching London he saw a case, and met five during a short residence there.

Dr. William Lee was inclined to attribute the prevalence of the disease in England to the absence of laws regulating prostitution.

Dr. R. W. Johnson urged the necessity of the most complete rest, both mental and physical, which it was possible to obtain. Stimulants of every sort should be prohibited. He suggested the use of the fracture-bed, so as to avoid rising during stool. The diet should be as light as possible. He thought a hospital no place for treating an aneurism. Electrolysis should be a last resort. He had seen several cases which were benefited by it. It must not be forgotten that mental perturbation is caused by the simple suggestion of puncturing with a needle.

CASE OF SUPPOSED MULTIPLE SARCOMA OF SKIN.

Dr. A. F. Erich reported the case of a gentleman aged seventy-two, who exhibited a number of small, round, generally firm tumors scattered over the surface of the body. They have existed for from nine months to two years, the greater number for the shorter period. Most are movable with the skin; some are purplish. There is no difficulty in removing them on dividing the skin overlying them; but in the case of two, removed by another physician before the patient came under Dr. E.'s care, a fungoid mass sprang up in the sites they had occupied.

Dr. I. E. Atkinson agreed with Dr. Erich in regarding this as a case of multiple sarcoma. It belongs to an interesting and unusual class. Kaposi reports cases of multiple melanotic sarcoma. Too much stress was laid on the prevalence of sarcoma in youth; he had seen many cases in advanced life.

Dr. John Morris had a similar case; one of the

tumors removed from the breast weighed eight to ten ounces. There was but little pigment in this case. The patient was a fine-looking and fat woman of forty-five.

HOT WATER AS AN ADJUVANT IN PERINEAL SECTION.

Dr. Tiffany reported the case of a boy aged fifteen, who fell a distance of fifteen feet astride a barrel, bruising and tearing the perinæum and scrotum so that blood trickled from a wound in the latter. Three hours after, the perinæum and scrotum became tense; no water had been passed since the accident. An attempt was made by a physician to introduce a catheter, but it could not be passed beyond the perinæum. Dr. T., being summoned the next morning, found the perinæum and lower part of the abdomen greatly swollen, with intense desire to pass water. He at once made an incision into the perinæum from the scrotum to the anus. The cavity thus exposed extended back to the rectum and up over the os pubis and anterior wall of the abdomen. The left pubic bone was found to be fractured. Much oozing of blood followed the incision, which was checked in a few seconds by the injection of hot water into the sac by means of a Davidson's syringe. The distal end of the urethra then became visible, through which and into the bladder a director was passed and the neck of the bladder incised as in the operation of lithotomy. Sloughing has since taken place, necessitating three openings over the abdomen. Three weeks and a half have elapsed, and the patient is still unable to walk, whilst all his urine passes through the perineal and abdominal openings. The interesting points in the case were: the necessity for opening the perinæum, the effect of the hot water upon the hemorrhage, and the ease with which the urethra was discovered. In the operation of perineal section it is exceedingly difficult to find the distal end of the urethra, and this was the only case in the speaker's experience in which he had found this possible.

CASE OF SUPPOSED ADVENTITIOUS GROWTH IN THE CEREBELLUM.

Dr. A. B. Arnold reported the case of a girl, twelve years of age, in whom vomiting began without assignable cause. This was followed by paroxysmal headache, situated in the occipital and right temporal region, which lasted twelve months; then defective vision began, terminating in total blindness. Ophthalmoscopic examination revealed double choked disk. A prominent feature in this case, and the one which chiefly led to the localization of the lesion in the cerebellum, was a tottering gait, the patient balancing herself by extending her arms. Westphal relates cases of lesions of the cerebellum exactly like this.

Dr. E. F. Cordell referred to a case in an adult, in which all the above symptoms were present, and, in addition, epileptoid convulsions and mental derangement. The patient was taken to his home in Belfast, Ireland, where he died in a few months from the intracranial trouble. No post-mortem had been made as far so he could learn.

HEADACHES OF CHILDHOOD.

Dr. William Lee opened this, the regular subject of discussion, by a carefully prepared paper. He said, that, as member of the School Board of Baltimore and chairman of the committee on health of same, he had been led to observe the common occurrence and frequent neglect of headache in children. It is apt to be hereditary, and is especially to be traced to confinement and over-study at a time of life when the brain is still undeveloped. Its causes in the class mentioned are, among others: 1st, overtaxing the brain; 2d, gastric and intestinal disturbance, worms; 3d, anæmia (from malaria, etc.), producing neuralgia or nervous headache.

Monobromide of camphor produced the best results, in the first variety, in the speaker's hands. Sick headache accompanies the second, in which the most effective agents are fluid ext. guarana (especially if the patient be kept at rest after using—a very important precaution) and nux vomica. The latter agent, as pointed out by Bartholow, is invaluable in these cases; it has been too much neglected by the profession. The third variety may be due to teething. A general tonic plan (in which valerianate of zinc may well be included) was recommended here. In malarial headaches, Fowler's solution and dialyzed iron give the best results.

Dr. J. E. Michael said one form had been omitted, viz.: "optical headaches"—those due to over-strain of the eye while developing. These may be due to defects of structure or over-sensitiveness, or to defective hygienic regulations (a frequent and growing cause of troubles of sight).

Dr. Lee said defective ventilation and late hours (especially after dark) were undoubted causative agents in this connection. The subject of school hygiene is now engaging the attention of the school board, and he also recently heard it discussed in London. In Maryland the hours and amount of work required exceed those in any other State. Some of our school-buildings are defective, and two or three should be pulled down.

Dr. I. E. Atkinson did not think any fault was to be found with the hours; the trouble is due to a want of correct scientific knowledge on the part of those who have charge of the pupils. Sufficient attention was not paid to the proper arrangement of the light (so that, for instance, it would not dazzle), to the character of the books, ventilation, etc.

Dr. A. F. Erich said impure air, as a cause of headache, was not sufficiently appreciated. The judgment of the teacher might obviate the bad effects of insufficient light, those studies requiring but little light being put off until the late hours.

Dr. Arnold said children were almost exempt from neuralgia, while hemicrania is far from uncommon in this class of patients. The evils of going to school cannot be entirely gotten rid of; it is an unnatural state for children to be compelled to sit quiet on benches poring over books. He referred to the fact that the brain-substance is insensible, and that any pain must be referred to the membranes covering it, which are supplied with sensory branches from the trifacial.

PATIENT WITH OBSCURE SWELLING OF LEFT SHOULDER AND ARM.

Dr. R. B. Morison presented a negro drayman, aged thirty-three years, with the following history: Four or five years ago a swelling appeared in his left shoulder. Shortly after one of his fingers on the same side was frostbitten, and consequently was amputated. The swelling slowly increased, extending finally half-way down the arm. It was soft and œdematous, and not accompanied by pain. In summer the swelling in the arm subsided. The lower part of the arm was very much reduced. The

fluid was aspirated and found to be nearly pure serum. The swelling afterward broke opposite the middle of the arm, and has continued to discharge serum and fat ever since. Into the natural opening thus formed a probe was passed up toward the shoulder a distance of five inches. There was no specific history in the case—no cancer-cells to be discovered on microscopic examination. The patient exhibited a cardiac anæmic murmur, for which he was taking iron and digitalis. He had been compelled to give up work. Opinions were requested as to the diagnosis of the case.

Dr. I. E. Atkinson regarded the swelling as due to enlargement of the lymph-channels from obstruction caused, doubless, by the protracted inflammation—a condition comparable to elephantiasis or Barbadoes leg. A negro girl had an enlargement of the right labium to the size of a double fist. The swelling was due to fluid which was not simply beneath the epidermis, but deeper down. One of the sacs containing the fluid being incised, gave exit to lymph. The labium was strapped as in treating orchitis, with the result of the almost entire disappearance of the swelling, which returned, however, on the cessation of the pressure.

Dr. L. McL. Tiffany regarded it as a case of enlargement of the lymph-channels from previous lymphangitis. The probe mentioned had passed up by the long tendon of the biceps muscle, and would, no doubt, have passed up twelve or eighteen inches if it had been of sufficient length. The fat in the discharge shows that the fistula passes through connective tissue. A swelling under the acromion, as here, is almost always connected with the joint. An examination in the axilla shows the presence there of three small bony growths, two behind and one below the joint. He knew of no other condition which could cause such growths but malignant disease.

A colored boy suffered a dislocation of the arm at the age of fourteen years. After reduction, a swelling formed about the joint, which on opening gave exit to a pint of pus. The patient remained well for two or three years, when the swelling gradually returned: an incision was made into which the finger was introduced, and about a pint of medullary (cancerous) matter removed. Simple inflammation is not capable of producing bony growths in the axilla, disconnected with the bony skeleton (as here). The course of events in the case before us seems to have been: 1st, some change about the joint interfering with the lymph-channels; 2d, malignant disease of the joint. It is certain that the symptoms in the case are due to joint-trouble.

GROWTHS IN THE LARYNX.

Dr. H. Clinton McSherry read a paper on this subject. Laryngeal growths were due, he said, to hyperæmia of the mucous membrane. Dr. B—— one year ago complained of sore throat and hoarseness, which, on examination, was found to be attributable to congestion of the larynx. Under treatment the voice returned. Four months later the trouble returned, and the right vocal cord was found congested. He improved under astringents. Five months later a small sessile growth was found, which was treated by the application of a strong solution of nitrate of silver; the growth increasing notwithstanding this treatment, the patient was advised to discontinue remedies entirely. The result has been that now, after three months, it is much smaller.

The second case related illustrated a local cause of hæmoptysis. The patient, a young man, had slight cough and spitting of blood in 1877. The heart and lungs were found to be free from any evidence of disease. On laryngoscopic examination, a pedunculated growth the size of a split-pea was discovered on the right vocal cord, on the surface of which was seen a small nutrient vessel. There was spasm here, and a possibility of the growth becoming detached and falling into the trachea. Hence it was extirpated with McKenzie's forceps, and Monsel's solution applied to the stump. The patient remains well after several years' interval, and has had no return of the hoarseness or hæmoptysis. If large, thyrotomy or laryngotomy may be demanded in such growths, and removal piecemeal. Billroth and others have even removed the entire larynx, but without success, except in one case occurring in Italy, in which the patient, after the lapse of three years, is able to do the work of a laborer in the field.

Laryngeal growths are not of rare occurrence, the only way to diagnose them is by the laryngoscope. The speaker impressed the idea that laryngeal growths do not always necessarily require removal; it may be best to leave them alone, unless by their size or symptoms they cause great trouble.

A third case was related, in which there was a growth on the vocal cords, accompanied by spitting of blood; but this was referable not to the growth, but to tubercular disease of the lungs, one of which showed a cavity, the other softening. Hoarseness should always lead to examination of the lungs.

SARCOMATOUS TESTICLE.

Dr. J. E. Michael exhibited a sarcomatous testicle which he had removed from a man, forty-two years of age, otherwise in perfect health. There was no glandular enlargement, and no secondary growths to be discovered.

CASE OF SINGLE KIDNEY.

Drs. Fenby and Walker exhibited an enlarged kidney, weighing 9¼ oz., obtained in a post-mortem made in connection with a coroner's inquest. It occupied the left side. Careful examination failed to reveal any sign of the other kidney.

INTRACRANIAL ABSCESS.

Dr. Herbert Harlan exhibited a specimen obtained from a stone-mason, thirty-five years of age, who came to the University Clinic suffering with violent facial neuralgia of the left side, of six months' duration, with slight protrusion of the corresponding eye-ball. There was a history of syphilis in the case. A diagnosis of intracranial tumor, probably syphilitic, was made, and the patient was put upon iodide of potash. He gradually grew worse, and died while in a comatose condition, seven days after he was first seen. None of the senses were impaired, nor was there any paralysis except ptosis of the left upper lid.

Post-mortem.—Adhesion of the brain in the middle fossa of the skull. One drachm of pus was found beneath the dura mater, at the root of the great wing of the sphenoid bone, extending slightly into the sphenoidal fissure; the bone was slightly eroded in the same situation. The cranial nerves were unaffected. There was a small abscess on the inferior convolution of the spheno-temporal lobe of the left side, from which pus had flowed into the lateral ventricle. It had passed thence through the foramen of Monro into the third ventricle, from thence into

the fourth ventricle, and finally out, to be diffused over the surface of the pons and cerebellum. The immediate cause of death was, doubtless, the passage of the pus into the fourth ventricle. The disease originated, he thought, in the dura mater. There was an ulcer on the septum nasi, in the left nostril —non-specific, it was supposed.

THERAPEUTIC VALUE OF TARTAR-EMETIC.

Dr. A. B. Arnold read a paper upon this subject. He said a great change had taken place in its estimation. First employed in fevers and then lauded in pneumonia by Lænnec and others, we find now leading German pathologists (Nothnagel, etc.) maintaining that it is almost useless in any disease. Even Bartholow confines its use to catarrh of the air-passages. So far as its antipyretic and relaxing effects are concerned, they are better procured by other remedies now at our command. But we have no better remedy to counteract inflammation of the larynx and trachea. In inflammatory croup it is capable, if early used, of keeping it in the catarrhal stage, and preventing its passage into the membranous form. He would give in this case $\frac{1}{12}$ grain every hour to a child. In one case, at six years, he gave $\frac{1}{4}$ grain every hour, with excellent results.

Dr. I. E. Atkinson agreed with Dr. Arnold in thinking that great injury is done by dispensing with such a useful remedy. In catarrhal and croupous troubles he had obtained most satisfactory results from it (in the form of hive syrup). He had also seen beneficial results from it in acute pleurisy.

Dr. A. F. Erich limits its use to croup (in which he precedes the hive syrup by the yellow sulphate of mercury), and to hoarseness.

Correspondence.

THE ETIOLOGY OF LEPROSY.

To the Editor of The Medical Record.

Sir—In an article by Jonathan Hutchinson, Esq., F.R.S., on the etiology of true leprosy, recently published in the *Medical Press and Circular*, he says: "We find that nearly everywhere the disease is most common on the sea shore, and that when it spreads inland it generally occurs on the shores of lakes, or along the course of large rivers; we find, also, that fish is largely eaten when leprosy prevails." He continues: "I don't believe that any other article of diet has any influence whatever on the causation of the disease; this is so special in its character that it must have one special cause."

In confirmation of this opinion, I will state my experience, acquired while on a visit three years ago to the north shore of New Brunswick, Dominion of Canada. Here leprosy has prevailed more or less since its early settlement by the French, having been brought over with them.

At the village of Tracadie a lazaretto has been established for several years, and is under the charge of the Sisters of Charity of Montreal, and at the time of my visit contained twenty-nine inmates in various stages of the disease.

Upon inquiry I learned that there was no regular medical attendant connected with the institution, but that the nuns prescribed and dispensed the medicines themselves under some general instruction. In conversation with one of the trustees, a very intelligent gentleman, I learned that the inhabitants were very poor, and that the disease was confined to the descendants of the French, living almost exclusively on fish and potatoes, preferring the former in a state of decomposition, or as he expressed it, putrid, having acquired a taste for it similar to that of the English for high pheasant. I also learned that cancer is a very common disease among these poor people.

Arnold Hallett, M.D.,
Late Physician to Long Island College Hospital.

LEPROSY AND HOÀNG-NÀN.

To the Editor of The Medical Record.

Sir—I have been permitted to read and to make extracts from a letter addressed to Messrs. Parke, Davis & Co., of Detroit, by *frère* Etienne Brosse, of Cocorite, author of "La lépre est contagieuse." These extracts I offer as a supplement to the paper recently read by me at the Academy of Medicine (Medical Record, February 19, 1881). The letter is dated January 27, 1881. Speaking of the use of hoàng-nàn in leprosy, the writer says: "I continue to use it constantly, and the results are the same. As yet there have been no complete cures, but almost always remarkable amelioration, and I have patients in whom all symptoms have disappeared so completely that their own families did not suspect the existence of the disease. . . . . The fact of the contagious character of leprosy should result in legislation providing for the isolation of these patients.

"America is interested in this, for, without speaking of the Norwegians, who have carried the disease into their settlements, the Chinese have introduced it into California, and there is not the shadow of a doubt but that it will pass from them to the other inhabitants of the country. Thus far it has been confined to the Chinese, but it certainly will not be restricted to them.

"Besides its use in leprosy, hoàng nàn has been employed in other affections, as hydrophobia, syphilis, scrofula, ulcers, and fevers. In hydrophobia I have no experience with it; one of my leprous patients contracted syphilis, and the effect of the remedy was surprising. It is highly recommended in scrofula. In this affection I have not tried it. I have given the remedy to two children attacked with 'yaws' and they were promptly cured. The ulcers of leprosy, when not too far advanced, cicatrize promptly, and it is probable that other ulcers would be benefited. All of my lepers, without exception, have been cured of the fever.* I have also used it with the same success in intermittent fever. I personally suffered for eight years from attacks of fever, which increased in frequency and intensity until four years ago, when I commenced using hoàng-nàn. Since then the fever has frequently exhibited its precursory symptoms, which have yielded immediately to the drug. It is far more valuable in fever than quinine.

"Another useful application is as a stimulant in prolonged intellectual work. Dr. Eklund, of Sweden, has written me: 'A thousand persons bless your remedy. As for myself, I work twelve and fifteen hours continuously without fatigue.' Hoàng-nàn may be taken for a long time without inconvenience, and, in fact, with benefit to the general health. While making these statements, it must be remembered

* The writer neglects to note the special kind of fever.

that I am not a physician, but a missionary,* and am unable to speak with proper scientific detail, but simply relate my personal experiences and observations.

"It was first announced that hoàng-nàn should be employed in combination with realgar and alum. For a long time I so used it, but am now satisfied that it is better to give it pure in three-grain pills: one pill every morning before breakfast, increased sometimes by a second or third pill at intervals during the day. It may thus be continued indefinitely. In an appropriate dose it is laxative; in too strong dose the contrary effect is produced. The patient should not use spirits or stimulating food.

"Chemical analysis has revealed the presence of brucia and strychnia in hoàng-nàn, the first existing in larger quantity than the second."

The foregoing extracts are not literal translations, but a somewhat condensed statement from *frère* Etienne's letter. It is hardly to be expected that the drug will prove as valuable as the writer of the letter appears to believe, but it is certainly one that should be made the subject of careful study and experiment. Hoàng-nàn is the powdered bark of the Strychnos Gautheriana, *Pierre*, and adds another member to the small group of analogous drugs now in use. Resembling nux vomica and ignatia in its active constituents, it differs from them as they do from each other in the proportional quantities in which they are found. According to Flückiger and Hanbury, nux vomica contains 0.25 to 0.5 per cent. of strychnia, and 0.12 (Merck), 0.5 (Wittstein), 1.01 per cent. (Mayer) of brucia, while ignatia contains 1.5 per cent. of strychnia and 0.5 per cent. of brucia, while hoàng-nàn, it is stated, contains more brucia than strychnia.

Respectfully yours,
HENRY G. PIFFARD, M.D.

THE ADVANTAGES OF THE METRIC SYSTEM.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR,—Notwithstanding Dr. Stair's assertion of the great superiority of this nation, there is a vague impression entertained by some that even we can learn. As the doctor objects to a system however perfect, because of its foreign origin, perhaps he will suggest one himself, as he would hardly maintain that the heterogeneous collection of weights and measures in use among us now is American in any sense except by naturalization. We have borrowed from England a system as inconvenient as it could well be, and without the least logical connection between its several parts, with no reason for its existence except custom. Yet if we talk of borrowing from France a system so simple and logical that any person of ordinary intelligence can, in a few minutes time, learn the rules by which he can construct the tables for himself from the unit of linear measure (which is the foundation of the whole system), we are met with the reproach of weakly following foreign lead, as well as of trying to gain a cheap reputation for linguistic attainments.

As to the latter charge, it is not easy to understand how metre is any more foreign when applied to measure of length, than when applied to the number of feet in a verse in prosody; and as for the prefixes milli, deci, and centi, we use them every day in words that no one considers foreign. Gram, is no more formidable than dram, nor is fluigram any harder to pronounce than fluiddram, and yet these are all the words and prefixes essential to be adopted. As a mere matter of prescribing, the metric system would have the especial advantage over the troy weights, of greater facility in calculating the percentage of the active ingredients necessary in a mixture to make the proper dose in a given quantity. But it is when we compare the two systems as a whole that the simplicity and logical connection of the French system serves to bring out more clearly the complexity, awkwardness, and want of logical sequence in the English. In fact, the latter is not properly a system at all, but simply a collection of different weights and measures which were in use in different parts of England at the time when an attempt was made to put them on a scientific basis. A standard pendulum is obtained in a scientific manner it is true, but instead of making this the unit of a system, a unit is taken that bears an inconvenient ratio to this standard. The wine gallon is decreed to contain two hundred and thirty-one cubic inches, but by what rule could such a relationship to the standard yard be established. Again, by what possible rule could the standard pounds, either one, be obtained from the yard. In short, the whole collection is so full of absurdities as to be apparent to every one, were it not that we are accustomed to them.

Although it goes by saying that the progression of these tables should be in accordance with our arithmetical notation, yet nowhere in the English tables is this decimal progression used.

Compare this system, or rather want of system, with the metric. Starting from the standard metre and the unit of measures of capacity arises out of it by cubing one-tenth of the metre. Cube the one-hundredth part of a metre, and you have the measure of the quantity of distilled water at maximum density that weighs one gram, which gives the unit of weight. Here is the whole system in a nutshell, *simplex munditiis*, but this is foreign. Given in addition to this that these units are divided and multiplied decimally, and you have a system as simple and complete as that of Federal money, and I hardly think that Dr. Stair would wish to change back to English money, although he likes English weights and measures so well.

In order to overcome some of the inconveniences of the English table of linear measure, engineers have founded on it a table of their own, the unit of which is a chain, usually four rods long, but sometimes one hundred feet, divided in either case into one hundred links. How much more convenient the metre and its derivatives, especially in extensive geodetic operations like those of the U. S. Coast Survey, in which the relation of the metre to a great circle of the earth would save much computation!

It may be said that such considerations as these have no bearing on the introduction of the metric system into medicine, but those who study the matter at all study it as a whole, and seek for the introduction of the system as a whole, and when it is introduced, as it surely will be, Dr. Stair can comfort himself with the reflection that the system, though foreign, has simply supplanted another system, also foreign. But, after all, perhaps the most comforting consideration is that true science is of no country, but is like light, universal.

Yours truly,
J. H. CHURCHILL, M.D.

CROSS RIVER, N. Y., February 26, 1881.

* Attached to a leprosery.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from February 27, 1881, to March 5, 1881.

By Wm. H. Arthur, Geo. E. Bushnell, H. P. Bermingham, and M. C. Wyeth, appointed Assistant Surgeons U. S. Army, to rank from February 18, 1881.

War Department, Surgeon-General's Office, Washington, February 25, 1881.

The Death of Geo. A. Otis, Surgeon and Brevet Lieutenant-Colonel, U. S. Army.—It is with profound regret and a sense of loss, not only to his corps, but to the medical profession, that the death of George Alexander Otis, Surgeon and Brevet Lieutenant-Colonel, U. S. Army, is announced to the medical corps of the army.

Born at Boston, Massachusetts, November 12, 1830, he graduated with the degrees of A.B. and A.M. from Princeton College; entered the Medical Department of the University of Pennsylvania, and received his degree of M.D. from that institution in 1850; visited Europe, and prosecuted his studies in London and Paris, and returning to this country he established himself at Springfield, Mass.; appointed Surgeon 27th Massachusetts Volunteers, September, 1861, he held this position until appointed Surgeon, U. S. Volunteers, August 30, 1864. After the close of the war he entered the Medical Corps, U. S. Army, as Assistant Surgeon, February 28, 1866; became Captain and Assistant Surgeon, July 28, 1866; Major and Surgeon, March 17, 1880, having received the four brevets of Lieutenant-Colonel of Volunteers, Captain, Major, and Lieutenant-Colonel, U. S. Army, for meritorious services during the war. While Surgeon of the 27th Massachusetts Volunteers he served in Virginia, North and South Carolina, and was on special duty in charge of the hospital steamer Cosmopolitan, in the Department of the South. Assigned to duty in this office July 22, 1864, he was curator of the Army Medical Museum, and in charge of the Division of Surgical Records until his death.

He was editor of the Richmond *Medical Journal* for three years, member of the leading medical societies of America, and corresponding member of various similar societies in Europe, and a contributor to prominent medical journals. Surgeon Otis, with his personal observations of the surgical collections abroad, brought indefatigable industry and untiring energy to the development of the surgical and anatomical collections of the Army Medical Museum, which he has made the most valuable of their kind in the world. The compilation of the "Surgical Volumes of the Medical and Surgical History of the War" has placed Surgeon Otis confessedly among the most prominent contributors to surgical history.

While on duty in this office Surgeon Otis wrote for publication no less than ten reports on subjects connected with military surgery, etc.; among which are his most valuable and exhaustive reports on "Excision of the Head of the Femur for Gunshot Injury," and on "Amputation at the Hip-joint in Military Surgery." Of great culture, retentive memory, and with a remarkable facility of expression, he was, as a compiler and writer, conscientious in his analyses, giving his deductions from the facts before him with modesty, but decision. With such a record it is needless to speak of his zeal, his ambition, or his devotion to his profession, and especially to the reputation of the corps of which he was so bright an ornament. While devoting himself to the preparation of the third and last "Surgical Volume (now more than half completed) of the Medical and Surgical History of the War," he died in this city February 23, 1881. His untimely death will be deeply deplored, not only by the medical corps of the army, but by the whole medical profession at home and abroad.

Jos. K. Barnes,
Surgeon-General.

Medical Items and News.

Contagious Diseases — Weekly Statement. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending March 5, 1881.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Feb. 26, 1881.	0	8	171	9	50	104	12	0
March 5, 1881.	0	2	151	12	50	82	14	0

College Commencements, Baltimore.—The commencements of the two medical schools—the University of Maryland and the College of Physicians and Surgeons—took place on the 1st and 3d insts., the former having 73 graduates, the latter 144. The total number in attendance upon the two schools is represented to have been about 545. The usual alumni banquets followed. A feature of the University annual meeting was a chorus of voices organized among the alumni and trained for the occasion, which enlivened the meeting very much by their stirring and well-executed songs. The following resolution was adopted at this meeting:

That a committee of *three* be appointed by the President to urge upon the alumni and other friends of this school the importance of providing an endowment, and to secure such contributions and bequests, either toward a general endowment fund, or to special chairs and departments, as may be in their power.

Prof. Christopher Johnston has recently resigned the Chair of Surgery in this institution. He succeeded the late Prof. N. R. Smith in this field, upon the resignation of the latter eleven years ago. Prof. L. McLane Tiffany, who now holds the Chair of Operative Surgery, will doubtless be elected to fill the vacancy.

Small-Pox and Measles.—Considerable comment, and unfavorable comment, has been aroused in the public press by the following case: A man named William H. Bowers presented himself at the Chambers Street Hospital and asked to be sent to the Small-pox Hospital. The physicians at the hospital, instead of detaining and isolating him, directed him to go to the Board of Health, which he proceeded to do, using, of course, the horse-cars. At the Health Board his case was diagnosed as one of measles by both Dr. J. B. Taylor, chief of the vaccinating corps, and his assistant, Dr. Purcell. Before the man left, however, he was seen by Dr. Janes, who recognized the case as one of small-pox, and had the patient sent to the Reception Hospital.

Buffalo Asylum Abuses.—The State Commissioner in Lunacy, Dr. Ordronaux, has rendered a decision in regard to the alleged abuses in the Buffalo State Insane Asylum. He says that the evidence, by reason of its conflicting character, presents no preponderance in favor of either side, and the charges remain not sufficiently established to warrant any affirmative decision upon their truth. It is manifest, however, from the very nature of the guardianship exercised over lunatics in asylums, that attendants who are in constant and immediate attendance upon patients should be free from any taint of suspicion. He therefore recommends the discharge of the attendants against whom the charges were made.

American Pork.—A large consignment of pork from this city has been seized at Lyons, France, on account of the presence in it of trichina spiralis. Six per cent. of the pieces were infected.

Medical Education in Illinois.—A committee of the Illinois State Health Board, appointed to investigate this subject, has just made its report. After enumerating the various essential studies in a medical course, it strongly recommends: 1st, a strict preliminary examination; 2d, more clinical study; 3d, three full years of study, one-half of each year at least being spent at a medical college; 4th, a stricter attention to the moral character of persons applying for admission to the school and profession.

Gelseminum in Large Doses of ℞x., repeated in half an hour, have been found by Dr. G. H. H. De Wolfe to relieve neuralgia when small doses had little effect.—*British Medical Journal.*

Death of Prof. Francis Carter.—At the regular annual meeting of the faculty of Starling Medical College, held February 26, 1881, the death of Prof. Francis Carter, Dean of the Faculty, was announced. The regular business was suspended, and the following resolutions, expressive of the sentiments of the faculty, were adopted:

Resolved, That in the death of Prof. Francis Carter, our beloved Dean, we have lost an accomplished and genial colleague, a wise counsellor and faithful guide, and that we tender to his family our heartfelt sympathy; and

Resolved, That we attend the funeral in a body, and that the halls of the College, which was founded mainly through his influence, and over which he has for many years presided with dignity and efficiency, be draped in mourning for thirty days.

Midwifery in the Paris Hospitals.—The general hospitals of Paris receive midwifery cases and deliver the patients very often in the common wards, where they are subjected to all the dangers of septic infection. In consequence of this, and, it is said, of the incompetency of the internes, the mortality is very great. The Municipal Council is now taking some steps toward securing reform.

For some reason, the hospitals of Paris are getting a very bad reputation in every way. It is reported that their cleanliness is not great, that the nursing is poor, that the patients are poorly fed, inhumanly treated, and barbarously experimented upon.

Malt Preparations.—There is, no doubt, a great deal of misapprehension in regard to the present much-advertised preparations of malt. As actual foods they have very little more value than so much syrup. But they contain diastase, which may help the digestion of starch, if the two articles are taken under the proper conditions. This is not the case if the maltine, or malt extract, is taken, as is generally directed, after meals. The stomach is then full of acid juice and products of digestion, and this acidity prevents the action of the diastase, and probably digests it. In order to get the full effect of malt it should be mixed with the farinaceous food either before or at the time of eating. In this way it acts on the starch before reaching the stomach, and possibly some is carried through to the intestine. Dr. Roberts advocates the liquor pancreaticus as being a much more active diastatic agent than malt.

The Protection of the Insane.—A leader in the *British Medical Journal*, on the subject of insane asylums in America, concludes as follows: "We heartily wish success to the Association for the Protection of the Insane in America. If it can only succeed in establishing efficient State supervision of all asylums, the rest will certainly follow. The habitual use of mechanical restraint will become a thing of the past, and patients will not be shut up in close wards all day, but will be usefully employed both in the house and out of it. The management of American asylums will then merit that public confidence which it assuredly does not enjoy at present."

Medical Uses of Figs in Comptes Rendus, XCI.—Prof. Bouchut speaks of some experiments he has made, going to show that the milky juice of the fig-tree possesses a digestive power. He also observed that when some of this preparation was mixed with animal tissue, it preserved it from decay for a long time. This fact, in connection with Prof. Bilroth's case of cancer of the breast, which was so excessively foul-smelling that all his deodorizers failed, but which, on applying a poultice made of dried figs cooked in milk, the previously unbearable odor was entirely done away with, gives an importance to this homely remedy not to be denied.—*Medical Press and Circ.*

Dr. Joseph S. Monell, of this city, died March 8, 1881, at Green Cove Springs, whither he had gone for his health.

Commencement Exercises.—The Medical Department of the University of the City of New York held its fortieth annual commencement at the Academy of Music, Tuesday evening, March 8th. Chancellor Crosby presided, and the faculty, with invited guests, occupied seats about him on the stage. The valedictorian was Joseph Clark Thomson. The address to the graduates was delivered by the Rev. Henry W. Bellows, D.D. The graduating class numbered 199.

Rush Medical College, Chicago.—The thirty-eighth annual commencement of this college was held February 23d. The graduating class numbered 172. The valedictory address was delivered by Dr. T. C. Clark. The alumni banquet was held in the evening.

Suppression of Quackery.—Dr. W. Thornton Parker, of Plymouth, Mass., suggests that societies be formed in different localities for the suppression of quackery. He believes that much good could be done by the publication of tracts to the people, warning them against the use of quack medicines. The idea is a good one, and we hope Dr. Parker can put it to a practical test in his own town.

Original Communications.

A NEW CORTICAL CENTRE.

By GRÆME M. HAMMOND, M.D.,

NEW YORK.

PHYSICIAN TO THE DEPARTMENT FOR DISEASES OF THE NERVOUS SYSTEM IN THE METROPOLITAN THROAT HOSPITAL.

(Read before the New York Neurological Society, February 1, 1881.)

Some six years ago there appeared in the *Centralblatt*, Nos. 37, 38, a short communication by Betz, embodying an account of certain nerve-cells found by him in the cortex of a region of the brain which he newly named the paracentral lobule. This paper has probably aroused more general attention among neurologists than any other paper of recent times dealing with the structure of the cerebral hemispheres, and this, on account of the anatomical confirmation which the discovery seemed to furnish, of the localization doctrine based on the electrical stimulation of the cortex carried out by Hitzig and Fritsche.

After localizing these cells chiefly in the paracentral lobule and the upper ends of the pre- and post-central gyri of man, stating them to be very few in number in the lower halves of these gyri, Betz proceeds to say, "the constancy of the occurrence of these cells, not only as regards the cortical layer but also the special convolutions in which they are found, led me to direct my attention to that portion of the brain of animals, and particularly of the dog, on which latter Hitzig and Fritsche obtained such brilliant physiological results. I refer to that lobule which bounds the sulcus cruciatus. Now I found in this very lobule in the dog, cells in similar nests and of a similar shape. With the dog as in man they are distributed in the fourth layer."

Engaged in a study of the ganglionic masses of the forebrain of the cat, an animal on which the experiments of Hitzig and Fritsche have been repeated, and in which the centres have been localized in regions homologous to those of the dog, and in which, furthermore, the architecture of the cortical surface is fundamentally the same, I proceeded to review the question of the localization of the giant-cells.

On the one hand, Betz seemed to argue that the giant-cells, which he claims to have discovered, were motor because they were found at those points in the dog's brain where Hitzig and Fritsche, by supposed localized electrization, had produced contractions of special groups of muscles. Again, on the other hand, it is apparent that those interested in defending that narrow localization theory, which is such a prominent feature in the teachings of Charcot and Ferrier, have found one of their strongest supports in the anatomical discoveries of Betz.

Let us suppose then, for the sake of argument, that it be granted that larger cells mean motor centres for larger muscles; taking up the localizationists on their own ground we will examine the location of these giant-cells in a cat's brain, which only differs in a single exception from the dog's, and is therefore a fit subject for study. In fact the cat's brain has the advantage of being somewhat simpler.

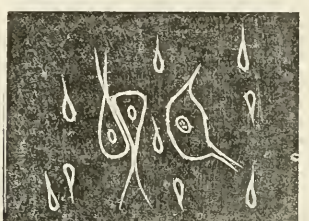
The results I have obtained are based upon the study of the cortical area of the two hemispheres of one cat. One hemisphere was cut as a whole into some seventy-five sections, from different altitudes transversely to the cerebral axis. The other was separated into eleven segments, and each segment cut into a number of thin sections. The series of sections derived from the first hemisphere served as a sort of topographical guide for the location of anything that might be found in the second.

I found that the giant-cells are not confined to localized areas as Betz claims. I find that they are not as numerous near the sulcus cruciatus as they are much posterior to that region. I have even found giant-cells not very far from the base of the brain, but I found the largest group of the largest cells in a place not yet indicated on any of the charts of the localizationists as an unquestionable motor point. In the accompanying woodcut the position of the nest of cells that I have discovered is accurately demonstrated. These cells are ovoid, circular, and subpyramidal in shape, and possess a round nucleolated nucleus situated about the centre of the cell. Each cell has from two to six visible processes. The ovoid cells are much the larger, their long diameter measuring from 0.08 mm. to 0.012 mm.; and

their short diameter from 0.05 mm. to 0.06 mm. The circular and subpyramidal cells measure from 0.07 mm. to 0.08 mm. in diameter. The nuclei of all the varieties are the same size, and measure 0.03 mm. in diameter. I only succeeded in finding them in one locality, but found them very numerous in that area. They are situated in the first primary arched gyrus, between the Sylvian and anterior Sylvian fissures. Ferrier, in his "Functions of the Brain" indicates a "centre" on the frontal division of the fourth external convolution, where, he says, he has observed, on irritating this centre, "a divergence of the lips so as to partially open the mouth." This centre approaches nearer in position to the one I have discovered than any other. With this study I was enabled to locate the chief foci for condensation of the giant-cells, of the shape known to Betz and Mierzejewski. These are pyramidal in shape, with a central round nucleus, and measure from 0.09 mm. to 0.12 mm. in length, and from 0.03 mm. to 0.04 mm. in width at the base. Their nuclei measure 0.02 mm. in diameter. The following woodcut (page 310) shows how two of Betz's largest cells can be placed so that their conjoined areas are only equal to the areas of one of the ovoid cells such as I have described.

I regard the term, "area of large cells" as inaccurate. The large cells are scattered more or less widely over the brain-surface, and it would be better to speak of "foci" when they are concentrated in larger numbers than elsewhere.

The giant-cell of Betz is not a new discovery. It is not a thing by itself distinct from the other pyramidal cells of the cortex. On the contrary, both in



the human cortex and in the cat, every transition from the average-sized cell of the third frontal layer to the giant-cell can be traced. I would also call attention to the fact that Betz states "these cells to be in nests" and not uniformly distributed in one layer, but I have seen, in one section from the paracentral lobule of the human brain, giant-cells arranged in regular order like soldiers on parade, for a distance of one-third of an inch.

Taking the deductions, which have been based upon the existence of these cells, on their merits, we find that those who have relied on this demonstration for the support of the theory of motor centres, are reduced to a number of predicaments. 1. That the largest giant-cells have been found in the brain of carnivora where no motor centre has been clearly demonstrated, and near which only small muscles are supposed to receive their cortical innervation. 2. That if, after all, this is a motor centre, that the method of localized electrization was incompetent to detect it. I have limited myself this evening to this single fact. I need not say that the giant-cell was known to Meynert, although its locality was not accurately described by him. He claimed that the larger gyri of the frontal lobe contained the largest cells. On the other hand, cells as large as the giant-cells can be seen through the entire occipital lobe, according to this observer, in the two white strata, and were described by him by the name of "solitary cells." I trust at no distant date to review the entire question of the distribution of large cortical cells with measurements and to submit them to the society.

For the present I think the existence of the large cortical cell group which I have described, shows conclusively that before the existence of large cells can be considered a demonstration of the correctness of functional localization, a more extended study must be made.

A Corner in Opium.—Opium, which had been selling for $2.50 a pound, recently took a jump up to $7.00, and then fell to $6.00. A syndicate in Philadelphia, which holds 600 cases of 200 pounds each, is (*Louisville Medical News*) responsible for this. The weekly consumption of opium in the United States is from thirty to fifty cases, and it will be six months before the new crop is in.

CHLORAL HYDRATE.

By H. H. KANE, M.D.,

NEW YORK.

Part III.—Continued.

THE URINE AND LUNGS IN CHLORAL HYDRATE POISONING.

The urine, in chloral poisoning, presents some points of interest. Sugar has been found to be present in varying quantity in the urine of man,[43] but Labbée [44] has failed to find it in the urine of chloralized rabbits and frogs. Feltz and Ritter,[45] however, found sugar in the urine of dogs into whose veins they had injected chloral. They proved its presence by both the reduction and the fermentation tests. They also claim to have found an organic body, which was present in such small quantity that a determinative analysis was impossible. The same substance was probably that found by Von Mering and Musculus,[46] who named it uro-chloralic acid. They found that it reduced the copper and the bismuth tests and turned the polarization apparatus to the *left*. This from small doses of chloral or morphine, while large doses gave sugar and turned the polarization surface to the *right*.

After the stertorous breathing that accompanies the coma has existed for a short time, it is usual to hear moist râles throughout the chest, increasing as the end approaches, and at death congestion and œdema of the lungs are usually found. This is rarely the case where death is rapid.

THE TREATMENT OF POISONING BY CHLORAL HYDRATE.

In treating this condition, cognizance should be taken of the tendency to death.

If the case is one of those where there is decided coma, fall of temperature, stertorous respiration, and a small, quick pulse, and the tendency to death is by failure of heart and lungs, strong black coffee, strychnia and whiskey hypodermatically, hot bottles to feet and close wrapping in hot bottles, with the subcutaneous injection of atropia and digitalis, should be resorted to. If the respiratory power seems to be failing, electricity should be tried as well as artificial respiration. The advantages of the former may be seen from the following case by Chouppe.[47]

Dr. Chouppe was called at midnight of January 12th to a gentleman, whom he found quite insensible, with stertorous breathing, a punctiform, contracted pupil, irregular respiration, and a small, irregular pulse. The nature of the case was obscure until a bottle containing some remains of chloral was found. The patient's state became rapidly worse: the respiration very slow, the pulse imperceptible at the wrist, and the movements of the heart scarcely audible, the trunk and limbs being covered with a cold and viscous sweat. By one o'clock all spontaneous respiration had ceased, and the heart could no longer be heard. Inductive electricity and artificial respiration had been resorted to, with little or no effect, when the reporter called to mind a case of poisoning by morphia, in New York, in which artificial respiration had been kept up for several hours by faradization of the diaphragm. One of the poles

[43] Labbée: Du chloral. Archives gén. de méd., 1870, p. 330, t. 2.
[44] Bouchut, quoted by Labbée. (See above.) Levenstein: Berlin. klin. Wochenschrift, July 3, 1876, pp. 389, 390.
[45] Comptes rendus, August 3, 1874.
[46] Levenstein, op. cit.
[47] Gazette hebdomadaire, February 5, 1875.

was passed over the track of the phrenic nerve, and the other over the insertions of the diaphragm, a thermometer placed in the rectum indicating a temperature of 30.2° C., being the lowest observed during the progress of the case. The application was continued for thirty-five or forty minutes, at the end of which time the patient respired spontaneously, although slowly and irregularly, while the radial pulse could be faintly felt, and the movements of the heart were rapid. The first sign of returning sensibility was a dilatation of the pupils during the passage of the current, this ceasing when the current was interrupted. Next followed some cries, and lastly a complete return of consciousness during the passage of the current, the patient then recognizing those around him. At three o'clock he fell into a calm sleep. His pulse was 80, strong and regular; the respiration was regular and 20; and the rectal temperature rose to 37.4° C. The sleep lasted until nine, the patient awaking reposed and unaware of what had occurred."

It seems the patient took the chloral for the first time, because he slept badly; and the bottle whence he drank the solution was supposed to have contained from thirteen to fifteen grammes, of which he probably took a third. Very soon after he commenced feeling heavy, and undressed himself, after which time he recollected nothing.

The first thing to do in case the chloral has been recently taken, is to rapidly evacuate the contents of the stomach.

If it proves to be a case of collapse, amyl should be given by inhalation; at least ten drops on a handkerchief, subcutaneous injections of digitalis, atropia, and stimulants. Strychnia in either type, to be of any real service, must be pushed. An injection of $\frac{1}{60}$ of a grain, followed by another of $\frac{1}{30}$ or $\frac{1}{40}$ grain in an hour, if there is no improvement, should be resorted to. Cases where it has proved of service are on record.[48]

The following is very interesting in this connection.

Case VIII.—(*Centralblatt f. d. med. Wissenschaft.*, April 3, 1875.) Man took twenty-four grammes on full stomach. Interrupted respiration; pulse very feeble, only felt in carotid; surface pale and cold; pupils contracted; temperature 91.22° F. No improvement under artificial respiration and faradization; 0.003 gramme (about $\frac{1}{20}$ grain) strychnia subcutaneously. Muscular spasm, trismus, return of pulse, pupils dilated, temperature 91.94° F. Bad symptoms again; relieved by 0.002 gramme (about $\frac{1}{30}$ grain) strychnia subcutaneously. Improvement in all but respiration; this kept up for eight hours by induced current. Trismus and tetanic spasm fourteen hours after last injection. Recovery.

The value of chloral hydrate in strychnia-poisoning is undoubted, as will be seen when we come to discuss that matter. The antidotal power of strychnia in chloral-poisoning is, however, not so well established. This is due, in a certain measure I think, to the fact that strychnia has been used in absurdly small doses—doses which are entirely incapable of accomplishing any result in that condition of the system produced by an overdose of chloral. It is true that experiments on animals have proved that strychnia is not so useful in chloral-poisoning as chloral in that of strychnia;[49] but we are taught by the study of the physiological action and antagonism of other drugs that it is not always safe to judge from animal to man.

"Orr[50] stated to the French Academy that he had experimentally proven that a dose of chloral which Liebreich had relied on as being mortal to rabbits was very often not so, that the same was true of strychnia, and that, consequently, the investigations of Liebreich was not to be relied on as proving the respective antidotal powers of the drugs; and further, that experiments had shown him that if a certainly fatal dose of chloral were given to a rabbit the hypodermic injection of strychnia did not affect the result, but that his own researches had not gone far enough to establish the exact relations of the drugs.

Certain it is that strychnia, while not directly antidotal to chloral, is one of the most powerful drugs we have in combating the evils of chloral-poisoning.

Amyl was first used in chloral-poisoning by Coghill[51] successfully. It has since been used with success by McCullough[52] and others. It is not claimed that it is antidotal, but simply that it benefits the respiratory and cardiac failure, the two points at which the danger is most imminent. Dr. Madison Marsh[53] reports the case of a woman rendered comatose by forty-five grains of chloral in two doses. He revived her by means of pouring several pails of cold water over her head.

Tizzoni and Fogliata[54] deduced from the results of forty experiments that the best treatment in chloral poisoning is the cold douche to the head and back. I hardly think this procedure will meet the approval of the profession generally, for, while severe enough to rouse the patient to consciousness, it is sure to prevent the application of warmth to the patient's body—a most essential factor in the treatment.[55]

The search for specific physiological antidotes to chloral has been thorough and careful, and several times it seemed that the proper drug had been found. Atropine was tried and found wanting; picrotoxine (cocculus indicus), was proved to have a slight modifying power over chloral-narcosis, but it did not give that full antagonism sought for; strychnia likewise exercised some power, but failed to accomplish all that was desired. Chloral hydrate was found, on the contrary, to exercise an almost specific antagonism in poisoning by picrotoxine or strychnia.[56]

In judging of the effect of any antidote to the symptoms produced by an overdose of chloral hydrate and

[48] Hutchinson: ℥j. chloral, 1-10 grain strychnia: recovery. Lancet, September 27, 1879. (London Pharmaceutical Journal) Druggists' Circular, May, 1874. Kane: Antidotal Action of Chloral and Strychnia, Phila. Med. and Surg. Reporter, January, 1881.

[49] British Medical Journal, November 7, 1874. Dr. J. H. Bennett, of London, has been experimenting on this subject. It appears to be established from these experiments: 1. That, after a fatal dose of strychnia, life may be saved by bringing the animal under the influence of chloral hydrate. 2. That chloral hydrate is more likely to save life after a fatal dose of strychnia than strychnia is to save life after a fatal dose of chloral hydrate. 3. That, after a dose of strychnia producing severe tetanic convulsions, these convulsions may be much reduced, both in force and frequency, by the use of chloral hydrate, and consequently much suffering saved. 4. That the extent of physiological antagonism between the two substances is so far limited, that (1) a very large fatal dose of strychnia may kill before the chloral hydrate has had time to act; or (2) so large must the dose of chloral hydrate be to antagonize an excessive dose of strychnia, that there is danger of death from the effects of the chloral hydrate. 5. Chloral hydrate mitigates the effects of a fatal dose of strychnia by depressing the excess of reflex activity excited by that substance, while strychnia may mitigate the effects of a fatal dose of chloral hydrate by rousing the activity of the spinal cord; but it does not appear capable of removing the coma produced by the action of chloral hydrate on the brain. It is scarcely necessary to point out the vast importance of these results to practical medicine, and the indications they afford, not only in cases of poisoning by strychnia, but in cases of tetanus and other spasmodic diseases, reflex and central.

[50] Gazette médicale, July 6, 1872. Quoted by H. C. Wood: Materia Medica and Therapeutics.

[51] Irish Medical Journal, June, 1879, p. 969.

[52] London Medical Record, Medical Gazette, March 6, 1880.

[53] Medical and Surgical Reporter, January 16, 1875.

[54] Revista Clin. di Bolog., Fas. 12, 1875, Practitioner, 1877, p. 214.

[55] Brunton, quoted by Farquharson: Antagonism of Therapeutic Agents. Philadelphia, 1878, p. 38.

[56] J. Hughes Bennet and Crichton Brown, quoted by Farquharson, op. cit., p. 25.

the degree of success with which it has been used, the fact that individuals have recovered from very large doses of this drug, with absolutely no treatment, must be borne in mind and receive proper weight.

In the absence of any known drug that completely antagonizes chloral, it behooves us to determine what drugs are best suited to combat the symptoms arising, the most important of which are, failure of either heart or lungs, or both, to do their duty. Drugs should be selected that act both upon the heart and lungs themselves, and upon the respiratory and circulatory centres in the brain.

These drugs should be given either by the skin, the rectum, or by inhalation. A patient who has been long comatose from an overdose of chloral hydrate should not be allowed to get up or sit up on awaking, but should at once receive a full dose of some alcoholic stimulant. The rapidly acting drugs and stimulants are, of course, best suited to those cases where the heart seems to be at once overwhelmed; while those that act upon the cerebral centres are best suited for the more chronic cases, where coma is marked, and heart and lung power seem to be slowly failing together.

To recapitulate. The treatment should be to overcome the *tendency* to death. First, evacuate the contents of the stomach.

To stimulate heart.....	Caffein citrat. Strychnia, Digitalis, Atropia, } subcutaneously. Brandy (subcutaneously and by rectum). Amyl nitrite (inhalation). Carbonate of ammonia (intra-venous).
To maintain temperature	Wrapping in blankets. Hot bottles to feet and body.
To stimulate respiration[57]	Electricity (faradization of phrenics). Oxygen (inhalation).
To clear mind.....	Shaking. Talking. Douche to head. Strong coffee *by the rectum*.[58]

Never give beyond the $\frac{1}{10}$ grain of atropia in all. The pulse, not the pupil, should be the guide as to when enough has been given. Strychnia may be given freely. $\frac{1}{30}$ grain, followed by $\frac{1}{40}$ or $\frac{1}{50}$ grain or even more in an hour's time if no improvement shows itself, should be given subcutaneously. If the dose of chloral has been large, the strychnia may be used in larger doses.

The following was sent me by Dr. Samuel W. Francis, of Newport, R. I., and is of considerable interest:

"Some few years since I was summoned, in haste, to attend a lady who was said to be dying. On entering her elegant and luxurious bedroom, I found her parents and nurse apprehensively awaiting her certain exit. She was of an organization that can be best described as delicate and intense.

"I was rapidly informed that, when in one of our large cities, a leading physician, for certain nervous derangements, had very properly ordered the usual four-ounce mixture of bromide of potassium and hydrate of chloral, one teaspoonful three times a day, which would require ten days before it was taken up, and was not to be renewed. Having derived much benefit from its good effects, and being depressed and oppressed by affliction and cares, she, unconscious of the danger, increased the dose and repeated it more frequently, until a bottle of the medicine that was to last ten days was consumed by her daily. This imprudence, combined with very little nourishment, etc., became 'cumulative,' and had reached the crisis when I arrived.

"She was moving restlessly about her bed, with her eyes sleepily fixed, and that peculiar dull, white, and pinched countenance which is so apt to supervene just before death. Her respiration was abdominal, labored, and irregular; her pulse over 170, and so thread-like that it was impossible to count it. Her constant desire to vomit, bringing up nothing of any consequence, together with an inexpressible feebleness of tone, presented a case alarming in its nature, and hopeless to all appearances.

"It is needless to commemorate the various approved methods adopted by me to resuscitate my patient, without the slightest promising effect. She, moreover, had made up her mind to die, and gracefully but firmly opposed every effort on my part to relieve her. Something must be done, and at once. There was no time to call in consultation any prominent physician.

"Rapidly grasping the emergency, and coming to the conclusion that her body, being poisoned, was affecting her mind, and that a muffled exit would soon end this painful scene, I determined to affect the body through the mind, as it was utterly impossible to make her retain a single teaspoonful of milk and lime-water, or even keep down a small piece of cracked ice.

"Having attended her some time before through a dangerous attack of typhoid fever, brought on by a defective drain, I had remarked the high order of her cultivated mind, her quick appreciation of anything original, novel, or interesting; her love of music, and her keen sense of the ridiculous. On these characteristics I immediately determined to act; so, hastening home, I seized my banjo and returned to her bedside, where her agonized parents and weeping attendants were gathered in solemn awe.

"Taking up a prominent position, I commenced at once one of those ludicrous negro melodies, with a rapid accompaniment, whose song and music combined in olden times to rouse the slave from despondency, and exhilarate the aged and infirm.

"The effect was magical. An entirely new set of nerves were excited. At first there was a listless attention, followed by a gradual fading away of the cloudy intellect; then interest; then pleasure; then a smile; and ere I had played and sung five songs the low ripple of a laugh repaid me for what the little big men of the world might say was frivolous treatment. As if anything innocent and honorable that brought back one from the grave, when all else had failed, could be frivolous. For three nights and a great portion of three days I remained at the house, playing and singing, thereby keeping her mind from feeding on itself, and preventing that exhausting introspection so baneful to the sick.[59]

"At any hour, night or day, that she was taken with what an Irish attendant so tersely styled as 'strong weakness,' I repaired to the bedside, and with father and mother as chorus, lifted her out of herself. Elasticity soon came; then cheerfulness; then assimilation; finally appetite. She recovered entirely and completely, and is now in the enjoyment of perfect health.

"My fee was high, but was paid with gratitude.

[57] Some of the drugs in list of heart-stimulants are respiratory stimulants also.

[58] After a full dose of chloral the stomach is often incapable of absorbing anything.

[59] At the end of that time I had succeeded in battling with the prostration, and overcoming the morbid craving for hydrate of chloral, or any nervine, opiate, or stimulant, and the result proved that the treatment was correct.

"At the risk of being held up to ridicule and contumely by those of narrow minds, I have written out this case for the benefit of the profession. For I am confident that a human life was saved by the means employed; and am equally certain that many persons are allowed to 'fade away,' after all the 'regular, legitimate, and scientific' remedies have been faithfully tried, instead of endeavoring to reach that vital spark, and fan it on to life by adopting some entirely new and sudden, though pleasing method. He who is unwilling to brave prejudice in an emergency, or afraid to rescue a fellow-being, lest he be ridiculed, is unworthy of our noble, self-denying profession, and had better remain a 'private citizen.'"

This was afterward published in the *New York Medical Gazette* of May 29, 1880, was copied into the *British Medical Journal*, and there drew out considerable comment. Dr. G. Herbert Lilley writes that he is a believer in the efficacy of this agent, and that he published a pamphlet early this year, entitled "The Therapeutics of Music." In 1803 Dr. Louis Roger, of Montpelier, published a treatise entitled, "Traité des effets de la musique sur le corps humain," and in 1874 Dr. Chomel wrote on "Effets et influence de la musique sur la santé et sur la maladie."

PERICHONDRITIS AURICULÆ.

By THOS. R. POOLEY, M.D.,

NEW YORK.

(Read before the Medical Society of the State of New York, February 4, 1881.)

At the meeting of the American Medical Association in New York, last June, Dr. H. Knapp presented a patient whom he had treated for inflammation of the perichondrium of the auricle. The case is reported in full in vol. ix., No. 3, p. 196, of the *Archives of Otology*. I was reminded by his case and the admirable description which he gave of the disease of a similar one which was under my care and to which he refers in his paper. Although the patient was under my observation about a year before he observed him, it has not yet been published.

As will be learned by reference to his paper, this affection has been either imperfectly or not at all described in the text-books on otology. In confirmation of which statement he refers to the leading text-books and gives an abstract from some of them.

The very rare occurrence of the disease—Knapp says he has only seen three examples of it, and the one which he reports in detail was the only one of these which showed the disease in all its phases—is my excuse for reporting another which I had the opportunity of following from first to last.

September 24, 1877, I was consulted by Mrs. G——, a young married woman, aged twenty-one years, born in New York, of German parents. She had always enjoyed good health, and up to the time when the ear-disease began had nothing to complain of. Three weeks before seeking my advice she had some pain and itching in the meatus of the right ear. She said that "a boil formed in the ear, broke, and gave exit to a greenish-looking core," after which she was better for a time, but as the ear began to trouble her again she sought advice. There was no history of any injury, nor had she any reason to assign for the present difficulty. I found upon the anterior lower wall of the auditory canal, just within the meatus, a conical swelling, which showed the usual appearance of an otitis externa furunculosa. It was very sensitive to pressure with the probe. A deep incision was made into the centre of the swelling, and a small quantity of watery-looking pus let out.

October 2d.—The circumscribed swelling of the canal had subsided, but the lower part of the concha was red and swollen, although no distinct fluctuation could be made out. This swelling rapidly increased and became painful, not only when pressed upon but spontaneously. There was now an ill-defined sensation of fluctuation present.

In a few days the swelling had rapidly increased to such an extent as to fill the whole concha and obliterate its normal concavity; the swelling was of a dark red color and boggy to the feel. An incision

Fig 1.

into the most dependent part of the tumor was made with a Bell's knife, and a thin, glairy-looking fluid, mixed with yellowish white shreds, was evacuated. No blood escaped. A probe could with ease be passed along the anterior surface of the auricle as far as the anti-helix. The cartilage was roughened, hard, and its perichondrium, which readily detached, raised together with the skin on the probe. A tent of charpie was inserted into the wound to keep it open, the ear covered with absorbent cotton, and a flannel-roller applied so as to exert a pretty firm pressure. There was a thin, watery discharge mixed with broken-down shreds.

Slow extension of the swelling over the entire anterior surface of the auricle, except the lobule, ensued, involving successively the concha, helix, anti-helix, and fossa hellicis—in fact, all the anterior surface of the auricle except the lobule. The photograph taken at this time, November 14, 1877, which I am sorry to say was not taken just when the disease was at its height but after it had begun somewhat to diminish, represents the appearance fairly well. The character of the swelling was uneven, in some places diffuse, in others nodular. When the swelling had reached the helix it began to encroach upon the posterior part of the auricle, every part of which, except the lobule, became diffusely red, very much thickened and swollen, painful to the touch, but gave no sensation of fluctuation. Although the lobule itself did not become involved there were two abscesses formed below it—one in front, the other behind (probably suppurating glands)—which were opened. A probe passed into the fistulous opening, which remained for some time in the anterior one (as can be seen in the photograph), passed into the

concha, and thence along the anterior surface of the auricle, until its point could be felt just underneath the upper margin of the helix.

The acute inflammatory symptoms lasted for about two months, during all of which time the patient suffered a great deal of pain, always aggravated at night. So severe was the character of the pain that she had to be kept more or less under the influence of narcotics.

As might be expected, her general health suffered. She was pale, lost flesh, and became nervous and irritable.

The treatment consisted in making incisions into the parts of the swelling which fluctuated; counting the first, made in the auditory canal, and the two below the lobule, eleven in all were made. In addition to keeping the lower incision always open, injection of a weak solution of carbolic acid, and, toward the last, of iodine, were injected. A compress-bandage, the pressure of which seemed to allay the pain, was kept quite constantly applied. She was also given quinine, and a generous diet. The hearing was but little affected. There was no discharge from the auditory canal, and when the swelling of the canal would permit, there was found a normal condition of the membrana tympani. The swelling gradually disappeared in the same order in which I had begun, first of the anterior, and then of the posterior surface of the auricle.

The case was under treatment until March 27, 1878, and the second photograph shows the resultant deformity.

The tragus has assumed about the same appearance as the other ear, but the calibre of the auditory canal was considerably diminished, not only from permanent thickening and enlargement of its cartilage, but also from pushing forward of the deformed concha. The natural depressions and eminences of the prima concha, helix, anti-helix, fossa helicis, had for the greater part disappeared and were replaced by hard, nodular ridges. The helix was atrophied, and its upper anterior margin shows a distinct notch.

Fig. 2.

The entire auricle, except the lobule, had participated in the deformity. The misshaped auricle measured, from the upper margin of the helix to the lower margin of the lobule, 5 ctm., and from the tragus to the outer margin of the helix 2 ctm. The same measurements of the sound ear gave respectively 5½ and 2½ ctm.

Since determining to report the case I have examined the patient over again, January 18, 1881. There is no material change in the appearance of the deformity. Hearing is normal in both ears. A peculiarity of the deformed ear, mentioned by the patient herself, is that it sweats more or less all the while, and in all temperatures.

My personal experience in this disease is even less than Dr. Knapp's. He was kind enough to show me his case once or twice while the patient was under treatment, and quite lately my colleague, Dr. Born, has shown me another, in which the disease seems to be developing. Here, too, it began as an external otitis, and is just commencing to affect the lower part of the concha, exactly as in my own and Knapp's case.

I think with Dr. Knapp that this disease ought to be considered as an independent affection, and not confounded with hæmatoma auris, whether idiopathic or traumatic.

It seems, too, that inflammation of the perichondrium can be either idiopathic or traumatic, but that the former occurs the more frequently. It is not a difficult matter to make the differential diagnosis between hæmatoma and perichondritis.

I cannot recall having seen but one case of hæmatoma, and that was when the disease had run its course, leaving behind the characteristic deformity. It occurred in an insane subject, but was, nevertheless, distinctly of traumatic origin. The patient, a young man of about twenty-three or twenty-four years of age, was afflicted with periodical mania, and at the time of an outbreak would beat himself about the face and head. In this way he had not only produced a bloody extravasation into both auricles, but also detachment of both retinæ, causing complete blindness. When the deformity only is left, it is, no doubt, difficult to say whether it resulted from a primary inflammation or a bloody tumor, especially as an abscess of the auricle (perichondritis?) may be provoked by the presence of the blood.

But, from reading the descriptions of hæmatoma in the books, it would seem that in the early stages of the affection it must be sufficiently easy to discriminate between the two conditions.

The swelling of hæmatoma is much more symmetrically round than it is in perichondritis, which in both Knapp's case and my own was very irregular and nodular. The color, too, of the blood-tumor is of a more distinctly bluish cast, and the deciding point would be the escape of blood, either spontaneously or when incised. I would venture to add, that in inflammation there will be more decided pain and constitutional reaction.

One feature in the differential diagnosis, upon which Knapp lays great stress, the integrity of the lobule, loses its value from the fact that neither is the lobule ever affected in hæmatoma. (See "Burnett on the Ear," p. 248.) Dr. Yeats, of the Coton Hill Institution for the Insane, England (*British Medical Journal*, June 21, 1873, quoted in "Burnett on the Ear," p. 252), believes that the cartilage is never affected in this disease, and hence the lobule of the ear remains intact. This is exactly the same reason which Knapp gives for the immunity of the lobule in perichondritis.

In my case there was much more pain and constitutional disturbance than is mentioned in Knapp's or any of the other cases to which he refers.

Regarding the treatment employed, it now seems to me a mistake to have made so many incisions as I did. They were followed by no relief to the pain, nor did they in any way hasten the cure. It may be well to make one incision into the most dependent

part of the swelling to gain access to the cavity. For the rest the cavity should be drained by a drainage-tube, and injected with some antiseptic solution, such as carbolic acid and sytematic pressure employed.

In addition to the cases of idiopathic perichondritis referred to by Knapp, I would add one reported by Kipp, of Newark, in the "Transactions of the American Otological Society," 1873, p. 79, under the head of "Spurious Othæmatoma of both Ears, the Result of a Burn." In his case, although the process was limited to the upper part of the auricle, it was evidently of the same character as those of idiopathic origin.

An interesting feature of my case, not mentioned, so far as I know, in any other, was the hyperidrosis of the deformed auricle; but this condition has been noticed after nerve injury, and it is probable that here it, too, may be due to the implication of the nerves in the inflammatory process.

PRACTICAL SUGGESTIONS IN REGARD TO MILK AS AN ARTICLE OF DIET.

By JAMES D. TRASK, M.D.,

ASTORIA, N. Y.

The value of milk as food for invalids is now so generally appreciated that I desire to offer some suggestions that may remove difficulties in the way of its employment.

The most common objection offered by individuals to the use of milk is, that in their case it produces "biliousness." In many instances this is due to a disregard of the fact that milk ought to be looked upon as an article of food, and not as a mere drink; consequently, to secure its perfect digestion it should be always taken at one of the regular meals, or at a point as near as practicable, midway between two meals, when something is required to bridge over this interval. Bread and milk eaten together, by both children and adults, being agreeable to the palate, is often hurriedly swallowed and in excessive quantities, and indigestion is the consequence.

Again, since modern chemistry has taught us the important part taken by the saliva in the preparation of all starch foods for digestion, we have a ready explanation of the failure of the stomach to digest bread that has been swallowed with milk without previous mastication. Most children and adults in vigorous health are able to digest bread even under these disadvantages. When milk is given to either children or adults with feeble digestion, I invariably direct the bread to be first thoroughly mixed with the fluids of the mouth and swallowed by the child or invalid before the milk is taken; the young child must be watched as it eats, mouthful by mouthful, until the proper habit is formed.

The digestibility of milk depends, in many instances, upon the temperature at which it is taken into the stomach. This is particularly true in the cases of nervous prostration, of varying degree, which are constantly presenting themselves to the physician. The digestive organs of these persons are almost invariably weak, and the reception accorded to milk when taken into the stomach will often depend upon its temperature when swallowed. From personal experience, as well as abundant observation, I am certain that the temperature at which it is ingested will determine whether it shall be gratefully received and readily digested, or, on the other hand, prove a source of discomfort.

On reflection it will at once appear that food, on being taken into the stomach, must first of all be warmed up to the temperature of the stomach, and this at the expense of vital heat. To raise a half pint of milk thirty or forty degrees involves the waste of no inconsiderable amount of animal heat. This, in a healthy person with vigorous digestion, may not only be disregarded, but may be agreeable in its effects, but it is far otherwise with him whose digestive organs, under any of the depressing influences productive of nervous exhaustion, are taxed to their utmost to furnish fresh supplies of enriched blood to the enfeebled nervous centres. In these cases, milk at ordinary temperatures will be felt as a cold, foreign body, long after it is swallowed, and its ingestion will probably be followed by acidity and headache. It is manifestly far more economical of vital force, in these cases, to heat the food upon the kitchen range, rather than in the patient's stomach.

These remarks find a curious and important corroboration in the fact, that they are especially applicable to the use of food by such persons in cold weather. In summer, when the temperature of the atmosphere and of surrounding objects approximates that of the human body, drinks may be generally taken without being first artificially heated. On the return of cold weather the stomach again becomes conscious of the additional duty imposed upon it, and artificial heating again becomes necessary. This has been observed too often to be a matter of doubt, and is in accordance with what we might expect.

Much has been said of the value of external heat as a vital stimulant. Few, however, seem rightly to appreciate the value of heat introduced into the system as a vital restorative. No more acceptable mode of accomplishing this can be devised than the drinking of hot milk. Milk heated to much above 100° Fahr., loses for the time a degree of its sweetness and its density. I am persuaded, however, that no one who, fatigued by overexertion of body or mind, has ever experienced the reviving influence of a tumbler of this beverage, heated as hot as it can be sipped, will willingly forego a resort to it, because of its having been rendered somewhat less acceptable to the palate. The promptness with which its cordial influence is felt is indeed surprising. Some portion of it seems to be digested and appropriated almost immediately; and I am certain that many who now fancy they need alcoholic stimulants when exhausted by fatigue, will find in this simple draught an equivalent that shall be abundantly satisfying, and far more enduring in its effects.

What I have written was originally an outcome of personal experience, but the following statement is a gratifying confirmation of the value of these suggestions: A lady, whose nervous system had been severely overtaxed by the supervision of a large school for girls, and whose digestion had become seriously impaired, went to Europe for her health. She eventually consulted Sir Thomas K. Chambers, and in answer to his inquiries stated that she had made repeated attempts to take milk of ordinary temperature as an article of food, but it had never been tolerated. At the suggestion of Dr. Chambers she began to drink it after being heated, in the same quantities as before. This proved the turning point in her case. The heated milk was well borne and her convalescence dated from that time.

The College of Physicians and Surgeons of Baltimore has lengthened its course from five to six months.

A DEVICE FOR RETAINING DISLOCATIONS OF THE CLAVICLE AT ITS DISTAL END.

By C. L. STILES, M.D.,

OWEGO, TIOGA CO., N. Y.

(Read before the Medical Society of the State of New York, February 4, 1881.)

Having experienced at various times much annoyance in the effort to retain the clavicle in place when dislocated at its acromial end, and my wife having had, something over a year since, the misfortune to sustain an injury of this kind, the result of falling down-stairs head first, I tried various dressings and appliances to retain the end of the clavicle in place, but with indifferent success until I devised the following method of treatment:

Putting the bone in position, a plaster cast was taken of the parts, about four inches long and two and seven-eighths inches wide. (It is necessary to oil the part before applying the plaster.) I took the cast to Dr. Downs, a dentist, and requested him to make a hard-rubber plate from the cast in the same manner as he would make a plate for a set of teeth from a plaster cast of the mouth, making it about three thirty-seconds of an inch thick. I explained to him what I wished it for, and he succeeded very nicely. When it was finished I applied a piece of lint to the under surface of the splint and placed it on the clavicle, and found it a perfect fit. I then attached to the outer or upper surface of the splint two strips of strong adhesive plaster, about fifteen inches long (and the width of the two strips nearly covering the splint), which I applied to the posterior part of chest. I then applied two more strips over those already applied, but extending in the opposite direction and diverging somewhat, and to the lower ends of these strips I fastened two rubber bands, about three inches long and three-fourths of an inch wide (the bands can be obtained at any bookstore), and to the lower ends of the bands I fastened pieces of adhesive plaster with broad bases, making sufficient traction to hold the bone in place. The last-mentioned pieces of plaster were firmly fixed to the anterior part of the chest. A small roller was placed in the depression of the splint above the clavicle, and then another piece of plaster about three inches wide was applied from before backwards over the roller and brought up over the roller and down on the back and closely applied. The forearm was placed diagonally across the chest, and retained with adhesive strips and a few turns of the roller, and the dressing was completed.

The result was all that could be desired; there is perfect freedom of motion of the arm, and it can be put directly up beside the head as well as its fellow.

My excuse (if any is needed) for presenting this brief paper is to help any professional brother who is annoyed as I have been with this class of injuries.

Suicide of a Physician.—On February 26th Dr. Arthur Clifford, a son of ex-Governor Clifford, while returning from a short trip to New York with Dr. Ira Russell, shot himself through the heart in a Ware River train, between Barre Plains and Winchendon. He had been partially insane, and was under Dr. Russell's care at the asylum here for some time. Dr. Clifford had been a practising physician in New Bedford, where his family reside.

Reports of Hospitals.

BELLEVUE HOSPITAL.

Notes of Practice and Peculiarities of Treatment.

ACUTE LOBAR PNEUMONIA—ANTI-PYRETIC USE OF COLD.

The interest in this case centres in the plan of treatment adopted. A female patient, aged thirty-five years, English, and a domestic, entered the hospital on the 30th of November. Family history unimportant, and she had not been accustomed to the use of alcoholic drinks. Three years ago she had an attack of acute articular rheumatism, which had not recurred, and there was *no evidence that she had at that time endocarditis*. She said she was in excellent health up to November 22d, when she was exposed somewhat to cold, and on the next day she began to feel ill, but had neither pain nor cough until the night of the 25th, when she had chilly sensations, accompanied by pain in the left side, embarrassed breathing, and fever. On the following day she was obliged to keep her bed, had a dry cough, but soon began to expectorate a whitish material that became darker in color at a later date. She grew steadily worse, and was admitted on the 30th, complaining of pain in her left side near the nipple, dyspnœa, great weakness, and had a temperature of 103¾° F. in the axilla; pulse, 120, and weak; respiration, 40; and an anxious expression of countenance.

Physical examination revealed notable dulness over the lower lobe of the left lung, bronchial breathing, increased vocal resonance and fremitus, bronchophonic voice, whispering pectoriloquy, and numerous crepitant râles; and, over the upper part of the same lung, slight dulness and broncho-vesicular breathing.

The indication from the pulse and general condition seemed to be to give alcoholic stimulants, and she therefore received *half an ounce* of whiskey every two hours, also *five grains* of carbonate of ammonia every two hours, and a diet of milk and eggs. It was also ordered that she be placed in the *cold pack* as soon as her temperature rose above 103¼° F. in the axilla. The following was the record made from the date of admission up to the date of this note:

November 30th.—Evening temperature, 102° F.; pulse, 106; and respiration, 26. A manifest improvement since admission in the forenoon of the same day. At 9 P.M. her temperature was 100° F.; pulse, 100; and respiration, 20. At 12, midnight, her temperature was 103¾° F.; pulse, 90; and respiration, 22.

December 1st.—At 3 A.M. her temperature was 101° F.; pulse, 80; and respiration, 20. At 6 A.M. her temperature was 102¾° F.; pulse, 100; and respiration, 23. At 8 A.M. temperature, 103° F. At 9 A.M. temperature, 102° F.; pulse, 105; respiration, 30. At 12 M. her temperature was 102½° F.; pulse, 106; respiration, 33; expectoration viscid, and noticed, for the first, to be rusty. At 3 P.M. her temperature was 103¾° F.; pulse, 116; respiration, 40. At 6 P.M. her temperature was 104° F.; and, nude, she was wrapped in a sheet which was wet in cold water, and sprinkled afterward every fifteen minutes. At 7 P.M. her temperature in the mouth was 103¾° F.; at 8 P.M., 103¾° F.; at 9 P.M., 102¾° F.; at 10 P.M., 102¾° F.; at 12, midnight, 102° F., and she was then removed from the pack.

December 2d.—At 1 A.M. her temperature was

103° F.; pulse, 104; and respiration, 28. At 2 A.M. her temperature was 102° F.; pulse, 105; and respiration, 36. At 3 A.M. her temperature was 101¼° F.; at 5 A.M. temperature 101¼° F.; pulse, 100; respiration, 20; at 7 A.M. temperature, 100¼° F.; pulse, 90; respiration, 18; at 8 A.M., temperature, 98° F.; pulse, 90; respiration, 16; at 9 A.M. temperature, 99° F.; pulse, 94.

[The subsequent history of the case was progressively favorable.]

GAMGEE'S METHOD OF TREATING WOUNDS.

A case of extensive wound in the neighborhood of the elbow-joint was seen, that was being treated by Gamgee's method, which is embraced in three propositions. 1. Water should not be used upon a wound, because it contains materials which may act as irritants, and he therefore treats all wounds in a perfectly dry state. 2. The wound should be put in a condition of perfect rest, to accomplish which, starch, pasteboard, plaster-of-Paris, or other material may be employed. 3. All wounds require a certain amount of equitable pressure on the wound and on the parts above and below. Therefore, if Mr. Gamgee had been called to treat this patient, he would have bandaged the limb from the fingers upward, removing only such blood as was not adherent, because the blood acts as a hermetically sealing apparatus. If the edges of the wound are separated he uses carbolized sutures. Then apply some material like lint which will mat down and so seal the wound in, and let it alone. If the discharge is considerable and offensive, remove only such portions of the dressing as are loose, and apply more dry material to absorb the pus rather than remove it. The wound in this case was an extensive one made by a saw. It did not involve the joint. It was progressing very favorably. But the visiting surgeon believed that the same amount of healing could be secured as rapidly without suppuration, at all events without the odor, by using carbolized dressings and irrigation. However, in the absence of carbolized dressings he believed that the plan contained a great deal of truth.

ACUTE DIFFUSE PERITONITIS—PAROTIDITIS.

The case was interesting with reference to both diseases. A male patient, aged twenty-three years was admitted to the hospital with well-marked symptoms of acute diffuse peritonitis, for which no cause could be readily ascertained. It was thought that some underlying disease existed, which probably would explain the occurrence of the peritonitis. [Nothing developed in the subsequent progress of the case to show that the peritonitis was dependent upon any antecedent affection.] He was treated with opium, sufficient being given to keep him entirely free from pain. In due time a laxative was given, which moved his bowels, and, so far as could be judged from his condition at the date of this observation, twenty-two days after his admission, there was nothing underlying the peritonitis which would prove serious.

About one week ago parotiditis developed as a complication, and from appearances it was altogether probable that suppuration would *not* occur. Parotiditis secondary to peritonitis is not common.

ENDOCARDITIS—THE DIAGNOSTIC SYMPTOM WELL MARKED.

A female patient was admitted to the hospital with acute articular rheumatism. There was no evidence of endocardial inflammation when admitted, but while in the hospital a murmur was developed, and it became quite intense. A systolic murmur heard in the precordium, above the apex rather more distinctly than at the apex, *not* transmitted to the left of the apex, *not* transmitted above, and *not* heard in the carotid artery. Such a sound denotes a murmur produced within the left ventricle *without* insufficiency of the mitral valve. [This case was exceedingly obstinate.]

PROBABLE CIRRHOSIS OF THE LIVER—ACUTE BRIGHT'S DISEASE—ASCITES—EARLY PARACENTESIS ABDOMINIS.

There were several interesting points in the history of the following case:

A male patient, aged sixty years, was admitted to the hospital in April, 1880. *Twenty-two* years ago, after exposure to a series of rapid alternations of heat and cold, he suffered from general malaise, loss of appetite, violent headache, nausea, febrile movement, and general anasarca. All those symptoms entirely disappeared, and he returned to his work apparently well. Prior to that date he had been accustomed to drink freely of ardent spirits, undiluted, and before breakfast. Since that date he had been strictly temperate. In March last, after prolonged exposure to cold, insufficiently protected with clothing, and bathed in perspiration, he was again taken with headache, anorexia, and nausea, and again he came to the hospital with general anasarca. He also had hydroperitoneum *out of proportion* to the general dropsy. His liver was found somewhat diminished in size. His heart was *slightly enlarged*. His urine was acid, had a specific gravity of 1015, contained albumen in large quantity, and blood and epithelial casts.

Under appropriate treatment the general anasarca disappeared, but the ascites remained as a prominent symptom, and paracentesis abdominis was performed and repeated three times in quite rapid succession. The last tapping was done about four months ago, and there was, at the date of this note, *no evidence of fluid in the abdominal cavity*. The case illustrated the value of early and repeated tapping, if necessary, in ascites. It was believed to be altogether probable that a certain amount of cirrhosis of the liver had existed during the last twenty-two years, and that it had been rendered *non-progressive* by the removal of its great cause at the remote period when the patient ceased to use ardent spirits. What had been the condition of the patient's kidneys during all these years was regarded as an important question, and its answer would have an important bearing on the diagnosis and prognosis in his present condition. Prior to his second attack in March last, the patient had noticed for some time that he was passing rather more urine than he usually had done, and that it was light colored.

CIRCUMSCRIBED EMPYEMA—FOUR YEARS' DURATION—GOOD GENERAL CONDITION OF THE PATIENT.

The following case was worthy of note. The patient, an old man, had been in the hospital *four* years. He entered with empyema on the left side, his chest was dilated very much, and his general condition was, at that time, exceedingly unfavorable, being confined to the bed, emaciated, and very feeble. He was aspirated several times, but pus continued to reaccumulate, and finally a free incision was made and kept open, and there had continued, up to the date of this note, a certain amount of discharge, but probably not to exceed an ounce daily for a long

time. The left side of his chest was extremely contracted, but he was comfortable and maintained a fair degree of general health.

It was believed that the circumscribed empyema existing was not between the walls of the chest and the lung, but between the lobes of the lung, and that that was the probable reason why the patient had not been cured, because it was difficult to bring any measures to bear upon completing the coaptation and adhesion of the inflamed surfaces.

The cavity was being kept constantly clean and disinfected daily with carbolized water 1 to 100. If, from any cause, the patient was allowed to go three or four days without washing out the cavity, fever was certain to develop, and as soon as the cleansing process was renewed the fever ceased. That had occurred several times.

ACUTE BRIGHT'S DISEASE—RECOVERY.

There was one interesting point in the following case. A female patient, aged fifty-three, intemperate, and a cook, was admitted to the hospital with gastro-enteritis, caused by alcohol. Four years ago she had dysentery; three years ago pneumonia; and two years ago, after exposure to cold while under the influence of liquor, she was admitted to a hospital with general dropsy and the diagnosis of acute Bright's disease was made. Since her present admission no evidence whatever had been found of the existence of disease of the kidneys.

Progress of Medical Science.

THE SALICYLATE OF ESERINE.—Ordinarily the salts of eserine are unstable. Merck has, therefore, proposed the use of the salicylate of eserine, which salt appears to be more readily preserved than most of the combinations now in use. This new preparation occurs in the form of bright, needle-like crystals, which are colorless, and soluble in 24 parts of alcohol, and 130 of water at 16° C. Solutions of one to fifty remain clear for about a week. They assume a slightly red color when exposed to light, but they are not turned brown, as are solutions of the sulphate. Besides, it is hardly necessary to use such concentrated solutions in ophthalmological practice. The salicylate of eserine contains 66.6 parts of eserine to 33.4 of salicylic acid in 100 parts.—*La France médicale*, January 13, 1881.

BILIARY CALCULI CAUSING SYMPTOMS OF INTESTINAL OBSTRUCTION.—This case was reported by M. Duménil (*Union médicale de la Seine-Inférieure*) to the Medical Society of Rouen. The patient was forty-six years old, and was suddenly seized one night with violent abdominal pains and bilious vomitings. Soon the symptoms of intestinal obstruction became quite pronounced. Treatment proved ineffectual, but about six days after the first attack the patient passed a large biliary calculus. The cause of the obstruction being thus removed, the patient made a quick recovery.

The voided stone was composed of three biliary calculi, surrounded by hardened fæcal matter. It had a horse-shoe shape. M. Duménil thought that a body so large could not possibly be supposed to have passed through the common bile-duct. Probably ulceration of the gall-bladder or hepatic ducts had occurred, in which case old adhesions must have existed or else peritonitis must have been developed. The possibility of such occurrences should not be lost sight of in cases of intestinal obstruction, affecting patients who gave a history of hepatic colics.—*La France médicale*, January 11, 1881.

EFFECTS OF EXPERIMENTAL OCCLUSION OF THE CORONARY ARTERIES.—M. Vulpian lately read a paper on the above subject at a meeting of the *Academie des Sciences*. The experiments were undertaken by Sée, Rochefontaine, and Roussy. After some historical items the results observed by these experimenters were detailed. Briefly summarized, this is what was ascertained. Shortly after closure of the coronary arteries (*i.e.*, after the lapse of one or two minutes), the rhythmic ventricular contractions suddenly cease and give way to an irregular, muscular tremor such as has been noted by Paxum, Mayer, Ludwig, Vulpian, and others, following faradization of the ventricles. This trembling motion is most intense in the right ventricle. The auricles continuing to discharge their contents, the ventricles rapidly become filled with blood. They swell out considerably, and at the same time the arterial pulse becomes imperceptible. The general circulation is permanently arrested.

It was further ascertained that it was not even necessary to ligate both coronary arteries at their point of origin. It sufficed to tie some of the principal branches in order to produce identical phenomena. Nor did section of the vago-sympathetic interfere with the obtaining of these results. Faradic excitation of the thoracic end of the cut nerves had no effect. The same was noticed with regard to faradization of the first thoracic ganglion, although this provoked rapid and energetic contraction of the auricles. Thus it would seem that arrest of circulation in the heart's own substance, from occlusion of the coronary arteries, occasions an incapacity on the part of the cardiac fibres to contract in a rhythmical manner. The muscular fibres of the ventricles are thrown into a state of contraction similar to the condition brought about by the application of the faradic current.—*Gazette Médicale de Paris*, January 22, 1881.

THE BIOLOGICAL ACTION OF BERBERIN.—Curci (*Il Raccoglitore med.*, vol. xiv., No. 4, 1880.—*Lo Sperimento.*, fasc. x., 1880) has investigated the physiological and therapeutical action of berberin and reports the following conclusions as the results of his experiments: 1. Peripheral capillary circulation is obstructed after administration of the drug. This stoppage of the flow is not brought about by vascular contraction, but by coagulation of the blood in the capillary vessels. The thrombi thus formed are, however, readily swept away by the current of the blood. 2. The blood in the vessels becomes changed. The colored corpuscles diminish in size, assume a round shape, show nuclei, and appear granular. They seem to be surrounded by a pale rim. 3. Berberin stains the muscular fibres. The transverse striæ soon lose their color. The coloration of the longitudinal striæ, however, is very marked. Muscular contraction is the assumed cause of this phenomenon. 4. Connective tissue, the skin, and other structures are hardened by the drug. Suppuration does not take place. The hypodermic injection of sulphate of berberin produces irritation, pains, œdema, and congestion. After some time the skin at the point of injection becomes hard and tense. Exudation and thrombosis also occur. 5. Its action on the alimentary canal consists of: irritation of the mucosa, stimulation of peristaltic motion, increased secretion, improved

digestive power, augmented tonus, and general advance in the powers of resistance.

It appears therefore, that, histologically, berberin is a coloring agent. From a therapeutic standpoint it stimulates intestinal function and hardens tissues. It seems to be indicated: *a*, in atonic gastro-enteritis, and the diarrhœa of strumous and scrofulous subjects; *b*, in chronic dysentery, even when extensive ulceration of the mucous membrane exists; the dose is 0.01—0.02, twice or three times daily; *c*, in atonic wounds and ulcers; *d*, in chronic conjunctivitis.—*Allg. med. Cent. Zeit.*, December 29, 1880.

Treatment of Choleriform Infantile Diarrhœa.—In the *Union médicale du nord-est*, M. Luton describes his method of treating the summer complaint of children. It is considerably at variance with the ordinary methods of treatment now in vogue. Absolute restriction of diet is the prime requisite of successful therapy according to Luton. The only thing which the child is allowed to take is pure cold water. No other food or aliment is given. The water is given in copious draughts, provided the child shows its inclination to drink. All vials should be scrupulously cleaned. Luton states that the sick infants readily drink the water—in fact, they seem to have an instinctive craving for it, feeling, as it were, that its effects are beneficial. Soon the vomiting ceases, and the diarrhœal stools disappear after the noxious bowel-contents have once been evacuated. In twenty-four hours convalescence is as a rule established.

A point of some delicacy is to return to normal alimentation. The first step in this direction is to add a few drops of boiled milk to the cold water, which the infants should continue to take. Gradually the proportion of the milk to the water is increased, until finally the former may be given almost pure. Cold milk, without the addition of sugar, should be taken for several days longer; and if any return of previous symptoms occur, the former treatment should again be employed. In ordinary acute gastro-enteritis, Luton makes use of rather large doses of silver nitrate (0.05 of the salt to 25.0 of water, a teaspoonful every hour), until unmistakable evidence of a remission is observed. Sometimes this event takes place after two or three doses of the silver nitrate have been administered. Of course the water plan is an essential addition to this method of giving large doses of nitrate of silver. Raw meats pounded, pressed, or minced, and especially mutton, are given with advantage during the progress of convalescence.—*Journal de méd. et de chir. prat.*, January, 1881.

A Case of Wandering Liver.—The following case is reported by Dr. Hochhalt (*Gyogyaszat*, xix., 41, 42): A woman, fifty-five years old, who had in her youth been subject to jaundice, lifted a heavy sac about one year before she came under observation. At the time of that unusual exertion she suddenly experienced a sharp pain in the right hypochondriac region, and fell to the ground in an unconscious condition. Since then she constantly suffered from a feeling of weight, and her right side was occupied by a movable, hard tumor. Her condition has remained unchanged, and, beyond attacks of temporary indigestion and obstinate constipation, she has no morbid symptoms.

The diagnosis of movable or floating liver appeared a proper one when the results of the physical examination were taken into consideration. These may be summarized as follows: 1st, the liver was not found in its normal position; 2d, in the hypogastric region a tumor, corresponding in its shape and dimensions to the liver, was discoverable; 3d, this tumor was movable; 4th, it could be returned, by manipulation and a suitable decubitus of the patient, to the right hypochondrium; 5th, the abdominal parietes were abnormally lax and flabby. As regards treatment, the patient was merely directed to wear an appropriate abdominal supporter.—*Med. chir. Rundschau*, December, 1880.

Sudden Death during an Attack of Hysteria.—At a meeting of the *Société médicale des hôpitaux*, M. Raynaud communicated the following case: A single lady, thirty-three years of age, had been for several years subject to hysteria. In addition, she had eczema of the feet, particularly about the matrix of the nails. Three times operations for ingrown nails had to be performed. The hysterical seizures were characterized principally by prolonged pharyngeal spasms, a distinctly marked dysphagia, and a complexity of other phenomena, closely resembling attacks of hydrophobia. Some time ago she complained of terrible pains in the region of the third dorsal vertebra, and her temperature rose to about 103° F. Under appropriate treatment the pains ceased. Soon, however, a similar pain was experienced in the neck, and trismus was now superadded to the other symptoms. Nevertheless, she was still able to sit up, and opisthotonos was never present. Then a protracted spasm, resembling an attack of hydrophobia, again came on. Respiration became considerably embarrassed. Later the pains shifted to the abdomen. She remained in this state for several days, the respiration meanwhile becoming more and more difficult. Sometimes breathing was altogether interrupted. Auscultation failed altogether to elicit any thoracic lesion. Cyanosis now developed, and the patient died. By the method of exclusion the diagnosis of hysteria was maintained.

In commenting upon this rather remarkable case, M. Dujardin-Beaumetz said that he had observed sudden deaths during hysterical seizures, but all such patients had presented at the autopsy the lesions of interstitial nephritis. In the present instance, no albumen was found in the patient's urine.—*Gazette des hôpitaux*, February, 1881.

Tracheotomy in One Movement.—M. de Saint-Germain has performed two hundred and twenty-seven tracheotomies without a single grave accident due to the operation. He is opposed to the successive incision of the different layers of tissue over the trachea by the slow method. This is his method of procedure. He places the child on a table, its shoulders resting on a hard cushion, and the head firmly held by an assistant. With his left hand he firmly grasps the larynx, seizing it as if to draw it away from the vertebral column. A straight bistoury with a narrow blade is then plunged into the cricothyroid membrane, the direction of the cut being guided by looking at the sternum. The depth of the incision is to be about fifteen millimetres. Next, with a sawing, not with a pressing motion, the cricoid cartilage is divided, and similarly two or three rings of cartilage, and at the same time the isthmus of the thyroid gland and the skin are cut. In withdrawing the instrument the incision is prolonged downward for several millimetres, thus making a little canal into the skin, to facilitate the flow of liquids. The edges are now separated by a suitable dilator, and the canula at once inserted. He has never seen serious hemorrhage occur in this operation.—*Gazette des hôpitaux*, January 15, 1881.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

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THE ENFORCEMENT OF THE MEDICAL LAW.

THE Medical Society of the County of New York has prepared itself for the work of prosecuting offenders against the present medical law. As will be seen by the report of the last meeting of that body, a certified list of registered practitioners has been obtained, and the censors have been empowered to employ a lawyer to aid them in framing the complaints.

The machinery for the prosecution is exceedingly simple, and can be employed by similar organizations throughout the State without much trouble or expense. In the first place, it is necessary that the by-laws of the different county societies be so altered as to provide that the board of censors shall be the committee in charge of the prosecution, as recommended at the late meeting of the State Society. By the medical law the duties of censor have been dispensed with. It is competent, however, for the county societies to retain their censors, and to impose upon them the new duties to which we have referred. To this end the change in the by-laws of the different organizations may be necessary. This is probably the best way to simplify the work of the societies and reduce it to a practical and comprehensive system. In case it may be impracticable to make new by-laws, special committees may be appointed, with powers to prosecute equal to those of the present censors of the medical society of this county.

Although the District Attorney is the proper prosecuting officer, it would appear to be necessary, in the interests of each society, to have an attorney to whom all legal questions bearing upon the prosecution of particular cases might be submitted in advance. Each member of the medical profession is especially interested in seeing the present medical law enforced, and cannot afford to allow any case to go by default for the lack of proper legal advice. The expenses of these proceedings need not be large. At most, they can be confined to test-cases.

We are not in a position to state what will be the course of the censors of the County Society in commencing the prosecution of cases. It is plain to us that, on general principles, those practitioners who may have declined to register should be the first to be taken in hand. This, it strikes us, is the starting-point for proving whether or no the present law is good for anything. If any medical man can take it upon himself to decline to register, and can sustain such a position, then any quack can do the same. If such be the case, the law becomes a dead letter, inasmuch as the main idea of its utility is centered in the possibility of an accurate registration of all qualified practitioners.

It may be well, then, to commence proceedings against some individual who is not registered, but who is otherwise qualified to practise. This should be made a test-case, and the most prominent offender should be selected for the purpose.

After this it would seem to be in order to bring the quacks to account. Of the latter there is a large number everywhere throughout the State, who practise illegally on one pretence or other. If such cases are properly presented in court, conviction is easy in the vast majority of instances. At least it is proper so to believe until the contrary is proven. Under the system adopted by the Medical Society of the County, it will not be difficult to collect the necessary evidence to convict offenders against the law. In fact, each individual member of a society can make the complaint himself if he chooses so to do. It will be found to be more convenient, however, to present the evidence to the censors, giving them the responsibility of acting upon the same.

THE CATGUT LIGATURE.

THE reports of some recent clinical experiences with the catgut ligature in Germany, together with experiments made with it in France upon dogs, have brought the subject somewhat prominently to the attention of the profession. Mr. Lister's opening address as President of the London Clinical Society, upon the catgut ligature, therefore, is especially timely and interesting. Although the individual opinions of surgeons regarding this ligature may be largely against it, there is no question that it has secured good results in some hands, and has become an established part of the surgical armamentarium. It is important, therefore, to know exactly what value should be placed upon it, since the life of a patient sometimes hangs on the ligature.

Mr. Lister admits that while catgut has answered his expectations in some respects, it has seriously failed in others. In tying large arteries, or pedicles, or in uniting the wound of the uterus in the Cesarean operation, there have been cases where the

catgut has not held, and where life has been endangered or lost in consequence.

The dangers from the animal ligature have been that it softens too soon, and either the knot slips or the entire cord dissolves away. In order to prevent this, the catgut, according to the old method, had to be soaked in carbolized oil and water for a long time —two months at the very least, and better for six months or a year. Such a long time of preparation opens the way to dangers if the surgeon depends on the honesty of the instrument-maker.

Convinced, however, that there were vital objections to the silk ligature on account of its often causing irritation and suppuration, Mr. Lister experimented for a long time with the object of removing the existing imperfections in the catgut. In order to make this ligature suitable, it must in the first place be prepared by a method which does not take a long time. It must be so prepared that it will not soften too soon, and the knot must hold well. The string must be strong enough to stand the hardest pull which the surgeon can put upon it. Finally, it must not be so rigid, or made so tough, that it will not eventually become absorbed or organized in the tissues. After many experiments, Mr. Lister found a method of preparing the ligature which, as he considers, meets all the indications. He dissolves one part of chromic acid in four thousand parts of distilled water, and adds to the solution two hundred parts of pure carbolic acid. As soon as the ingredients are mixed, catgut about equal in weight to the carbolic acid is added. At the end of forty-eight hours the gut is taken out, dried, and placed in one to five of carbolic oil. This latter mixture has the property of stopping any further changes in the gut, and preventing its becoming over-prepared. There is a slight tendency for the catgut to uncoil when placed in the chromic solution, and this tendency is still greater when it is being dried after removal. To prevent this, the catgut should be prepared on the stretch, which may be done by winding it on a test-tube. As the principal uncoiling takes place during drying, special attention should be paid to its being kept stretched at that period. Prepared in the above way, catgut measuring 2¾-hundredths of an inch in diameter will stand a strain of thirteen pounds six ounces, while the ordinary maximum strain applied in tying is only ten pounds. After soaking in warm serum for half an hour it breaks at eleven pounds. The test for the quality of catgut is soaking it in warm blood-serum, since that fluid acts upon the gut much more actively than does water.

As regards its action in the tissues, Mr. Lister showed specimens of ligature which had been imbedded for various periods. From an examination of these he concluded that for about ten days there is no change. After that, superficial erosions take place, the gut becomes smaller and smaller, until in about three weeks it has become absorbed or organized. Even when it has been made very small by erosion, however, the part which remains continues firm.

Mr. Lister concludes, therefore, that he has found a method of preparing catgut which meets all previous objections to its use.

It will be obvious to persons acquainted with the general qualities of catgut, after reading Mr. Lister's address, that the data on which he founds his recommendations are as yet quite insufficient to warrant anything but very cautious trials of the new material. The trouble with catgut has always been the uncertainty regarding the quality of each particular sample, and these uncertainties still seem likely to be so great that the careful surgeon will feel it a duty to test each specimen before use by soaking it in blood-serum. Catgut is made out of the intestines of the sheep, being composed mostly of the submucous tissue. The quality and strength differ in different sheep. If any putrefaction has taken place before the manufacture, the gut is much weakened. Furthermore, the chromic acid tends at first to soften and uncoil the catgut, and there must be much care taken in the different steps of its preparation for surgical use. Until these various contingencies are lessened, the sphere of usefulness of the catgut ligature must continue a somewhat narrow one.

QUACKERY AND THE RELIGIOUS PRESS.

Our protests against the publication of quack advertisements in the religious press have not been made in vain. Not only has the medical profession over the country indorsed our position, but many of the religious papers are on our side. Notably among these is the *Christian Register* of Boston, which comes nobly to the front in denouncing the wicked practices of many of its contemporaries. The *Register* does not publish quack advertisements, and therefore has a right to speak upon the question. In the course of an able article on the subject, the *Register* very pertinently says:

"One can hardly take up a single number of the denominational journals without finding that the order and decency which reign in the editorial columns seem to be wholly neglected in the advertising department. We have heard an experienced advertising agent say that the publisher of a prominent weekly religious journal would take absolutely anything in the way of an advertisement, without regard to quality, so long as it was paid for, and amusing instances are related of his willingness to oblige advertisers by taking pay "in kind." This laxity of taste and judgment is most strikingly revealed in the case of quack medicines. They flood the columns of the religious press. They are displayed in conspicuous type, and illustrated by ridiculous and disgust-

ing travesties of the engraver's art. If we sought for a basis of agreement among the religious papers, we should find it not in the panaceas which they offer for the soul, but in those which they unite in offering for the body. The same advertisement runs through a host of journals. Whatever be the "ologies" or "isms" that these papers stand for, they come together in delightful brotherhood concerning the virtues of a specific for the liver or the properties of some unfailing cathartic. This beautiful catholicity loses something of its charm when we remember that every paper is paid a round sum for circulating these sentiments."

We commend these truthful statements to the publishers of such religious journals as still continue the quack advertisements. If there is any plausible excuse for publishing the advertisements in question, except the money to be made from them, it would be interesting to know of it. But merely making money is not the sole mission of a religious paper. If the gospel is to be propagated under the auspices of quackery, the thirsty souls must still cry for pure water. If the Evil One has to be coaxed to give a helping-hand to Christianity, he must have an equivalent for his investment. No one should understand this better than the editor of a religious paper who would sell his conscience for money, and attempt to excuse himself by hypocrisy. We are glad to learn from the *Register* that some of its contemporaries have become alive to the evils of this indiscriminate advertising, and are disposed to stop it. We wonder if it speaks authoritatively in this respect concerning the *Observer* and other influential religious papers. We shall watch them and see.

CALIFORNIA AS A HEALTH RESORT FOR CONSUMPTIVES.

In the report of the California State Board of Health for 1880 there is a practical contribution to climate therapeutics, to which we are glad to direct attention. In 1879 the State Legislature authorized a committee of the Health Board to investigate the subject of a suitable locality for a State hospital for consumptives. In pursuance of this authority, ten different places which had some reputation as sanitaria were visited, and the various facts bearing upon their desirability as health resorts investigated. The elements sought for in the location of a hospital for consumptives were, say the committee, a certain equability of temperature, the absence of excessive humidity, elevation, exemption from fogs and strong winds, an abundant supply of pure water, and opportunities for a pleasant out-door life, either of work or recreation. In discussing the above points the committee say, with reference to moisture, that though dryness is generally to be desired, yet a moderately moist air is undoubtedly often favorable when such moisture comes directly from the sea. San Diego illustrates this fact. In the same way the element of altitude, though in general an important one, must have other things go with it in order to make it really desirable.

Bearing in mind the various desiderata, therefore, of an ideal climate, the committee traversed the state and made their examinations. Some of their comments upon health resorts that are already well known have much interest. Santa Barbara, for example, is recommended for its equability of temperature during a great part of the year, and for its freedom from severe winds. It is well adapted, we are told, for a winter residence in the early stages of consumption; but its air is not very dry, the main humidity being, for the winter, between sixty-five and seventy per cent. In the summer bad winds prevail; there are occasional fogs, and the temperature is high. San Diego is another place which has a wide reputation as a health resort. It has a remarkably equable temperature, the range not being over 15° for the whole year. The humidity is less than that of most towns on the coast, being between sixty and seventy-seven per cent. There are few fogs and no severe winds; still we find the committee not endorsing the place very strongly. The climate does undoubtedly exercise a favorable influence over some forms of phthisis in the early stage, and the climate is especially good in winter It lacks, however, like Santa Barbara, the important elements of elevation and summer dryness.

The two places which are finally settled upon as most favorable for a hospital for consumptives are the Sierra Madre Villa, in Los Angeles County, and Atlas Peak, in Napa County. The latter place is especially recommended, because it is more central and accessible. It is on the ridge of the Coast Range Mountains, within twelve miles of Napa City, and it has of late years attracted considerable attention, say the committee, on account of its equability of temperature, its freedom from fogs or harsh winds, the dryness of the atmosphere, and its supposed advantages as a residence for consumptives. Its elevation is about one thousand five hundred feet. Its mean temperature for winter is 50°; for summer, 74°. The mean relative humidity is only forty-five per cent., which is considerably less than at the other better known health resorts. The climate is warm in summer, but it is said never to be oppressive. There are no malarial diseases, and the vicinity affords abundant facilities for camp-life and out-door exercise. The committee, therefore, recommend that the State hospital be constructed at this place.

The opinions expressed in the report in question are based in many instances on somewhat meagre data. Even in the case of the Atlas Peak country there are no definite facts given regarding the actual effect of the climate upon phthisical patients. Neither do we find in the report any special reference to the character of the soil, except as regards its fertility.

Notwithstanding this incompleteness, however, the report is a most instructive one, on account of the very frank and unbiassed manner in which it discusses the value of the different health resorts. It will show the reader where he will be likely to find the most healthful locality for consumptives. It will also show him that California possesses no sanitaria, so far as is now known, which have any remarkable power in checking or curing pulmonary disease.

TUBERCULOSIS AND EXPERIMENTS ON CRIMINALS.

It seems very proper to call attention to a suggestion recently made by *The Journal* (formerly *Archives*) *of Comparative Medicine*. It is in regard to securing further light upon the subject of the infectiousness of bovine tuberculosis. There are, according to the last report of the Agricultural Department, about 35,000,000 head of cattle in this country. If these are diseased in any such proportion as exists in Germany, the number of cattle having tuberculosis must be numbered by millions. It is certain, at any rate, that tuberculosis is very prone to develop, and does exist largely among cows kept in city stables, or in the neighborhood of large cities. An extensive existence of the disease in this country, according to our contemporary, cannot be doubted. Now it seems to have been demonstrated that tuberculosis can be transmitted from man to the lower animals, and from one of the lower animals to the other. The only point about which there is doubt, is whether tuberculosis can be conveyed from the lower animals to man through their flesh or milk. Yet this, independent of the question of the identity of human or bovine tuberculosis, is the most important of all to be settled. Phthisis kills off nearly one-fifth of the inhabitants of this and many other countries. Tuberculous affections of the bowels and meninges destroy many thousands more. If we put beside these facts the fact that thousands of the cattle which furnish food to young and old have tuberculosis, we may well consider it important to learn whether there is really any causal relation whatever between the two.

After reviewing the question somewhat as above, the *Journal* referred to makes this suggestion: There is, it says, only one certain way by which the question whether man can be infected by the milk or flesh of tuberculous cattle can be settled. This is by making the experiment upon man himself—upon criminals condemned to death. "There is nothing cruel or at all revolting in the idea. For a certain period previous to the day for execution, the person to be experimented on should be fed with the milk or flesh, or both, of tuberculous cattle. There need be nothing offensive in such a diet. The criminal's physical condition should be carefully watched to see whether tubercles develop. After execution a careful necropsy should be held. By experiments properly conducted in this way, results of the highest importance to science and preventive medicine could be secured."

The plan, though it may appear a little startling at first, is certainly worthy of much consideration. Few pathological questions are so intimately connected with the health of the people as that which it is proposed to settle in the above way.

Reports of Societies.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, February 28, 1881.

Dr. F. A. Castle, Vice-President, in the Chair.

REPORT OF THE COMITIA MINORA.

The Comitia Minora reported that, through the kindness of the Hon. William A. Butler, County Clerk, a certified copy of the Registry of Physicians and Surgeons for the County of New York, up to January 19, 1881, had been received by Dr. Robert A. Barry, who had presented it to the society. The following resolution, as offered by Dr. F. R. Sturgis and recommended by the Comitia Minora, was then unanimously adopted:

"*Resolved*, That the Comitia Minora would urge the society to tender a vote of thanks to Dr. Robert A. Barry for his generous action in procuring for the Medical Society of the County of New York a certified copy of the Registry of Physicians and Surgeons practising in the County of New York, with the request that Dr. Barry would present to the Hon. William A. Butler its sense of the obligation which he has imposed upon it."

The Comitia further reported that it had authorized the Board of Censors to employ an attorney for the society, and to incur the necessary legal expenses in attempting to enforce the act passed May 29, 1880, and entitled "An Act to regulate the licensing of physicians and surgeons."

This action of the Comitia was approved by the society.

Dr. Abraham Jacobi, President of the Medical Society of the State of New York, was invited to a seat upon the platform.

Dr. William T. Lusk then read a paper on

THE TREATMENT OF EXTRA-UTERINE GESTATION.

The author presented his subject under three heads:

1. Treatment in early gestation.
2. Treatment in advanced gestation, with a living fœtus; and
3. Treatment in gestation prolonged after the death of the fœtus.

Under the first head came the adoption of measures to destroy the life of the fœtus, such as puncture of the sac, injections of solutions into the sac (atropia, morphia, etc.), the use of the electro-cautery, and the use of the faradic current. Puncture had been recommended on the score of simplicity, but in general not very favorable results had followed the adoption of the measure.

The weight of opinion was against the use of the electro-cautery, except in special cases, in which the severity of the symptoms demanded powerful and prompt action.

The transmission of the faradic current was regarded as safe during the first three months of the existence of the fœtus.

Dr. Lusk then related the history of a case that came under his care not long since, and in which the faradic current was employed to kill the fœtus. An ordinary one-celled battery was used, the negative pole being placed upon the tumor through the vagina, and the positive pole upon the tumor externally above Poupart's ligament. At the second application the negative pole was placed upon the tumor through the rectum, and the full force of the battery transmitted. The woman, at present, is in the enjoyment of perfect health.

Dr. Lusk then gave a *résumé* of the treatment, as introduced by Dr. J. G. Allen, of Philadelphia, in 1872, and subsequently employed by Drs. Landis, of Columbus, O., J. C. Reeve, of Dayton, O., and G. T. Harrison, of New York, who had used the faradic current, and also included one case by C. McBurney and one by C E. Billington, of New York, who used the interrupted galvanic current. He had collected nine cases, and the method had proved uniformly successful.

When the tumor ruptures, the treatment should be: first, such as will aid the patient in rallying from shock; and second, that for peritonitis.

Abdominal section, for the purpose of ligating bleeding vessels and removing the sac, had been recommended, but as yet no one had performed the operation.

Second.—Treatment in advanced gestation, when the fœtus is living. Laparotomy was regarded as a justifiable operation with certain reservations. He counselled in abdominal pregnancies to wait until several weeks after the death of the child. Of primary operations—child living—so far reported, twenty-four in all, only one mother had been saved. Six cases of primary operation claimed by Parry as successful, had, on investigation, been found to have been erroneously reported.

Third.—Treatment when utero-gestation is prolonged after the death of the fœtus.

In such cases the success of secondary laparotomy had been such as to warrant placing it among the justifiable procedures. The time for its performance most successfully was between five weeks and a year after the death of the fœtus. It was best to defer all operative measures until the obliteration of the maternal vessels had probably taken place. In case marked septic symptoms developed, the sac should be opened without delay.

The placenta should be left to come away spontaneously after laparotomy.

The discussion was opened by Dr. Jacobi, who had treated only one case of extra-uterine pregnancy, and with favorable result. He simply punctured the sac through the vagina, believing it to be in the beginning of the third month of utero-gestation. The puncture was repeated two days afterward. A large quantity of liquid escaped, the sac became smaller and smaller, and finally shrank to such an extent that six months subsequently nothing could be discovered except a hard substance which felt like a cicatrix in any other part of the body.

Dr. A. D. Rockwell had had within the last eighteen months three cases under observation. He thought that the galvanic current was more efficacious than the faradic. In the third case the fœtus was killed by a single application of the galvanic current. In a case which Dr. McBurney had reported, the fœtus was killed with two applications of the galvanic current.

These cases seemed to settle the question that a fœtus can be destroyed with the galvanic current, without danger to the mother.

Dr. C. E. Billington referred to the case included in Dr. Rockwell's number, and said that the result was perfectly satisfactory. He made four applications of the galvanic current after Dr. Rockwell made the first, beginning with fourteen and fifteen cells, and lastly using the entire thirty-six cells of the battery.

Dr. P. F. Mundé said that his experience was limited to three cases. The first he saw with Prof. Scanzoni, in 1869; the second, in Carl Braun's clinic in Vienna; and the third, in New York. In the last case the fœtus was expelled *per vias naturales*. He thought the galvanic current was to be preferred for two reasons: first, because it was less likely to produce spasmodic contractions, and thus diminished the liability to rupture of blood-vessels; and second, from the fact that, as it is the current that decomposes animal fluids, it is the one from which we should, theoretically, expect the most effect. He also thought that in cases of tubal or interstitial pregnancy the recommendation made by Dr. Emmet, as first practised successfully by H. Lenox Hodge, some ten or twelve years ago, to dilate the uterine cavity, dilate the tube, and in that manner induce the expulsion of the fœtus, was a very plausible one.

As for laparotomy in cases of supposed rupture of the tube, he thought that it should be performed.

Dr Lusk, in closing the discussion, said that the galvanic current was employed as far back as 1857, but it was finally abandoned because it was found to be not quite safe—not so safe even as simple puncture of the sac. It seemed to him that, with the thus far uniformly successful record for the faradic current, it was hardly worth while to go back to a method which was tried and abandoned twenty-three years ago.

PERMANENT ANTISEPTIC DRESSING.

Dr. Fred Lange exhibited a sample of the permanent antiseptic dressing recommended by Prof. Neuber, of Kiel. It was one that had been applied to an amputated thigh. The *technique* of the dressing was to use absorbable drainage-tubes and apply sufficient material, so that all the discharge from the wound would be absorbed and would not make its appearance at all externally, and then let it remain unchanged for weeks.

REPORT OF THE DELEGATES TO THE STATE MEDICAL SOCIETY.

Dr. F. R. Sturgis, secretary of the delegation to the State Medical Society, read the report, which contained an account of the transactions relating principally to the Medical Society of the County of New York. The report was accepted, and the more important parts of it ordered upon the minutes.

Dr. Daniel Lewis offered the following

PREAMBLE AND RESOLUTIONS,

which were unanimously adopted:

Whereas, Through the kindly feeling of our associate, Dr. R. A. Barry, and indirectly by a spirit of friendship on the part of the Hon. William A. Butler, County Clerk of the County of New York, this

society has been presented with a complete and authentic copy of the Registry of Physicians and Surgeons of New York County; therefore,

Resolved, That the thanks of this society be and are hereby tendered to the Hon. William A. Butler for the very valuable aid he has rendered us in presenting so excellent a copy of the Registry.

Resolved, That a copy of this preamble and resolutions be sent to County Clerk Butler, attested by the President and Secretary of this society.

The society then adjourned.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, January 25, 1881.

H. B. Sands, M.D., President, in the Chair.

LIGATION OF THE EXTERNAL ILIAC ARTERY.

Dr. James R. Wood gave his experience in the ligation of the external iliac artery for the cure of aneurism of the femoral, high up, and said that he had tied the vessel eight times for aneurism of the femoral occupying Scarpa's space. The operation which he performed was that recommended by Sir Astley Cooper—that is, by making a crescentic incision, beginning over the external abdominal ring and extending it to and above the anterior superior spinous process of the ilium, with the convexity toward Poupart's ligament. He then cuts through layer after layer until the fascia transversalis is reached, making the superficial more extensive than the deep-seated incision for the purpose of protecting the peritoneum and preventing it from being ruptured during the future steps in the operation. He reaches the fascia transversalis at the internal ring. His guide is the spermatic cord, that which Sir Astley Cooper has indicated. He does not cut through the fascia transversalis with the scalpel, but with a pair of forceps, raises it from the peritoneum at the internal ring, tears it or scratches an opening into it with the nail of his index finger, and then dilates the opening made and reaches the peritoneum opposite to the internal abdominal ring. He then separates with his finger the fascia transversalis from the peritoneum, and in that way reaches the fascia propria of Velpeau, or the areolar tissue that contains fat at this point. Having thus reached the peritoneum, he separates the fascia transversalis from it with his fingers, after which very little is done with the scalpel or any cutting instrument until he gets down upon the anterior aspect of the external iliac, not seeing in his dissection the external iliac vein. Reaching the artery on its anterior and external aspect, the rest of the operation is very simple. The aneurismal needle is passed between the vein and artery from within outward. In this manner a funnel-shaped wound is made, the expanded portion of the funnel being toward the periphery of the body.

Dr. Wood had performed this operation eight times; seven times with success. In the case which terminated fatally the patient died a few days after the operation, and the post-mortem examination revealed fatty liver, *fatty kidneys*, and circumscribed peritonitis. He presented the specimen in which were seen the ligature around the external iliac, the aneurismal sac below, and the clot (for it was two or three days after the operation that the patient died) reaching well up the external toward the common iliac.

Some of the other cases presented points of considerable interest; for instance, in one, pulsation returned in the aneurismal sac very soon after the ligature came away, say a month or six weeks. He lost sight of the patient for perhaps two years, when he returned, and Dr. Wood found the sac not much smaller than it was a short time after he tied the artery. He then discovered that the epigastric artery was very much enlarged, being of the size of a goose-quill, and when pressure was made upon the epigastric artery, he found that the pulsation and the bruit in the aneurism ceased at once. He then applied a ligature to the epigastric, and that was the end of the aneurismal thrill and the pulsation of the artery. He had ligated the epigastric artery in three cases at the time of tying the external iliac. In one case, in 1855, secondary hemorrhage occurred a few days after the ligature came away from the external iliac artery, and Dr. Hitchcock, one of the house physicians in the Bellevue Hospital at the time, saw the patient at once, and applied digital pressure and controlled the hemorrhage, but the patient had lost at least three pints of blood. Dr. Wood was sent for at once, and soon saw the patient. Digital and pressure with shot-bags was continued for a considerable time, and the patient was subsequently discharged cured.

The following are the interesting features in this case:

1. The pulsation in the posterior tibial artery was absent until the seventh day after the operation.

2. On the thirteenth day the ligature came away.

3. On the eighteenth day secondary hemorrhage occurred; five days after the separation of the ligature.

4. Pressure by the hand was kept up twelve days, from the eighteenth to the thirtieth day, after the operation. The shot-bag, compress, and bandage were then substituted.

5. On the twenty-eighth day after the operation, and tenth after the hemorrhage, pulsation of the external iliac artery entirely disappeared. On the thirty-eighth day part of the shot was removed, the remainder, with a compress and bandage, being applied as before.

6. On the sixty-fifth day after the operation, and forty-seventh after the secondary hemorrhage, all the dressings were removed and the patient discharged cured.

The following collection of cases, which exhibits the dangers of secondary hemorrhage, complicating ligature of the external iliac artery, was then read by Dr. Wood as reported by Norris.

CASES OF HEMORRHAGE AFTER LIGATURE OF THE EXTERNAL ILIAC ARTERY.

Operator.	Ligature separated.	Date of hemorrhage.	Treatment.	Result.
Abernethy	.....	5th day	.....	Died.
Moulard	24th day	.....	.....	Cured.
Dupuytren	16th day	24th day	Pressure	Cured.
Todd	21st day	24th day	Lig. reapplied	Died.
B. Cooper	.....	19th day	.....	Died.
Hewson	29th day	6th day	Pressure	Cured.
Lallemand	.....	5th day	.....	Died.
Baroni	19th day	40th day	Laid open tumor.	Died.
Power	.....	5th day	.....	Died.
A. Cooper	.....	17th day	.....	Died.
Adams	28th day	18th day	Pressure	Died.
Smith	7th day	.....	Pressure	Died.
Ogden	.....	8th day	.....	Died.
Wood	13th day	18th day	Pressure	Cured.

Summary: No. of cases, 14; recovered, 4; Died, 10.

The average time required for the ligature to come away, in Dr. Wood's cases, was fourteen days. He

never attempted to remove the ligature until he found it loose in the wound. The dressings were as simple as possible. The limb was well protected with cotton. The lower extremities and the pelvis were kept lower than the thorax and the head. He believes this was an important point in the treatment of these cases, in order that the blood might reach the remote portions of the body with greater facility than when the patient is on his back in the horizontal position. The bed should be elevated so that the patient's head would be eighteen inches or two feet higher than his feet.

Dr. Wood then exhibited a specimen which he removed from the body of a man on whom he tied the external iliac thirteen years ago. The patient had a large femoral aneurism; the external iliac artery was ligated, and he recovered without a symptom. As usual, the tumor gradually decreased in size until it could not be felt. The man's name was Williams, and he died of pulmonary phthisis. The specimen showed the anastomosis which had taken place, and supplied the limb with blood after the ligation of the artery. The external iliac artery remained as a mere cord. The ischiatic artery, the great sciatic, and the obturator were enormously distended, so that the circulation was ultimately as free after the operation as it was previous to the ligation of the artery.

In reply to questions, Dr. Wood said none of the patients showed evidence of disease of any of the viscera except the one who died. In some of the cases he had tried compression before the ligation, but without success. One patient, a colored man, he had cured of popliteal aneurism by compression, and pulsation in the posterior tibial had not returned; but about two years and six months afterward he returned with femoral aneurism on the same side, and still there was no pulsation in the posterior tibial. He again made compression for some time, but without success, and then tied the external iliac and the patient made a good recovery. He had not known aneurismal dilatation to take place afterward where compression had been made, and yet in this last case the femoral aneurism seemed to be near where he had made compression for the cure of the popliteal aneurism. He always feels for the epigastric artery during the operation, and ligated it at the same time he ligated the external iliac, for he believed the aneurismal sac was often also fed by that artery.

Dr. R. F. Weir said that during the rebellion a man who was wounded in the right groin by a bullet, came under his care in November, 1862, and he found an enormous tumor, about nine inches in its transverse diameter, in that region, extending well up in the iliac fossa. In consultation with his staff it was thought that nothing could be done but to ligate the common iliac, but the results of that operation had been so disastrous that he deemed it advisable, if possible, to try a different procedure. The next day he proposed performing Syme's operation, of passing his finger into the sac and securing the opening in the artery and then laying open the aneurism and ligating above and below; but during the night there was a great increase in the size of the tumor, and the next day he was able to feel pulsation toward the median line on the inner side of the aneurism, and concluded that this pulsation belonged to the external iliac artery. On cutting down to the large vessel he found it to be the external iliac crowded out of position. He tied it. The case did well until after the ligature came away, which was about the fourteenth day, when hospital gangrene set in in the wound. This was treated with nitric acid, and healed about the fifteenth of December. In February the patient showed symptoms of constitutional disturbance, and a swelling in the region of the groin appeared, which resulted within a short time in suppuration, and discharged a large amount of pus. Shortly afterward a furious hemorrhage occurred from this sac, which, however, was controlled, but a second hemorrhage the next day caused his death before help could be obtained. A post-mortem examination showed that the hemorrhage came from the sac, and it was thought from the circumflex and epigastric arteries, both of which were very much dilated. The external iliac had been tied three-fourths of an inch above this point. The aneurismal cavity extended from the fourth lumbar vertebra down four or five inches below Poupart's ligament. Dr. Weir considered this suppuration of the sac an uncommon occurrence.

Dr. Stimson said that in Agnew's surgery it is stated only two successes occurred out of sixteen cases of ligation of the external iliac artery during the rebellion. He also gives general statistics regarding this operation, and out of one hundred and fifty-seven cases there were forty-eight deaths, the proportion of deaths to recoveries being very much larger than Dr. Wood's.

The President supposed the cases relating to the army, to which Dr. Stimson had referred, were the result of wounds and injuries, to which Dr. Stimson assented. The president said that tying large arteries for hemorrhage is known to be exceedingly fatal, while for aneurism good results are often obtained. In tables given by Dr. Stephen Smith for ligature of the common iliac in cases of hemorrhage, he believed it is stated that out of eleven cases only one recovered.

Dr. Markoe had tied the external iliac for hemorrhage with success. The man had received a stab wound in the groin, not a very severe one, but it continued to bleed a little until the second or third day, when the hemorrhage was so great he cut down upon the external iliac, found it had been slightly wounded, tied it, and the man recovered.

The President said that the success of the operation in Dr. Wood's hands was certainly very remarkable, and went far to show the expediency of the operation. Still, he had long thought that digital compression of the main trunk, made by inserting the hand into the rectum, would be likely to cure an aneurism in the groin. He had recently tried digital compression of the external iliac artery in a case of aneurism of that vessel, but the aneurism was so large that he found it was very difficult to make pressure upon the artery, as it could only be made by crowding the finger directly against the tumor. He was unable to maintain pressure long enough to fairly test the method, but in the case of an aneurism situated lower down near Poupart's ligament, or below it, he thought there would be little difficulty in maintaining pressure for a period much longer than had been found sufficient to effect a cure of many cases of aneurism. In a case of gluteal aneurism which came under his care three years ago he made three attempts to cure it by pressure upon the common iliac, but without success. On the first two occasions he kept up pressure over an hour. Having by these trials learned just how to compress the artery, and having satisfied himself that the procedure was not attended with danger, he made a third attempt, and kept the artery under perfect control, shifting the point of compression, while the assistant made pressure above for a period of three

hours and a quarter. It did not cure the aneurism; but he thought that pressure for that length of time might in some instances cure a gluteal aneurism, or an aneurism of the femoral artery high up, and therefore such a method might reasonably be tried before resorting to the operation which, although eminently successful in Dr. Wood's skilful hands, had shown on the whole so high a rate of mortality.

Dr. Stimson believed it was in the hands of Gersuny that an aneurism of the femoral artery in Scarpa's space was cured by the use of Esmarch's bandage repeatedly applied during a short time for a period extending perhaps over three weeks. The aneurism was situated so high up that he was afraid if he applied the tubing alone the aneurism would burst, therefore the elastic bandage was carried up to and over the lower border of the aneurism, thus supporting the aneurismal sac. After a few applications the sac was so much diminished in size that the tubing no longer pressed upon the upper portion of it, and therefore the bandage was no longer carried over the lower portion.

Dr. Weir mentioned Davis' rod in connection with Dr. Sands' remarks on compression of arteries through the rectum.

The President had thought of this appliance in connection with the cases he had referred to, but believed that, although it had proved very successful in controlling pulsation of the artery during amputation of the hip-joint, it would be found dangerous to make compression with such an instrument for so long a time as would be required to cure an aneurism. The objection thus made to the rod could not apply with equal force to the finger as a means of making pressure, for in the latter case one can take advantage of the sense of touch, and therefore graduate the pressure, so as to obviate or lessen the risk of damaging the tissues.

Dr. Weir said the instrument had been used for making compression of the artery during, he believed, two hours, but for what reason he did not remember.

Dr. Markoe would be afraid to make such use of the instrument, but Dr. Sands would remember that he (Dr. Sands) said, at the time of the operation referred to, that compression of the abdominal aorta might be made just long enough to give the fingers rest.

Dr. Sands thought it was Dr. Markoe who had made the suggestion.

Dr. Markoe thought it a very practical one at any rate, making pressure for a time on the internal iliac artery with the finger, and resting it by screwing down the tourniquet upon the abdominal aorta for a while. Thus both procedures would be robbed of some of their dangers.

The President thought there would be no objection to repeating pressure in that way a number of times so as to diminish the risk of continuous compression at a single point. The length of time during which compression had been made in the cases of successful treatment of aneurism by this means had varied greatly. Popliteal aneurism had been cured in ninety minutes, if not in a shorter time, and a case is on record in the "Dictionnaire Encyclopedique" in which pressure was made at considerable intervals during a period of two years. Cases of popliteal aneurism were cured in Dublin seven or eight years ago by making compression during the day and taking it off during the night, and the results of intermittent pressure were said to be quite as good as those obtained from continuous pressure.[1]

Dr. Briddon said: It will be known to most of the members present that the method of compression referred to by the President was used in the case of the late Professor Chas. A. Budd. The aneurism was popliteal, and the compression was preceded by genuflexion continuously night and day for two hundred and seventy hours, in the beginning at a distance of eight inches from the nates, at a later period five inches. The process was a very painful one. Compression was begun October 21, 1872. Three points were used: one at the groin, one at three, and another at seven inches below Poupart's ligament, and it was steadily maintained for fifty-six days, at an average of ten hours and a half a day, making five hundred and eighty-eight hours. For a large portion of this time a just perceptible wave was permitted to pass through the tumor, but later on, when the great fortitude and endurance of the patient began to give out, it was used on several days, so that not a pulsation occurred except when changing points of pressure. The aneurism was diminished two-thirds in size, was solid, without lateral expansion, but there always remained a very feeble pulsation, and when he resumed the active duties of his profession it never increased in size.

Dr. Weir ventured to ask, although somewhat irrelevant to the subject, "*how long shall flexion be continued*" for the cure of popliteal aneurism, in which it is most frequently employed? He asked the question because no very definite statement had been made by authorities upon that point—merely that it should be maintained from several hours to three days. He had lately treated a case of popliteal aneurism in which he kept up compression by flexing the knee at nearly right angles during nine hours. The sac was solid at the end of six hours, but as the patient did not complain of a great deal of pain, the flexion was continued until the end of nine hours. The patient rested most of the time on his hands and knees.

The President had treated a patient at Roosevelt Hospital, some years ago, by flexion continued for twenty-four hours, during which time the limb was not examined. The contents of the sac were then found to be solid.

Dr. Weir thought that if flexion were sufficient to prevent any circulation through the aneurism, solidification should take place in a shorter time than twenty-four hours.

Dr. Stimson thought that experience with Esmarch's bandage would show that five or six hours either of flexion alone, or flexion and subsequent digital pressure would usually be sufficient.

The President had once cured a recurrent popliteal aneurism, in the case of a man on whom he had previously tied the femoral artery, by flexing the thigh upon the pelvis, and suspending the leg from a frame. He had tried the ordinary flexion treatment, and it could not be borne. But he had found in the course of examination that pulsation in the tumor ceased when flexion of the thigh at right angle was made; and advantage being taken of the circumstance, the thigh was kept in the flexed position for several days, at the end of which time consolidation in the aneurism was complete, and the patient was permanently cured.

Dr. Wood said the time required to cure the aneurism depended a good deal upon the condition of the contents of the sac. If there is a good clot in the sac it can be cured in a short time; if not, but only fluid, it requires a long time. In a case in which he could press all the fluid out of the sac, he

had made compression during six or eight hours without effect. It was tried again, but without success. Then digital compression was made on the femoral artery higher up by relays of students, and in six hours it was cured. It is not best to cure the aneurism too quickly, lest gangrene occur, but more slowly, in order that the smaller anastomosing vessels may become enlarged before the circulation through the main vessel is entirely cut off. He had treated several cases in succession, and at the time was ambitious to cure at once; but he was too ambitious, for in one case the leg died and he had to amputate at the thigh. He had known the toes to die occasionally. He thought, however, gangrene could be avoided by cutting off the circulation gradually.

The President thought that if pressure is made only upon the artery there is no more reason why gangrene should occur than when the artery is ligated. In cases in which gangrene occurs, pressure is, perhaps, often made, not alone upon the artery, but upon the vein also, thus interfering both with arterial supply and venous return.

STRANGULATED HERNIA.

Dr. Weir narrated a case as follows: A woman about sixty years of age was brought to the hospital on Wednesday last, with strangulated hernia which had existed since the previous Saturday. She had had a reducible hernia off and on for fifteen years. The house surgeon had tried to reduce the hernia, but failed. The patient's condition was quite bad; there was a crackling sound in the tumor, and it was supposed that upon cutting down to it there would be found gangrene, and an escape of air would take place, but such was not the case. On opening the sac he found no air, and no special amount of fluid. In the sac, however, was found a knuckle of small intestine, in a moderately congested condition. There was also a small portion of omentum which was very fœtid; but the most interesting thing was a worm-like body which examination showed to be the vermiform appendix. None of the cæcum was present. The portion of small intestine was returned into the abdominal cavity; the portion of omentum tied and cut off, but the appendix being gangrenous about half way up, and the source of the emphysematous crackling, was cut off up to the healthy portion, the peritoneal surfaces of which were sewn in apposition, and the whole returned to the abdomen just within the ring and the wound dressed. The patient died forty-eight hours afterward from general peritonitis, the external parts being in a satisfactory state. The interesting fact was with reference to the vermiform appendix being present in a strangulated hernia. He had, from a moderate study of the literature of this subject, found but very little in reference to it. Hernia presenting both cæcum and vermiform appendix, however, was not very rare.

Dr. Briddon had seen three operations in which the cæcum or a portion of that organ and its appendix were found in the sac. In 1862 a mulatto boy, aged nine years, was brought to the New York Dispensary with an irreducible non-strangulated hernia the size of his own head. A portion of this could be reduced, there remaining behind a mass that was apparently adherent to the fundus by a band that could be easily distinguished. Dr. Briddon asked the late Dr. Gurdon Buck, who was consulting surgeon to the institution, to see the case, and he coincided as to its nature, and as the already large protrusion was growing and likely to be a serious inconvenience, an operation with a view to division of the band was advised.

On opening the coverings the sac was found empty, reaching to the bottom of the scrotum, and lying in front of the cæcum, the appendix representing the band. A tedious dissection enabled Dr. Briddon to return the whole mass into the abdominal cavity, and the part was dressed with a pad over the inguinal canal and spica-bandage. On visiting the child on the following day he found everything again in the scrotum, it having been forced down during a fit of coughing in the night. He did not interfere and the boy had a pretty smart attack of peritonitis, but recovered with a slight fecal fistula which, however, gradually diminished and closed.

The second case was an Italian woman whom he saw in consultation with Dr. Gillette. There was a large inflammatory swelling in the right femoral region. It was red, and the symptom of emphysematous crackling (from gases of decomposition) was elicited on deep pressure; the symptoms of strangulation had not been of an acute character. On proceeding with the operation the tissues outside the sac were found infiltrated with the products of inflammation, the sac itself was filled with pus, the appendix was seen on its floor, and only a small portion of the calibre of what was supposed to be cæcum was in the crural canal. Its condition was regarded as doubtful, and after notching some constricting bands everything was left "in situ" with the wound open. She recovered with a fecal fistula that gradually closed.

The third case he saw in consultation with Dr. Francis D. Buck. It occurred in a colored child. The protrusion was on the right side, scrotal, and the symptoms of strangulation were acute. When the doctor opened the sac, there was found the cæcum, with a long meso-cæcum free in the cavity of the sac, the usual condition in intra-uterine and occasionally in early life. The child died a few days after the operation.

Dr. Mason asked for the experience of the members regarding the operation for sangulated umbilical hernia. His had been rather unforfunate. A woman was brought into the hospital on Thursday last with a history of umbilical hernia of six years' duration, and during the last two or three days it had been strangulated. She was much prostrated, and, when he saw her, was in a state of collapse. The tumor was about the size of one's fist, and the integument was discolored. A very small opening was made at the upper border of the sac, and the constriction divided. By slight pressure the intestine passed into the abdominal cavity with a gurgle, and the discoloration of the integument subsided. There was evident adhesion of the omentum in the sac, and to make certain that there was no intestine remaining in it he introduced his little finger and found none. The operation was done under full antiseptic precautions. She died within a few hours afterward. Autopsy revealed only moderate discoloration of four or five inches of the gut. This patient, and three or four others with whom he had had similar results, was fleshy, and the strangulation had existed some time before he saw them.

Dr. Weir recalled the case of an old woman with umbilical hernia in which strangulation had existed about three days before he saw her. It was returned without any difficulty after operation, but she died within twenty-four hours.

Dr. Markoe had had very favorable results with taxis in umbilical hernia.

MALIGNANT TUMOR OF THE NECK.

The President presented a cancerous mass which had just been removed from a man seventy-five years of age, from whom he had removed a cancer of the tongue a year before. The cancer of the tongue was of considerable extent, and reached pretty far back. After staking it out with pins he removed it with the heated platinum wire. The patient made a good recovery and the disease of the tongue had not returned. A scar remained which was firmly adherent to the pendulous velum, but this caused little or no inconvenience. In June last a swelling developed rather suddenly on the side of the neck, and was at first attended with some signs of inflammation. When he saw the patient the swelling was as large as his fist. The interest connected with the case related to the difficulty he experienced in its removal, and it illustrated the fact, he believed first formally noticed by Langenbeck, that the mobility of a tumor affords no certain sign of the absence of adhesions to the deeper parts. This tumor was very markedly movable, but on proceeding to remove it, it was found to nearly surround the common carotid, and its extirpation required the exposure of this artery, the external carotid, and some of its large branches, as well as the jugular vein. It had to be dissected out with the greatest care; indeed, a small part of it, which was very hard, was so thoroughly incorporated with the jugular vein near the thorax that it could not be removed with safety.

Dr. Weir asked what were the indications for the removal of the tumor?

Dr. Sands replied, that he was persuaded to undertake the operation because the patient's general condition was good, and because he was suffering great pain from the tension and pressure of the tumor.

DENTIGEROUS CYST.

Dr. Weir gave the history of a case of a commencing dentigerous cyst due to an imbedded tooth. A young man, about twenty-nine years of age, had suffered a year and a half ago intense neuralgia in the lower jaw, followed by an inflammatory swelling which from time to time suppurated and discharged. He supposed it was due to a decayed tooth, but two dentists failed to discover any connection between disease of the teeth and the swelling of the jaw. However, after laying open the inflammatory swelling and exposing the jaw, which was somewhat swollen, Dr. Weir found there was within it a wisdom tooth lying transversely, the root of it being posteriorly, and all of it being completely buried. It was extracted with much difficulty and after a good deal of chiselling. There was a cavity around the cusp of the tooth lined with a membrane, and a mass of soft, pinkish substance. This cavity communicated with the soft parts externally by a small hole through the bone. This was the second case of the kind he had met with, the other being that of an elderly lady who had suffered with a discharge from the upper jaw, which was found to be caused by a canine tooth lying transversely.

Chiromancy has recently had a "boom" in Paris. A M. Besbarrolles has written an elaborate treatise upon the subject. The author is endorsed by Alexandre Dumas, who says: "Chiromancy will one day be the grammar of human organization."

Correspondence.

AMBLYOPIA FROM TOBACCO.

To the Editor of The Medical Record.

Dear Sir—Those of your readers who were interested in the recent discussion, at the County Medical Society, of amblyopia said to have been caused by the use of tobacco, will no doubt be glad to read the letter which I inclose. Although not written for publication, it is of such great importance to this subject that I hope you will publish it in the Record. I know Dr. Sewny to be a thoroughly competent practitioner, who has enjoyed special advantages for the observation and treatment of diseases of the eye. His statistics, although from the Orient, are entitled to as much credence as those from his Occidental brethren.

Yours respectfully,
D. B. St. John Roosa.

"Central Turkey College at Aidtab,
January 20, 1881.

"Dear Doctor—The Medical Record of December 11, 1880, reached my hands yesterday. I read with much interest my friend Dr. D. Webster's admirable paper on "Amblyopia from the Abuse of Tobacco and Alcohol." I also read the account of the discussion on it at the meeting of the New York County Medical Society, in which you took a prominent part, and also your note to the Record.

"By the time this letter reaches you the whole subject will probably be forgotten by most of the readers of the Record, and possibly by many of the gentlemen who are especially interested in the subject treated of in that paper; nevertheless, I consider it proper to state my opinion on the question, as the result of my observations since my return to Turkey; it entirely agrees with those of Drs. Dickson and Hobsch, of Constantinople, and is substantially the same that you supported at the meeting. During my service of two years at the Brooklyn Eye and Ear Hospital, I took special pains to familiarize myself with the ophthalmoscopic appearances of optic nerve troubles due to abuse of tobacco and alcohol, and their treatment, having in my mind the extensive and excessive use of tobacco in Turkey, and anticipating many cases of amblyopia from this loathsome habit, so prevalent in the East.

"Yet my extensive practice of four years and a half in various large cities of Asia Minor, drawing many eye cases from these and many neighboring cities and villages, does not realize my anticipations as to the prevalence of tobacco amblyopia, not to say of the occurrence at all, though I could say even that so far as my own experience goes, for I do not remember seeing a single case of amblyopia or amaurosis due *solely* to the use of tobacco. You see that in this I quite agree with Dr. Hobsch, who says that he has never attributed amaurosis to the use of tobacco. On the other hand, however, I have seen cases of amblyopia and amaurosis due apparently to the abuse of *alcohol and tobacco at the same time*, but these also have been comparatively rare. That the people here smoke a great deal is a fact; that their tobacco is none the less strong is also acknowledged by smokers (I am not a smoker, and cannot speak from experience); but it is also a fact that amblyopic affections are quite rare in Turkey. I cannot attempt to explain the reason. I hope no one will say that

the Eastern people are too dull to be able to notice slight failure of sight. They often come to me in the early stages of senile cataract, and for slight opacities of the refractive media. I cannot say anything for or against the treatment by strychnia. Cases that have come to me have been such as were beyond the reach of any aid. I have noticed the irritating effect of tobacco-smoke on the conjunctivæ of delicate persons, as stated by Dr. Hobsch. I have seen many cases of chronic bronchitis caused by excessive and long-continued use of smoking tobacco. My treatment in these cases has been very successful if not of too long standing, and they are ready to leave off tobacco immediately and forever. I remain,

"Yours most respectfully,

"K. Hekimian Sewny."

PARTIAL NARCOSIS IN OPERATIONS ON THE MOUTH.

Chlorate of Potash Poisoning Cases.

To the Editor of The Medical Record.

Sir:—The severe hemorrhage that frequently accompanies operations on the mouth or nose is especially troublesome, from the fact that the blood may be inhaled by the patient and consequent strangulation result.

By a coincidence, Nussbaum, of München, discovered that a patient upon whom he was operating, and who had previously received a subcutaneous injection of morphia, was cognizant of what was occurring about him before he was conscious of pain. It thus suggested itself that an operator might use partial narcosis in certain cases—as in operations upon the mouth—where the conscious condition of the patient would enable him to avoid the inhalation of blood. To illustrate this method, Prof. Thiersch, of Leipsic, operated upon five consecutive cases, in two of which there was bleeding into the mouth.

The patient, before operation, was given a subcutaneous injection of morphia, 0.03 grm. if a man, and 0.015 grm. if a woman, this being equivalent to about one-half and one-fourth grains respectively. Chloroform was then administered until the patient was in the state of rigidity which commonly accompanies partial narcosis, this requiring, perhaps, five minutes.

Prof. Thiersch always uses the Junker inhaler, since, at the maximum, it allows the inhalation of but a four per cent. mixture of chloroform with air, and decreases the danger of over-narcosis.

When the state of rigidity has been reached, the chloroform is removed until the patient is able to answer questions, and then the operation is begun, only sufficient chloroform being given subsequently to keep the patient in a state unconscious of pain. The method will perhaps best be described by the detailing of the five cases upon which it was illustrated.

Case I. was a man of about forty-five years of age, whose left eye had previously been removed for a tumor, but as the operation was performed elsewhere its history was unknown. He came to Leipsic with the whole left side of the face protruded, the most prominent part being about two inches anterior to its normal position. The tumor was immovable, and involved the parts from the angle of the mouth and nose upward to the supra-orbital process, and backward nearly to the articulation of the lower jaw. The eyelids stood far out upon the tumor.

The patient was given a subcutaneous injection of morphia, 0.03 grm., and then chloroformed. First, the common carotid was ligated. The tumor itself was removed by the common method of sawing through the hard palate, the nasal process, and the zygomatic arch. At all parts of the operation the patient could answer questions. When told to spit, cough, or open his mouth widely, he would do so, and he scarcely moved throughout the operation.

Very little chloroform was administered, and only at such times as the patient became too conscious. No difficulty was encountered from strangulation, and the patient throughout laid flat upon his back, with his head upon a pillow. At the close of the operation he sat up for the application of dressings to the wound.

Case II.—A man, sixty-nine years of age, had lost one side of his nose by lupus. He received a subcutaneous injection of morphia, grm. 0.03, and was chloroformed. The surface affected by lupus was removed, and the cavity was filled with a flap taken from the forehead. The bleeding was quite profuse and the blood ran down through the posterior nares. The patient coughed more or less, but would spit out the blood, and once vomited up a considerable amount of blood which he had swallowed. Throughout the operation the patient laid flat upon his back, and would answer questions when spoken to.

Case III. was a very muscular man, of about thirty-seven years of age, with an abscess over the sacrum. He was given morphia subcutaneously, grm. 0.03, and chloroform was administered. The period of excitement came on in about five minutes.

On removing the chloroform for a moment the patient did not become conscious, as did the other four cases, but struggled violently when any attempt was made to operate. A second subcutaneous injection of morphia, of grm. 0.03, was given, and shortly afterward the patient became quiet and answered questions as the other patients, and would turn himself as he was told to do.

Case IV. was a patient with impermeable urethral stricture. Perineal urethrotomy was performed and the patient would pass urine when told to do so, thus conveniently showing the operator the urethral opening.

Case V. was one of phimosis. The patient, a student, received morphia subcutaneously, grm. 0.03. He was conscious throughout the operation. He answered all questions; discussed the subject of narcosis intelligently, and delivered the monologues from Hamlet and Faust; laughed and joked, and admired the result of the operation. Several times he complained that the operation hurt him, but on being told to take a long breath of chloroform he did so, and was again unconscious of pain.

This method of operation, with partial narcosis, is a convenient one, especially where there is bleeding into the mouth, since it permits the operator to place the patient in any position he may desire, and at the same time removes, or at any rate greatly decreases, the danger of the inspiration of blood.

It would seem to show that a partial narcosis may be maintained at a point when the patient is sufficiently conscious to answer questions, to clear the throat, and to change his position when told to do so, while at the same time he lies quietly and is unconscious of pain.

Prof. A. Wagner, in discussing the treatment of tonsillitis, remarked that he considered the common method of ordering chlorate of potash as a gargle

dangerous. That is, a patient is frequently told to buy some chlorate of potash, place it in a glass of water, gargle frequently, and swallow a little. He cited several cases of death after such treatment. One case was of a young man who had an ordinary tonsillitis. He was told to gargle his throat diligently with chlorate of potash. He did this, and subsequently it was discovered that during twenty-four hours the patient had disposed of between forty and fifty *grammes* of chlorate of potash, or in the neighborhood of seven hundred *grains*. He died suddenly afterward.

A second case was that of a child, ten years of age, who had also gargled frequently, and had swallowed a good deal. This patient died suddenly.

The symptoms in both cases were collapse and great prostration. There was at first a dark, and later a yellow urine, and death followed in from twenty-four to forty-eight hours.

The post-mortem showed the kidneys to have a yellow tinge, and to be filled with small hemorrhages; the blood was dark; the spleen was congested; the tubules of the kidney were found to be filled with hæmoglobine.

That the symptoms and pathological appearances were due to a poison, is suggested by the fact that the pathological appearances were similar to those observed after death from severe burns, transfusion of blood, and severe exanthemata. Experiments made upon rabbits, by the administration of large quantities of chlorate of potash, produced death, with symptoms and post-mortem appearances similar to those cited above.

These cases would seem to suggest, as a safer method, to order chlorate of potash in definite solutions and amounts.

DUDLEY P. ALLEN, M.D.,

DRESDEN, January, 1881.

THE DIAGNOSIS OF SMALL-POX.

TO THE EDITOR OF THE MEDICAL RECORD.

MY DEAR DOCTOR—I am sorry to see that you have fallen into the newspaper error concerning the Bowers case, particularly as it was officially corrected at the last meeting of the Board of Health, and duly reported in the papers of the following morning. Neither Dr. Taylor nor Dr. Purcell made any mistake in diagnosis, as the written report of the latter now on file testifies. The only error made, if it may be called an error, was what some might consider an unwise, and others a justifiable attempt on the part of Dr. Taylor to protect the hotel where Bowers had been employed, from a sensational newspaper report.

I write this without the knowledge of Dr. Taylor or any one in this department, and whether you publish it or not, I hope you will set the matter right, and not allow this unfavorable impression to remain concerning one whose services are so valuable to the Health Department and to the public.

Very truly yours,

E. H. JANES, M.D.,
Asst. San. Supt.

NEW YORK, March 12, 1881.

A HOG-CHOLERA SCARE.—A short time ago great consternation was caused among pork-dealers by a report sent to England, by the British Consul at Philadelphia, that hog-cholera was prevailing extensively in the West. Investigation has shown that the report was unfounded.

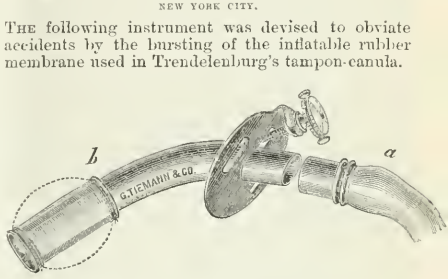
New Instruments.

A SAFE TRACHEAL TAMPON-CANULA.

BY A. G. GERSTER, M.D.,

SURGEON TO THE GERMAN AND MOUNT SINAI HOSPITALS, NEW YORK CITY.

THE following instrument was devised to obviate accidents by the bursting of the inflatable rubber membrane used in Trendelenburg's tampon-canula.



a, rubber tube for anæsthesia; *b*, dilatable tampon.

A number of delicate steel springs are placed longitudinally around the lower end of a stout tracheal tube, so that, by turning a thumb-screw attached to the upper extremity of the oblique flange, they become diametrically dilated. A piece of rubber membrane, somewhat stouter than that used by Trendelenburg, is drawn over the steel springs, and on being equally dilated will insure perfect closure.

A rubber tube is fitted into the distal opening of the canula, and bears at its end a funnel-shaped apparatus for the administration of the anæsthetic.

As regards tight closure, satisfactory results were obtained from experiments on the cadaver, and the usefulness of the instrument was also sufficiently tested on the living subject. The case in question, being still unfinished and under treatment, cannot be reported in full at present; so much, however, as bears on the practical value of the apparatus, may be stated here.

It became necessary to incise, scrape out, and drain a perichondral abscess contiguous with the remaining half of the thyroid cartilage of a patient, on whom partial excision of the larynx had been performed about a year ago, and who habitually wore a tracheal tube. The tampon-canula being inserted, no discomfort or pain was felt by the patient. The little operation, accompanied as usual by free hemorrhage, was leisurely finished, and not one drop of blood passed beyond the tampon.

Solidity of construction, durability of action, simplicity and ease in handling, seem to recommend this apparatus over that of Trendelenburg, especially in *prolonged* bloody operations performed with the aid of anæsthetics in the nasal and oral cavities, the pharynx or larynx.

In conclusion, I take pleasure in expressing thanks to George Tiemann & Co., the makers of the instrument, for their successful efforts in overcoming the technical difficulties of the task.

SLOW PULSE.—Dr. A. E. May, of Naugatuck, Conn., reports the case of a child aged eleven years, suffering from acute pleuritis, in whom, during the attack, the pulse ranged from 32 to 56 per minute.

COMBINED SELF-RETAINING NASAL AND AURAL SPECULUM.

By D. N. RANKIN, A.M., M.D.,

ALLEGHANY, PENNSYLVANIA.

The difficulty which attends the application of the galvano-cautery to the nasal cavities and to the external auditory canal, has given rise to the construction of several ingenious instruments. In my hands none of them gives protection to the healthy parts as fully as can be desired.

I have devised an instrument for that purpose which has proven perfectly satisfactory. It is a bivalve speculum, almost similar to Spier's ear-speculum, with the following additions: each blade has a slotted guide, into which slides a thin concavo-convex plate of ivory, one inch long by three-eighths of an inch wide. In order to retain the instrument in place, an ear with a hole in it is attached to the outer lateral edge of each blade; to these is tied a gum cord sufficiently long to pass round the head. This instrument is presented to the profession in the hope that those who may try it will find it as useful as I have. I claim it has at least two advantages over any instrument yet devised for this purpose:

First.—It gives more protection to the healthy tissues when using the galvano-cautery.

Second.—It is self-retaining.

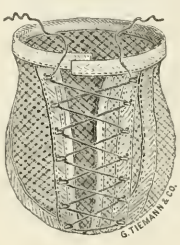
If the ivory plates be removed, its usefulness is equally apparent in examining the nose or external auditory canal.

AN ELASTIC COMPRESSOR FOR ORCHITIS.

By ALFRED L. CARROLL, M.D.

The ordinary method of applying compression to a swelled testicle, by means of adhesive strips, not only entails much expenditure of the surgeon's time and trouble in shaving the scrotum and in affixing and renewing the plaster, but also involves possible danger of strangulation and sloughing of the integument. The following simple contrivance, which I had made by Messrs. Tiemann & Co., obviates these annoyances, and has answered so well in my hands that I am induced to suggest its use to others.

A bag of webbing, like that of the common "suspensoire," open at one side, is bound at its mouth



with a strip of flexible metal which can be wrapped above, and thus made to isolate and control the affected testicle. The side opening is then laced from below upward with elastic cord, which maintains its equable tension as the testis decreases in size, or may be loosened or tightened as occasion may demand. Not the least advantage of this appliance is that the patient can remove and readjust it for purposes of cleanliness. The subjoined engraving renders lengthened description superfluous.

New Brighton, N. Y., December, 1880.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from March 6, 1881, to March 12, 1881.

Brown, H. E., Capt. and Asst. Surgeon. Relieved from duty at Fort Duncan, Texas, to accompany battalion First Infantry to Fort Davis, Texas, and, on arrival there, report to the commanding officer for duty as Post-Surgeon. S. O. 35, Department of Texas, February 26, 1881.

Girard, J. B., Capt. and Asst. Surgeon. Having reported in person, is assigned to duty at Fort Verde, A. T. S. O. 23, Department of Arizona, February 26, 1881.

Taylor, B. D., Capt. and Asst. Surgeon. Assigned to duty at Fort Ringgold, Texas. S. O. 40, Department of Texas, March 7, 1881.

Medical Items and News.

Contagious Diseases — Weekly Statement. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending March 12, 1881.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
March 5, 1881.	0	2	151	12	50	82	14	0
March 12, 1881.	0	5	130	21	80	98	36	0

Defibrinated Blood in Phthisis.—Archibald Sinclair, one of the cases reported in the Medical Record of March 5th, illustrating the use of defibrinated blood in phthisis, was discharged from the Presbyterian Hospital, N. Y., February 26th in excellent condition. His weight had increased from 101 lbs. to 134 lbs. after three months' treatment.

Ligation of Internal Iliac Artery.—Dr. J. Newell, of Wyoming, Ontario, Canada, writes: "In your issue of February 26th appears a clipping from *Vratch*, No. 47, stating that Professor Kasinski has performed successfully ligation of the internal iliac artery, and that up to 1876 the operation had been performed but four times, of which two proved fatal, the operators being Stevenson, Atkinson, White, and Mott. As there is an error in the foregoing, I desire to state that in 1867, while attending medical lectures in Philadelphia, I witnessed in October Dr. Thomas George Morton ligate the internal iliac artery for supposed aneurism in the gluteal region. The operation was in every way successful, the ligature coming away on the twenty-second day. The patient was from Harrisburg, but in about a year, I think, died of malignant disease of the buttock.

"A full account of the operation, with cuts, ap-

peared in the *American Journal of Medical Sciences*, some time about 1876, but which I have not time to look up."

Actual Cautery.—Dr. John M. White, of Pleasant Ridge, Alabama, in using the actual cautery anoints the tissues around the place to be cauterized with *liquid storax*, thus keeping them from being burned.

Diagnosis of Locomotor Ataxia.—Dr. S. F. Haskins, of Yarmouth Port, Mass., writes: "In the Medical Record of February 26, 1881, you published an excellent paper upon the diagnosis of progressive locomotor ataxia, by E. C. Segnin, M.D., and I regret that the gentleman did not give some points on the treatment of the same.

In his description of the differential diagnosis between locomotor ataxia and neuralgia he mentioned the fact, that in the former the pain is not necessarily in the region of the nerve-trunk, while in the latter it is. This has been demonstrated to me by a case that I now have in charge, where there is a hyperæsthetic condition of the scalp for the space of about two inches in diameter, directly over the articulation of the parietal bones and a little anterior to the parietal foramen. No pain is produced by making firm pressure on the part or by rubbing, but to touch it with a feather, or very lightly with the tips of the fingers, or with a piece of cloth, as in the act of pulling on a shirt, causes the most excruciating pain.

Another interesting point which I never have seen mentioned in any works on the subject, is that when the patient takes into the stomach any highly seasoned foods, as, for instance, salads that are highly seasoned with mustard or pepper, he immediately feels it at this point. The sensation has more of a dull, aching character than of an acute pain. Perhaps I should mention that the disease is well advanced, the patient having now suffered five years, and has lost nearly all control of the lower extremities.

The Manner of Death of the Czar.—Telegraphic dispatches give the following particulars of the Czar's death: As soon as the Czar was removed to the Winter Palace Dr. Droriachine, who was among the first physicians summoned to his bedside, prepared to amputate his legs, which were held to the body by the flesh alone. The bones of each limb were broken and the blood flowed so copiously that the sufferer fainted from its loss. India rubber bandages were applied, first to his right leg below the knee and then to the left, and the physicians, as rapidly as possible, caught up the ends of the arteries and tied them. Under the influence of sulphate of oxygen and ice the Emperor began to breathe quite audibly, and finally he opened his eyes. In their search for further wounds, the physicians found, on removing the glove from the right hand, that the member had been severely lacerated, and that pieces of his marriage ring were imbedded in the flesh. With the restoration of partial consciousness hopes began to be entertained that the Emperor would survive, frightful as were his injuries. Chaplain Bjanor availed himself of the interval of apparent consciousness to administer the sacrament. A minute or two afterward the eyelids dropped and the heart ceased to beat.

Office Thief.—Physicians in this city are warned against a stylish, thick-set man, who wishes to "wait for the doctor."

The Treatment of Diphtheria.—Dr. J. B. Davison, of Moline, Ill., after stating his conviction, founded on long experience with the disease, that diphtheria is not contagious and is not dependent upon filth, writes regarding treatment:

"The most nearly allied to a specific, in the treatment of diphtheria, is the hydrochloric acid, which should be applied at the earliest possible moment after discovering the location of the enemy.

"One part of the chemically pure acid should be added to seven parts of honey. Of this about one-eighth should be used as a gargle and repeated every five hours, until from four to six parts of the mixture has been used, which is ordinarily sufficient.

"Before using the gargle a strong solution of sodæ bicarb. ought to be prepared, and as soon as the gargle has been used, the *mouth* ought to be washed with a few mouthfuls of the soda-water, in quick succession, not as a gargle. In cases where the gargle cannot be used it should be applied by a mop, which may consist of a rod, on the end of which has been rolled a little cotton-batting. This being rolled in the mixture, is passed down to the point diseased, with as much of the mixture as it can carry, and an effectual application made to the entire diseased locality. As soon as convenient, after the gargle has been used, from gr. ij.—x. of hydrarg. chl. mite. should be given in two or three divided doses, to be followed by a mild cathartic. When much headache or general aching occurs, free doses of morphine with potassium bromide act well. After the action of the cathartic, tr. ferri chl. may be given in moderate doses, and in the Mississippi Valley, at least, quiniæ. Early in this disease the cervical glands become implicated and swell. For this I habitually use lard as an external application, combined with camphor, that is, ℥ ss. gum camph. dissolved in three or four ounces of hot lard; this rubbed on the neck and covered with a strip of flannel after the acid gargle has been used, until no appearance of the patches can be detected in the throat, or after five or six applications. An elegant soothing gargle may be used with great benefit. Prepared as follows:

℞. Cranesbill rad.	℥ ij.
Sodæ boras	℥ j.
Pulv. ulmi	℥ j.

S. Tie in a thin cloth, put into two-thirds of a pint boiling water and set in a place where it will keep warm for an hour, then throw away the cloth and contents and use the tea freely as a gargle, and often repeated.

"This course of treatment I have used for years, and have never had cause to regret it. I know that it is not cruel, it is not painful, and I believe that the form of treatment, which, if unfashionable, will be crowned by success in a multitude of cases, where failure is destined to follow the use of either popular dilute potencies or exclusive constitutional treatment. Try it."

The Act to Regulate the Licensing of Physicians and Surgeons in the State of New York, Passed May 29, 1881.—We have received so many inquiries regarding the text of the medical law, that we again publish it in full:

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. A person shall not practise physic or surgery within the State unless he is twenty-one years of age, and either has been heretofore authorized so to do, pursuant to the laws in force at the time of his authorization, or is hereafter authorized so to do as prescribed by chapter seven hundred and forty-six

of the laws of eighteen hundred and seventy-two, or by subsequent sections of this act.

§ 2. Every person now lawfully engaged in the practice of physic and surgery within the State shall, on or before the first day of October, eighteen hundred and eighty, and every person hereafter duly authorized to practise physic and surgery shall, before commencing to practise, register, in the clerk's office of the county where he is practising or intends to commence the practice of physic and surgery, in a book to be kept by said clerk, his name, residence, and place of birth, together with his authority for so practising physic and surgery as prescribed in this act. The person so registering shall subscribe and verify by oath or affirmation, before a person duly qualified to administer oaths under the laws of the State, an affidavit containing such facts, and whether such authority is by diploma or license, and the date of the same and by whom granted, which, if wilfully false, shall subject the affiant to conviction and punishment for perjury. The county clerk to receive a fee of twenty-five cents for such registration, to be paid by the person so registering.

§ 3. A person who violates either of the two preceding sections of this act, or who shall practise physic or surgery under cover of a diploma illegally obtained, shall be deemed to be guilty of a misdemeanor, and on conviction shall be punished by a fine of not less than fifty dollars nor more than two hundred dollars for the first offence, and for each subsequent offence by a fine of not less than one hundred dollars nor more than five hundred dollars, or by imprisonment for not less than thirty days nor more than ninety days, or both. The fine, when collected, shall be paid, the one-half to the person or corporation making the complaint, the other half into the county treasury.

§ 4. A person coming to the State from without the State may be licensed to practise physic or surgery, or either, within the State, in the following manner: if he has a diploma conferring upon him the degree of doctor of medicine, issued by an incorporated university, medical college, or medical school without the State, he shall exhibit the same to the faculty of some incorporated medical college or medical school of this State, with satisfactory evidence of his good moral character, and such other evidence, if any, of his qualifications as a physician or surgeon, as said faculty may require. If his diploma and qualifications are approved by them, then they shall endorse said diploma, which shall make it for the purpose of his license to practise medicine and surgery within this State the same as if issued by them. The applicant shall pay to the dean of said faculty the sum of twenty dollars for such examination and endorsement. This endorsed diploma shall authorize him to practise physic and surgery within the State upon his complying with the provisions of section two of this act.

§ 5. The degree of doctor of medicine, lawfully conferred by any incorporated medical college or university in this State, shall be a license to practise physic and surgery in the State after the person to whom it is granted shall have complied with section two of this act.

A Peculiar Case.—Dr. Julio J. Lamadrid, of Brooklyn, N. Y., very kindly sends us an abstract of a peculiar case originally published in *La Union Nacional*. It is that of a brunette female, thirty-seven years of age, who has, upon the external surface of her abdomen, a tumor resembling the face of a fœtus and possessing teeth.

"On the anterior walls of the abdomen, a little to the left of the median line, and about one and one-half or two centimetres below the navel is seen a semispheric tumor of about eight centimetres in diameter, of a parched appearance and reddish color, which, on further examination, appears to be part and a continuation of a larger tumor concealed within that cavity, and easily identified to be intimately connected with all the textures of the walls of the abdomen. On its surface the following objects are noticed: in the superior maxillary bone are seen two lateral incisors exposed to view, of a regular size, but dark in appearance, due to their carious condition and constant exposure to the air. The right lateral incisor is loose and could be extracted with the least effort, the other, however, remains fixed and firm. These two teeth are partly covered by an eminence in the form of a lip of about two centimetres in length, one in width, and forty millimetres in thickness; the latter, on being lifted by the fingers, reveals to view the right central incisor; this is smaller and firm to the touch. In addition, it also reveals a few fleshy bodies or papillas lightly moistened by a liquid, a little of which, examined under a high power microscope, shows to consist of squamous epithelial cells, filaments of fungi, and a granulous substance, the character of which remains undetermined.

"The gum which separates the three teeth is of a natural red color, but there does not exist any vestige of the inferior maxillary bone. Finally, the observer, in his imagination, and in trying to look for the other parts or organs of the face, can scarcely perceive two dim spots, intended, no doubt, to represent the position of the eyes, also a slight depression on the right side, and a few lines over the lip, indicating, perhaps, a place for the right nostril."

Home for Convalescents.—This institution held its first anniversary at the parlors of the Home, 433 East 118th street, on the 9th inst. The institution is one that has long been needed, and the present evidences of its success are very gratifying. The report of the secretary showed that the institution, which began with five beds, has now accommodations for eighteen or twenty patients. Since last June, forty-seven convalescent women have been sheltered and fed within its walls, the average period of their residence having been forty days. Thirty of these inmates were married women, and a large proportion of American nativity. The addresses incident to the occasion were delivered by the Rev. Dr. Crosby, the Rev. Dr. Taylor, the Rev. Dr. G. H. Mandeville, and the Rev. Dr. Mason. The Rev. D. D. Ray presided. The ladies of the association propose to open another home as soon as arrangements for that purpose can be made.

Commencement of the Bellevue Hospital Medical College.—Meeting of the Alumni Association.—Bellevue Hospital Medical College held its Twentieth Annual Commencement at the Academy of Music, on the afternoon of the 10th inst. The members of the Faculty and a number of prominent medical gentlemen were present. Chaplain Beach made the opening prayer, and the names of the students, one hundred and eighteen in number, composing the graduating class, were read by Dr. Austin Flint, jr. The diplomas were given by President Taylor. A large number of the students received handsome bouquets. The valedictory was delivered by Dr. Charles E. Nammack.

In the evening the Alumni Association and the

members of the graduating class ate an excellent dinner in Nilsson Hall. About two hundred and fifty physicians and others sat down to the tables. At a business meeting, before the dinner, the following-named officers were elected by the Alumni Association for the ensuing year: President, F. H. Bosworth; First Vice-President, H. C. Bleyle; Second Vice-President, E. A. Maxwell; Recording Secretary, G. H. Swezy; Corresponding Secretary, R. Newman; Treasurer, W. H. Katzenback; Historian, F. A. Castle.

A Cremation Company has been formed in this city. It is called the United States Cremation Company (Limited). In connection with the stock company there is a society for the propagation of correct views in regard to this particular mode of incineration. The principal business office of the company is to be in New York. The capital is fixed at $50,000, divided into 2,000 shares of $25 each.

The society will hold its meetings twice a month. The following are its officers: President, The Rev. J. D. Bengless; Vice-Presidents, Delavan Bloodgood and E. C. Townsend; Corresponding Secretary, J. S. Cobb; Recording and Financial Secretary, D. W. Craig; Treasurer, E. C. Cockey; Executive Committee, J. E. P. Doyle, Charles Putzel, C. W. C. Dreher, W. F. Kremer, and A. C. C. Tamsen.

A noticeable thing in the movement is the almost entire absence of medical men. In England, the medical profession has been active in promoting this mode of disposing of the dead.

Burning of Danville Lunatic Asylum.—This large asylum was burned to the ground on March 5th. Fortunately, none of the inmates were killed. The fire was caused by an explosion of gas.

Contagious Diseases of Animals.—Congress adjourned without creating any commission for the investigation of the contagious diseases of animals. It in fact did nothing of interest or importance to medical or scientific men.

The Plague has reappeared in certain parts of Armenia and Mesopotamia, and has caused considerable alarm.

Prescriptions in English.—A bill is now before the Pennsylvania Legislature to compel physicians to write prescriptions in English, without abbreviations.

The New Mydriatic, Hydrobromate of Homatropin.—Dr. W. Cheatham, in the *Louisville Medical News*, gives the following reasons for substituting hydrobromate of homatropin in place of atropia: 1st, it paralyzes accommodation equally as well as atropia; 2d, the local effects of the homatropin are no more than those of atropia; 3d, it is not poisonous (according to Ladenburg), and has no bad after-effects; 4th, after paralysis by homatropin, the muscle regains its former condition in twenty-four hours. After the use of atropia it takes ten or twelve days. This is the chief advantage.

The Medico-Legal Aspects of Magnetism or Trance have already begun to be developed. A case occurred in Paris recently of a man named Didier, who was considered guilty by the civil authorities, but was considered irresponsible by two high medical authorities, Drs. Mesuet and Mottet. The man when brought to trial was mesmerized by Dr. Mottet, and put through various tests. The judge and jury were at last convinced of his irresponsibility, and he was set free.

Etiology and Treatment of Acne.—Dr. Le G. N. Denslow (*New York Medical Journal*) is inclined to refer the causation of acne in large part to an atony of the unstriped muscular fibres in the skin. On account of such atony the cutaneous circulation is weakened, and the expulsion of sebum lessened. Acne consequently develops. As clinical proof of the truth of the theory, he states that he has had excellent results from the use of ergot.

A Place Where Diplomas are not Needed.—"The Maine Reports," says the *Boston Advertiser*, record a decision which overruled the decision of a lower court, to the effect that a clairvoyant, who expressly disclaims any medical or surgical knowledge, was entitled to recover for "medical services," because she had visited and examined the sick person and prescribed.

"There is no question," continues the journal referred to, "that the statute was fairly represented in the opinion of the court, but what must be thought of a law which opens wide the door to the operations of any who think they can make a living more easily by dealing with disease than by going out to service, or by driving a truck or a pedlar's cart? If so be morality is certified to, it matters not that the man or woman cannot read, write, count, see, hear, or be able to do any of the things that a doctor ought to do. The most impudent impostor, his certificate secured, may put out his sign and practise upon the fear or shame of those weak enough to patronize him, charge heavily for his undesirable services, and the law says, pay in full, or he may make you discharge the debt to him and the court costs besides. If any quack finds the atmosphere of another State oppressive, if the statutes fail to shield him at the expense of those who are his victims, let him take courage. Maine offers him a shelter. Her statute provides for his well-being. He need bring no knowledge, no outfit, no pill or potion. If there be with him the certificate required, the law ranks him with the wise and noble of a profession which deserves the high repute it has attained."

Editorial Change.—Dr. William H. Mays has retired from the editorial management of the San Francisco *Western Lancet*.

Are We Right-Sighted?—The editor of the *Louisville Medical News* claims that while we judge of distance and form by the aid of both eyes, we judge of direction entirely by one eye, and that eye the right or left one, according as the individual is right- or left-handed.

Those who doubt this are directed to make the following experiment: "As you sit in your chair point to any object across the room with both eyes open, and no attempt at 'sighting.' Close the left eye, and you will find you are still accurately on the object; but close the right eye, and you will discover with your present vision, you are pointing clear over to the right, provided you are right-handed." The result is the same, whether the finger of the right or left hand be used in pointing.

The Sewerage in Baltimore is a subject now agitating the authorities. Some time ago the National Board of Health made a sanitary survey of the city, which was thought by some to be an impertinence, by others a great mark of favor. All agreed, however, that it showed the necessity of a better system of sewerage. What kind of sewerage-system to adopt is now the question. Some are advocating that there be a drainage system only for the rain and waste

water; and that the dirt and excreta be removed by odorless excavating companies, etc. Those who advocate this system, show that the best sewered cities are, as a rule, those in which diphtheria and various other infectious diseases most abound.

"Gynomania"—A Curious Case of Masturbation.—Dr. H—— sends us the following account: "Permit me to offer you for publication a brief description of a curious case of prolonged masturbation, which came before me in the course of my regular practice. The details I have gathered from the patient at various times, and give them as fully as consistent with concealment of his personality.

"The patient is a highly cultivated gentleman of high moral character, the father of three or four healthy children, the result of an unusually happy marriage. 'At an early age,' said he, 'long before puberty even, I had acquired a taste for indoor games, female pursuits, and even attire, although the latter desire was never satisfied farther than wearing girls' shoes. I was also an admirer of small waists in ladies, and at the age of fourteen tried to procure or make for myself a pair of corsets. As I grew older my fondness for female dress increased, but having no sisters I could find no opportunity to gratify it farther than reading stories of female impersonations, etc. I composed several stories entitled 'Adventures in Hoops,' and detective stories founded upon such plots. They were printed and extensively copied. To this day, said he, I seldom miss an opportunity to see men take female parts on the stage, especially the more refined ones, like Leon, Byrnes, etc.'

"At the age of twenty-one years he began the use of corsets, of which he is still very fond, and although he laced himself very tightly for several years he seems to have suffered no injury from it. He confessed that he has always derived a certain amount of sensual gratification from their use, and although at first he experienced some pain in the pubic region, and erections, he has since found that as soon as his corsets are pulled quite tightly erections cease, and that coition, as well voluntary discharges, are *impossible* when tightly laced.

"From fear of impotence or other evil that might result from masturbation before marriage, he carefully avoided voluntary discharges of semen and remained perfectly continent before marriage. He recollects, however, having had three involuntary emissions while awake. The first occurred while horseback riding, and induced him to abandon this otherwise healthful exercise. The others happened while putting on a pair of very tight shoes (ladies' boots with French heels), and buttoning them.

"After marriage he abstained from corsets and other articles of female attire (with rare exceptions), until two children had satisfied him of his potency.

"About this time our patient began to yield to the temptations which everywhere beset him, and returned to the very source whence he had first derived unlawful pleasure. But I will let him tell it. 'I purchased,' said he, 'a very stylish pair of ladies' high boots with French heels, which were at first tight enough to make me limp.' These boots he boldly wore upon the promenade in fine weather, with pants elevated to show the heel. In bad weather he was wont to put on these boots and button them in front of a long mirror, about once a week. This seldom failed to cause not only an erection but also an emission.

"When this had lost its novelty he purchased a pair of corsets, not having worn them since marriage. As often as practicable with concealment he wore these, and laced them sometimes to faintness. These two articles, buttoned boots and corsets, seemed to have a most peculiar infatuation for him. Often while riding in a street car, if a lady with a small waist or pretty foot sat opposite, he would have a sort of mental coition, he called it, with this innocent paramour, an emission. M. Rouband mentions the only case at all similar, where a young man was impotent except with a light-haired woman wearing corsets, high boots, and a silk dress. (See Van Buren and Keys, p. 451.) The last three articles had a powerful influence on our patient, whether they were worn by man or woman.

"After this he advanced step by step down the ladder, purchasing various articles of female attire, until at length he bought a black silk dress, which he had made to fit him very tightly, and in which he took great pride. Curls and switches, false hair, earrings and breast pins, all aided in feeding this peculiar fire. He would even sit for hours tightly laced, while a lady hair-dresser curled and frizzed his hair like a woman. At length he went so far as to walk the city streets and even attend church, wearing his new black silk dress caught up on one side so as to expose a white fluted skirt, beneath which his high-heeled French boots were visible. With heavily padded chest, tightly squeezed waist, enormous bustle, his hair tortured into fantastic forms, his ears in screw vices, and his feet crowded into the narrowest and most uncomfortable boots, he would walk for miles, or dance for hours, with great pleasure. In fact, physical pain seemed essential to his happiness, and he thoroughly and deeply enjoyed it, if it were only the pain inflicted by female attire. He imitated their manner and habits to some extent, yet never used his disguises for improper purposes, except to excite an occasional emission.

"As before stated, he had always been an advocate of tight lacing, had read extensively upon the subject, and collected all the literature that in any way favored or defended it. He several times tried to lace himself tightly enough to faint away, but never could. He even persuaded his wife to lace, and daily tightened her corsets, until he actually reduced her waist nearly *six inches*, which also gave him sensual gratification. A child born of her soon after was perfectly healthy and well formed.

"He showed me several pictures of himself in all sorts of dresses, as a ballet-girl, as Queen Elizabeth, as a Polish maiden, an old maid, the Goddess of Liberty, as Juliet, and in the plain street dress, which he wore to church a few years ago.

"Many times he swore off, but in vain. Sometimes he would remain free from his peculiar vice for weeks and months, when it would return with renewed vigor. I found him eating largely of animal food, but not of fat meat. Nitrogenous food alone suited his palate. I advised a vegetable diet, but he found it distasteful to such a degree that I was forced to withdraw it. He used no stimulants except weak tea and coffee. Gave bromides for awhile and hope at length to conquer. Have any of your readers had a similar case within their experience? I proposed the name of Gynomania for it."

The Cough of Phthisis can, it is said, be easily and quickly relieved by hypodermic injections of water with a few drops of cherry-laurel water added. The injections must be made generally in the infra-clavicular region

Original Communications.

CENTRES OF VISION IN THE CEREBRAL HEMISPHERES.

By J. C. DALTON, M.D.,
NEW YORK.

(Read before the New York Academy of Medicine, February 17, 1881.)

Among the results announced by Ferrier, from experiments on the cortex of the brain, one of the most remarkable is that which locates the power of visual perception in the angular convolution. Such a connection of the sense of sight with a limited part of the cerebral cortex was not in accordance with our previous knowledge of the functions of the hemispheres, and seemed even more improbable than the existence of the centres of voluntary motion discovered by Fritsch and Hitzig. Notwithstanding the acknowledged value of many of Ferrier's experiments, and the great extension which he gave to the doctrine of localized motor centres, his conclusions with regard to the centres of sensation are received by many with much less confidence. The regions to which most of them are assigned (lower part of the temporal lobe, subiculum cornu ammonis, and hippocampal convolution) are extremely difficult to reach for purposes of experiment; and the presence or absence of hearing, taste, or smell on one side only, can hardly be determined in an animal, with any approach to accuracy. The localization of vision in the angular convolution has shared the incredulity attaching to that of the other senses, although it is much more capable of a satisfactory test, owing to the nature of its phenomena and the more accessible situation of its supposed centre.

I propose, in the present paper, to offer a short *résumé* of Ferrier's investigations, so far as they relate to the visual centre, together with some experiments of my own on the same subject.

In man the angular convolution is seated on the lateral surface of the posterior third of the hemisphere, immediately below the interparietal fissure, and a little behind the posterior extremity of the fissure of Sylvius. Its name is derived from the sudden downward bend which it makes in this situation, after which it runs downward and forward, becoming continuous with the second principal convolution of the temporal lobe. In the monkey its general position is similar to that in man, except that it is still more sharply folded upon itself and seems to embrace closely the upper end of the fissure of Sylvius. In the dog it occupies a corresponding situation with regard to the rest of the brain, but is separated from the fissure of Sylvius by two intervening parallel convolutions. It therefore forms, in this animal, a part of the second principal convolution, counting from the great longitudinal fissure outward to the fissure of Sylvius.

Ferrier found that in the dog, cat, and monkey, faradization of the angular convolution caused rotation of the eyeballs toward the opposite side, sometimes with turning of the head in the same direction, and often with contraction of the pupils. These results he attributed, not to any direct action of the part as a motor centre, but to excitement of the visual sensation. Their occurrence in animals of different species enabled him to recognize the corresponding cerebral convolutions.

The experiments of Ferrier on destruction of the angular convolution in monkeys were first published in the "Philosophical Transactions of the Royal Society of London" for the year 1875. They consisted of three cases, in which the convolution was destroyed on one side only, producing blindness of the opposite side, and two cases in which the same convolution was destroyed or injured on both sides, causing blindness on both sides. The cases of unilateral destruction were the most satisfactory.

The method of procedure was, in general, as follows: the monkey was chloroformed, and so much of the skull removed as would expose the angular convolution. The animal was then allowed to recover from the chloroform intoxication until all the senses had nearly or quite regained their normal activity. The angular convolution on one side was then destroyed by the cautery, the eye on the same side securely covered by a plaster or bandage, and the animal set at liberty. He was then found to be blind, although the eye on the side opposite to the injury was uncovered. After continuing the observations long enough to leave no doubt on this point, the bandaged eye was uncovered, when the animal at once regained his power of vision and his normal freedom of movement. The details of these observations, given by Ferrier, plainly indicate blindness on the opposite side and preservation of sight in the eye on the same side with the injury.

But in two of the cases this unilateral blindness had to some extent disappeared by the next day, the animal then appearing to have vision with both eyes. When the angular convolution was destroyed on both sides, loss of vision was complete, although the pupils reacted as usual under the influence of light. Ferrier also, in one instance, extirpated the angular convolution in a cat, producing immediate signs of blindness on the opposite side. According to his observations, loss of visual perception is the only result of this lesion—the other senses, as well as voluntary motion, being unimpaired provided the injury is confined to the angular convolution.

My own experiments on this subject were performed on dogs, in the early part of the last year, and consisted in the excision of the angular convolution, on opposite sides, in two different animals.

Experiment I., March 16th.—*Excision of Angular Convolution on Left Side—Blindness of Right Eye—Death after Three Days.*—A young, healthy, and active dog, of medium size, was etherized, and trephined over the most prominent part of the parietal region, on the left side. From the cerebral convolutions thus exposed, a circular layer of brain-substance, seventeen millimetres in diameter and seven millimetres in average thickness, was removed by incision. The hemorrhage, which was not abundant, was arrested by gentle absorption with raw cotton, and the wound in the integument closed by sutures. The animal recovered rather slowly from the etherization, and for the rest of the day was allowed to remain quiet in an open pen, large enough to allow of his moving about freely in every direction.

March 17th, second day.—The animal was in good condition, responding readily to the voice and touch, and often standing on his hind legs, with the forepaws placed against the wall of his pen. His postures and movements were in every respect natural, except that they were less vigorous than usual, and there was no indication of paralysis or insufficient coordination. There was no pain and no alteration of the general sensibility. The animal took milk with much relish, lapping it eagerly in a natural manner. The appearance and expression of the eyes were per-

fectly natural, and the spontaneous movements of winking normal on both sides. *But vision was certainly abolished in the right eye, and certainly present, apparently to a normal extent, in the left eye.*

It requires much care to determine with certainty the fact of unilateral blindness in an animal so watchful and active as the dog. It would be almost impossible to do so, unless he were already familiarized both with his domicile and with the person by whom he is observed; and he must be free from any source of annoyance or suspicion. In this instance the animal took no notice of an object brought cautiously in front of his right eye, and did not wink at its sudden approach, unless it touched the skin or the eyelashes; in that case he winked instantly. On the other hand, he immediately noticed anything presented to the left eye, and invariably winked on its close approach. These facts were verified for each eye many times over, and to the entire satisfaction of all observers.

March 18th, third day.—By the following morning symptoms of encephalitis had commenced, the animal being very sluggish, without appetite, and apparently suffering from oppression in the head; but his postures, movements, sensibility, and particularly his vision, were otherwise in the same condition as before. During the day he grew steadily more sluggish, became comatose in the evening, and died during the night.

Post-mortem examination next day showed much recent inflammatory congestion and exudation about the wound at the base of the brain and in the fourth ventricle. The loss of cerebral substance, occasioned by the operation, occupied the whole turn of the angular convolution and a part of the two convolutions nearer the fissure of Sylvius. Its situation and size are indicated by the shaded spot in Figure I.

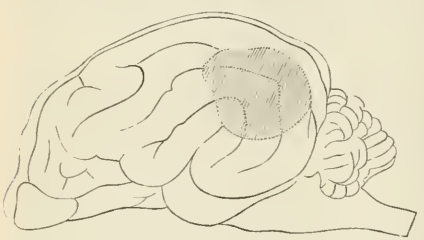


Fig. I.—Brain of the Dog, left side, showing destruction of the angular convolution and of the two convolutions between it and the fissure of Sylvius. Blindness of the opposite eye.

Experiment II., April 17th.—*Excision of Angular Convolution on Right Side—Blindness of Left Eye, persisting for Twelve Days.*—A young, healthy, and active dog was etherized and trephined on the right side of the skull in the parietal region, and an oval portion of the cerebral substance removed, sixteen millimetres long, seven millimetres wide, and about six millimetres thick. It was afterward found to represent rather less than one per cent. of the volume of the entire brain. The hemorrhage was moderate, and easily controlled by gentle pressure with raw cotton.

April 18th, second day.—The animal's postures, action of the limbs, facial expression, and spontaneous winking movements were perfectly natural. Hearing and cutaneous sensibility normal. On testing the vision by suddenly approaching a finger toward the eye alternately on the two sides, winking was always produced on the right side, but not on the left. It took place instantly on either side if the skin or eyelashes were touched.

In the afternoon of this day the animal became quite sluggish and oppressed, as if with commencing encephalitis, but was improved the next morning, and on the fourth day (April 20th) was again nearly well, taking food with relish, and often standing on his hind legs with his fore-paws against the wall of the pen. Sight, hearing, and other nervous functions as before.

April 22d, sixth day.—The animal's vision was tested by alternately covering either eye with a compress of black silk. When the right eye was covered, and a finger suddenly approached toward the left eye from a considerable distance, no winking took place; but when the left eye was covered, the right eye always winked promptly on the approach of the finger.

On the tenth day (April 26th) the same tests were repeated with the same result. The animal being left at liberty with both eyes uncovered, vision was further tested by carefully presenting pieces of fresh meat within the range of the left eye only. The animal took no notice of them while held in this position, but immediately seized them with avidity when brought within the field of vision of the right eye.

On the morning of the twelfth day (April 28th) the animal was found lying helpless, with nearly complete hemiplegia of the left side, which had come on since the previous day. He was killed by subcutaneous injection of woorara, and examined.

The loss of cerebral substance was confined to the turn of the angular convolution, and a portion of that next above and behind it. Its position and extent are shown by the shaded spot in Figure II.

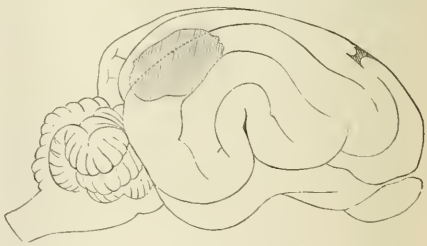


Fig. II.—Brain of the Dog, right side, showing destruction of the angular convolution and a part of that next above and behind it. Blindness of the opposite eye.

By a comparison of these two cases it will be seen that, although they differ somewhat in the shape and position of the excised portions, the feature common to both is the lesion of the angular convolution. We can hardly avoid, therefore, attributing to this lesion the symptom of opposite blindness which they both presented in so marked a manner.

The only particular in which these results differ from those obtained by Ferrier is their persistence. In the dogs, blindness of the opposite eye, after removal of the angular convolution on one side, continued unchanged throughout the period of observation; in one case for ten days and over. But in Ferrier's experiments on monkeys, sight appeared to be more or less regained on the affected side by the end of twenty-four hours. This restoration of a function which has been once abolished by local le-

sion of the nervous system is often one of the most difficult matters to explain. It happens in loss of co-ordination from injury of the cerebellum, and in the hemiplegia of dogs caused by removal of the motor centres of the hemispheres. In such instances as these, where the nervous affection is indicated by defect of motion, its disappearance may, perhaps, be accounted for by supposing that the animals either cease attempting the movements of which they are incapable, or else gradually learn to accomplish the same act by different muscular combinations. But, in regard to a sensation, it is difficult to imagine how perceptive faculties can be acquired by an organ in which they do not already exist. Ferrier supposes the central ganglia of the optic tracts (corpora geniculata and tubercula quadrigemina) to have such bilateral connections that they can both transmit visual impressions to either hemisphere; and that, after removal of one cortical centre, that of the opposite hemisphere supplies its place. But in this case there should be no blindness at all after removal of one cortical centre; whereas it is always at first complete on the side opposite the injury, and only disappears or perceptibly diminishes by the next day. I do not doubt the accuracy of Ferrier's observations on this point, but their explanation does not seem altogether clear.

A further singularity connected with this part of the subject is that the loss and recovery of nervous function, in such cases, appear to follow different laws for motion and for sensation. Removal of one entire hemisphere, in the pigeon, produces hardly any disturbance of the power of locomotion. In the dog, destruction of the motor convolutions on one side causes an opposite hemiplegia, more or less marked, which disappears after some days; while in monkeys, according to Ferrier, and in man, according to numerous pathological observations, the hemiplegia so produced is complete and permanent. Paralysis of motion, therefore, from destruction of the brain-substance, in the lower orders of animals, is slight in degree and temporary in duration, becoming more marked and more permanent in the higher animals and in man. But for destruction of a visual centre, judging from our present data, the effects are reversed. In monkeys, the blindness of the opposite eye is temporary; in dogs, it is persistent; and in Flourens' experiments, removal of one hemisphere in the pigeon caused permanent blindness on the opposite side. It is possible that these variations may depend on a difference in the completeness of decussation in the motor and optic tracts respectively, though it is not easy to explain all the phenomena in this way. But, from the evidence in our possession, it seems that we may safely draw the following conclusions:

I. Extirpation of the angular convolution causes loss of visual perception on the opposite side.

II. This operation is not followed by any disturbance of the intelligence, attitude, power of locomotion, or general sensibility.

III. It does not interfere with the local sensibility of the retina or conjunctiva, the reaction of the pupil to light, nor with the normal consentaneous movements of winking. Its effects are, therefore, confined to the exercise of visual sensibility.

Physiology in Fiction.—Dr. W. A. Hammond's daughter has written a novel, to be published by Putnam, the plot of which is based on the facts of "double-consciousness."

THE HYSTERO-NEUROSIS OF THE STOMACH IN PREGNANCY.

By JOHN S. WARREN, M.D.,

NEW YORK.

PHYSICIAN TO DEPARTMENT OF DISEASES OF WOMEN, DEMILT DISPENSARY.

The tendency of modern therapeutics is to constantly seek specifics for diseased conditions.

One of the results of this search is the too frequent announcement of such specifics founded upon insufficient experience, and hence followed by disappointment.

The reason that this disposition exists, is probably not only on account of our increased knowledge derived from pathological study, whereby we learn the etiology of disease; upon the development of chemical science, and the consequent production of new remedial agents; upon the physiological investigations as to the action of medicines; but especially because some of our most valuable remedies have come to us empirically.

The subject which I have selected for your consideration, "The Hystero-Neurosis of the Stomach in Pregnancy," so common-place, and it may be, uninteresting, has appeared to me to especially illustrate the folly of this continual search for specific medication.

The whole range of remedies has again and again been reviewed for this purpose, and scarcely a week or month passes without hearing that the discovery has been made, only to be followed by inevitable inefficiency and merited neglect.

The vomiting of pregnancy has not heretofore received the consideration from the friends and physicians that it deserves. Too long the custom has been with the former, to make the pregnant woman believe that in her condition all things are possible. And with the latter, that unless the trial of a few routine medicines relieved her distress, she must patiently await the period of quickening for the abatement of her sufferings.

Too long has this aggravating and often dangerous disease, both to the mother and child in utero, been treated upon the supposition that an engorged uterus was its sole and only cause; and not as a disturbance capable of being produced, or at least greatly increased, by the functional or organic derangement of other organs.

A pretty large experience with women suffering from this complaint, during the past five years, in the Female Department of Demilt Dispensary, and including several hundred patients, as well as in private practice, has led me to believe that much of the ill success that has attended the treatment of this disease, has been due often to the careless and empirical way in which it has been managed; and without attempting, in each individual case, to make a correct diagnosis of the cause of the stomach irritation, or to distinguish between the vomiting *of* pregnancy and the vomiting *in* pregnancy.

Trousseau says (vol. iii., p. 18) "that to cure, and, when that cannot be done, to alleviate the sufferings of patients, is the object of medicine. And while treatment is dependent upon the experience, talent, and tact of the physician, it is still more subordinate to the nature of the disease which he wishes to cure, to particular conditions under which the disease exists, to the peculiarities of the organization of the patient, a knowledge of the symptoms, and a proper understanding of their causes and natural history."

Without further premise I will say, that, in the management of the vomiting of pregnancy, I believe

it is absolutely essential to ascertain at the onset, if possible, whether the symptom is due purely to the sympathetic disturbance proceeding from a congested uterus, or is it dependent upon other causes and disorders of other organs, each capable of producing the same symptoms at other times than during pregnancy? and to which, if our early attention is directed, and the proper treatment applied, the gastric trouble will be much lessened, if not entirely abated.

Among the first of these, and not the least important, is the effect which the emotional or hysterical element may produce at this time. In some people, if not in all, emotion, in some form or other, connects itself with every thought, word, and action, giving at one time zest to existence, at another depressing even the simplest of our powers. The stomach is known to be most intimately connected with morbid emotions; so that the function of digestion may not only be arrested and vomiting occur, but even that symptom may happen when the stomach is empty, if distressing or unpleasant thoughts are present to excite.

Dr. Greenhalgh (London *Lancet*, 1868) says "that the form of vomiting, which but few pregnant women escape, occurring very early in pregnancy, the appetite being unimpaired, is characterized by the ejection in the morning of a little glairy mucus tinged with bile, in which there is no evidence of indigested food. This form occurs most frequently and severely in those who are of a nervous and hysterical temperament, and who have suffered before from some uterine ailment. It also more frequently affects the rich than the poor, owing probably to the more highly altered state of the nervous system and greater mental activity of the former."

In such cases it seems that vomiting is but a symptom of that morbid irritability which is so common in females; that depends upon the impressibility of their nervous organizations, and which is set wrong by any slight derangement of their general health. Cannot the vomiting in the sympathetic husband at this time be attributed to emotional causes?

Again may be mentioned, as powerful agents in exciting this trouble, all those conditions that help to increase the natural uterine engorgement, whether it is the uterus, prolapsed and crowded into the bony pelvis by reason of previous subinvolution, a sharp ante- or retroflexion, a lacerated cervix or eroded os uteri, an undue tension of the muscular fibres of the neck, fibroid tumors, or an obstinate constipation. Any of these conditions are capable in women of not only seriously disordering the digestive function at any other time, but even of producing the symptom of nausea and vomiting, and may in many cases, if complicating the reflex irritation following conception, both greatly increase its severity and at times render it intractable.

Corroborative of this, many cases and reliable authorities might be quoted, if necessary.

Even Bennet asserted in his ardent writing upon uterine inflammation, that in his so-called "ulceration" existed the *keystone* of the diseases of the pregnant state, especially those cases of obstinate vomiting which sometimes defied all medicinal treatment, and advised the local application of the solid nitrate of silver for a certain cure. But a more eminent authority is Dr. Marion Sims, who not long since detailed (London *Lancet*) several extreme and hopeless cases of pregnant vomiting which yielded at last to the same application applied to an eroded os.

Dr. Graily Hewitt too soon decided that *all* cases of this disease had for their cause a forward flexion of the uterus. Still, we all know that this displacement is not infrequently a complication which, if relieved, gives the stomach rest and enables digestion and nutrition to go on.

At times, too, a slight expansion of the cervical canal by Copeman's method has proved to be the only and a very positive remedy for arresting the distress.

Again, I will refer to the influence exerted by the derangement of other organs of the body in inducing this disease, whether existing prior to or occurring with the commencement of gestation, and for this purpose I can do no better than to briefly refer to a remarkably terse and suggestive paper read by Dr. Robert Barnes, of London, before the American Gynecological Society in 1876, and published in the first volume of "Transactions," wherein he speaks of the many and important changes which happen in the female economy during the process of gestation, notably referring to the extraordinary activity of the lymphatics, manifested by the rapid wasting of fat and the marked changes that take place in the glandular system, especially in the thyroid, spleen, liver, and kidneys. What exact importance the disorder of the first two mentioned may possibly be to the disease in question we are not prepared to positively assert. But the influence of the two last-named—the liver and kidneys—whether their disorder is functional or organic, alone or complicated with other conditions, are too important to be overlooked; and all eminent gynecologists of the present day are ever ready to emphasize the necessity in the treatment of all uterine disease of keeping them in their proper functional capacity.

In the latter months of pregnancy albuminuria may sometimes exist without the usual signs of its presence, by dropsy, headache, disordered vision, etc., and may be the cause of vomiting, as cases on record will attest. Here, too, the friends and physician even, may be disposed to attribute it to a sympathetic disturbance, especially if the sickness has occurred in the earlier months and has once ceased. So insidious may be its progress, that it is not until dangerous or perhaps fatal symptoms appear that the true disease is manifest. In this period of gestation the possibility of the existence of this form of nephritis without the commoner manifestations should not be lost sight of, but frequent and repeated urinary examinations should be made.

Without a further detail of causes which may contribute to or directly produce this symptom, even when at first it may appear to be reflex, I will only briefly relate two cases which have recently occurred to me in private practice, and while I have been preparing this paper.

The first, a young married lady, who had borne one child several years ago, and who had since been perfectly regular, came to me, fearful that she might again be pregnant. She had passed nearly two months without being unwell. Although I had known her for many years to be in good health, she at this time was anæmic and debilitated. Her symptoms were those of general prostration, with nausea, and vomiting of food during the day.

At first, thinking that the latter symptom was especially significant of pregnancy, I asked about her previous experience, and she informed me that she had suffered considerably from vomiting with her first child, but she remarked, "I always become sick at the stomach when I am fatigued or do any laborious work." Doubtful as to her condition, but

simply putting her upon tonic treatment, her menstrual period again appeared naturally, and she has since continued to improve in health.

Another case was in a lady of high respectability and good connections, who had been several times pregnant, and who after six weeks' suppression became violently sick and vomited incessantly.

At this time she informed me that a small quantity of brandy was the only thing that her stomach would retain. This I directed her to stop using, and after ordering the bromide of sodium in full doses, to be followed by a remedy which I shall later mention, I left her until the next day, when I found her condition greatly improved. In a few days, being again summoned, she told me her vomiting was as bad as ever. Again interdicting the use of brandy, which I suspected she was in the habit of taking, and which suspicion was confirmed by the advice of a lady friend, her complaint ceased, although afterward she succeeded, through efforts on her part, in producing an abortion.

These two cases illustrate the last and only cause of this neurosis which I shall enumerate; the former showing the influence of physical effort in the production of stomach disorder, the latter exhibiting the effect of over-stimulation by the use of alcohol, in bringing about the same results; the one common, the other less frequent, but highly important and exceedingly difficult to deal with, particularly if the patient be a gentlewoman, for she will never acknowledge her weakness until recurrent attacks render it patent, as women are much more secretive in the indulgence of the habit than men.

And now, if sufficient evidence has been offered to show that this disease has many and varied influences, aside from pregnancy, capable of producing or complicating it, does it not deserve the same attention, when demanding treatment, as other diseases or symptoms? I claim that it does, and that its successful management must always be dependant upon the correct diagnosis of its cause, whether simply reflex in character or due to many other conditions or disorders, a few of which I have mentioned.

The treatment, then, of the vomiting of pregnancy resolves itself into the correction of all disturbances, functional or organic, as far as possible, which are known to excite dyspeptic symptoms, before a simple irritation becomes a confirmed gastritis, and the stomach refuses to receive remedies most appropriate to relieve the original trouble. Among these, oftener than any others, the emotional element and a constipated habit, with its attendant flatulence and discomforts, accompany the pregnant state, and should receive early and prompt attention. For the relief of the former, no remedies at this time equal in efficiency the bromides of sodium and potassium exhibited in full doses. And here it may not be amiss to state, that in order to secure their full effect these medicines must be administered at the proper time, generally late in the day or at bedtime, and when the stomach is empty.

The constipation can be overcome by any simple laxative, as the comp. liquorice powder, or any other harmless medicine or formula, or if obstinate, copious and repeated enemata of tepid water will unload the rectum of the hardened fæces or scybala which so frequently occur in women.

Finally, when all other causes are excluded, the constipation relieved, and the emotional element controlled, and we come to consider the purely sympathetic disorder following conception; in short, when we have to deal with the uncommon vomiting, due simply and solely, so far as we can see, to the impregnation of a healthy uterus in a healthy woman, I have found many of the remedies which have been called specifics to sometimes relieve, but oftener to fail. But the one remedy which, in my hands, has before all others proved the most efficient for alleviating the distress, if not for curing the complaint, is Fowler's solution of arsenic, administered in drop doses upon an empty stomach. When thus given, and with a restricted diet, it has seemed to me to come nearer to a specific for this neurosis than any other. Indeed the effect is at times almost magical, and when continued for a considerable period, and given in larger doses when the stomach contains food, affords, in my opinion, a nerve tonic highly essential to women in the pregnant state, and which no other remedy can equal.

Frequently, however, after its continuance for a considerable time, benefit comes from suspending its use and substituting the nitro-muriatic acid with tinct. nux vomica, particularly if there be any inactivity of the liver or kidneys, or anorexia exists.

In conclusion, every pregnant woman, and especially those suffering from vomiting, should be placed under the best possible hygienic conditions, the diet carefully regulated, sufficient exercise enjoined, and above all the mind should be actively employed.

A CASE OF
PSEUDO-MEMBRANOUS LARYNGITIS

Successfully Treated with Turpeth Mineral, Aconite, and the Subcutaneous Injection of the Sulphate of Atropia.

By HORATIO BIGELOW, M.D.,

WASHINGTON, D. C.

On Sunday, January 9th, of the present year, I was sent for at about five o'clock in the afternoon, to see the eight months old child of Mr. C——, residing on Madison street. Upon my arrival the mother informed me that the baby had been ailing for a day or two. Toward evening it would become hoarse, would choke, and seemed to have difficulty in breathing. It had coughed considerably, and the cough was peculiarly harsh and jarring. At times, also, it breathed with difficulty.

I went into the next room and saw a healthy female child, eight months old, laboring with all the force of its inspiratory muscles to force the air through a glottis that was evidently in some way obstructed. The expiration was exceedingly difficult, and accompanied by a hissing sound as loud as that made during inspiration. Shortly after a paroxysm of dyspnœa occurred, and the child's face assumed a look of distressing anxiety. The face became livid and then dusky red, and for a time the child seemed moribund. The dyspnœa existed both during expiration and inspiration. By floating some of the ejected matter in water, patches of false membrane became visible. The breathing could be heard in every corner of the room. The pulse was 150, small, and feeble; respirations 38 to the minute. There was a well-marked sulcus at the base of the sternum, from an absence of the usual atmospheric counterpoise. Auscultation yielded nothing of interest. It was apparent that, without the most active medicinal interference, the child would soon die. I at once ordered powders of the yellow sulphate of mercury, each to contain three grains, one to be given every

two hours, together with small doses of the tincture of aconite-root every half-hour. I then fashioned a covering out of a sheet which should entirely shut in the baby and cradle. The steam-atomizer was charged with lime-water, which evaporization was kept up during the entire night. The tea-kettle upon the stove was also kept filled with the same liquid. Twice the child ejected strips of membrane of considerable length. The inhalation of the lime-steam seemed to afford the greatest relief, and after vomiting, occasioned by the mercurial salt, the voice would clear up and the breathing become easier. The symptoms were met and battled with during the entire night, and the child seemed to grow better. On Monday morning it was bright, and its breathing was less labored. As the day advanced all the symptoms became aggravated, and in the afternoon she became so alarmingly ill that I injected the one-sixtieth of a grain of the sulphate of atropia over the course of the pneumogastric. The effect was immediate and interesting. The breathing became deeper and less labored, and with a tremendous effort, during which it seemed as if the baby would suffocate, a perfect cast of pseudo-membrane was thrown off. The lime-water inhalation was kept up during the whole of Monday night, and the aconite with citrate of potash administered at regular intervals. The child began to mend from this time, and at the present writing is on the road of recovery.

Professor Fordyce Barker is very strong in his encomiums of turpeth mineral in the treatment of croup, and states that there are few cases which will not yield to this treatment when followed up with veratrum viride. The fatality of this disease may logically be attributed to the fact that, when the physician is called in, the disease has already made great progress, and to the tendency among many practitioners to avoid heroic treatment, and to depend more upon nature and less upon active therapeusis; and for this cause it is that tracheotomy has become an opprobrium of medicine. It is not in itself an especially difficult or dangerous operation, and the mortality following its practice is due to a weakened state of the system, since the surgeon is never called in until the last moment, when nature is beyond the power of recuperation. If there be one disease above all others which requires immediate and energetic interference, it is croup, and much of the terror that surrounds it would be avoided and the distressing fatality greatly lessened, if parents would send for the proper advice upon its first manifestation, and if the physician would at once and boldly adopt a vigorous and aggressive attack.

Some time ago my attention was called to the use of subcutaneous injection of atropia in the treatment of croup, by a translation in the "RECORD," from a foreign journal. Its use seemed based upon such sound physiology that I determined to try it upon the first opportunity. The initial dose should be a full one, so that atropinism is reached at once. With the advance of scientific medicine, unconquerable diseases are yielding to the master-hand, and even so formidable a malady as this one has become stripped of much of its terror and power. It is of the first importance to recognize the disease at once, and, having diagnosed it, to begin at once with an alum or turpeth emetic, and follow it up with aconite or veratrum viride. The emetic should be frequently administered, and the lime-spray should be uninterrupted as a last resort, if atropia should fail; or if, for some reason, the physician should be disinclined to make use of it, good results and permanent might be obtained from the inhalation of pure oxygen. Indeed, I am inclined to believe that this is a powerful addition to our formulæ, and that from its more extended use we may expect the most flattering results.

1502 FOURTEENTH STREET, January 15, 1881.

SOME FALLACIES OF PHYSIOLOGICAL EXPERIMENTATION REGARDING NERVES AND MUSCLES.

By T. W. POOLE, M.D.,
LINDSAY, ONT., CANADA.

First.—When Drs. Todd and Bowman wrote their excellent work on "Pathological Anatomy," it was believed that the terminal motor nerve tubules failed to penetrate the sarcolemma of the muscular fibrillæ, and consequently were "entirely precluded from all contact with the contractile material" of the muscle (pp. 161, 167). When, therefore, one of the ultimate fibrillæ of the muscle (supposed to be wholly separate and distinct from nervous tissue) was seen to contract under the microscope, from a touch, it was concluded that this was an example of muscular contraction independent of nervous influence.

The fragment of a muscle here, of course, is a miniature of the whole, since the entire muscle is composed of just such fibrillæ, and it is in these that the sarcous elements or true muscular tissue resides, and in this microscopic arena that the real work of the muscle is done. Just as the fibril contracted to a touch, so it was seen that the entire muscle contracted to a blow, pinch, burn, or electric shock, and in one case as in the other, it was concluded that what was here done, was done to *muscle* only; that the experiment was an experiment on *muscular tissue*, and that muscle had shown itself responsive to these so-called stimuli, "without the intervention of nerves."

This inference, then drawn and accepted, continues to influence opinions on this subject, although the basis on which it rested has been overthrown. Dr. Klein ("Handbook Phys. Lab.") shows that the terminal nerve-tubules not only penetrate the sarcolemma of the muscle fibres, but have beneath it end-plates, nuclei, and terminal filaments, which penetrate the very muscle-cells, and are intercalated with even the nucleoli of their nuclei; so that the smallest microscopic fragment of a muscle has its corresponding nerve-accompaniment, to which a slight touch may be held as the counterpart to a blow, pinch, or other injury inflicted on an entire muscle with its contained nerves.

In view of these facts, the inference that an action done to either the tiny fibre, or to a mass of muscle, is done to muscular tissue only, is no longer tenable. *The act done by a blow, pinch, burn, or electric shock, is really done to both nerve and muscle in intimate association.*

Second.—The erroneous inference just referred to has given rise to another fallacy, namely, that "the property of contractility in muscle is capable of being called into action by other stimuli besides the nervous" (ib., p. 177). The "other stimuli" are the brow, pinch, burn, electric shock, etc., just referred to. It is almost needless to state that this fallacy falls to the ground with the previous one, out of which it grew. There is no proof whatever that any of these agencies produce muscular contraction otherwise than through the influence they exert on *the nerves supplying the muscle.*

Third.—That it is *through the nerve* the contraction of the muscle is brought about is shown by the fact that, when any of the above-named acts are done to *the nerve alone*, extraneous to the muscle, a contraction of the latter follows. Drs. Todd and Bowman state that this fact was considered "sufficient proof" that "the effect was produced through the medium of nervous tissue (p. 166); but against this proof were placed the considerations referred to above, which long obscured it. Now that the adverse inference based on an erroneous view of the nerve-endings falls to the ground, this "proof" must be allowed its full value, and the conclusion is to be drawn that *muscular contraction is brought about through the agency of the nerves of the muscle*, either extraneous to, or intimately associated with, its substance.

Fourth.—Dr. M. Foster expresses this fact in declaring that "a muscular contraction is a token of a nervous impulse passing along the nerve" ("Handbook," p. 385).

What is the character of this impulse? Is it a stimulus to the muscle, inciting it to the performance of its proper function? or is it a release of the property of contractility, inherent in the muscle and ordinarily held in restraint?

Neither of these inquiries can be answered by direct or positive proof. The reply, of necessity, is a deduction or inference from the conditions under which the contraction takes place, and from the character of the agents which produce it. For example, in the introduction into the circulation of drugs of the paralyzing class, such as veratrin, etc., the effect of which on the muscles is that "the duration of the contraction will be enormously prolonged" ("Handbook, etc.," p. 367), it is a matter of inference whether such a drug, of an essentially paralyzing character, acts as a stimulant to the motor nerves of the muscle, inciting the latter to this prolonged contraction; or whether the poison, by paralyzing these motor nerves, puts an end, for a time, to their restraint over the muscle, and the latter, left to itself and its inherent property of contractility, asserts its freedom in this prolonged contraction. Neither the experiment nor others of like result *prove* one of these inferences more than the other. I know of nothing which can be said in favor of the first of these inferences, except that it is the one universally adopted. It has the great disadvantage that it requires a stimulant action to be evoked by an essentially paralyzing drug. In favor of the latter inference, it may be urged:

That it is based on the ordinary well-known character of the drug as an uniform paralyzer.

That the doctrine which assigns to muscle an inherent property of contractility, residing in its sarcous elements, is universally avowed by physiologists.

That there is no proof that this property of contractility in the muscle is in need of a stimulus from the nervous tissue, for the exercise of this inherent power.

That, besides the fact that muscular tissue "is exquisitely organized for the production of its proper force," . . . . "it is contrary to all analogy for one tissue to confer vital properties on another" (Drs. Todd & Bowman, ib., p. 302).

That very numerous facts, both experimental, pathological, and post-mortem, show that muscular contraction takes place and is most persistent when associated with paralysis of nervous function.

Fifth.—Leaving these general facts out of consideration at present, it is proposed here to examine some of the authentic experiments, to see how far they bear out the conclusions which have been attached to them. In a recent physiological work we read as follows:

"Kühne has given an ingenious method to decide if a drug acts *on the muscle or on the end of the motor nerve. In the neighborhood of the tendinous ends* of the sartorius of a frog, the parts are free from nerves, the nerve being in the middle of the muscle. Now, by testing with a Dubois apparatus [induction battery], the irritability decreases from the centre of the muscle toward the periphery, because the nerve is more easily excited than the muscle, the former being more irritable. If, now, a sartorius muscle is removed from the poisoned frog, and the irritability of the middle of the muscle does not exceed or is less than that of the ends of the muscle, the inference is that the drug acts on the ends of the motor nerve" (Dr. Isaac Ott, "Action of Med.," p. 45). This might have been more clearly stated, but I have preferred to quote it in the author's words; italics mine.

Now what are the facts here? The middle portion of the sartorius muscle contains the chief part of its contractile tissue, the sarcous elements, to which motor nerves are distributed in the usual way. These sarcous elements invariably terminate "in the neighborhood of the tendinous ends" of muscles, as might be expected, and as occurs in other long muscles, as in the forearm. Of course there is, consequently, less contractile power here than in the middle of the muscle, but this has not, apparently, been taken into account. The reason for the "decrease of irritability" (which means the lessened readiness to contract of this portion of the muscle) is hence apparent, and is not due, as alleged, to muscle being less easily excited than nerve, for there is here no true muscular (sarcous) tissue. The latter, found in the middle portion of the muscle, gives place as the "tendinous ends" are approached, to white fibrous tissue; and to institute a comparison between tissues so distinct, as though sarcous tissue were equally present in both these parts, and to use such a comparison as the basis for estimating the relative effects of a blood-poison *on nerve and muscle* respectively, is not "an ingenious method;" it is simply an outrage on physiological experimentation. It will be seen how, in the above quotation, the errors crop out, that muscular tissue may be experimented on, and that muscle may be made to contract without the intervention of nerves—ideas which have been shown above to be untenable.

Sixth.—Let us turn now to some of Dr. Michael Foster's experiments ("Handbook Phys. Lab."). The frog is first to be "pithed"—that is, killed by opening the spinal canal below the head, and thrusting a stout wire up and down the cranial and spinal cavities, thus destroying the great nervous centres. Having utilized a certain muscle or muscles in testing their elasticity, the details of which are not necessary here, we are directed to "kill the muscle," "either the same or a fresh one," by its immersion in water at 40° C. (104° F.) for five minutes. What follows? Passing over the effects as regards elasticity, etc., it is found that "no stimulus, however strong, will call forth any further contraction" (pp. 362, 398). Why? The reason usually assigned is that the muscle has lost its "irritability," which is another name for its power of contraction. This is not the true reason, for the fact is that the muscle during its five minutes' immersion has been exerting its contractile power, and has passed into "a state of tetanic contraction," as may be readily proved by ex-

periment, and as is elsewhere incidentally stated by Foster in these details (pp. 379, 363, 398).

Seventh.—If this experiment be varied by subjecting the nerve-muscle preparation to a slightly lower temperature, from 38° to 40° C., the muscle will be equally "thrown into tetanus," from which it will recover if then removed from the bath. "The tetanus will speedily pass away, and the muscle will remain alive and irritable" (p. 398).

This shows that the muscle may pass into a state of "tetanic rigidity" without being "killed"—that is, while in the full exercise of its normal property of contractility. The presumption from this is that the muscle was not killed in the former experiment. Certainly it has not been *proved* to have been killed, and the fact just cited justifies the opinion that it was not. So far as appears, the muscle in both cases simply exerted its contractile power. Was there a stimulus from its attached nerve-trunk or its intra-muscular nerves to incite it to contract? If so, there must have been *a new generation of nerve-force:* because the nervous influence present in the terminal nerves did not previously suffice for this purpose. But how could there be such a new and increased production of nerve-force as is here required, on the "stimulus" theory? Nerve-force is the product of the cell-life of the nervous centres. Here these centres are not only destroyed in beginning the experiment, but the muscle with its local nerves has been removed from the body. There is here a physical impossibility that nerve-force can be so augmented in the terminal nerves as to afford a stimulus to the muscle. But, while these nerves could not have received an accession of nerve-force, they could suffer a deprivation of it, thus setting the muscle free to pass into a state of contraction, as it has done. That the muscle, with its larger and denser mass of tissue, and its less vital property, should "live" through such an ordeal, and that the more susceptible nerve-tissue should be the chief sufferer, is surely a natural and legitimate conclusion.

Eighth.—It is proper to note here that the tetanic rigidity of this muscle, so much resembling rigor mortis as to be so called by Dr. Foster, was not due to any coagulation of myosin or muscle-plasma; because, if such were the case, such coagulation would be permanent, and the muscle could not have remained "alive and irritable." Tetanic rigidity, then, indistinguishable from rigor mortis, may result independently of the coagulation of myosin, and Dr. W. B. Carpenter was quite justified in basing his description of muscular contraction, and his drawings illustrating it, from the similar appearances of muscle while passing into rigor mortis—as he informs his readers he had done—and in adding of rigor mortis that "there can be no reasonable doubt that the phenomena of contraction excited by the agency of the nerves are *precisely similar*" ("Hum. Phys.," p. 308). These facts lend a powerful support to the thesis here advocated. It is natural and reasonable that the nerve-force in the nerve-trunks and terminal muscular nerves may for a time maintain their existing relations to the muscles on the death of the organism, and that, as nerve-force dies out in these nerves, first one muscle and then another is set free to pass into contraction, thus accounting for the post-mortem movements of muscles and limbs so authentically recorded, till finally the entire muscular system, in the exercise of its inherent property of contractility, passes into a state of rigidity which only relaxes in the changes of putrefaction. On the other hand, if these post-mortem movements are due to a stimulus from the nervous system, it has to be explained how such nervous activity has been so long sustained after the cessation of all other vital activities, or how, after a temporary absence, it has returned to assert its domination over the muscle.

Ninth.—If a fresh and vigorous frog be placed in water at a temperature of 42° C. (only two degrees higher than that to which the muscle was exposed), in a few minutes it will be dead, with its muscles in a state of tetanic rigidity (Dr. Ferrier). It will not do to say that here the muscles are killed; for they are found displaying their highest functional activity in complete contraction. Nor can the frog's sudden death be attributed to coagulation of the plasma of the muscles, for it has been shown that a similar tetanic rigidity may be produced when such coagulation is certainly absent. Indeed, it might fairly be insisted on that, so far as has yet been shown, *there is no proof of the presence of myosin in living muscle at all:* that it is only known as a product of dead muscle, and is most probably due to coagulation of albuminous compounds, under circumstances which are the counterpart of the production of fibrin, which it closely resembles, and which is not found in the living circulating blood.

Nor can the tetanic rigidity of these muscles be attributed to the action of heat upon *the muscle* alone, because a similar effect is produced by dipping *the nerve* in hot water, or touching it with a hot needle ("Handbook" pp. 364, 398)—facts which prove that here, as elsewhere, the muscular contraction is "a token of an impulse passing along the nerve." It is to the nerve, then, that we must look as the starting-point of those molecular changes which result in contraction of the frog's muscles. What is the character of this impulse? Is the nervous system excited to an extraordinary degree? Surely not; or why should the frog die, at the very moment when its nervous life was most active, if the tetanic state of the muscles is to be regarded as depending upon that activity. What has happened is something inimical to life. The nervous system is not only implicated in the process, but is also the most delicate and impressible of tissues, and its nerve-force is the most highly vitalized product of the organism. It is therefore the first to suffer. What happens is incompatible with increased nervous activity; but it is quite consistent with the sudden extinction of nervous life; and this view of the case is in full accord with what is witnessed elsewhere, namely, the most rigid contracture of muscles in association with the most profound and persistent paralysis of nerve-function.

Tenth.—The foregoing observations bring us to what is called "the chemical stimulation of muscle," to which the same considerations apply. Here a portion of a nerve or muscle is dipped in a corrosive solution, such as a dilute mineral acid, as a local result of which, Dr. Foster informs the reader, "a fresh surface of muscle must be cut off after each trial, as *the substance used as a stimulus destroys the layer of muscle with which it is in contact*" (ib., p. 397). And this destruction of a portion of nerve and muscle, in successive instalments, is held as a scientific conclusion, to confer increased vital properties on the portion which remains! If so, it must be explained how this process causes the successive generations or augmentations of nerve-force in the mere nerve-endings, which are here required. Nerve-force, under these conditions, cannot be thus increased; but it may be gradually diminished, and

with each temporary decadence the opportunity is afforded for the momentary contraction of the muscle. Each successive destruction of tissue may thus be held as causing the transmission of a paralyzing impulse along the remaining nerve, setting the muscle free to pass into a contraction.

Eleventh.—The phenomena of what is called, "ideo-muscular contraction" furnish another strong inference in favor of the conclusion that what the nerve does to the muscle is to release its contractile power, not to stimulate it. Here again the fallacy appears, that when we "strike the muscle sharply," the act is done to the muscular tissue alone; whereas it is really done to nerve and muscle in intimate association. This sort of inaccuracy, continually occurring, is not creditable in professedly scientific experiments.

When the contraction "which will probably follow" the blow has passed away, "the line where the blow fell will be marked by a wheal. . . . *This wheal, this local thickening and shortening, is the ideo-muscular contraction* (ib., p. 396). This wheal is produced by a more intense local contraction than that which passes over the muscle generally. Like the latter, it too is necessarily a token of "an impulse passing along the nerve" to the muscle. If the blow were a stimulus, and causes an increased nervous impulse to incite the muscle, would not a highly vigorous condition of nerve and muscle be best adapted to produce the desired effect? That is obvious But Dr. Foster recommends, by preference, "*a nerve-muscle preparation which has been much exhausted by treatment or by long removal from the body*" (p. 396). The plain inference from this is that the blow momentarily suspends the general nervous activity, producing the first general contraction, but produces more permanent injury to the nerve where it falls, the wheal at this point corresponding to the greater freedom and consequent contraction of the muscle here than elsewhere; and also that the experiment succeeds best with an exhausted nerve, because in this case its activity is more promptly and completely suspended than would be the case with a fresh and vigorous preparation.

Twelfth.—Dr. Foster states, on another page, that "the ideo-muscular contraction may be called forth in muscles the nerves of which have *completely lost their irritability*" (p. 402). In proof of this statement, the reader is directed to "wait till neither nerve nor muscle give any ordinary contraction with an electric stimulus. Strike as before; the ideo-muscular contraction will make its appearance" (p. 396). This is really no proof at all. The nerve-muscle preparation which fails to give an "ordinary contraction" to electricity is simply a more or less exhausted one, and is not to be considered as one in which the nervous life is "killed." So long as any contraction, however feeble, attends the electric shock, the life of the terminal motor nerves cannot be said to be extinct, nor can these nerves be said to have "completely lost their irritability," because, in Dr. Foster's words, this very contraction, even if feeble, is still "a token of an impulse passing along the nerve," which could not be transmitted if the nerves had lost their irritability; for in that state a nerve "can neither receive impressions nor transmit them."

Nor is the *muscle* "killed" here; for, as Dr. Foster shows, it exerts its property of contractility by subsequently passing into tetanic rigidity. It does this as soon as its nervous life is really extinct, and it is gradually entering on this state during its successive stages of exhaustion.

On such slipshod evidence as the above, conclusions are too often gravely presented, with an air of accuracy and apparent scientific precision to which they are in no way entitled. The justice of this last remark is further shown by the use of this experiment as "an argument in favor of independent muscular irritability" (p. 402), as if this were an experiment on muscle alone, which it was not, so long as nervous life was present, which the experiment shows to have been the case.

Thirteenth.—An editorial censor comes to the rescue of the ideo-muscular fallacy by referring me to certain "facts of comparative physiology" which show that "there are contractile organisms without nerves," leaving it to be inferred that these, at least, furnish an illustration of ideo-muscular contractility. Here is another fallacy. The vital conditions of these organisms in which prehension, digestion, locomotion, etc., are all carried on by the same protoplasmic tissue, is essentially different from the vital conditions of the higher forms of animal life, in which there is "a division of labor," and special functions are assigned to certain tissues.

There is this further essential difference between the two, that in the protoplasmic masses referred to, not only contraction, but the power of elongation, is equally present; whereas muscle in association with nerve can only contract, and does not lengthen, except when forcibly extended. As Dr. Lionel Beale remarks: "Contractility is essentially different from any form of vital movement. . . . Vital movement may occur in a mass of living matter in any direction; contraction takes place in one definite direction only, and never alters" ("Micros. in Prac. Med.," p. 71). The "organisms without nerves," referred to above, cannot therefore serve as illustrations of muscular contractility *minus* the nerves of muscle. Indeed, they do not consist of muscular tissue at all; and the reference to them, in this connection, was surely an oversight on the part of the editor, who deprecates the discussion of questions of this sort in other than "a proper scientific manner."

From the foregoing it is fair to conclude that, owing to the intimate association of nerve and muscle, there can be no ideo-muscular experiment, and no ideo-muscular contraction as the result of a blow, etc.; and the *quasi*-scientific teaching on this entire subject is very much in need of a total reconstruction.

The experiments with curare (urari or woorari), and its effects on the motor nerve-endings, will form the subject of the next paper.

TWENTY-FIRST ANNUAL REPORT OF THE STATE ASYLUM FOR INSANE CRIMINALS, Auburn, N. Y., 1880.—The Medical Superintendent, Dr. T. Dimon, makes a very good showing for the past year. There were forty-five patients admitted during the year, and one hundred and eighty treated during that time, with a percentage of recoveries on admissions amounting to nearly one-third. Considering the character of the inmates, and the fact that the asylum is in the centre of a city, as much employment is given and as little restraint used as could be expected. The inmates are chiefly males.

DR. GEORGE W. DIRMEYOR, of New Orleans, La., a well-known physician and for many years Secretary of the State Board of Health, died on February 27th, aged fifty-two years. A few days before Dr. Dirmeyor stated that he had had seventy-seven hemorrhages of the lungs in the past twenty-seven years.

Progress of Medical Science.

Cauterization in Pulmonary Affections.—Dr. Martin (*Petit moniteur de la médecine*, January, 1881) presents the following conclusions with regard to this subject: the use of the potential cautery possesses certain advantages over thoracentesis in pleuritic effusions; if not invariably, in at least a number of special cases. Thus, in timid persons dreading surgical interference, in tuberculous patients, and in pregnant women, this measure is to be preferred to other therapeutic endeavors. The cautery may also be employed when, for various reasons, blisters are useless or inadmissible. Moreover, the use of the cautery should precede as a tentative measure all operative procedures.

Prerectal Cystotomy for Cystalgia.—At the Hôpital de la pitié, M. Verneuil recently performed this operation under exceptional conditions and for a rare affection. He has performed only one similar operation for a similar purpose, and with a good result. In the present case the sufferer was a young man of about twenty years of age, who had for a long period been tormented by a constant desire for frequent micturition, accompanied by excessive pain in the bladder. He was unable to sleep, and, in consequence, developed alarming marasmus. An adequate cause for this desperate condition could not be discovered. Every possible kind of treatment was tried, but all efforts proved equally fruitless. A temporary respite was obtained by the use of an opiate with copaiba in conjunction with cubebs, but soon the cystalgia was as intense as before. The patient had become a habitual morphine-eater.

Verneuil's first case occurred in 1869, and likewise concerned a young man afflicted with persistent cystalgia. After incising the neck of the violently contracted bladder, the patient was quickly relieved. He died later from the effects of privation during the Franco-Prussian war, and at the autopsy a nearly imperceptible cicatrix in the neck of the bladder was the only local trace of the operation.—*Gazette des hôpitaux*, January 11, 1881.

Exsection of Portions of the Small Intestine.—Dr. Koeberlé, of Strasburg, sent a communication to the Académie de Médecine, describing a recent operation of his, in which he successfully removed two metres of small intestine from a patient. From a consideration of this case, taken in conjunction with other similar ones, he concludes that:

First.—A long piece of gut may be excised (two metres or more) without giving rise to appreciable disturbances of digestion.

Second.—Under certain circumstances such operations are to be regarded as perfectly admissible.

Third.—Such excision may be practised in several ways. First, by immediate suture of the intestinal wounds, followed by closure of the abdominal incision; or by first establishing an artificial anus, and then performing enterotomy. Lastly, by an incomplete suture of the intestine, combined with an artificial anus. The second and third methods appear to expose the patient to less risk.

Fourth.—In cases where cicatricial bands of fibrous tissue exist—and such cases are of more frequent occurrence than is generally supposed—a radical cure may be obtained. The same applies to cases of epithelioma. Cancerous obstruction, on the other hand, can only be temporarily improved, and such relief will soon give way to recurrent disease *in loco* or metastatic deposits elsewhere.

Fifth.—In instituting immediate closure of the intestine (as Koeberlé did in his case), the patient may be guarded against the harmful influence of the flow of intestinal contents until the wound has had time to form sufficiently firm adhesions. Besides, the intestine does not readily evacuate its contents after an operation of this kind. In nourishing the patient with food as little fluid as possible, the danger of liquids escaping into the peritoneum by the wound in the gut is reduced to a minimum. Moreover, solid food is apparently more nourishing.

Sixth.—Drinks and liquids may be administered per rectum, when water will be readily absorbed in the colon, thus allaying the patient's thirst.—*Gazette méd. de Paris*, January 29, 1881.

True Dyspepsia and Pseudo-Dyspepsia.—At a recent meeting of the Académie de Médecine, M. G. Sée (*Jour. de méd. de Bordeaux*, January 23, 1881) read a portion of his forthcoming volume on false dyspepsia. This is what he says: "True dyspepsia is characterized by a chemical alteration of digestion, and is due to deficient acidity of the gastric juice, a change in the quantity or quality of the pepsine, an increased secretion of mucus, which chokes, as it were, the pepsine, and prevents its action; also to an excess of alimentation, and an alteration of the peptic glands themselves."

Apart from this true dyspepsia, or these true dyspepsias, there are the pseudo-dyspepsias, which may assume the guise of the former, but, nevertheless, have certain distinct features of their own. M. Sée recognizes five varieties of false dyspepsia:

First.—Simple intestinal atony, with habitual constipation and permanent tympanism. Differential signs are pain, sluggish digestion, no fermentation, no emaciation.

Second.—Atony by obstruction. The obstruction may be due to various causes, such as hemorrhoids, prolapse of the rectum, polypi, hypertrophy of the prostate gland, constipation, uterine affections, and herniæ.

Third.—Intestinal atony accompanied by mucilaginous secretion. This secretion, falsely called pseudo-membranous, is merely the result of atonic constipation.

Fourth.—Intestino-biliary atony, due to the absence of bile. Differential symptoms: stercoral acholia (which in plain English means merely clay-colored stools), and fatty indigestion (*i.e.*, incapacity for digestion of fatty substances).

Fifth.—Spasmodic atony of the stomach, known as gastralgia. Differential signs: absence of fermentation, constipation, pain and spasms more frequent than in real dyspepsia, a normal tongue, healthy urine, and no emaciation.

We must confess that some of Sée's distinctions are rather fanciful, and certainly his somewhat novel nomenclature appears to be quite superfluous. But perhaps he will present ample reasons for this new departure, and we must reserve our final judgment until the appearance of the entire volume.

The Leucocytosis following Hemorrhage.—The hæmatological researches of Malassez have established the fact that the presence of simple wounds might lead to an increase in the proportion of the white corpuscles of the blood. The same result is observed to follow hemorrhage. The question arose whether the leucocytosis was actually brought about

by the hemorrhage, or was the result of suppuration in the wounds giving rise to the loss of blood. In order to determine this point Malassez instituted a series of experiments from which he draws the following conclusions: Leucocytosis does not invariably follow hemorrhage, and it occurs in extremely variable degrees of intensity. It is very marked whenever it follows a wound which is undergoing suppuration; it is slightly present or altogether wanting when suppuration is absent. Thus it would appear that this variety of leucocytosis must be ascribed to the consecutive suppuration rather than the loss of blood occasioned by wounds, and must, therefore, be classed with the leucocythæmia of suppuration.—*Journal de méd. de Bruxelles*, December, 1880.

Simple Method of Resuscitation in Apparent Death of the Newly Born.—In a note published in 1872, M. Le Bon affirmed that asphyxiated young animals could readily be restored to a normal condition by their sudden immersion in water, the temperature of which was gradually raised from 38° to 48° C. Quite recently M. Goyard (*Le Courrier médical*, January 22, 1881) made use of this method to revivify a moribund infant. The child was born of a primipara having eclampsia. The forceps had to be employed. After extraction the heart's beatings could not be detected. For fully two hours all the ordinary means of restoration were used. The child meantime manifested no sign of life, and its body was growing quite cold, when the idea of hot water suggested itself to M. Goyard. The infant was plunged into a bath up to its neck, the temperature of the water ranging between 45° and 50° C. Thirty seconds had scarcely elapsed when the first respiratory movement occurred. Five minutes later the child was fully restored to life. M. Goyard does not agree with Le Bon, in believing that death in such cases is avoided by obviating cooling of the blood. According to him the beneficial effects are due rather to the sudden excitation of the peripheral nerves followed by a reflex central impulse.

Filaria Sanguinis Hominis and Filaria Disease.—Dr. Patrick Manson reverts to this subject (*Lancet*, January 1, 1881), in continuation of a paper which appeared in last year's *Customs Gazette*, in order to bring forward some evidences lately obtained corroborating unmistakably his conjectures as to the habitat of the parent filaria. In the following case the mature parasite was found *in situ*, and it is the first time in which it has been possible to state precisely, from direct observation, the particular structures it occupied. The patient, a male, had noticed that after walking he had pain in both groins, along the course of the spermatic cords. At first there was swelling of and pain in the groin lymphatics, but on the bursting of a vesicle which had formed on the scrotum, and the escape of much fluid, these subsided. During the first year or two scrotal discharges occurred only once or twice a year; then they became more frequent. They would stop for a day or two occasionally, but as a rule the scrotum would drip lymph night and day, to the extent of ten to fifteen ounces in the twenty-four hours. The discharge was always clear like water, and when collected in a bowl, coagula with red particles and streaks would form rapidly. The patient had never suffered from chyluria or any serious illness. He was anæmic, however, and very thin. The ingnino-femoral glands on both sides were found enlarged, but the bulk of the scrotum was only slightly increased. Scattered everywhere on the surface were innumerable minute vesicles. These contained a clear, watery fluid. There was no elephantiasis of the legs. Examination of the exudation showed embryonal filariæ. The blood, also, was very watery, and defective in corpuscles, but contained no filariæ. The affected portion of the scrotum was removed, but during the operation he detected a long and slender worm, of a catgut, opaline appearance, the thickness of a medium-sized horsehair, and it proved to be the head of a female. The patient recovered in a short time after the operation.

Charbon and Hydrophobia Contagia.—The Commission appointed by the French Academy of Medicine to inquire into the controversy between Pasteur and Colin on the inoculation of a new microphyte claimed to have been discovered by Pasteur, and of the preservation of the *charbon germs* in the cultivated soil, has made its report. It indorses the views of Pasteur; but as the cause of the difference of opinions between these two investigators remains unexplained, because the methods of Colin were not examined, and as no original experiments were made, the commission failed to advance the subject, and its decision will weigh little in the eyes of the profession. This is to be regretted, as the subject is very obscure and complicated. Raynaud, Lannelonque, Pasteur, and particularly Dolériis, have also experimented with the fluids and tissues from a child who died of hydrophobia, and have succeeded in isolating from these substances, by means of successive inoculations and cultivations, three distinct sets of particles or organisms: highly septic agents demonstrated by Dolériis, the new microphyte of Pasteur, and another, which Dolériis obtained by cultivation, and the inoculation of which was proclaimed to produce in rabbits death in eighteen to twenty-one days with the symptoms of hydrophobia. In reference to the preservation of *charbon germs* the Commission failed to examine the negative side of the question. Colin claims that the soil of a certain farm abounds in the charbon débris, and the analysis of it, conducted by Pasteur, revealed the existence of bacteridia; yet the animals living on these grounds never suffer from carbuncle. The germ theorists seem, therefore, to have done little more than add new obscurity to a theory whose vitality is still of a very feeble quality. —*Gazette médicale de Paris*, 12 février, 1881.

The Galvano-Cautery in Chronic Nasal Catarrh.—Dr. Pipino, of Mexico, Mo., has reported (*St. Louis Med. and Surg. Journal*, January, 1881) excellent results in the use of the galvano-cautery for chronic nasal catarrh. The cases in which the greatest benefit was derived were those in which there was much structural change and hypertrophy of the mucous membrane over the inferior and middle turbinated bones, causing an obstruction to the free passage of air through the nasal passages. Deflection of the septum to the right or left should not be mistaken for hypertrophy of the membrane covering it, although we frequently find the membrane covering the posterior part of the septum hypertrophied, as well as that over the turbinated bones; defective hearing, excessive secretion with the formation of crusts, and follicular degeneration of the membrane of the posterior nares and pharynx are also found. Nothing short of the partial or total destruction of the hypertrophied tissues will answer. The cicatricial contraction of the tissues from the heated wires deprives them of their erectile nature, removes the obstruction and allows the free passage of air through the nose.

THE MEDICAL RECORD:

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GEORGE F. SHRADY, A.M., M.D., Editor.

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THE DECLINE OF THE BIRTH-RATE.

THE criminality of producing abortion under any but exceptional circumstances has always been conceded, and especially by medical men. It is somewhat startling, therefore, to hear just now views advocated whose logical tendency is to encourage, if not justify, this procedure. Such views have recently been expressed by certain professors of sociological science in Europe. It appears that the Germans have been studying the vital statistics of their country with the object of ascertaining, if possible, the cause of the immense and increasing amount of poverty, misery, and crime which exists among them, and an explanation of this condition of affairs is said to be found in the excessively high birth-rate. This birth-rate for the year 1879 was four per cent. of the population. On the other hand, France, despite a great war indemnity and debt, is prosperous and happy, while it has a birth-rate of only 2.6 per cent. The inference is considered obvious. The rapid increase of population in Germany has overcrowded the country. This increase entails upon the government the heavy expense of education; when the children have grown up, however, they find every avenue of employment overcrowded, and in consequence they emigrate, thus depriving the State of the capital invested in education. But there is no over-population in France, owing to there being half a million less children born there annually, and there is no need of or desire for emigration. The remedy suggested for Germany, therefore, is some law restricting marriage; or, at any rate, the encouragement of a habit of life which shall restrict the number of children born. This should mean, of course, prudence and continence; but it will mean practically, of course, the practice of preventing conception or of procuring abortion. The idea that there is too large a birth-rate is said to be becoming established in all classes of Germany. It is the old theory of Malthus, that the population, if left unchecked, will increase in a geometrical ratio, while the resources of the country increase only in arithmetical ratio. This same theory, somewhat modified and specially applied, has lately been advocated in this country and England, where it should have the name, perhaps, of "Bessantism." It is the theory whose subtle force is shown in the moral obtuseness existing so widely toward the criminality of abortion. Since physicians very often come in contact with those who do not hesitate to express their desire of limiting, by almost any means, the number of their children, the views of political economists upon the subject may well deserve attention. So far as these views relate to Germany it has been shown that the increased birth-rate is but one, and that is a very smal factor in producing the distress there. Germany is a vast camp, and its people are crushed with the expense of supporting an army of half a million. On the other hand, the Netherlands, the most densely populated country in Europe, with a birth-rate nearly as large as Germany's, is prosperous, and its inhabitants show no tendency to emigrate. Sweden, with a thin population and a birth-rate nearly as small as that of France, shows its lack of prosperity by a very large amount of emigration. The principles of Malthusianism should be applied with caution therefore. Regarding any modified form of this doctrine also, the physician has but one ground to take. The production of abortion involves physical evils which are never small and may be fatal. Furthermore, the educated medical man appreciates more deeply than any layman seems able to do the fact that the destruction of the fecund ovum is the destruction of a life. Apart from any moral view of the question, except such as the latter point involves, this knowledge, and the peculiar relations of the physician, make his position regarding any form of Malthusianism a responsible one. The medical profession has, however, always been unanimous in discountenancing the tendency to seek irregular means for limiting the number of the family. Nothing need be said now, therefore, further than to call attention to the political theory and the vital statistics which we have just given, and which may easily be misinterpreted or misapplied. The view that a low per cent. of births is a political necessity does not hold good in this country, at any rate. Still, efforts have been made to apply it to our tenement-house population, a class who will, as a rule, see only the economical side, and not the dangers to morality and health.

THE UNCLEAN STREETS.

THE recent mass meeting for the purpose of insisting upon the prompt cleaning of the streets brings to the surface of discussion a subject of the greatest interest to every citizen. It is well known that our thoroughfares have been in a disgracefully filthy condition during the entire winter. An early snow with

accompanying frost took our street-cleaning bureau unawares, and since then, and during the entire winter, no opportunity has been seized to fulfil any of its contracts with the city. In the more fashionable streets and avenues the street-cleaning has been done by the respective residents; but in the more populated districts filth has been allowed to accumulate to an almost incredible amount, converting roadways into mounds of garbage or pools of rottenness. It is not difficult to understand, in view of the continued presence of such an enormous amount of filth, that the health of the city has suffered. At least, on general principles, we are safe in assuming that the foul streets and the increase of mortality are in a great measure in the relation of cause and effect. The city has never been in such an unsanitary condition before for such a long period, and has never been afflicted with such a relative mortality. It was time, then, that the citizens arose in their might and demanded an explanation; it was time for the Academy of Medicine to record its verdict in favor of cleaning the streets at once, and it was time that the representative men of all parties joined in urging the passage of some law that would fix the responsibility of street-cleaning upon some person or persons willing and capable of performing the contract.

It is gratifying to know that the voice of the profession regarding the necessity for enforcing sanitary regulations has not been without its influence upon the public. Indeed, it is quite evident that the point to the argument of reform was given by the resolutions of the Academy of Medicine. There is but one voice concerning the necessity of street-cleaning. It is quite probable that a suitable law will be passed to meet such a necessity. At least no more favorable opportunity could be seized for enlisting the services of a new broom.

Although the condition of our streets is, doubtless, the main cause of the increased malignity of disease and the high rate of mortality, it is not the only one. The drinking-water has been in a bad condition, and has been insufficient in supply. In many parts of the city, for months at a time, the pressure has been so low that water could not be obtained above the first stories of dwelling-houses. As a consequence, traps became dry, water-closets were not flushed, and sewer-gas entered freely into the houses. The cry of citizens for more water began in autumn and has continued until the present. This request must be answered in a more practical way than it has been done during the past winter, else we will continue to have an increased mortality even despite efficient street-cleaning.

Again, the condition of the sewers must not be lost sight of. Aside from being improperly constructed, they have been compelled to find egress for the washings from the miles of gutters loaded with the rotten refuse of the tenement districts. Of course there is ventilation for the sewers through the houses by means of roof-pipes, but it is a question whether the authorities will not now be compelled to get rid of the surplus of noxious gases in some other way.

And still again, it seems proper to take into account the influence of the nuisances of Hunter's Point, of the abbatoirs on the east side, of the unsanitary condition of our public schools, and of the crowded state of our tenement districts. All these are factors of greater or less influence upon the mortality of our city, and should be duly estimated in the advocacy of reformatory measures. The streets must be cleaned, but other important matters must also receive attention.

BAD EFFECTS OF TOBACCO ON THE YOUNG.

THE well-worn subject of the injuriousness of tobacco has again come to the front. This time, however, it presents a phase which is of much more than ordinary importance.

Certain English medical journals have been giving a partial indorsement of the weed, protesting that, on the whole, it is rather a boon than a bane to mankind. An exception is uniformly made, however, to its use by the young, and at this point Dr. Gihon appears, and in the Annual Report of the Surgeon-General of the Navy presents most strongly the evils wrought upon the young by smoking.

The case of the human organism against tobacco is made out by Dr. Richardson and others to be something as follows:

In smoking tobacco we take in carbonic acid and carbonic oxide, several ammonias, and an oily substance, which is crude nicotine. In this crude nicotine are nicotine proper, a volatile empyreumatic substance and a bitter extract. The ammonias and the nicotine especially are the substances which so sadly poison the system, and they act in numerous directions: 1. The ammonias, entering the blood, make it too alkaline and fluid, thus interfering with its proper nutritive activity. 2. The stomach is debilitated and dyspepsia induced by the general influence of the drug. 3. The throat is made dry and red, the tonsils enlarged, and the morbid condition known as "smoker's sore throat" results. 4. The innervation of the heart is disturbed, its action being weak, irregular, and intermittent; palpitation, precordial pains, faintness, and vertigo are the consequence, forming the well-recognized symptoms of the "tobacco heart." 5. The laryngeal and bronchial mucous membranes, if already irritable, are made more so. 6. Owing chiefly to the disturbance in the blood and heart, the processes of nutrition are slowed, and in the young may be seriously affected—tissue is degraded (Acton). 7. The sexual organs are at first stimulated, especially by cigarette-smoking, but are eventually weakened in power; "excessive smokers,

if very young, never acquire, and if older, rapidly lose their virile powers" (Acton). 8. Vision is impaired, especially if alcohol is used in conjunction with the tobacco, "tobacco amblyopia" being produced; 9. Muscular co-ordination is impaired, especially in the young; drawing-masters find that young smokers cannot draw a "clean straight line." 10. The antidotal effect of alcohol to tobacco leads to forming the habit of drinking. 11. The power of concentrating the mind, and perhaps of intellectual activity in general, is lessened.

The Minister of Public Instruction of France, finding that smokers, as a rule, stood lower in their classes than non-smokers, has forbidden the use of tobacco in the public schools. "Alcohol oppresses the well-nourished brain, though it soothes the exhausted one" (Richardson); in general, a person can do more intellectual work without tobacco than with it. All smokers can do more work if they smoke moderately, than if they smoke excessively.

The above includes about all that can be said against tobacco, and it is an indictment that is heavy enough. Indeed, we cannot but feel a little of the conscious guilt that comes when ruthlessly proclaiming the frailties of a friend. It is in the cause both of justice and scientific truth, therefore, that we hasten to state some modifications of the very damaging charges given. Tobacco is essentially a functional rather than an organic poison. It modifies the special energies and not the structure. It does not, like alcohol, leave a knobby liver behind to proclaim past indiscretions at the autopsy. This is the strongest point to those who argue for its use. It is an evasive poison. Then again, it is a drug that works its bad effects on a minority of those that use it; and these bad effects disappear very rapidly when the habit is given up. Tobacco is eliminated chiefly by the kidneys, and it leaves the system very rapidly; both acute and chronic symptoms of tobacco-poisoning are, as a rule, in adults quite transient. The effect of tobacco upon the throat is not very often injurious; Dr. Richardson's idea that it has a tendency to produce dyspepsia is opposed by the experience of many. Tobacco amblyopia is not at all common.

All this, and still other things, can be said in favor of the drug, but it is to be remembered that they apply almost entirely to tobacco as used by adults. The evils of tobacco are intensified a hundred fold upon the young. Here it is unqualifiedly and uniformly injurious; it stunts the growth, poisons the heart, weakens the sexual organs, impairs the mental powers, and cripples the individual in every way. Not that it does all this to every youth, but it may be safely asserted that no boy of twelve or fourteen can begin the practice of smoking without becoming physically or mentally injured by the time he is twenty-one. We refer to this with especial emphasis, because the practice among boys of smoking, and especially of smoking cigarettes, is now very prevalent. The most prominent cause of rejection of candidates for apprenticeship in the navy, says Dr. Magruder, is irritable heart—caused, in most cases, primarily by tobacco. Ten out of every thousand applicants, in the year 1879, were rejected for "tobacco heart."

It is the duty of our public school instructors to make the facts in regard to tobacco known and impressively felt by their scholars, and we hope that this field of sanitary mission work will be actively occupied. Sewer-gas is bad enough, but a boy had better learn his Latin over a man-trap, than get the habit of smoking cigarettes. For we may lay it down as certain that tobacco is a bane to youth, though it may be the proper indulgence of manhood and a solace to old age.

TYPHUS FEVER IN NEW YORK.

An outbreak of typhus fever has appeared in the city. At date of writing there are thirty-four cases suffering from the disease in the Riverside Hospital. They were taken from their homes, lodging-houses, and from the German, Charity, Bellevue, St. Francis, and United States Marine Hospitals. All, except one from the latter hospital, have been traced to the Shiloh lodging-house, a cheap resort for tramps, which often accommodates five hundred persons nightly. Small-pox has been discovered in the same place, which is now under the care of the sanitary officials.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, February 17, 1881.

DR. FORDYCE BARKER, M.D., LL.D., PRESIDENT, IN THE CHAIR.

DR. BRYCE, of the United States Army, and Dr. Rhodes, of the United States Navy, were introduced to the Academy and invited to seats upon the platform.

DR. JOHN C. DALTON then spoke on the subject of

"CENTRES OF VISION IN THE CEREBRAL HEMISPHERES."

[See p. 337.]

DR. R. H. DERBY reported three cases of what he believed to be cerebral hemiopia. Ophthalmoscopic examination was negative. No autopsies.

DR. BIRDSALL referred to the experiments of Munk, who located the visual centre, in the monkey's brain, in the occipital lobe. The particular points of interest in Munk's results were the different forms of blindness and deafness which he observed as the result of injury to or extirpation of different parts of these tracts in the brain. Both Ferrier and Munk observed hemiopia in the ape, but this condition was not observed in the dog after being subjected to the same experiments.

Dr. T. R. Pooley referred to cases of hemiopia already published, and similar in character to those related by Dr Derby. He also asked if ophthalmoscopic examination was made of the blind eye, either in Ferrier's or Dr. Dalton's cases.

Dr. Jacobi thought that pathology could not aid experimental physiology very much in the study of such questions; for the symptoms produced by lesions upon one side of the brain were by no means always the same. Again, different results might be obtained by different methods of performing the same experiment. For example, the use of the knife was liable to be followed by secondary inflammation, while the reaction from the use of chromic acid or the actual cautery was less than that from the knife, and usually little or none at all.

Dr. Leale referred to a case in which he removed a button of bone and scooped out three drachms of blood from the region indicated in one of Dr. Dalton's plates. Before the operation the patient was unconscious, and the pupil of the opposite eye was dilated. Within half an hour after the operation consciousness was restored, and the dilated pupil assumed its normal relation. There was no general paralysis. The patient recovered entirely.

The subject was further discussed by Drs. E. G. Loring and H. Knapp.

Dr. Dalton, in closing the discussion, remarked that, according to his recollection, Ferrier did not make an ophthalmoscopic examination. Munk did, and found no change whatever in the blinded eye. It seemed to him that Munk's reasoning was more metaphysical than physiological.

The Academy then adjourned.

OBSTETRIC SECTION.

Stated Meeting, February 24, 1881.

Dr. Henry E. Crampton, Chairman.

RUPTURE OF THE UTERUS.

Dr. H. J. Garrigues presented a specimen in which there was a complete longitudinal rent of the body and neck on the right side of the uterus, with an opening into the peritoneal cavity between the right round ligament and the tube. Branching from that was an incomplete anterior rupture, and there was also an incomplete internal rupture about the junction of the body and the neck.

The only items of the clinical history with which he had been furnished were, that the fœtus was expelled through the rent into the abdominal cavity, and was subsequently delivered through the natural passages with great difficulty. Two hours were spent in the operation, and, after it was completed, several loops of intestine were seen in the vagina. The woman died shortly afterward. At the autopsy it was ascertained that the conjugate diameter of the pelvis was two and three-fourths inches.

Remarks.—With regard to *frequency of rupture of the uterus*, statistics had varied very greatly: from *one* in 600 or 700, to one in 3,200 (Franqué) and one in 3,400 (Jolly). There was also a diversity of opinion concerning the *frequency of the site of rupture;* some claiming that it occurred most frequently longitudinally, as in the specimen presented, while others maintained that the transverse rupture at the junction of the body with the cervix was the most common variety. Playfair had evidently made a mixed statement upon this point, because in one place he had stated that rupture usually occurs opposite the promontory of the sacrum, and in another place he had said that it is usually longitudinal.

With reference to the *cause of rupture of the uterus*, Dr. Garrigues remarked that the most common cause was contraction of the pelvis. In some cases rupture might be due to fatty degeneration of the uterine tissue, but such instances were rare. If Cæsarian section had been performed, the wall of the uterus, in cases of recovery, was weaker at that point than elsewhere, and rupture might occur in the next labor.

But the question to which Dr. Garrigues directed special attention was:

THE TREATMENT OF RUPTURE OF THE UTERUS.

First, with reference to preventive treatment. Ergot should not be administered; for, even in cases in which there was no contraction of the pelvis, it might cause rupture of the uterus by producing too strong contractions.

When the conjugate diameter was reduced to *between one and two* inches, the indications were clear, for the child should be delivered by one of three methods: 1, Cæsarian section; 2, Porro's operation; 3, gastro-elytrotomy.

When the conjugate diameter was *between two and three* inches we should make a distinction between the cases in which the child was living and those in which it was dead. If dead, we should perforate and use either the cephalotribe or craniocłast and deliver. If living, opinons were divided as to the method that should be adopted. Many were opposed to destroying the life of the child. Taking that position, there was nothing left to be done except Porro's operation or Cæsarian section or gastro-elytrotomy.

But an embarrassing feature, in the case which gave the specimen presented, was the fact that the conjugate diameter was two and three-fourths inches, just the diameter through which a living child had been delivered with forceps, or by turning, and therefore, in such cases, much would depend upon the size of the head of the child and the degree of ossification. Of course each case of that kind should be studied with the greatest care.

But suppose the rupture had occurred. If the head presented we should try to deliver with forceps. More commonly, however, after the rupture had occurred, turning was the operation indicated. There was, however, a difference of opinion upon that point. Chailly-Honoré taught that, when the legs of the child had entered the abdominal cavity, version should be performed. Speigelberg, on the other hand, advised against such a procedure, saying that if the hand and arm were introduced into the abdominal cavity we were sure to increase the size of the rent in the uterus.

When the entire child, or the greater portion of it, had escaped into the abdominal cavity, the question was, "What shall be done?" In the beginning of this century the teaching was, to leave the case to nature. Since then, however, a great change had taken place, but opinions were still divided as to which method should be adopted—extract the child through the natural passages, or perform laparotomy.

Dr. Garrigues then referred to Dr. Trask's article, published in 1848 in the *American Journal of Medical Sciences*, in which were given 302 cases, and also Dr. Trask's continuation of this paper, published in 1856, in which he brought the number of cases up to 417.

Dr. Trask's statistics held that by gastrotomy 22 mothers were saved and 7 lost, or 24 per cent. mortality. By turning, perforation, and other methods, 18 mothers were saved and 38 lost, or 68 per cent. mortality. Of the cases abandoned to nature, 15 mothers lived, 55 died, a mortality of 78 per cent.

In 1873 Jolly gave statistics complete up to that date, as follows:

Expectant treatment, 144 cases, in which 142 mothers died and 2 recovered, or 98.61 per cent. mortality.

Extraction by the natural passages, 382 cases, in which 310 mothers died and 72 recovered, or 81 per cent. mortality.

Gastrotomy, 38 cases, in which 12 mothers died and 26 recovered, or 32 per cent. mortality.

In the *American Journal of Obstetrics* for October, 1880, Dr. Robert P. Harris, of Philadelphia, treats of "Laparotomy for Rupture of the Parturient Uterus," with special reference to the operations in the United States. He had collected 40 cases in which the operation had been performed, and among those there were 21 recoveries and 19 deaths. Of the 40 operations, 21 were performed either in the open country or in small towns, leaving 19 operations to be divided among all the cities and large towns. Of the 21 cases 15 recovered, and of the 19 cases 6 recovered.

Those statistics were so striking that the conclusions had not been reversed, and the accepted recommendation had been to perform laparotomy.

Lately, however, some obstetricians had returned to extraction through the natural passages, with an important modification. Quite recently there had been reported in the *Centralblatt für Gynekologie five* cases operated upon by three different obstetricians, and all terminated in recovery.

Frommel had reported three cases. In two of them the peritoneum was simply lifted up, and formed a pouch, which contained the child; but in *one* case there was a complete rent, and the entire child with the placenta was in the abdominal cavity. The uterus was almost entirely divided by a transverse rupture through the lower segment of the body and the cervix. The child weighed 2,800 grammes, and had been in the abdominal cavity six hours. It was extracted by turning, and the entire abdominal cavity was washed out with lukewarm carbolized water, two per cent., and a drainage-tube introduced through up to the diaphragm, and sewed to the outlet of the vagina. Then compression was maintained with compresses and abdominal bandages, and an ice-bag applied. The woman left her bed on the nineteenth day, and on the twenty-first day was discharged from the hospital perfectly well.

The case reported by Morsbach was one of complete rupture of the cervix and vagina, with the child in the abdominal cavity, and its head near the ensiform prominence. The child had been in the abdomen ten hours before the operation was begun. One foot remained in the uterus, and in order to get hold of the other foot numerous small incisions were made in the edges of the rent. The conjugate diameter was "considerably diminished." The hand was introduced and the placenta found to the left of the vertebral column. In this case the drainage-tube was introduced into Douglas's cul-de sac, and salicylated cotton was applied between the legs.

On the following day there was a dark, fetid discharge, and later it was purulent. On the fourth day the tube was removed, and the woman made a good recovery.

The other case was one reported by Graefe, in which the child was in the abdominal cavity, and the uterus well contracted. The child was easily extracted by the feet, and the placenta removed. The uterus was ruptured transversely. There was much coagulated blood and meconium in the abdominal cavity, all of which was washed out with a two and a half per cent. solution of carbolic acid, a drainage-tube ten inches long, with transverse branches, introduced, stitched to the posterior commissure, and pressure and an ice-bag applied to the abdomen externally. The drainage-tube was removed on the thirtieth day, and the woman recovered.

In five cases, then, the child was extracted through the natural passages, the peritoneal cavity was cleansed with an antiseptic fluid, a drainage-tube was introduced, and all the patients recovered.

The after-treatment recommended by Frommel is to keep bowels quiet by opium, if possible, avoid injections through the tube the first two days, in order not to interfere with adhesions, but inject warm carbolized water, two per cent., when temperature rises above 100°.

Dr. A. C. Post suggested induction of premature labor as a prophylactic measure not mentioned by Dr. Garrigues. He also regarded it as a fair inference that, as laparotomy without antiseptic injections had, according to the statistics presented, given better results than when the child was extracted through the natural passages, it would be likely still to give better results with antiseptic injections than would extraction through the natural passages with the same precautions. He thought that laparotomy was a simpler operation, in most cases, than extraction of the child through the natural passages after it had completely, or nearly completely, entered the abdominal cavity.

Dr. Francis V. White referred to a case reported several years ago by Dr. Joseph A. Monnell, who extracted the child through the natural passages, returned the loops of intestines that appeared in the vagina, and the woman recovered.

Dr. Lynch had seen, in the practice of other physicians, three cases of rupture of the uterus. He believed the rupture was due to some change in the tissue of the organ itself; for all the labors were progressing normally, and there was no deformity of the pelvis in either case. All three were multiparous, and had not had any difficulty whatever in any of their previous labors. In one case the woman was passing through her tenth labor when the rupture occurred. Dr. T. G. Thomas performed laparotomy, but the woman died forty-eight hours afterward.

Dr. Sell believed that fatty degeneration of the muscular tissue of the uterus was the primary cause of rupture.

Dr. Carpenter referred to a paper on laparotomy in rupture of the uterus, read by Dr. W. T. Howard, of Baltimore, at the last meeting of the American Gynecological Society. Dr. Howard advocated the operation with full antiseptic precautions, and suggested as a modification that at the same time a modification of Porro's operation might in certain cases be performed, namely: "Pass a ligature through the centre of the cervix, tie it upon either side, cut the cervix off clean, and then do Sims' operation upon it, and so prevent the transudation of fluid into the abdominal cavity, rather than leave the woman exposed to the perils incident to an ununited, ragged uterine laceration." He also regarded Dr. Post's suggestion as one worthy of special consideration.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, February 23, 1881.

DR. THOMAS E. SATTERTHWAITE, PRESIDENT, IN THE CHAIR.

DR. J. W. HOWE presented, on behalf of a candidate, specimens of

MULTIPLE FRACTURE OF UPPER AND LOWER EXTREMITIES—EXCISION OF ANKLE-JOINT AND AMPUTATION OF LEG.

THE PRESIDENT remarked that operations for caries in middle aged persons are more apt to be followed by bad results than in young subjects.

DR. HOWE referred to a case which he reported to the society at a stated meeting in December, 1880. It was one of excision of the ankle-joint in a patient suffering from catarrhal phthisis. The wound healed, and the sinus was entirely closed for two days, then reopened, a few spicule of bone escaped, and the sinus again closed. The patient finally died of osteomyelitis.

THE PRESIDENT remarked that Dr. Gibney's observation had been, and his own experience had confirmed it, that in many cases which had been recorded as recoveries, the patients subsequently died suddenly without known cause. It was so especially with regard to children.

DR. D. M. CAMMANN presented a specimen of

ANEURISM OF THE ARCH OF THE AORTA,

with the following history:

H. B. F——, aged forty-eight years; pier-master. Twenty years ago he had a hard chancre and was kept under treatment for two years; no secondary symptoms followed. Between 1863 and 1876 he had chronic dysentery, acquired while in the army. Otherwise he had been in robust health. About two years ago he noticed that he had slight dyspnœa following an exertion. Since then the attacks of dyspnœa with stridulous breathing had increased in frequency and severity, and had sometimes lasted for several days. Six months ago he came under the care of Dr. A. H. Smith. At that time the vocal cords were red and somewhat thickened, and the trachea which could be seen for three-fourths of an inch below the larynx, was also red. Dr. Smith found some evidence of an intrathoracic tumor. Iodide of potassium was given, with marked benefit at first, but later it ceased to have any effect.

For six weeks before death his breathing was more or less stridulous. He was examined by Dr. Leaming with the following result: In the right infraclavicular region the true respiratory murmur was heard; broncho-respiratory not much exaggerated. Lack of motion over the lower part of the lung. Over the upper part of sternum harsh sounds heard on respiration. Rhythm of heart perfect. No displacement. Lack of motion over the lower part of left lung in front; breath-sounds feeble, especially at the upper part. Sonorous respiration over the right lung behind, least marked over the lower half. At the base of left lung, behind, very little motion. On the left side, behind, percussion note was flat, most marked at base. Over the upper half of the right lung, behind, percussion note was dull and raised in pitch. Vocal fremitus was not very pronounced; most marked over left lung.

There was an area of dulness, the most marked point being to the right of the sternum, an inch below the clavicle, less marked in inspiration than in expiration. Vocal fremitus was most distinct at the same point. On percussion behind, the sound was projected into the stethoscope at the same point in front. Dr. L. diagnosed an intrathoracic tumor, probably an aneurism of the ascending aorta with considerable exudation of plastic matter in the neighborhood.

With a view to relieve the dyspnœa by causing the absorption of plastic material, the patient was twice put on small doses of calomel until the gums were touched, followed by moderate doses of iodide of potassium and belladonna. Under this treatment the dyspnœa was markedly lessened.

February 9th.—Dyspnœa much worse for the past two days, with cough and a slight mucous expectoration. Slight chill this afternoon, followed by fever and profuse sweating.

February 10th.—The stridulous breathing continued, but was less distressing. Respiration, 30; temperature, 99½° F.; pulse, 96. About two hours after he became suddenly unconscious. Two and a half hours later his breathing was stertorous, deep, and somewhat irregular. The whole body was warm, moist, and flaccid; the eyes closed, mouth half open, cheeks sunken, and face slightly cyanotic. The pulse barely perceptible in both wrists, but heart regular.

Post mortem examination, twenty-four hours after death, by Dr. Cammann, Drs. Leaming and A. H. Smith present: Rigor-mortis well marked. A tumor occupied the upper part of the thorax behind and to the right of the sternum. It was closely adherent to the chest-wall in the neighborhood, except in front, but was not adherent to either lung. There were no adhesions between the surfaces of the pleuræ, which were apparently in a healthy condition. The lungs crepitated between the fingers throughout. In the right lung, surrounding the root, were several small tumors, apparently fibrinous masses. Slight hypertrophy of left ventricle of the heart. Valves perfect. Ascending aorta dilated, the internal circumference in the largest part being five and three-fourths inches. On the wall were numerous calcareous plates. The largest measured one and three-fourths inch in the longest diameter and seven-eighths inch in the shortest. A few of the plates were so thick that they could only be broken by considerable force. The largest dilatation was in the first part of the transverse aorta, and involved the innominate artery. It contained a mass of laminated fibrin irregularly conical in shape, measuring in its largest circumference ten and one-fourth inches, and three and one-fourth inches on a line let fall from the apex to the middle of the base. The base was somewhat concave, and formed an arch beneath which the current of blood passed along the aorta. The mass contained an opening through which the index finger could be passed, leading to the innominate artery. The tumor pressed upon the trachea behind and above the bifurcation. The subclavian artery of the right side was enlarged. The remainder of the transverse aorta was dilated and contained large calcareous plates. The descending aorta was dilated, and contained calcifications to within an inch of its passage through the diaphragm.

The brain was not examined.

The chief points of interest in this case were: 1, the large size of the fibrinous clot—nature's attempt at repair; 2, the few symptoms during life of the extensive changes that had taken place. There were no signs of interference with the circulation; no paralysis of the vocal cords; no bruit; no displacement of the heart.

SCARLATINOUS NEPHRITIS.

DR. PUTNAM-JACOBI presented a specimen with the following history: A girl, aged seventeen, and

previously healthy, contracted scarlet fever. The eruption covered her entire body within two or three hours after the first appearance of indisposition, and on the following morning had reached its maximum of intensity. During the first week of her illness, with the exception of the eruption, the case seemed to be a very mild one, the patient's temperature at no time, with the exception of a few hours, when it was 104° F., rising above 102° F. During the second week the desquamation was exceedingly profuse, yet the patient felt remarkably well. Not the slightest trace of albumen was found in the urine, and on the day previous to the appearance of symptoms of nephritis it contained no albumen, and the patient felt well. Exactly two weeks from the day in which the eruption appeared the patient was seized with a phlegmonous inflammation of the neck, increasing so rapidly in the course of a few hours as to threaten suffocation. On the same day the quantity of urine diminished very much, and was found to be nearly solid with albumen. The phlegmon was arrested by means of free incisions and leeching, but the nephritis persisted and progressed steadily toward a fatal termination. This took place on the tenth day after the intercurrence of extensive broncho-pneumonia and finally pleurisy.

The case presented many points of unusual interest, but it was desired at this time only to call attention to the kidneys. These were considerably enlarged, in the medullary portions intensely congested, while the cortical substance was uniformly of a pale yellowish color, indicating a diffuse degeneration. Numerous hemorrhagic foci were scattered throughout both substances. Microscopical examination revealed the following: numerous hemorrhages, in addition to those visible to the naked eye, the effusion occupying the lumen of the tubes, or else Malpighian corpuscles, from which the glomeruli had disappeared. This destruction of glomeruli was a conspicuous feature of the case. In every section of the cortex were found numerous empty spaces, which evidently had once contained glomeruli, but now showed no trace of the latter. The capsule enclosing these spaces was thickened and often lined by several layers of epithelial cells. This proliferation of epithelial cells was observed in capsules still containing their glomeruli. In many of these the glomerulus seemed to have shrunk down toward the hilus of the corpuscle, leaving a large, clear space between the capillaries and the capsule. In this space were lying many epithelial cells, evidently thrown off from the proliferating lining of the capsule. When the glomeruli were not so shrunk or compressed, they seemed enlarged, and in all cases the space enclosed by Bowman's capsule was larger than usual.

The thickened appearance of the capsule was repeated in the walls of the urinary tubes, both convoluted and straight. It was probable that this thickening was apparent rather than real, as the duration of the disease had been quite insufficient to allow of the development of organized connective tissue. But close examination showed that the thickened appearance of the walls of the tubes was caused by the tubes being pushed somewhat apart, the spaces between them containing small round-cells. In other words, the kidney offered the initial lesion of interstitial nephritis. This small-celled infiltration was also observed around the glomeruli, especially near the hilus. Only here and there was it very abundant; in no place sufficiently so to threaten the formation of an abscess. Its existence was noteworthy, because it does not enter into the description of scarlatinal nephritis, as given in the ordinary English text-books. Thus Meigs and Pepper, and most recently Bartholow, describe an exclusively parenchymatous degeneration as the lesion characteristic of this disease. Such a degeneration unquestionably existed in this case.

The epithelial cells were uniformly granular, and many of them were broken down. In some instances the cell-body was finely granular, while the nucleus remained distinct. In the straight tubes the epithelium was less affected than in the convoluted tubes, and in the loop-tubes the epithelium was apparently normal. A number of tubes were blocked up with broken-down epithelial cells, but a large number of the straight tubes and the collecting tubes, particularly toward the apices of the pyramids, were entirely empty, and the tubes themselves extremely dilated. This denuded condition of the tubes and consequent cessation of obstruction would, on Dickinson's theory, explain the fact that five days before death, under the influence of digitalis, the quantity of urine reached nearly the normal—the patient passing eighteen, twenty-six, and eighteen ounces daily. With the increase in quantity of urine there was a diminution in the percentage of albumen; and this fact, notwithstanding the persistence of uræmic nausea and dryness of tongue, led to an unduly favorable prognosis.

Dr. Putnam-Jacobi thought that the possibility of albuminuria depending upon serious hemorrhages into the kidneys was sometimes overlooked, the albuminuria being considered as an ordinary sequela of scarlet fever. Whether in the present case the great quantity of albumen in the urine was the expression of the hemorrhage into the kidney, or was simply due to transudation through denuded tubules, was an interesting question. The duration of the entire course of the scarlet fever was three weeks and three days, of which the last two only were occupied by any perceptible symptoms of nephritis. In regard to these it was worthy of note that anasarca was entirely absent, the nephritis manifesting itself by intense nausea and vomiting, and a uræmic dryness of the tongue. This resembled the tongue of a bad typhoid.

Dr. Carpenter remarked, that in estimating the extent to which dilatation has taken place in the tubules of the kidney, it was important to keep in mind two things: first, positive dilatation; and second, apparent dilatation due to complete removal of the epithelium lining the tubules. He also thought that the excessive development of interstitial tissue described was an unusual occurrence in a case having no greater duration than the one reported by Dr. Putnam-Jacobi.

The President remarked, with reference to the presence of interstitial tissue in kidneys, that we should recognize the fact that this tissue actually exists to a limited extent in the kidneys of children, though when adult life is reached it has so diminished in quantity that only sufficient remains to hold the tubes, the blood-vessels, and the Malpighian bodies together. This interstitial tissue is not fibrillated, but homogeneous, although it contains lymphoid corpuscles throughout. It is a peculiar variety of connective tissue; the nearer the tip of a papilla the greater is the development, but when sections are made across the tubes at the apices of the papillæ a certain quantity of fibrous tissue can always be seen in kidneys removed at any period of life. And this is really fibrillated and not the ordinary

sustentacular tissue just described. Therefore, sections for microscopical examination to determine this point should be made through the cortical portion. With reference to albuminuria, he thought it might arise from a variety of causes; that the number of causes was large, and that we should discriminate carefully the varieties. In the case reported by Dr. Putnam-Jacobi, it seemed eminently probable that the excessive albuminuria depended upon the hemorrhages into the kidney which thereby obscured the prognosis. But it appeared that the specific gravity of the urine was not taken, which he regarded as more important than simply testing for albumen in such cases. A persistently low specific gravity he regarded as a much more important symptom in interstitial difficulties than the mere presence of albumen. But with reference to albumen being derived from the epithelial tissue of the kidney, he thought it was of frequent occurrence, and perhaps was a frequent cause of albumen in the urine in parenchymatous nephritis. Within the last six months he had performed an experiment with the view to determine whether or not epithelial tissues are able to develop albumen in any considerable quantity. For that purpose he took a bladder that had been removed from the body of a patient who had just died, washed its inner surface carefully with water, and then removed the epithelium by scraping and allowed it to digest in water, kept at the temperature of the human body, for several days. He then filtered the fluid carefully through borated cotton, and testing it found that it contained albumen in abundance. The President, therefore, thought that it was important to recognize the fact that water remaining for a long time in the bladder might give rise to albumen, which would appear in the urine.

After examining the specimen under the microscope, he remarked that he would not be willing to give an opinion with regard to the increase of interstitial tissue without further examination.

At the stated meeting held March 9, 1881, Dr. Putnam-Jacobi had permission to add, that since the presentation of the specimen she had ascertained that the existence of interstitial nephritis in scarlatina was recognized as being constant, in all serious cases, by most German authorities. Thus, Thomas, in "Ziemssen's Cyclopedia," so describes it while recognizing a superficial catarrh of the large tubes as the cause of the albuminuria of mild cases (similarly Birch-Hirschfeld). She was indebted to Dr. A. R. Robinson for calling her attention to some researches by Klein (communicated to the London Pathological Society in 1877), made on twenty-two cases of scarlatinous nephritis, in which death occurred at periods varying from the second to the forty-fourth day. In all cases examined after a week's illness, interstitial nephritis was found, but Klein seems to consider this demonstration as rather novel: says that Wagner and Biermer have described a single such case, but considered it as quite exceptional. During the first week the lesions found were vascular; consisting in an infiltration of the intima of the blood-vessels, especially of the afferent arteries to the Malpighian corpuscles, with a hyaline substance. Klein considers this lesion as identical with that of chronic Bright's disease. That the initial lesion is in the Malpighian corpuscles; is, as Klebs has already described it, a "glomeruli nephritis;" and is further maintained, in a recent German essay by Ribbert, published at Bonn this year. This writer, indeed, undertakes to prove that all cases of nephritis begin in the glomeruli: in a proliferation and desquamation of the epithelium lining the capsule; possibly in a proliferation of the nuclei of the capillary tufts. By boiling the fresh kidney, or by hardening it in absolute alcohol, he has demonstrated the presence of coagulated albumen effused between the glomeruli and their capsules, and attributes this transudation of albumen to alteration of the texture of the capillary walls. These lesions have been particularly conspicuous in cases of scarlatinous nephritis, where death had occurred before alterations of epithelium in the tubules had taken place. To such capsular transudation Ribbert attributes all albuminuria of the first stages, at least of nephritis.

The lesions and the clinical history of my case would well accord with these views. The shrinkage toward the hilus of the glomeruli within the distended capsules, is exactly such as was observed both by Klebs and Ribbert; and employment of the method used by the latter might have also shown coagulated albumen filling the large, clear spaces left around the glomeruli. The proliferation and desquamation of epithelium of the capsule were easily demonstrable on my specimens. The sudden onset of the symptoms coinciding with the enormous amount of albumen found in the urine, could be well explained by such a sudden giving way of the weakened walls of the glomeruli capillaries, as Ribbert describes. This author urges that all the various mechanisms by which albuminuria has been experimentally produced, are such as must alter the nutrition of the walls of these capillaries, and thus permit of transudation of albumen, or, under a higher arterial pressure, of blood. The irritant of scarlet fever would act in this respect like phosphorus, carbolic acid, etc. The transuded albumen must interfere with secretion; at first by equalizing pressure, as is done when the ureter is tied; afterward may compress and even destroy the glomerulus. From the very first, therefore, we may infer, severe uræmic symptoms may develop, as in the case related.

The coincidence of uræmic symptoms with glomeruli nephritis, and the absence of anasarca, even when the urine was seriously diminished in quantity for several days, tends to confirm the remark of Bartels, that uræmia always depends on lesion of the glomeruli, anasarca on lesion of the medullary tubes. In this case there was certainly extensive parenchymatous degeneration of those tubes, but it would seem as if, in order for that to be efficient in the production of anasarca, the functions of the cortical portions must be intact. Wherever disease first invades the cortex uræmic symptoms are liable to appear without previous warning of anasarca: whenever the medullary portion is first attacked the lesion is indicated by anasarca, and the patient may throughout remain absolutely free from all symptoms of uræmia.

Dr. Wm. H. Porter submitted the following

REPORT OF THE COMMITTEE ON MICROSCOPY.

The cast of a bronchial tube presented by Dr. Van Gieson, December 10, 1880, was composed of fibres interlacing each other, and within the meshes thus formed were numerous round-cells. At some parts the membrane was perforated, as if for the escape of fluid from the bronchial glands.

The specimen presented by Dr. Tauszky, October 27, 1880, of supposed membranous dysmenorrhœa, showed in some parts nothing but fibrillated fibrine, holding in its meshes numerous small round-cells, probably lymphoid in character, and also epithelial cell-elements. Other portions were made up of irreg-

ular shreds, in which were seen small blood-vessels distended with blood-corpuscles, surrounded by numerous round-cells and epithelia. Fragments of the uterine glands were seen, and when cut transversely the lumen was found filled with a finely reticulated substance. The specimen may justly be regarded as representing at least a partial exfoliation of the mucous membrane of the uterus.

The society then went into executive session.

Correspondence.

MEDICAL LEGISLATION IN WEST VIRGINIA.

To the Editor of The Medical Record.

Sir—It may prove of interest to your readers to know some particulars about the legislation in medical and kindred matters as being effected by the Legislature of West Virginia, now in session. There have been three acts passed, I believe. The first is a bill to establish a State Board of Health, and regulating the practice of medicine and surgery; 2d, a bill regulating the practice of pharmacy and sale of drugs; 3d, a bill regulating the practice of dentistry and to protect the people against empiricism in relation thereto. I will try to give you, as briefly as possible, an abstract of the provisions of the first bill.

Section 1 provides for the appointment by the governor of a board, consisting of two physicians from each Congressional district, who shall be graduates of respectable medical colleges, of twelve years' continuous practice in their profession, and have distinguished themselves by devotion to the study of medicine and kindred sciences, who shall constitute the State Board of Health.

Section 2 relates to qualifying.

Section 3. For their meeting and organizing, they shall elect one of their number president, another secretary, and also for their consultation and co-operation with the National Board of Health and other sanitary organizations.

Section 4. The duties of the secretary: to be the executive officer of the board, correspond with and assist local boards of health, and make yearly reports to the governor of matters pertaining to the board of health.

Section 5. Of the functions of the board: to take cognizance of the interests of the life and health of the people of the State; to make and cause to be made sanitary investigations and inquiries respecting the causes of disease, especially of endemics, epidemics, and means of prevention; of the sources of mortality, and the effects of localities, employments, habits and circumstances of life on public health; to investigate causes of disease occurring among the stock or domestic animals in the State, the methods of remedying the same, and gather information in respect to these matters and kindred subjects, for diffusion among the people; to advise relative to location, drainage, water-supply, heating and ventilation of public buildings, school-houses, the ventilation of coal-mines, and the drainage and sewerage of towns and cities. Also, when they deem it necessary, they shall adopt and enforce such rules as they deem will be efficient in preventing the introduction and spread of infectious and contagious diseases. They are empowered and directed to establish and strictly maintain quarantine at such places as they may deem proper, and adopt rules and regulations to obstruct and prevent the introduction and spread of infectious and contagious diseases to or within the State; to enforce inspections of persons, and articles of baggage and other goods, as well as the purification of the same. Provides penalties on companies and individuals resisting and obstructing the same.

Section 6 provides for the appointment of local boards of health in the several counties of the State, which shall consist of three discreet and intelligent persons—one of whom must be a legally qualified practising physician. The duties of these local boards are to inaugurate and execute, and require the heads of families to execute, such sanitary regulations as the local boards may consider necessary to prevent the outbreak and spread of cholera, small-pox, scarlet fever, diphtheria, and other endemic, infectious and contagious diseases; they are also empowered to go upon and inspect premises which they may believe to be in an unclean or infectious condition, and to enforce the rules and regulations of the State Board of Health. Also, that practising physicians shall report to the local boards promptly all or any of the above-named character of diseases under their special treatment, said local boards reporting monthly to the State Board.

Section 7 provides for local boards of counties adjoining the Ohio River, and other States, declaring quarantine in said counties or places against the introduction of any contagious diseases prevailing in other counties or States, such quarantine to be promptly reported to the State Board for approval.

Section 8. For prevention of the landing of river craft when infected; for the detention of railroad trains, coaches, and other vehicles containing infected persons or goods; also, penalties for violation of such quarantine.

Section 9 provides that all persons practising medicine in any of its branches shall be qualified as follows: if a graduate, he shall present his diploma to those members belonging to his Congressional district for inspection as to its genuineness. If genuine, and issued by a reputable medical college recognized as such an institution, and the person presenting the same to be the person named therein, these two members of the State Board shall issue to him a certificate to that effect, and such diploma and certificate shall be conclusive as to the right of the lawful holder of the same to practise medicine in the State of West Virginia. If not a graduate as above specified, every such person practising in West Virginia shall pass an examination before said members of the State Board, together with the medical members of the county local board in which said examination is held. If satisfactory, a certificate to that effect shall be issued in accordance with the facts, which shall entitle the holder to practise medicine in the State. Also provides that those not graduates, who have been practising medicine in the State for ten years, on filing an affidavit to that effect, shall have issued to them a certificate without requiring the examination.

Section 10 provides for recording these certificates with the Secretary of the State Board, in a book kept for that purpose.

Section 11 provides for $10 fee from those who have to pass the examination, or have their certificates issued. For appeals to the State Board from the decision of the district boards, in case of failure

to pass examination. If applicant fails before both boards, said examinations shall be final.

— Section 12. The examination to be of an elementary and practical character, in anatomy, physiology, pathological anatomy, surgery, chemistry, materia medica, pathology, and obstetrics, but sufficiently strict to test the qualifications of the candidate as a practitioner of medicine, surgery, and obstetrics. Not to apply to females practising midwifery.

Section 13. Defines who are practising physicians —those who publicly profess to be physicians and to prescribe for the sick, or who shall append M.D. to their names. Also applies to apothecaries and pharmacists who prescribe for the sick. Not applying to commissioned officers of the United States Army, Navy, or Marine Hospital service.

Section 14 provides that *itinerant* physicians, who shall practise or offer to practise medicine within the State, or by writing or prescribing or other method publicly profess to cure or treat disease, injuries, or deformities, shall pay into the State Treasury a special tax of $50 for each and every month or fraction thereof they shall so practise.

Section 15 provides a fine of not less than $50, nor more than $500, or imprisonment in the county jail for not less than thirty days or more than one year, or by both, for each and every offence against the provisions of the act. Also, that persons filing, or attempting to file as their own, the diploma or certificate of another, if convicted, shall be guilty of felony, and punished by fine and imprisonment, as provided by the statutes of this State relative to forgery.

Section 15. For the salary of the Secretary of the State Board; for expenses of the members of the State Board.

Section 17 provides for payment into the State Treasury of all funds received by the State Board for certificates, and of all fines and special taxes collected by this act.

Section 10 provides for an appropriation of $1,000 from such funds as shall be received by the State Board for the salary of the secretary and the contingent expenses of officers of the board of every kind and nature whatsoever, and if insufficient, the appropriation of sufficient from the State Treasury for said purpose.

The act will go into effect ninety days from the time of passage. As will be seen, Mr. Editor, this act is very extensive in its provisions, and will keep the members of the State Board busy for some time in organizing local boards and examining the qualifications of the some twelve hundred or fifteen hundred practitioners of the State. And it looks to an outsider as if our Legislature expected the State Board to die of starvation before the next meeting of its session, two years hence, when they appropriated the sum mentioned in the bill, and to expect the unfortunate practitioners of medicine, non-graduates of under ten years' practice, to pay most of it. It is protecting the dear public at some one else's cost. Why they should distinguish between the younger non-graduate and the older one is strange, for I know many of over ten years' practice whom it would puzzle to pass any sort of an examination. They are the equals of any one in ignorance. Again, while protecting us, it makes us do work for which no compensation is offered, *i.e.*, report cases of infectious and contagious disease. To complete the list, it ought to include a report of births, marriages, divorces, and deaths occurring among our patrons. It provides no compensation either for the members of the local boards of health. In conclusion, it looks as if the bill was so weighted down with provisions, without providing compensation for services required, that it will be a dead letter. It has some redeeming points, and we hope that in a few years it will be in good working order.

Very respectfully,
W. H. Sharp, M.D.

ORCHITIS FOLLOWING PAROTIDITIS.

To the Editor of The Medical Record.

Sir—On the 20th inst. I was called to see four young men, aged seventeen to twenty-five, who were just recovering from mumps, one of whom consulted me on account of an inflamed and very painful testicle. On the 23d inst. I visited another boy, seventeen years old, in the same condition. Each of these young men had had the mumps on both sides; the soreness and swelling had disappeared from the parotids a couple of days previous to my visits, and the metastasis was attributed by all of them to exposure to cold. There was anorexia, constipation, tongue covered with heavy, dirty yellowish coat, and marked febrile excitement.

A full dose of magnesia sulph. was ordered in each case, also a hot hop-poultice to be applied to testes, and kept there while the swelling continued; and the following prescription was also given:

℞ Morphia sulph..... gr. j.
Quinia sulph..... gr. xxiv.
Misce. Div. in pulv. no. viij. Sig.—One powder every three hours.

I had but one visit to make in these cases, and they now report themselves "all right."

Truly, there is nothing remarkable in these cases, and the main objects of this paper are to show how very difficult it is to reconcile the views of great authors with clinical facts, and to call the attention of their numerous readers (especially the younger ones) to the *fact* that *there is danger* of metastasis.

Druitt, in his "Surgery," thinks the matter of so little importance that he does not even notice it at all.

Erichsen, fifth edition, p. 821, says:

"Metastasis to the testicle or breast, though of rare occurrence, has been described as occasionally happening."

Flint, third edition, p. 382, says:

"Occasionally, during the progress of the disease, or when the affection of the parotid is about to disappear, swelling, pain, and soreness of one or both testes occur. This must be extremely rare. I have met with but a single example." Farther on he says: "The popular apprehension of danger from 'taking cold' in this disease is based on the idea that, if the affection of the parotid be arrested, a metastasis is apt to take place." Flint does not believe in metastasis at all, and makes no provision for treatment. Erichsen and Druitt, ditto. Dunglison differs from them, and, after describing the malady, he says:

"It is often accompanied with swelling of the testes in the male, and of the mammæ in the female; *the testes being sometimes absorbed afterward.* It is generally epidemic, and apparently contagious (?)."

There is, as Flint infers, a very "popular apprehension of danger" in such cases, and my experience leads me to believe that the apprehension is well founded. Not an old woman in the country but will watch over a case of mumps with maternal anxiety, and keep it from undue exposure while danger lasts. I was glad to see in the Record of January 22d a report from Dr. Heller on this subject, in which he

refers to twenty-nine cases of orchitis in connection with mumps, and I regard it as surprisingly strange that men of such great experience as the English authors cited, and our own Flint, should not have met with it oftener.

JOHN I. SKELLY, M.D.

POTOMAC, ILL., January 28, 1881.

UTERINE DISEASE ONE OF THE PRINCIPAL CAUSES OF INSANITY IN FEMALES.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR—The almost invariable presence of some one or more of the various uterine diseases, either functional or organic, in those cases of insanity occurring among females, and the facts brought forth by a thorough and searching inquiry into the history of a large number of cases, have convinced me of the important and serious effect often produced by a diseased condition of the uterus upon the nervous system. Hence the importance, in the treatment of the various nervous diseases, to direct our attention to the condition of the generative organs, which, without exception almost, I can safely say, will be found to be in an abnormal condition.

Among nearly one hundred and fifty cases of insanity which I examined during my service in the asylum, in nearly every case I found some uterine disorder, which almost invariably, inquiry would reveal, had existed prior to the advent of mental trouble, in many cases for several years. The usual history told by them is a long story of having suffered in many cases almost constant pain, which had interfered with sleep and proper nourishment, and in some cases to that deadly habit, opium-eating, which finally resulted in a shattered condition of the whole nervous organization, and the final overthrow of reason, the result of family trouble, mental worry and depression, or some sudden shock, or hereditary predisposition to insanity. Subjoined is the history of a case:

A. Z., married, thirty years of age, suffering from melancholia; had many delusions of persecution; imagined her husband desired to get rid of her; at times had hallucinations of sight; very nervous; had frequent attacks of hysterics. She informed me that she had not been unwell for eight months, the menstrual flow having been entirely absent since last August. On examination I found the uterus displaced, being tilted forward and to the right. The os uteri was swollen and congested, being of a purple hue, and upon its posterior surface a small ulcer. There was also a profuse leucorrheal discharge. She informed me that she had been in this condition for five years. Three years ago she was badly frightened by fire, since which time, her husband informs me, "her mind has been affected." I immediately commenced treatment, it being simply local applications of an astringent solution to the ulcerated spot on the os uteri, made daily, and repeated syringing with warm water and carbolic acid, 1 in 20, also introducing a pessary. Internal treatment, tonics and iron, and mineral waters. At present date she is greatly improved in her mental health, is cheerful and contented, converses rationally, manifesting no delusions, and expresses herself as feeling well for the first time in several years.

This simply illustrates the good results which may be obtained in the treatment of mental and nervous disease by directing the treatment to the (in a large number of cases) diseased uterus. If more attention were given to those diseases to which the female sex are peculiarly liable, by the general practitioner, and the study of gynecology more earnestly pursued by the student during his collegiate course and after, it would materially lessen the number of those unfortunate ones that are yearly committed to the various asylums.

LEONARD F. PITKIN, M.D.

NEW YORK.

CONGENITAL ABSENCE OF EYEBALLS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR—There came under my observation a few days since, a child, white male infant, six months old, who was born without eyeballs. With Dr. J. Z. Porter, Assistant Surgeon, U.S.A., I carefully examined this case. The *tutamina oculi* appear to be perfectly formed, though the lids are small and appear not to have grown any since birth, owing probably to lack of function and the natural distention which the presence of the balls would have produced. The lids, as a consequence, are somewhat retracted into the empty sockets, and because of this and their non-development they can be separated only to a very limited extent to gain a view into the empty sockets. We satisfied ourselves, however, that there were no eyeballs present even in a rudimentary form. The child is well-grown for its age, intelligent, and seems all right in every other respect. When it cries from pain, its mother states that it sheds tears, showing the presence of the lachrymal gland. The mother, on being questioned as to any probable cause to which she could attribute this defect in her child's formation, stated that about a month and a half after conception, she was frightened in crossing a stream in a ferry-boat, on turning her head and observing unexpectedly behind her a negro man who had lost one eye, the lids of which were closed and retracted into the socket. This is the only incident which occurred during gestation to which she attaches any importance.

As relating to maternal impressions, I will mention an instance which would seem to indicate that there may be something in it, in the first place, and that the deformity may appear in another child subsequently as a result of the physiological effect of the first on the mother. In 1872 I operated for harelip on the second-born of a lady, who stated that in the first months of pregnancy she had seen a very ugly double harelip in a child six years old. This latter child I also operated on successfully two years afterward. About a year ago I operated on another child of this same lady's, for double hare lip, who also has cleft soft palate. Now, so far as can be discovered, this harelip deformity cannot be traced to any of the progenitors of these parents; and, consequently, I am rather disposed to attribute the first case to maternal impression, and the second to the physiological effect of the first on the mother than to atavism. Where a woman has had children by two husbands, physiologists say that it is not unusual for the children of the second husband to resemble the father of the first set, which they attribute to the physiological impression of the first made on the mother while in utero. Now, is not the same thing possible, and even probable, as regards deformities?

Very respectfully,

JOHN P. WALL, M.D.

TAMPA, FLORIDA, February 2, 1881.

STATE MEDICINE AND MEDICAL COLLEGES.

To the Editor of The Medical Record.

Sir—At the last meeting of the American Medical Association a resolution was adopted, urging all medical colleges to establish chairs of State medicine as essential parts of their curricula. In view of the increasing number of sanitary organizations under the promptings of State boards of health, and the consequent demand for trained officers of health, the fulfilment of this resolution is daily becoming more needful; but as yet I know of but three schools in the United States wherein there is even a pretence of teaching more than the merest smattering of personal hygiene, sandwiched in a course of lectures on some other subject; and in the prospectuses of most of our colleges everything relating to hygiene is entirely ignored. Surely, sanitary science—embracing a knowledge of epidemiology, etiology, telluric, meteorological, and dietetic conditions; of the various trade processes which may affect health; of the sources of contamination of soil, air, and water, and the analytical methods of defection; of architecture and engineering to some extent; of a fair range of comparative pathology; in short, of every possible cause of disease and every means of prevention—is of sufficient importance and wide enough scope to deserve a separate chair.

If our metropolitan medical schools deem it inexpedient to make preventive medicine a part of their general course, they might at least give special instruction to those who desire it, and issue a special certificate of proficiency in sanitary science, as is now done in several instances abroad. That public hygiene is destined, year by year, to assume greater prominence, no one can doubt; the chief obstacle to its more rapid progress hitherto has been the lack of instruction of the profession at large in its principles.

I am, sir, faithfully yours,

Alfred L. Carroll.

New Brighton, 1881.

"GYNOMANIA."

To the Editor of The Medical Record.

Sir—In regard to the query of a correspondent in your issue of March 19th, as to whether cases similar to the one designated by him as one of "Gynomania" have occurred to others, I would say that such cases, while not frequent, are far from being uncommon, and that they have received due consideration at the hands of eminent German and French alienists. Westphal,* under the head of "Contraere Sexualempfindung" and Krafft-Ebing,† in a very thorough paper dealing with all varieties of sexual perversion, have described cases of the same character, and shown that those states in which the patient feels himself inclined to assume the feminine dress and gestures, or goes so far as to feel himself a woman during the otherwise normally performed sexual act, are symptoms of a degenerative psychosis. There are to my knowledge about twenty cases of this perversion described in the German periodicals. Probably a much larger number occur, but are unnoticed, as they rarely fall into the hands of so careful an observer as Dr. H., and very rarely indeed are committed to asylums. They are all of them incurable. I have met with three cases of "contrary sexual appetite," and of these only one came under my notice professionally; the others were learned of through accident. Careful search should be made in cases of this kind for a hereditary history, and for anomalies in the offspring. Yours, etc.,

E. C. Spitzka.

130 East Fiftieth Street,
March 20, 1881.

* Archiv fuer Psychiatrie und Nervenkrankheiten. VI., p. 620.
† Ibidem. VII., p. 205.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from March 13, 1881, to March 19, 1881.

White, C. B., Major and Surgeon. Granted leave of absence for three months, on surgeon's certificate of disability. S. O. 57, A. G. O., March 11, 1881.

Gardiner, J. de B. W. Capt. and Asst. Surgeon. The leave of absence granted him in S. O. 16, February 8, 1881, Division of Arizona, is extended five months; and so much of S. O. 34, C. S., A. G. O., as relates to him, is revoked. At the expiration of his present leave of absence, to report by letter to the Surgeon-General. S. O. 59, A. G. O., March 14, 1881.

Gibson, R. J., First Lieut. and Asst. Surgeon. Granted leave of absence for one month, and permission to apply for fourteen days' extension. S. O. 47, Department of the Missouri, March 10, 1881.

Arthur, Wm. H., First Lieut. and Asst. Surgeon (recently appointed), to report in person to the commanding general, Department of the Platte, for assignment to duty. S. O. 62, A. G. O., March 17, 1881.

Bushnell, Geo. E., First Lieut. and Asst. Surgeon (recently appointed), to report in person to the commanding general, Department of Dakota, for assignment to duty. S. O. 62, C. S., A. G. O.

Birmingham, H. P., First Lieut. and Asst. Surgeon (recently appointed), to report in person to the commanding general, Department of the Missouri, for assignment to duty. S. O. 62, C. S., A. G. O.

Wyeth, M. C., First Lieut. and Asst. Surgeon (recently appointed), to report in person to the commanging general, Department of Dakota, for assignment to duty. S. O. 62, C. S., A. G. O.

Medical Items and News.

Contagious Diseases — Weekly Statement. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending March 19, 1881.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
March 12, 1881.	0	5	130	21	80	98	36	0
March 19, 1881.	41	12	146	22	69	92	39	0

Medical College of Virginia.—Dr. Hunter McGuire having resigned his position as Professor of Surgery in the above college, the place has been filled by Dr. J. S. Dorsey Cullen. Dr. J. S. Wellford has been transferred to the Chair of Diseases of Women and Children, and Dr. James to the Chair of Materia Medica and Therapeutics.

THE NEW YORK ACADEMY OF MEDICINE—ITS ACTION CONCERNING THE SANITARY CONDITION OF THE CITY OF NEW YORK.—At a stated meeting, held March 17, 1881, the President, Fordyce Barker, M.D., LL.D., called upon DR. ALFRED L. LOOMIS, who spoke as follows:

Mr. President and Fellows—I wish to occupy your attention for a few minutes upon a subject which, at the present time, is of special importance. It is hardly necessary for me to remind the members of the academy that during the last few months all diseases, acute as well as chronic, have assumed an unusually malignant type. By referring to our death-rate during these months, you will find that it has been higher than ever before for the corresponding months of the year. The disease which is to be before us for discussion this evening—pneumonia—has prevailed more extensively, and been more fatal than ever before since I have been a member of the profession. There have been fevers which cannot be classified, new in many respects, prevailing among us. Phthisical patients have passed away in ways to which we have not been accustomed; and when one in declining years has been seized with acute disease, any physician must have trembled concerning the results. There has been a peculiar fatality in the type of disease, which must have been observed by every practitioner as unusual. As guardians of the public health, we are naturally led to inquire, What are the conditions which have brought about this state of affairs? Has disease changed its character, or has there been a weight upon our city which it has never felt before? As suggestions to answers, I would make the three following propositions: 1. It must be remembered that New York City is in a malarial district, and that its inhabitants, on that account, are predisposed to disease; 2. We all know that the sewerage system of this city is notoriously defective, and we also know that emanations from the sewers, deadly in character, enter our streets and our houses, and thus another element is added which is powerful in the production of disease; 3. During these months there have been masses of animal and vegetable matter undergoing decomposition in our streets in connection with the melting of snow and ice—conditions which, as sanitary science teaches us, are most prolific in the production of disease. Under such circumstances, it seems to me that it is time for our profession in New York to speak, and how can we speak better than through the Academy of Medicine? With that end in view, I offer the following preamble and resolutions:

Whereas, it is our opinion that the uncleanly condition of the streets of this city is an efficient factor in increasing the malignity of many diseases, and thus contributes to the present alarming death-rate.

Resolved, That, acting under a deep sense of our responsibility as members of a profession whose chief duty it is to check the development of disease, we earnestly warn the public against the danger of allowing this state of things to continue.

Resolved, That we are heartily in accord with the call for a citizens' meeting, to be held at Cooper Union, Friday evening, March 18th, to demand relief from the Legislature.

DR. AUSTIN FLINT.—Mr. President, I rise to second the resolutions just offered, believing that the cleansing of the streets is a step in the right direction, and that it may lead to sanitary reforms which are, perhaps, of still of greater importance, more especially the defects in sewerage and defects in the construction of houses with reference to protection against sewer-emanations and deficiency in the water-supply. Although my observation has led me to think that the increased prevalence of disease during the past winter, and its increased fatality, are in a very great measure attributable to the latter fact, yet I regard the cleaning of the streets as a question of great importance, and cordially second the adoption of the resolutions.

DR. GOUVERNEUR M. SMITH.—Mr. President: I believe that the resolutions should receive the warmest indorsement of this academy, which was founded to promote medical science and the public health. I think we might add a little, and say how cordially the members of the medical profession greet intelligent laymen who interest themselves in the matter of sanitary reform.

DR. M. H. HENRY.—Mr. President: I feel unwilling that the verdict of this academy shall go forth that this is a malarial city, and that the terrible surroundings of its inhabitants are due altogether to the condition of its streets. I am perfectly in accord with the desire for clean streets and all sanitary reforms; but I think, before denouncing in such a sweeping way the condition of the city, we should take the subject into more serious consideration. I am not sure but what Dr. Flint is correct in his suggestion that the low water-supply is more a source of danger than all the decaying animal and vegetable matter which the city has contained. I think that the actual condition of the croton water itself and the dirty refrigerators in which food is kept in the houses may prove to be a greater source of disease than are malarial emanations.

THE PRESIDENT.—Before putting the question the chair will ask permission to make a few remarks, especially in consequence of those which have just been made, of which he feels that their importance should be properly estimated, and of the fact that it is a matter which should be thoroughly understood, both by the profession and the public. From having given a good deal of attention to this subject, I believe that the resolutions now before the academy pertain to matters of vital importance, not only to the profession, but to every resident of the city. It is certainly the duty of the profession to sound an alarm in such trumpet-tones as will rouse the proper authorities to wise and efficient action. The prolific causes of disease and death now needlessly destroy more lives in this city annually than are usually lost in the conflict of battles between great contending armies. If the public could be made to understand the warning and dangers of the blood-poisoning which results from the sources to which the resolutions now before us refer; if they could see, as the profession sees, how those who were constitutionally healthy are made miserable and ill; how diseases of a mild type are made dangerous and malignant; how convalescences from those natural processes which add to the happiness of families and the population of the city are interrupted, prolonged, and often attended by dangerous complications, and how the lives of children, often of those who are in the very bloom of youth, are sacrificed, the danger would be so apparent and so appalling that they would be awakened to the necessity of self-preservation. It must be that brains can be found and utilized by such a paternal government as now rules over us in municipal and state affairs as will devise thoroughly efficient means for keeping our streets free from those offensive, disgusting, pestilential heaps of filth which infect the air that we all must breathe and which poison our blood; and that these materials that have only served as ferti-

lizers of our cemeteries may be converted into fertilizers of the earth for increasing its production of health-giving food.

The resolutions were then unanimously adopted. On motion by Dr. R. H. Derby, they were authenticated by the official signature of the president and secretary, as expressing the unanimous sentiment of the members of the academy and the medical profession of all schools, and Dr. Loomis was appointed by the president to present these resolutions, with remarks, at the mass meeting for street-cleaning reform, to be held in Cooper Union, March 18, 1881.

The Medical Students in New York City during the past winter have numbered as follows: College of Physicians and Surgeons, 555; Bellevue Hospital Medical College, 350; University Medical College, 750; Woman's Medical College, 60. In the Veterinary Colleges there have been about 75 students, making a total of about 1,800. The students in the two homœopathic and one eclectic school would raise the number to about 1,900.

Dr. Canquoin, inventor of Canquoin's (chloride of zinc) paste, died recently at Dijon. He was in his eighty-third year.

A Surgical Governor.—Surgeon-Major Sir Samuel Rowe, K.C.M.G., has been appointed Governor of the Gold Coast.

Dr. J. Fulton, editor of the Canada *Lancet*, has been appointed Professor of Surgery in Trinity Medical College, in place of Dr. Bethune, resigned.

Regulating Medicine in Colorado.—The Legislature of Colorado has just passed a law regulating the practice of medicine. A board of examiners is soon to be appointed by the governor.

Ovariotomy in Private Practice.—Dr. E. P. Bennett, of Danbury, Conn., relates the history of a case of ovarian tumor, upon which he recently operated. The patient, fifty-seven years of age, was suffering from a very large polycystic tumor, which greatly distended the abdomen and was producing distressing symptoms. She was tapped once, and four quarts of liquid were drawn off. Later, the tumor was removed by abdominal incision, the pedicle ligatured, and the ligatures brought out at the lower end over the incision. Dr. Bennett says: "This is my tenth operation, and, as I have said, I have never used disinfectants, and have always secured the pedicle with a ligature. In old hospitals, saturated with noxious effluvia, Listerism may be, and undoubtedly is useful, but in private practice, with strict attention to cleanliness, I do not believe it does any good. The less foreign substance introduced into fresh wounds the better. I have always secured the pedicle by ligature, bringing them out at the lower angle of the wound, and tie them over a small roll of cloth, bringing the pedicle well up to the lower part of the incision. My objections to the clamp are: first, it will not do with a short pedicle; second, the pedicle being brought out and left within the incision retards the healing; then in vomiting or coughing it constantly jerks upon the pedicle, producing pain and irritation, tympanitis, which is always present to some extent, pulls upon the pedicle, and the weight of the clamp is painful to the tender abdomen; and lastly, it does not admit of proper drainage, which is of primary importance in preventing septicæmia, especially when there are adhesions which have to be broken down. One very important thing in this operation is that, after cutting down to the sac and before opening it, the patient is placed near the edge of the table, and then let the assistants turn her over nearly as possible on her face, so that the fluid, instead of entering the peritoneal cavity, flows out, and after evacuating the contents of the sac, gravitation facilitates its removal. Another error, I think, is in leaving the bowels too long in a state of constipation. I think a large accumulation of fæces in the lower bowel is productive of more irritation than their earlier removal. I generally move the bowels on the fourth day, and even earlier. If the bowels are tympanitic, an injection with a portion of spirits of turpentine often affords great relief as early as the third day, if the flatus does not readily pass." The patient referred to made a good recovery.

Case of Empyema in Adult, Opening into Lung, Treated by Free Incision—Cure.—Dr. William M. Baird, of Washington, N. J., gives a very interesting account of a case of empyema, in which the lung had been perforated. The patient was a woman, thirty-six years of age, who had always been healthy until nine weeks before she was seen by our correspondent. He found her suffering with what was apparently the last stages of consumption. She had hectic and was very weak, and expectorated large quantities of ill-smelling pus. Physical examination showed the presence of pus in the right pleural cavity. An incision was made and three or four quarts of pus came away. The cavity was washed out daily with carbolized water, the patient meantime improving greatly in every way. In a few days, however, the opening became stopped up, and ten days from the time of the first operation a second was performed. This time a counter-incision was made, and a drainage-tube passed through. The patient, though very weak, continued to improve rapidly. It was, however, some time before the opening into the lung was completely closed.

"Now that nearly two years have passed since the pus was evacuated, it seems to me that I am justified in reporting it a cure by free incision; not only this, but it is ten months since pus ceased to flow, and fifteen months since the drainage-tube was removed.

"As to the choice between this operation and aspiration, the writer cannot see the preference for aspiration where air has once come in contact with the pus by an opening through the lung-wall.

"Though I was prepared to excise a portion of the rib, and told the patient that I should possibly do this if free incision failed, yet I had in this case a difficult one to secure good drainage in. There seemed no way to do this other than to pass the drainage-tube around the rib. In case of empyema, where frequent aspiration failed to stop the formation of pus and cure the disease, I should certainly stop 'tapping,' and make a free incision.

"After having seen several cases of empyema in private practice, I feel sure that the cases of 'consumption' that die, have included not a few that might be cured by free incision and washing out of the pleural cavity. While I do not advocate free incisions in every case, believing that the treatment of each case should depend on its own peculiarities, yet, where indicated, I certainly favor this plan.

"No artificial antiseptic precautions were used in this case other than carbolized injections. Free ventilation was carefully looked after, and nature was depended on for antiseptic measures, and in country practice nature is generally superior to 'Listerism,' if interpreted by common sense and good judgment."

Statistics of Medical Journalism.—On the authority of M. Duveau, one of the librarians of the Academy of Medicine, the total number of medical periodicals for the various continents is 785. Of these 147 are published in France (95 being in Paris alone), 133 are in Germany, 69 in Great Britain, 54 in Austria, 51 in Italy, 28 in Belgium, 26 in Spain, 26 in Russia, 16 in Holland, 10 in Switzerland, 9 in Sweden and Norway, 5 in Denmark, 4 in Portugal, 4 in the Danish Principalities, 2 in Turkey, 1 in Greece, in Asia there are 15, in Oceania 4, in America 183.

Northwestern Dispensary—The annual reports for 1880, of the Board of Managers and House Physician of this charity, present a flattering condition of affairs. A legacy of $10,000 has been bequeathed by the late John H. Dyckman, a long-time resident of the dispensary district. An additional legacy of $100 was given by the estate of the late Joseph Seligman; private donations to the amount of $3,215 were made; while $800 were given by the city. The number of persons treated at the dispensary and visited by the district physicians was twenty-three thousand four hundred and fifty-four, being an increase of nine hundred and eighty-five over the year 1879. Dr. R. J. McGay, house physician, reports that in no year has the medical staff had so few changes, and their efforts have never been so conducive to the welfare of the institution. Some of the classes have received large increments, of which the most remarkable has been in the eye and ear service, and is chiefly due to the efforts of Dr. E. S. Peck. In this department there has been an increase of one hundred and thirty-five per cent. over the year 1878, or a total of one thousand three hundred and seven patients. Clinical instruction is given in this service by permission. The report adds: "This (accession) is particularly the case with the department for diseases of the eye and ear, the usefulness of which has been very greatly augmented by skilful and efficient management. Patients requiring the various operative procedures upon the eye and ear, who were formerly accustomed to seek relief at special institutions, are now skilfully operated upon, and with the best results, in the eye and ear department of the dispensary."

In the department of skin diseases there has been an increase over 1878 of forty-two per cent.; in surgery of thirty-nine per cent., and a slight increase in two other classes. There seems to have been a large decrease, viz.: seventy per cent. in two years in vaccinations, while there is no venereal department. A very valuable auxiliary to the work of this dispensary is the New York Diet Kitchen Association, which occupies the basement of the building as a kitchen.

A New Medical Knight.—The Queen has graciously signified her intention of granting the order of knighthood to James Risdon Bennett, M.P., late President of the Royal College of Physicians.

Dr. Francis Carter, one of the leading physicians at Columbus, O., and Dean of the Starling Medical College for many years, died on February 26th of inflammation of the throat, after an illness of forty-eight hours. He was sixty-seven years old. Mrs. Carter had recently gone to Washington as a guest at the White House, and was there when informed of her husband's death.

Leprosy in the United States.—At a meeting of the New York Academy of Medicine, held January 20, 1881, the following resolution was adopted:

Resolved, That a committee be appointed by the president to investigate the extent to which leprosy prevails in the United States.

The president appointed as such committee, Drs. H. G. Piffard, F. R. Sturgis, and G. H. Fox.

The committee are desirous of ascertaining the actual number of lepers in this country at the present time, and to that end respectfully request any physician who may know of the existence of a case in his neighborhood to communicate the fact to the chairman of the committee, at No. 10 West 35th street, New York.

Filth and Fever.—Dr. F. W. Epley, of New Richmond, Wis., writes: "On September 7, 1880, I was called into the country to see a young lady suffering with typhoid fever. Epistaxis was profuse and exhausting. She had lost her hearing when I first saw her. Tenderness and gurgling in right iliac region marked. Disease ran a severe course for twenty-one days, then went on to recovery; convalescence uninterrupted.

On October 7th, same year, was called to another case in same house, very similar to the first, only not quite so severe, and running a longer course, twenty-eight days. Epistaxis, diarrhœa, and impairment of hearing prominent, with eruption and iliac tenderness. Recovery also uninterrupted.

On the 13th of the same month a third case presented itself for treatment in same house, symptoms same as above. I began to look about for a cause, locally, as there were no other cases in the neighborhood. Upon investigation I found everything in seemingly perfect hygienic condition. The cellar was clean, scrupulously so, whitewashed, swept, and garnished; no old vegetables to be found, new ones nicely binned and clean. The only suspicious-looking corner was the one in which a cistern was located. This was built of stone in one corner of the cellar, and the wall did not extend up to within three feet of the ceiling. This I did not like the looks of, but upon examination found the water, so far as chemical or microscopical examination, looks, taste, or smell, was concerned, was pure. The house was located on quite a high elevation. Everything about the house and grounds were neat and tidy. The privy-vault quite a long distance from the house and down the hill, as were also the barn and yards for stock. The water-supply pure and abundant from lime-rock. I was perplexed, I suggested cleaning out the cistern, but as "water was in such demand" yielded to the wishes of the family and let it remain; but when on the 24th of October a fourth case, and on the 1st of November a fifth occurred, I determined to have the suspicious corner cleansed and thoroughly disinfected. In doing this, after pumping off the upper portion of the water, a thick, slimy, muddy, and extremely offensive-smelling sediment was found in the bottom, with some decomposing rats and mice. No more new cases appeared, and those then prostrated made good recoveries.

In 1878 I had two cases of typhoid fever in one house, and another physician three in an adjoining house. Both families procured water from the same well. Said well was supplied from the mill-pond, and between the two was a privy-vault, the liquid contents or drenchings of which settled readily in the loose sand in which it was deposited. There were no other cases in the village except one, which could be traced directly to Canada in the person of a travelling man.

In August, 1880, two young men died of malignant diphtheria in this place. They were the only ones

who were seriously affected with the disease. They both worked in the same harvest field and drank water, as nearly as could be ascertained, from a watering-trough where horses and stock drank, that is, a jug was filled from the trough in the absence of a funnel.

The Treatment of Orchitis by applying an ointment composed of iodoform four, and vaseline forty parts, is highly recommended by Dr. Sabadini.

The Medical Colleges of Baltimore seem to get hard hits from every quarter. The *Cincinnati Lancet* accused them of underbidding, etc. Now the Baltimore *Independent Practitioner* says that the medical faculty of one of the colleges is "composed in part, or in whole, of skeptical and immoral professors, who fear not God, nor regard the good wishes of Christian parents for the moral welfare of their sons, but introduce into their lectures, ever and anon, obscene anecdotes and unchaste language, couched in unnecessary vulgar utterances; it tends to encourage immorality in the students, and to lower the dignity as well as to debase the sacredness of the medical profession."

Some Points on Cleansing the Ear.—Dr. W. H. Bennett, of Brooklyn, writes: "Books on aural diseases, and ear specialists generally, advocate for cleansing the auditory canal the use of a syringe, having a short, blunt, or swollen nozzle, and advise further, simply that the canal should be thoroughly straightened while using the instrument. But experience has taught me that this is not the proper syringe, and that a somewhat different method should be pursued. We want free vent for the outflow, or return current, of water (except in the comparatively few cases where it is desired to force the fluid through a perforated drum-head into the parts beyond), in order that it may carry out the foreign body, wax, or pus; and then we should be able to *see* what we are about, and to direct the stream with exactness and nicety above, below, or on either side of the substance to be removed, if it be impacted in the canal, and so cause the fluid to accumulate behind it without forcing it farther in. To accomplish these ends we must use the head-mirror, the speculum, and a syringe with a long, slender nozzle. I use the ordinary uterine syringe. By means of these instruments, one can syringe an ear neatly, intelligently, and effectually, and there is no more danger to the patients, nor as much, as by the old method. To my mind it is as unphilosophical to syringe an ear in the dark as it would be to probe the auditory canal blindfolded; and should the army of ear-syringers kick against the method here recommended, I can only assure them that when any one of their number has once tried it he will adopt it. The stream of water should not be thrown with quite so much force as is generally employed, for it impinges more directly upon the drum-head or walls of the middle ear, and of course the smaller the stream, with the same amount of power, the swifter the current and the more violent its action. The speculum should be as large as it is practicable to use. During the syringing it will frequently fill with water and obstruct the view, but this may be sucked out and the parts again exposed to the eye. If it be a foreign body or lump of wax we are endeavoring to remove, as it makes its way out the speculum may be gradually withdrawn until the substance reaches a point where it may be seized by the forceps, or admit of the introduction of a probe behind it. It is understood, of course, that the syringe, and method of using it, here mentioned, is meant to be intrusted only to professional men, as it would be a dangerous instrument in the hands of a layman. A few words regarding the drying out of the canal after syringing, which ought always to be done, except in acute inflammations. For mopping up the residual fluid a camel's-hair brush of good size, previously moistened and squeezed out, answers the purpose admirably. It can be sufficiently dried by pinching it between the folds of a towel, and may be repeatedly used. Afterward, for removing every trace of moisture, ordinary blotting-paper, cut into narrow strips, a line or two wide, is the most convenient, and by far the least dangerous or irritating material I have found."

Evidently a Swindler.—During the past few days several well-known medical gentlemen of this city have become convinced that they have been swindled by a person who represented himself as Dr. Geddings, of South Carolina, and who, pretending to have run out of money, was unable to get home. His story was a very plausible one, his manner easy, gentlemanly, and frank, and he impressed all upon whom he called with the truth of his statements. The name he assumed is well and favorably known here, and he did not ask in vain for the loan. Among his victims are Drs. Alonzo Clark, Isaac E. Taylor, and Samuel Sexton, who advanced sums varying from fifteen to forty dollars. It is supposed, after the city is more thoroughly canvassed, that the swindler will visit Philadelphia.

Small-Pox in the Sandwich Islands.—Latest advices from Honolulu represent that the small-pox epidemic is abating. Since it began about one thousand persons have been quarantined in their houses.

A Bill prohibiting the sale of opium or morphine, except by druggists upon the prescription of a physician, has been introduced by Mr. Brehm into the State Assembly. It is aimed at the Chinese opium-dens.

Commencement of College of Pharmacy.—The fifty-first annual commencement of the College of Pharmacy was held on the evening of March 22d, at Chickering Hall, in this city. Degrees were conferred upon sixty-five graduates by the President of the College, Ewen McIntyre, who also delivered the opening address. The winners of the gold, silver, and bronze medals were Albert F. Meyer, Frederick Hohenthal, and William Bodebender respectively. Mr. Eugene L. Pridenberg, of the graduating class, delivered the valedictory. Professors Chandler and Bowles (of Philadelphia), Messrs. Douglass Campbell (who addressed the class), Park Commissioner Olliffe, and other gentlemen, were on the platform.

At the conclusion of the commencement exercises the annual dinner of the Board of Trustees took place at Seighortner's, in Lafayette place, and was, as usual, an enjoyable affair.

Medical Law of New York.—The following sections were accidentally omitted from the text of the medical bill published in our last issue:

§ 6. Nothing in this act shall apply to commissioned medical officers of the United States Army or Navy, or of the United States Marine Hospital Service. Nor shall it apply to any person who has practised medicine and surgery for ten years last past, and who is now pursuing the study of medicine and surgery in any legally incorporated medical college within this State, and who shall graduate from and receive a diploma within two years from the passage of this act.

§ 7. All acts or parts of acts inconsistent with the provisions of this act are hereby repealed.

THE MODIFYING INFLUENCES OF VACCINIA UPON SMALL-POX.—Dr. H. L. Green, of Cedar Rapids, Iowa, sends us the following account of an interesting and instructive case: "Inasmuch as the profession is having its attention directed to small-pox, it may be of interest to succinctly detail a case that I have lately treated, and which, to my mind, shows clearly the valuation of vaccination. It has been amply illustrated, and is not questioned by the best medical minds, that vaccination exerts a mitigating influence upon small-pox, but there are those who argue against this point. Had I had a doubt of its value, what I have seen in the case of the girl about to be cited would effectually and finally dispel it.

"Mr. John G——, twenty-one years of age, Irish, while on a train was exposed to and contracted small-pox. He came home in Cedar Rapids and suffered a *severe* confluent small-pox. He had never been vaccinated. His sister, Lizzie G——, eighteen years of age, remained in the house with him for two days, after which time she was sent away from the house. Six days after this she was vaccinated for the first time, with bovine virus known to be good. On November 16th, the fourth day after vaccination, and the eleventh or twelfth after exposure to the small-pox, the arm at the site of the scratches was swollen, distinctly flushed, together with elevated oval vesicle of whitish color and depressed centre. Here were clear evidences of successful vaccination; but accompanying these symptoms the pulse ran 138; temperature under tongue, 103½° F.; vomiting; intense headache; anorexia; vertigo; no pain in the back; flushed surface. We would have considered vaccine disease to be all had it not been for this extreme constitutional disturbance, and knowledge that the patient had been exposed to small-pox. The arm was certainly an acceptable vaccination arm. November 17th.—It is now seen that the patient is in the primary fever of small-pox and the manifestations of vaccinia checked in their progress. The vesicle is dried into a blackish crust (which came off during the day); redness has left the arm; skin of more natural color; pulse, 108; temperature, 103; headache; anorexia; general feeling much improved. November 18th.—Patient feels well; pulse, 96; temperature, 102°; red dot or speck, like rash, on face and scattered over the body. November 19th.—Patient feels well; pulse, 96; temperature, 97°; dots larger. November 20th.—Patient feels well; pulse, 100; temperature, 97°; specks larger, with white points; vesicles. November 21st.—Patient feels well; pulse, 108; temperature, 100°; vesicles increased in size. The patient is now at the period of secondary fever, and during the intervening period between the fevers, November 18th, 19th and 20th, the vaccine disease seemed to make another effort at continuance. The arm became painful, red, and gave evidences of increased local irritation, but nothing very perfect developed locally. November 22d.—Patient feels well; pulse, 124; temperature, 100°; vesicles convex and full to base. November 23d.—Patient feels well; pulse, 94; temperature, 100°; vesicles shrunken. November 24th.—Patient feels well; temperature, 98°. From this time the patient continued to improve. Vesicles dried down and came off, leaving no pith. They existed principally on the hands, and upon one I counted 150. This is thus seen to have been a case of varioloid, with range of temperature rather less than typical varioloid.

"The points of interest in the case are: the existence of two disease-poisons in the system at the same time, both known to a certainty to be present, and each received by the system at such times as would bring together the periods of greatest intensity of action, and the evident influence that each poison exerted upon the other; for there is every reason to believe that had the girl not been vaccinated she would have had severe small-pox. Here, as it were, was a contest for ascendancy between the two poisons and a small-pox mitigated into a varioloid. It is rare that so much certainty accompanies a beautiful pathological picture like this."

THE "GROSS SURGICAL PRIZE."—The Philadelphia Academy of Surgery offers through its President, Dr. S. D. Gross, a prize of five hundred dollars for the best essay on the Surgical Pathology and Treatment of Tumors, or Morbid Growths of the Testis, Scrotum, and Spermatic Cord, to be open exclusively to American surgeons. 1. The essay must be founded solely upon original investigations, be illustrated by suitable drawings, microscopical and other, and be written in scholarly English. 2. The essay must comprise an amount of matter equal to 250 pages octavo. 3. It shall be the property of the Academy, which shall, at its option, permit the author to publish it at his own risk or expense. 4. Each essay must be accompanied by a motto, and by a sealed letter containing the author's name. 5. The award will be made at the meeting of the Academy in January, 1884, by a committee of five of its Fellows, consisting of D. Hayes Agnew, M.D., Wm. Hunt, M.D., R. J. Levis, M.D., J. H. Packard, M.D., J. Ewing Mears, M.D., Secretary, 1429 Walnut Street, Philadelphia. 6. All essays must be forwarded to the secretary of the committee, on or before October 15, 1883.

THE NEW GERMAN PHARMACOPŒIA.—The excluding of many of the old drugs from the German Pharmacopœia, which is now being revised, will strike every one as being a very judicious measure. The commission now at work on this revision have already struck out 370 of the 797 articles in the old pharmacopœia. Among the preparations thus left out are several preparations of iron, kino, logwood, resins of guaiacum and scammony, and valerianate of zinc, as well as about half of the hitherto officinal distilled waters, plasters, extracts, etherial oils, tinctures, and ointments. Among the additions are nitrite of amyl, salicylic acid, apomorphia, physostigma, jaborandi, etc.

The commission has rejected gelsemium, chrysophanic acid, eucalyptus leaves, coto and quebracho bark, bromide of camphor, etc. Absorbent cotton, thymol, catgut, gutta-percha, and acetate of alumina have been added to the list of antiseptic materials. The pharmacopœia is to be written in German instead of in Latin, as heretofore.

DUKE CHARLES OF BAVARIA, M.D., the rising young ophthalmologist, has recently discovered bacteria in the choroid coat of two eyeballs. There were no signs of decomposition in the eye, and every circumstance went to prove that they were due to antemortem organisms. In shape and appearance they resembled the bacteria seen in septic diseases.

THE SCIENTIFIC RELATIONS OF MODERN MIRACLES is the title of an article in the March *International Review*, written by Dr. W. A. Hammond. The untrustworthiness of the modern miracle is illustrated by cases from his private practice.

Original Lectures.

TYPHUS FEVER.

By ALFRED L. LOOMIS, M.D.,

PROFESSOR OF PATHOLOGY AND PRACTICE OF MEDICINE IN THE UNIVERSITY OF THE CITY OF NEW YORK.

(Phonographically reported for THE MEDICAL RECORD.)

LECTURE I.

GENTLEMEN: As typhus fever is prevailing to some extent in New York to day, more than fifty cases having been sent to the fever wards on Blackwell's Island, it is an appropriate subject for our consideration at the present time.

Typhus fever is now regarded as the result of a morbific agent previously developed in the body of one who has had the disease. In other words, it is considered a contagious disease. A poison is developed in the body of a person who has typhus fever, which, if conveyed to others, would give rise to the same disease in them. Some claim that it may develop as a result of filth, bad ventilation, and the decomposition of animal and vegetable matter; others only assert that it is more likely to occur among those who are badly fed, badly clothed, and who live in small, crowded, dirty, and ill-ventilated apartments. But some other condition is necessary for its development. Among those who entertain the latter opinion are most of the physicians who have had the best opportunities for studying the disease clinically. They maintain that it is not of spontaneous origin.

The special virus or poison of typhus fever has been regarded by some writers and observers as a germ, by some as a gaseous emanation, and by others as a vegetable organism. The German writers, for instance, claim that it is produced by a germ which has the power to reproduce itself indefinitely and with great rapidity; while other observers state that the poison is a gaseous emanation arising from the decomposition of animal and vegetable matters, which takes place under certain atmospheric conditions, and that, as such, it enters the circulation and produces changes in the blood which give rise to the phenomena of the disease.

The latest view, however, and the more reasonable one, is that the poison which gives rise to typhus fever, and also to other infectious diseases, consists of a vegetable organism which grows, develops, and decays, which, when introduced into the circulation, by its presence (not by its production) causes changes to take place in the blood, according to the same principle that the yeast-plant causes alcoholic fermentation. In the latter instance there is no reproduction, but simply growth of a plant, or of an organism which, by its presence, produces the changes which we recognize as fermentation. Do not understand me to say that the changes which take place in the blood during the course of typhus fever are the same as those which occur during the process of fermentation. This view seems to be corroborated by Pasteur's recent experiments (now under discussion by the profession) on the propagation of the poison of the contagious diseases in the lower animals. He has discovered an organism in the course of these diseases which, when reproduced outside of the body and then introduced into the circulation, gives rise to the characteristic phenomena of the original disease. He found that the introduction of a small amount of this element into the circulation would give rise to a light form of disease which would protect the animal from the development of the severer forms should a larger amount be introduced afterward, according to the same principle that vaccination protects one from variola. The experiments in this direction have not been sufficient to warrant definite conclusions — hardly sufficient to invite for theorizing—and yet they constitute as good a basis for theory as is the basis for the germ theory. The fact that the so-called germs exist in the body in the course of the contagious diseases is as far from being demonstrated as is the presence of an organism which, by its very presence, produces changes in the blood characteristic of these diseases.

Typhus fever has not prevailed in this city to any extent for a number of years. A few cases occurred in 1861, which finally resulted in an epidemic. An investigation of its development and history during that time, from July 1, 1861, to 1864, led me to the conclusion that typhus fever is endemic on certain portions of the globe, for instance, in Ireland, Russia, and Italy. By this statement I mean that the typhus-fever poison always exists in these localities, and that under certain atmospheric conditions, with filth, imperfect and bad nutrition, and crowding together of human beings, it will give rise to an epidemic of typhus fever; and I believe that whenever typhus fever has made its appearance in other localities, the poison has been introduced from some place where it was endemic.

On one day in July, 1861, fourteen cases of typhus fever were suddenly ushered into my wards in Bellevue Hospital. They were the first cases I had seen since shortly after my entrance into the profession, some years before, when many similar ones had fallen under my observation. There was considerable discussion among some of my colleagues as to whether they were cases of true typhus fever, for it was claimed, and very correctly too, that overcrowding, bad ventilation, imperfect nutrition, and want of cleanliness would develop a fever which has many of the symptoms of typhus. Typhus fever has received many names, as ship fever, jail fever, hospital fever, petechial fever, and continuous fever, and without doubt many cases of fever have been included under these names which were not typhus fever at all. Epidemics, or perhaps I should say endemics, of fever have broken out in prisons and overcrowded houses, which resembled typhus fever very much, but which were nothing more nor less than a septic fever, lacking the contagious element of typhus. A patient having such a fever, if taken from the institution where it was developed and placed in a private house, would not convey the disease to those about him. It would differ from typhus fever in this respect, if in no other.

When the fourteen cases just referred to were brought into my wards, I immediately began to make very thorough investigations as to their origin, and found that most of them were traced to the top floor of a rear house in Baxter street. A little girl, Katy Way by name, I remember, came from Ireland to her aunt's, and had typhus fever. She recovered, but her aunt took the disease and died. It then spread to the next floor, then to the lower floor, then to the front house, when some of the inhabitants became frightened and moved to other localities, and of course wherever they went they created new centres for the development of the disease. By the time the

first patients were brought to the hospital the disease had spread considerably. The same conditions —dirt, bad ventilation, dark and overcrowded apartment-houses—existed for years before typhus fever was developed, and if an epidemic of typhus fever occurs in this city now, it will not be because of the filthy streets, or because the inhabitants are more filthy than they used to be, but because typhus-fever poison has been put into proper soil for widespread development. Our filthy streets and bad ventilation offer the greatest facilities for rapid reproduction of the poison. I have heard that the Health Department proposes to stamp out the typhus-fever poison by thoroughly disinfecting the houses in which it has occurred, but intend to allow the people to remain in the same apartments during their disinfection; if that be all they will do, I feel pretty certain they will fail in their intentions. As summer comes on, bringing with it fresh air and fresh ventilation, when windows and doors are thrown open, the disease may not spread very much; but a few cases may carry the poison over to next winter, or it may remain dormant in clothing or household goods. When doors and windows shall be closed, filth and bad ventilation will obtain, and the disease may, in consequence, spread widely.

I am more convinced by the manner in which the disease developed in the internes and house physicians of Bellevue Hospital, during its prevalence in 1861–4, that a slight exposure is not sufficient for its contraction. I took classes into the typhus fever wards, when the doors and windows were open, and delivered clinical lectures, and the students did not take the disease. I think one must have personal contact with a patient sick with typhus fever, or be brought within reach of the concentrated poison, in order to contract the disease. This view is sustained by the fact that only persons who were constantly in the wards where typhus fever patients lay, were attacked with the fever; those in other parts of the hospital, where the typhus poison must have circulated, though in a less concentrated form, escaped.

The question has been raised, and it is claimed by some to be settled in the affirmative, whether typhus poison can be conveyed by clothing or merchandise to a distant country. Murchison, and most writers on typhus fever, claim that such can be done. In investigating this subject at the time of the epidemic before mentioned, I found no instance in which the disease developed in persons who had simply the care of the clothing of the typhus fever patients. It was the rule, when a patient having typhus fever was brought to the hospital, to have his clothes removed, rolled up into a bundle, and put into a pigeon-hole, in a ward devoted to that use, and none of those who had the care of, or washed the clothing, contracted the fever, but every one of those whose duty it was to carry the patient on a litter to the typhus fever ward, contracted the disease if he had never had it before, and every attendant and physician (with the exception of two), who had the care of typhus fever wards, or were in them more or less of the time, contracted the disease. Clergymen who came to the bed-side of patients to administer the consolations of the church took the fever. One after another of the Catholic clergy who had that duty to perform would remain on duty two or three weeks, then be taken with the fever and die, and another would come to fill his place. There was one clergyman, however, who escaped, but he remained at a distance from the patients.

Some persons have an idiosyncrasy of constitution which protects them from contagious diseases. Two of the physicians in the typhus fever wards of Bellevue Hospital, as I said before, escaped the disease, although they were as much exposed to it as any of the others. I have never had typhus fever, although I have been exposed to it as thoroughly as one could possibly be; but unless my duty called me there I should shrink from going into a typhus fever ward to-day, for the idiosyncrasy which protected me from it when exposed to it formerly might not do so to-day. My physical condition may not be the same; years may have made a difference. The mortality among the physicians who took care of the typhus fever wards in Bellevue was very great. Eight or ten contracted the disease; six or eight died. All of the house surgeons escaped, because they kept away from the typhus fever wards.

To repeat: the investigations made at that time led me to the conclusion that typhus fever is a contagious disease, but in order to contract it one must come in contact with a patient who has it, or must expose himself to an atmosphere thoroughly impregnated with the poison; that a slight exposure is not sufficient to give rise to the disease.

Those of you who shall settle in seaport towns will be likely, on account of our large commercial relations, to meet with cases of typhus fever at any time, and you need not fear to expose yourselves sufficiently to make a proper examination of your patients. If you suspect a patient to whom you are called has typhus fever, do not expose yourself needlessly; let the windows be open and the wind blow in a direction from you toward the patient; hold your breath while examining the patient's body, and as soon as you have made the necessary examination pass immediately into another room, and thus you will not be likely to contract the disease. If, however, the patient be in a dark bedroom in a tenement house, where there is no ventilation, and where the air must necessarily be thoroughly impregnated with the poison, you will be likely to contract the disease, especially should you remain in the room long. Many of our most brilliant and promising young men in the profession died of typhus fever during the epidemic which commenced in 1861.

It is apparent from these statements that typhus fever might be prevented from entering and spreading in any locality in which it is not indigenous. It should never be allowed to enter New York City. If our quarantine were properly and effectually enforced a person having typhus fever would not be allowed to come into our ports, but even then we would not be entirely free from danger, for one acquiring the contagion in another country might land at this port before the disease became manifest. As I said before, when it is once developed in a family, I do not believe the health authorities will be able to stamp it out simply by disinfection of the house; the patient, and all of those who have been exposed to the contagion, should be removed beyond the city limits and quarantined until the possibility of their transmitting the contagion has passed. I believe the usual length of time required for the development of the fever after exposure to the poison is two weeks. When I used to go on service in the fever wards, after the lapse of about two weeks I would suffer from headache, nausea, vomiting, and all the commencing symptoms of typhus fever, until it seemed my system became accustomed to the poison and was no longer affected by it.

There is no special lesion of typhus fever. I have told you that ulceration of the intestine is the characteristic lesion of typhoid fever, and I have told you that pulmonary infiltration is the characteristic lesion of pneumonia: but I cannot name to you a characteristic lesion of typhus fever. It is true that certain changes do occur in those who have typhus fever, but they are not characteristic. For instance, changes take place in the blood; it becomes of a darker color, it loses its coagulating qualities; it contains more urea and ammonia than normally; the serum is darker, and undergoes ammoniacal decomposition very readily. All these changes, I say, take place in the blood, but they also take place in the course of other diseases, though possibly with less rapidity and to a lesser degree. Congestion of the internal organs takes place, differing, however, from that which occurs in small-pox, of which we have recently spoken. The venous engorgement is more intense in typhus fever; the vessels of the brain are distended and a serous effusion takes place, which, when they occur in considerable degree cause cerebral symptoms which are rather characteristic of this fever. We will continue this subject at our next lecture.

Original Communications.

ON STATICAL ELECTRO-THERAPEUTICS;

Or, Treatment of Disease by Franklinism.*

By W. J. MORTON, M.D.,

PHYSICIAN TO THE DEPARTMENT FOR NERVOUS DISEASES, METROPOLITAN THROAT HOSPITAL, NEW YORK, AND PROFESSOR OF DISEASES OF THE MIND AND NERVOUS SYSTEM, UNIVERSITY OF VERMONT.

Statical electricity for medical purposes has fallen into almost complete disuse. This is due to a considerable extent to the introduction one after the other of galvanism and faradism. Each in turn from a medical point of view struck a blow at its predecessor. For first galvanism replaced franklinism, and soon faradism replaced galvanism. Of late years the history of electro-therapeutics, to its great advantage, has turned backward and resurrected, after the teachings of Remak, the discarded galvanism. And there is reason to believe that the wheel of circumstances may yet take a further inverse turn and bring us round again to static electricity. When this is accomplished, all three forms, doubtless each in its own province, will enjoy a just and discriminating medical favor.

It may at first sight seem to be somewhat an act of temerity to ask attention to a method of treatment now so antiquated. If, from this point of view, any apology is needed, it is simply that the writer, after careful trial in his own practice of the medical merits of statical electricity, feels a natural desire to have others realize its value. Convinced, then, of the uniformly great, and in many forms of disease superior, merits of this remedial agent, and believing as I do that, in again giving it a trial, we shall take a real advance step in the cure of disease, I have ventured to bring the subject before the Academy this evening, and to present at the same time for examination a modern and improved friction inductional electric machine, together with the various appliances used in the administration of the electricity.

It was statical and frictional electricity that was first and long applied to medicine, and with brilliant results in the cure of disease.

In 1730 Mr. Stephen Gray, of London, first insulated and electrified a human subject, and in 1734 the Abbé Nollet received the first spark drawn from a body thus insulated. From this incident undoubtedly sprung the modern idea of electro-therapeutical science, for Nollet pursued electrical investigations to great lengths, and as early as 1746 was treating paralytics by insulations, sparks, and shocks. About this time, also, Prof. Kruger, of Helmstadt, and Kratzenstiin, his pupil, cured paralysis by electricity, and Klyn cured by means of sparks a paralyzed arm. These cases were the first stirrings of modern electro-therapeutics, but they produced little effect on medical practice.

It was a publication in 1748 by Jallabert, professor at Geneva, that first drew the earnest attention of the medical world to the real curative power of electricity. Jallabert restored to perfect motion and sensation in two months a locksmith's arm which had been paralyzed during fifteen years. In the meanwhile the invention and perfecting of the electric machine and Leyden-jar paved the immediate way to the practical use of electricity as a remedial agent, and soon, following the success of Jallabert, the whole medical world was awake on the subject of medical electricity. At Montpelier, under the auspices of Sauvages, President of the Academy of Medicine, the people flocked in multitudes to have their ailments relieved, and so great was the number of successful treatments that the physicians were obliged to appeal to the priests to protect them from the charge of witchcraft. Destrais, in 1749, wrote a dissertation upon the Montpelier experiences. Quelmalz, Linnæus, and Letzell followed him, and from this period onward up to eighteen hundred works* on the subject multiplied in all countries.

It is interesting to recall that Franklin, in 1752, treated paralytics at Philadelphia by statical electricity.

It is evident, then, that statical electro-therapeutics was already, at the end of the last century, entering upon a marked career of service to medicine when galvanism and the voltaic pile, in 1800, extinguished it at the very height of its progress. It is not improbable that its abandonment was a loss to medical science.

THE ELECTRICAL MACHINE AND APPLIANCES.

Up to comparatively recent times frictional electricity for medical purposes was produced from a single glass wheel. Its tension was low and its quantity small. But the invention of Holtz, in 1865, marked out for modern statical electricity the possibilities of a new career. In the Holtz machine we have an apparatus simple and durable in construction and capable of furnishing electricity of high tension and in great quantity. And by means of the Leyden-jar condensers, and of the possibility of increasing the number of wheels, both tension and quantity are within the control of the operator. At a given length of spark or tension, every additional

* Abridgment of a paper read before the New York Academy of Medicine, March 3, 1881.

* Besides those mentioned, the most important are by De Haen, Watson, Franklin, Priestley, Gardane, Lignad de la Fond, Berthelon, Cavallo, Wilkinson, and Maudnyt; the latter is particularly valuable to the student of medical statical electricity.

wheel adds only to the quantity, and Holtz machines, with as many as twenty revolving wheels, have been constructed, in which the quantity, of course, was very great. This very fact of a greatly increased working quantity of statical electricity justifies the expectation that modern electro-statical therapeutics will take a step greatly in advance of its past.

The machine which I have the pleasure of exhibiting to-night is a double Holtz, so-called. It has two stationary and two revolving wheels. Its condensers or Leyden-jars have about twenty-four inches each of tinfoil surface. It gives with ease, in all weathers, an eight-inch spark, and a large quantity. Its constructor * is Andriveau, of Paris, while to Dr. Vigouroux, of Prof. Charcot's clinic, at Paris, is due, based on the knowledge of his predecessors, its present form of adaptation to medical uses. One novelty in its construction is its enclosure in a glass case, within which, if necessary, drying substances may be placed, thus ensuring its action in all weathers. By the discovery, in the Holtz machine, of a new current, which I shall describe later, it may be also used in all instances in which the ordinary faradic and magneto-induction coils are now used. Thus a single machine combines franklinism and faradism.

Accessory to the machine are simply an insulating stool or platform, and a few metallic or other electrodes for "drawing" or "giving" sparks, and a rod connecting the stool to the machine. The electrodes will be described under the head of "sparks." An excellent insulating stool is made, if desired, by slipping four rubber caps, found at any rubber-store, on to the legs of a chair.

A Pelletier electrometer accurately indicates the tension of the electricity to be administered. The objection, then, that static electricity is not in the control of the physician is invalid. It is as controllable and as measurable, for medical purposes, as galvanism and faradism, and as localizable also.

The motor power for driving the machine may be the hand, steam, gas, or water. The one I exhibit is turned by hand. A similar one in my office is run by a Backus water-motor, at the ordinary pressure of the faucet. I need not say that the regular turning of a mechanical motor is much preferable to the uncertain action of hand-power.

Other points in regard to the machine and its workings will be referred to verbally after the reading of the paper.

In treatment by electro-statics the patient is first electrified, in other words, the state of electrification produced by means of frictional induction electric machine is communicated to his body. But in order that he may retain this condition of electrification he must at the same time be insulated—*i.e.*, cut off from communication with the earth. This is done by placing him on a glass-legged stool or platform, by which we mean to say that his body is raised to a potential higher than the potential of the earth, which is 0. Here, as in all treatment by electrification, whatever effect is produced is effected by creating a "difference of potential." In the Kinetic method the difference is at either electrode, its minimum or 0 at the point of equilibrium within the body, about midway between the two electrodes. In the static the highest of positive potential is the patient's body, the lowest the earth. Hence if an electrode attached to the earth by a chain is approached near to the patient's body, an equalization of potentials or discharge at once takes place at the point of approximation or contact. Of course, the higher the patient's potential the more active will the discharge be.

It is obvious, then, that we may treat our patient by simple insulation, raising him even to a high potential without producing any discharge whatever, but simply allowing his charge, constantly maintained by the machine at work, to diffuse itself into the surrounding air. If a discharge or equalization of potentials is provoked during insulation, the effect is a "spark," "spray," or electric wind, according to the form of the electrode which we attach to our earth connection.

The usual electrodes are balls of various sizes, of metal, wood, or other substance for the spark, and a collection of small metal points for the spray, or a single sharp point, preferably of metal, for the electric wind, all mounted on glass handles.

The spark is due simply to the equalization of the patient's and the earth's potential, and represents a very brief but violent current.

The spray, so-called, is the familiar "brush" discharge.

The "electric wind" is produced by means of the sharp-pointed metal electrode. It is due to agitation of the air intervening between the insulated patient and the metal point, and, as its name indicates, creates upon the surface of the skin the impression of a strong breeze. The feeling is extremely agreeable.

By shock we mean the subjection of the patient entirely, or in portions of his body, to the discharge of the Leyden-jar. Its medical use will be referred to under therapeutical considerations.

A NEW INDUCTION CURRENT IN MEDICAL ELECTRICITY.

Thus far, in describing the methods of administering static electricity for medical purposes from the induction electrical machine, I have confined myself to what has been previously known on the subject. The three main methods of administration up to the present time have been by insulation, by sparks, and by shocks.

I now venture to add a fourth method, that of the *induced current* produced by static electricity, and capable, like the currents induced by magnets and the voltaic circuit, of causing physiological tetanus. In other words, by a simple arrangement, the frictional machine may be converted into a machine which will do all the work of the best faradaic machine.

We thus have at command in a frictional machine all of faradism, in addition to the static electricity; for working purposes we have all the advantages of both systems.

Taking the Holtz machine as it stands, the change may be quickly effected. We remove the connecting-bar between the two *outer* coatings of our Leyden-jars, connect ordinary conducting-wires and wet-sponge electrodes to each outer coating respectively, and, finally, connect the two *inner* coatings by the discharging-rod. The patient, of course, need not now be insulated. As soon as the machine is set in motion and the condensors are filled, the discharging-rod may be drawn out a very small fraction of an inch, and at once a current is felt between the two sponge-electrodes, which in its general characteristics cannot be distinguished from the ordinary faradaic current. Owing to its very high tension, however, it is necessary to have the handles of the

* Remarkably fine Holtz machines of all sizes may be found in this city at the store of J. H. Berge & Co., formerly Hall & Benjamin, 191 Greenwich street. I have allowed them also to make copies of all the electrodes and other appliances.

electrodes well insulated and free from metal points, in order to avoid the fine prickling sparks which pass into the hands of the operator. It is soft and agreeable, and accompanied by no shock. This current is not to be confounded with the series of discharges taking place between the *inner* coatings of the jars. This latter, in silent current forms, produces no muscular contractions or sensations of any kind. In slight repeated discharges it is too painful to be borne. A superficial trial shows one difference in favor of the static-induced, as compared with the galvano- or magneto-induced current. The static-induced both produces more efficient contractions and gives less pain to the patient, where pain would be produced by any of the three. With it the whole motor apparatus of the body may be called in action at its several points, nerves stimulated, and other effects produced, just as with faradism.

The current may be regulated to a nicety by means of the discharging-rod, ranging from an almost imperceptible tingle up to extreme and rigid flexion of the arms, should, for instance, the electrodes be held in the hands.

This, then, is an entirely new current in medicine, and it is not a little curious that with all the experience with frictional machines, it should have remained undiscovered up to the present day.

THERAPEUTICAL CONSIDERATIONS.

Whatever form of electricity we make use of, we have to do, of course, with one and the same force, represented by the voltaic, induced, static, and other phases. True as this may be in a general sense in medical electricity as in the laboratory and in the arts, it would be ridiculous to expect equivalent results from an indiscriminate employment of any one of these various forms. Wide differences in indications for use and curative results exist, both in the nature of the electricity used and in the manner of its use.

If, then, both in nature and method, statical electricity has therapeutical effects peculiarly its own, if both medical practice and analogies of physics teach this, we are called upon, as practical physicians, to accept the fact.

But static electricity, as we have already seen, has never had fair play in modern medicine. The older practitioners (1740 to 1800) have left us glowing records of its value—records embodied in a period of literature still full of fruitful suggestion in other branches of medicine, though in none more advanced than in the treatment by electricity. The physicist of to-day cannot neglect the work of Franklin, of Symmer, of DuFaye, of Cavendish, and the long line of the men of their time, who unrolled to view the mysteries of the new science. No more can the physician neglect, from a medical point of view, De Haen, Boze, Bertholon, Nollet, Wilkinson, Cavallo, Manduyt, and a dozen others. True, the mantle of their labors decked in a degree the new galvanism and the newer faradism, while in the act statical electricity dropped from sight. It found conscientious revivers in Sir William Gull, Golding Bird, and Wilks, in 1850 and thereabouts, and it is gratifying to note in their writings the highest appreciation of its merits. When at last it fell from their hands again abandoned, it was only and simply because of the inconvenience of administering it. The machine of their day refused to work in the damp of London fogs, and it was necessary in the electrical room of Guy's Hospital to keep a large fire constantly burning to dry the air; and even to-day, in Paris, one may visit the rooms of a practitioner heated summer and winter.

But these disadvantages have now been removed. Statical electricity was again revived, and with great success, by Professors Clemens in Germany and Sewanda in Austria. In France, its revival has already received a notable impetus from the labors of Dr. Vigouroux, though as yet we have no published record of his opinions and results.

Statical electricity, then, may now again fairly come before the profession of America to be judged on its merits. Again, still pursuing our inquiry in the line of therapeutics, what we are actually to look for as the ultimate curative factor in our electrifications, by one form of electricity or another, does not seem to have been settled.

But, leaving behind us these statements as to accepted actions of different forms of electricity, and their comparative characteristics, there remain two views of electrical curative action which lean with great force to the side of statical electricity, and at the same time account, in a satisfactory manner, for results which have been doubted because they did not fit into a prevalent theory. We may now ask the special question, *Why, above and beyond other forms of electricity, does statical electricity cure?* I will offer two explanations, and these are, *a*, first, simple mechanical disturbance followed by a local alteration of nutrition; and, *b*, secondly, reflex action from irritation of the peripheral distribution of nerves.

With regard to the first, when the electric discharge, in the form of a spark, takes place in a resisting medium like the various parts of the human body which are submitted to it, a very great mechanical disturbance in the tissue at the point of discharge must inevitably result. A piece of paper, for instance, held between the electrode and the skin is perforated by the spark. A parallel to the mechanical action referred to, though in a less localized and less powerful degree, is to be found in ordinary physical exercise or in massage. From this point of view, static electricity by the method of sparks has, in a special degree, owing to its high tension, great advantages. The spark strikes a sharp, incisive, and penetrating, though scarcely painful blow, and often repeated in a given region, creates, by simple disturbance, a great alteration in the nutrition of the part. This, at least, is the only way in which I can account for the almost instantaneous relief and cure, after a few applications, of a large class of pains seated in deep and superficial fasciæ, and due to subacute and chronic rheumatism. Neither blisters, other violent counter-irritation, nor medicine will dissipate these pains, while, on the other hand, static electricity will subdue them at once.

The contraction of muscles is also often due to this same mechanical effect of the spark, just as muscles of the thigh may be made to contract by a snap of the finger or sharp blow from a percussion hammer.

With regard to the second explanation—that by reflex action following a peripheral irritation of the terminal sensory filaments and endings—a very intricate question is opened, which we can no more than glance at here.

How can simple electrification by insulation and the drawing of sparks, it is asked, produce the decided effects that are claimed for it? Static electricity, it is said, owing to its high tension, accumulates merely on the surface of the body, and does not penetrate into the deeper organs, while the spark is merely the briefest kind of current.

Recent investigations on the irritative action of applications to the skin have thrown a new light upon this question, and show that, though previously unexplained, the effects of the great accumulation of electricity on the surface and the sharp blow of the spark were, in truth, effects based upon a true physiological principle, the principle named by Brown-Séquard, its recent expounder—"the phenomena of inhibition." A few drops of chloroform applied to the neck of a guinea-pig produced, on some occasions, an epileptic attack; on others the nerves and muscles became highly excitable to stimulation.

But the most notable effect of irritating applications of chloroform, as well as other substances, was a general anæsthesia; reflex symptoms were inhibited and muscular excitability lost.

As we have as yet received but abstracts of Brown-Séquard's communications, we must wait for fuller development of his ideas. But an interesting element has entered into our physiological and therapeutical studies—that of the reflex phenomena of peripheral irritation. And we may at once place under this single heading a large number of facts long familiar.

External irritant applications, in one form or another, have always formed an important element in medical treatment. And most of these applications have been used to relieve pain, or in some way modify the general sensibility either in contiguous or remote parts.

Familiar examples are blisters, sinapisms, cupping, the actual cautery, ammonia, the moxa aqua and acupuncture, and in later days the magnet, the tuning-fork, and hypodermic injections of water into the thoracic walls for the purpose of allaying the cough of phthisis. The latest novelty in this direction is the electric percutor of Baudet, consisting of a tuning-fork kept in vibration by electricity, and communicating to any desired nerve or part, by means of a slender rod; the mechanical vibrations originated in the fork.

Charcot, after cautious experimentation, has given his adherence to the statement that metals (metallotherapy) do produce effects contiguous and remote when applied to the skin—that the magnet also produces similar effects, both upon general sensibility and muscular power. Vigouroux has pointed out that the vibrations of a tuning fork, either alone or communicated to a sounding-board, provoke similar phenomena.

Here, then, in this collection of well-known facts and in the broad generalization of Brown-Séquard, drawn from his recent experiments, we have, at last, it seems to me, found the law which governs the results produced and to be expected from statical electrification, as well as from some other uses of electricity. This law is the effect produced upon remote parts by affecting the peripheral distribution of the sensory nerves, and the effect produced is most commonly relief of pain or spasm in a remote part. And in this principle of inhibition from peripheral application may doubtless be found the explanation of many of the definite and hitherto inexplicable effects of static electricity.

The "insulation" alone holds the entire sensory peripheral distribution of the skin in its grasp. Every nerve-filament is vibrating, is polarized, or affected, whatever term we choose to use, by the tense layer of electricity or electrical influence collected on the surface, there bound by the natural laws of physics, and only waiting to be drawn off by a spark or diffuse itself gradually into the atmosphere, while in the spark itself is found a still more potent and localized stimulating agent.

However, a fuller discussion of this question is beyond the scope of our paper. What has been said upon it is merely suggestive and explanatory of the action of static electricity. I have said enough to indicate, in general outline, certain main considerations in treatment by statical electricity. It only remains, under this division of our subject, to describe more fully the available forms of administering it. These are four, viz.: *a*, insulation; *b*, sparks and sprays; *c*, shock; *d*, static induction current. And first,

a. Insulation.—By this we mean, of course, insulation and electrification, a process termed the "*electric bath*" *by the older writers.* The patient sits on an insulated platform connected with either of the condensers of the machine, according as we wish to administer positive or negative electricity. The former is generally preferred. The latter gives a shorter but more painful spark, in case a spark is desired. Where the positive fails to act promptly, it is well to try the negative. The positive insulation is said to be stimulating, the negative depressing, to the vital powers. I have not been able to observe the depressing effect of the negative as yet. Many cases are treated by insulation alone. The state of electrification produced is constantly lowered by diffusion from the patient's body into the surrounding air and as constantly renewed from the machine. Insulation is employed, in some instances, simply for the "refreshing effect" common to all electrifications, again for permanent tonic effects, as in the use of medicinal tonics, also in rheumatism and neuralgia, and finally, to relieve spasm, as will be seen in the reports of cases. Other reasons for using the simple insulation would, of course, occur to each practitioner. Special indications can no more be given for it than for the "douche," the bath, or other form of hydrotherapy.

From twenty minutes to half an hour is the usual duration. If continued too long it produces a decided feeling of fatigue. In some instances this is desirable. Much to a physician's convenience, two, four, or even six patients may sit on the insulated platforms at once. With an improved Holtz I find that four may be thus treated. The connecting-rod itself may be held in the patient's hand, if strong electrification is desired. The pulse was thought by old writers to be increased. From observations taken to decide this point, I cannot find that the pulse is either increased or diminished. There is, however, generally a mild diaphoresis.

b. Sparks and spray.—The spark is a peculiarly distinctive phenomenon of frictional electricity, and, therefore, very naturally holds a prominent place in treatment by it. The patient is first insulated; in this condition sparks will fly between any point of the body and a conductor more or less directly connected with the earth. Their strength and shape may be graduated within large limits by the operator, from a minute prickle to a blow passing through six inches or more of intervening air. In certain forms of anæsthesia and paralysis, as well also as along the spine, which is particularly insensible to their superficial effects, these long sparks may be used with great advantage. A little practice shows in what regions strong sparks are not disagreeable and in what regions they are painful. The question as to whether the spark is considered painful or not further depends upon the size and shape of the electrode. The spark from a brass ball two inches in

diameter causes no pain, while a spark of the same length from a quarter-inch ball causes a prickling sensation. I much prefer, on many accounts, the large electrodes. In all instances, in "drawing" sparks, I use a ground connection, easily effected by connecting the chain to the nearest gas- or water-pipe. The operator may employ a great variety of electrodes, large and small metal balls, or balls of wood, charcoal, and other substances. A large metal ball and a sharp-pointed rod are in general sufficient, though special forms are needed for the ear, mouth, nose, and some other organs.

It is never necessary to remove the patient's clothing, since the sparks pass through any fabric without injury to it, and without any diminution of their effect. When a spark of considerable strength strikes the skin, a whitish spot is seen at the point of contact and in regions where there are hairs, a condition resembling "goose-flesh." A little urticarial wheal, even, may appear on sensitive skins, which is soon replaced by slight erythematous blushes. These effects disappear in from half an hour to two hours.

We administer sparks to excite muscular contractility, to excite the function of organs and special senses, to cure by reflex action, and to stimulate the general skin surface. For this latter effect a metallic roller electrode is desirable.

But the spark may be pre-eminently antispasmodic. Its action in this instance depends upon the cause of the spasm. If of central irritative origin, the sparks are drawn from the head and back of the neck; if local, from the affected part; if from a reflex, from the peripheral point which controls the reflex. Oftentimes when the distribution of a motor nerve can be reached, a spasm may be at once controlled by the simple mechanical numbing effect of a succession of sparks. For instance, in a patient subject to violent tonic spasm of a great number of muscles on the left side, particularly the region supplied by the facial nerve and the spinal accessory, I have often made this experiment.

At times, when an attack was coming on, about to last invariably several hours, I have applied the static induced current (equivalent to the current from the ordinary Faradic battery) to the facial nerve, and caused the facial group of muscles to respond, not in a clinic but in a tonic manner, *i. e.*, the mouth strongly drawn up at the corner, the eye closed, etc., etc. In less than a minute a few sparks would resolve this spasm. Again produced, it could be again as quickly resolved, and this repeated as often and in as varied a manner as desired. In torticollis, in spasms of irregular forms of epilepsy, and in a large variety of hysterical spasms I have seen the same results, as well, also, as in muscles grown rigid by pain, rheumatism, or paralysis of their antagonists.

In the relief of neuralgic pain the spark is in most every instance successful, often instantaneously (ten to twenty minutes).

In subacute and chronic rheumatic pains, its curative power is equally certain and rapid. I have never seen from medication results at all comparable to the effects of static electricity. A variety of rheumatic pains, characterized by deep-seated, constant, wearisome, and disabling pain, oftentimes translatable, generally worse upon getting up in the morning, is relieved with great certainty and at once. The same is true of muscular rheumatism.

c. Shock.—In electricity the word "shock" signifies the effect produced on a person submitted to the discharge from the outer and inner coating of a Leyden-jar. In the improved Holtz machine the shock may be gradnated by means of the discharging-rod to proportions easily borne by patients, but however administered it is severe, and the practitioner would probably not use it generally. It is well borne by hemiplegies; in some I have frequently given a shock corresponding to a three-inch spark from the discharging-rod; profuse perspiration, a tremulous feeling at the epigastrium and in the knees, and a feeling of being mentally demoralized and unstrung may follow a strong shock like this, but no ill results have ever been known to follow. I have found no advantage in the shock for hemiplegies. Much greater benefit arises from the sparks and from insulation.

The shock may, for instance, be administered with the idea of favorably affecting a diseased liver. In the only case I have tried it, undoubtedly it did good.

But, on the whole, the shock should be little used. The careful practitioner will seldom need to avail himself of a remedy thus heroic.

It was by the shock that Jallabert, of Geneva, cured his first patient of a paralyzed arm of fifteen years' standing.

d. The static induced.—This new current has already been fully described. It has never before been a working part of the frictional machine, nor has it been used medically, so that it has a record yet to make. Simple wet sponge electrodes, of the usual sizes, are used for its administration.

(To be continued.)

AORTIC VALVULAR INSUFFICIENCY—DILATED ATHEROMATOUS AORTA.

No Bruit de Souffle—Attacks Simulating Spasmodic Asthma, Hydrothorax, etc.—Death.

A Case in Private Practice.

By E. P. HURD, M.D.,

NEWBURYPORT, MASS.

Aortic regurgitant disease, when primary, and not rheumatic, especially when occurring in advanced life, is the consequence of endarteritis of the aorta, of a chronic latent and atheromatous character. Sclerotic changes in the sigmoid valvular segments and walls of the aorta, result in rigidity and contraction of the valve (thickenings, puckerings, retroversions), so that perfect closure of the aorta during diastole is no longer possible. The disease progressing, the walls of the aorta undergo degenerative changes of a fatty, then of a calcareous nature, and become rigid and dilated. Among the immediate effects of these lesions (an adequate compensation being impossible after much atheromatous change has taken place) we have incomplete depletion and dilatation, first of the left ventricle, then of the left auricle; then increase of tension and stasis in the pulmonary veins; then relative ischæmia and diminution of pressure in the arterial system, and general venous congestion, resulting in dropsy, etc.*

The blood-wave, during systole, driven into the arterial system, recedes in part, during diastole, the heart being emptied in two directions; the increased energy of the heart during contraction gives amplitude to the pulse. These two factors, the hurried, impulsive filling and the sudden unfilling of the arteries, give a fulness and a *jerkiness* to the pulse which is characteristic of the lesion. This

* See the instructive table in Jaccoud's Pathologie Interne, vol. i., p. 655.

bounding and compressible pulse was first described by Corrigan, and goes by his name.

The angina pectoris so common to atheromatous disease of the aorta and sigmoid valves, is probably the result of pressure, on branches of the superficial cardiac plexus, of the overtaxed, distended ventricle. It generally comes on when any extra exertion is made.* The distressing dyspnœa which is often a marked feature of the disease, and which is sometimes for a long time paroxysmal, resembling spasmodic asthma, is due to embarrassment of the respiration by venous stasis; the habitually languid blood-flow becomes temporarily arrested, in considerable part, in the lungs. Any means by which you can restore the normal pulmonary circulation, relieves the dyspnœa. It is a fact that this cardiac asthma never comes on without such temporary congestion.†

The activity of the brain being in close relation with the arterial circulation, any mechanical impediment to the free outflow of arterial blood (such as aortic incompetence produces) must occasion a serious perturbation of the cerebral functions; mental effort becomes difficult, and lethargy, if not alienation, ensues. There is often a special nervous irritability which is in marked contrast to the previous disposition of the patient. Dujardin-Beaumetz describes this irritability under the appropriate name of *faiblesse irritable*. There is generally a regular pulse, which is often slow. In the case about to be described it was very rapid. There is, too, in the great majority of cases, a diastolic murmur.

History.—T. C. S——, sixty-one years of age, an influential citizen of Newburyport, had been from childhood of robust health and good habits. The family from which he sprung has been noted for robustness and longevity—his parents attained to great age, and he has a brother and sister who are advanced in years, and are vigorous.

Destined to a seafaring life he made several long voyages in merchant vessels to various ports in South America and Asia, ultimately succeeding to the post of captain, when, at the age of thirty, during a sojourn in Brazil, he became totally blind. Cause of his amaurosis, unknown. He underwent severe antiphlogistic treatment. He soon returned to his home in this city, where he married, and where he lived till his death. His life, from the date of his blindness, was one of ease and refinement, for he was wealthy; it was not, however, an indolent life, for he always took much exercise, and was, at the latter period of his life, much addicted to practice with dumb-bells, wood-sawing, walking, etc. He was always fond of good living, but was temperate, taking but little alcoholic stimulants; he was, the larger part of his life, much given to smoking. About three years ago he had a severe attack of gout, the great toe being inflamed and the constitutional symptoms being severe.

Temporary angina.—The first cardiac symptom was felt in the summer of 1879. It was a sudden pang, referred to the region of the heart, occurring after considerable exertion, as rapid walking. Three or four times while ascending the hill between the main road and his house, he would experience this painful sensation, which would oblige him to stop and rest. At that time he was in his usual good health; embonpoint marked; pulse regular and forcible, but rapid—fully ninety a minute. No murmur; to this I can testify from having been early his medical attendant. The cardiac area was somewhat greater than normal. A little more easily fatigued than usual; a little dyspnœa on exertion.

During the month of February, 1880, Capt. S. had another attack of gout; there was much pain in the metacarpo-phalangeal joint of the left great toe, with febrile action.

He had for several months restricted himself to very moderate exercise, and had suffered but little from angina; his favorite pastime of sawing wood he had been obliged to abandon. He had been able to walk several hours a day in his garden, without angina or dyspnœa. He was much of a hygienist, taking sponge-baths, with much cutaneous rubbing, every morning and evening, and (of late) dieting rigorously. Smoking he had abandoned, from hygienic considerations.

April 25, 1880.—Was summoned to attend the captain in the night-time for an attack of what seemed to be spasmodic asthma. Pulse was rapid and weak, venosity marked; breathing labored and *wheezy*. There was some dulness posteriorly, with faintness of the respiratory murmur; fine, bubbling râles suggested œdema of the lungs. The physical signs indicated cardiac asthma from pulmonary stasis, and watery effusion in the pleural cavities and air-cells.

A hypodermic injection of Magendie's solution (ten drops) would probably calm the hyper-irritability of the cardiac and respiratory nerves, allay spasm of the bronchioles and give stimulus and support to the fatigued heart. Acting on this belief a subcutaneous injection was tried and with gratifying results. In about half an hour the breathing and pulse had become much better, and he was able to go to sleep.

From this time the asthmatic paroxysms were frequent. The attacks generally came on in the evening, were sudden in their invasion and departure, and sometimes yielded to the ordinary remedies of spasmodic asthma (fumigations, lobelia emetics, etc.); sometimes to remedies addressed to the digestive system, as rhubarb and soda. A hypodermic injection of morphia would always afford speedy relief, and would generally carry him over several days without any paroxysmal return. He was never, however, free from some dyspnœa on exertion, and at night he had to be bolstered up in order to sleep.

During the months of May and June he had frequent asthmatic paroxysms. I often found him covered with a cold sweat, livid, nearly pulseless, pulling for breath. A few whiffs of ether or ammonia (the latter in the form of the aqua fort., on a handkerchief, rendered essential service) and a hypodermic injection of the combined alkaloids, morphia and atropia, would very soon allay the storm and give tranquillity and comfort.

The solution which I now used, and which with some increase was continued till the time of his death, was as follows:

℞. Morph. sulph.	gr. iij.
Atropia sulph	gr. ¼
Aquæ laurocerasi	ʒ ss.
M. Ft. solutio.	

Each syringeful of the above has one-fourth grain of morphia and one ninety-sixth of atropia.

* Clinical experience has led me to formulate this opinion, which certainly is as reasonable as the theory which refers the angina to a neuritis or a neuralgia of the cardiac plexuses.

† This explanation I offer in place of the (as it seems to me) more improbable one of Dujardin-Beaumetz, in his recently published and valuable "Clinique Thérapeutique," and Michael Peter in his "Leçons de Clinique Medicale," which attributes the dyspnœa to an inflammation of the cardiac plexus. Beaumetz seems to favor the notion that pressure by the dilated ventricle and aorta on the superficial plexus of nerves may produce the dyspnœa, just as it undoubtedly does the angina; the cardiac plexuses being intimately blended with the respiratory plexuses in a physiological solidarity.

Cherry-laurel water is the best menstruum for preserving solutions of these alkaloids, and is not at all irritating to the subcutaneous textures.* The injection was always made in the forearm.

There is no antagonism between morphia and atropia as thus combined; in fact they help one another. The one stimulates the brain (anæmic in this disease) and allays hyperæsthesia of the cardiac nerves; the other is both a cardiac and respiratory stimulant.†

Captain S. always slept well after the subcutaneous injection, but considerable dryness of the fauces was apt to ensue.

Opium is undoubtedly the quinine of the heart in aortic disease. Belladonna, perhaps, ranks next.

The bowels were never constipated. Nature seemed to have instituted a compensatory looseness, which made it unnecessary to administer hydragogue cathartics. There was as yet no œdema of the extremities; pulse always between 90 and 100; no frémissement, either at the base or apex. Some morning cough.

Through most of July and August Captain S. was better, being able to take his daily rides and spend much of his time in his garden. His digestion was good and he slept well nights. He was now taking three times a day, gr. $\frac{1}{12}$ morphia, with a little digitalis (ten drops of the tincture) and chloric ether; at bed-time one of Trousseau's pills (gr. ¼ ext. bellad., gr. ¼ pulv. bellad.). During August he made a visit to Boston. It was noticed that he was always free from palpitations, and the pulse was always full but compressible, and somewhat jerky (water-hammer pulse of Corrigan). No bruit, no fremitus, no apex-beat discoverable, and the cardiac dulness seemed but little increased. During September and October the disease made progress. Gradual increase of pulmonary œdema and hydrothorax; attacks of dyspnœa more frequent and severe; upright decubitus (orthopnœa)‡ The nightly hypodermic injection was now an indispensable condition of his comfort and well-being.

The habitual shortness of breath was very perceptible after exertion. It required a considerable effort for him to go upstairs; his breathing would be accelerated to 50, and his pulse to 120 or 130 by the exertion. His aspect was often livid, his veins always turgid and prominent. His eyes had a marked glistening appearance, due to venous congestion.

Even the effort of eating fatigued him and put him out of breath. There was increasing emaciation, and œdema of the lower extremity was noted.

With bodily lethargy there was lethargy of mind. He took less interest in his affairs than formerly, his increasing infirmities and ailments engrossing his thoughts. It was difficult for him to fix his attention on any subject for more than a few minutes. His only enjoyment in reading now consisted in going to sleep as soon as the reading commenced. Little things worried him much; he was afraid to be left alone; was indisposed to make any exertion; became very dependent on the regular visits of his physician and the nightly *solamen mali*. One or two unsuccessful attempts were made to leave off the opiate, or "taper off."

About the 30th of November Dr. F. Irving Knight, of Boston, Specialist in Diseases of the Throat and Chest, visited Captain S. in consultation. The patient was still able to take his morning and afternoon rides, which seemed to do him good.

Dr. Knight agreed with me that the symptoms were all referable to some serious cardiac lesion. But what kind? The heart-sounds were very regular, but weak and distant. The faintness of the heart-sounds might be due to fluid in the pericardium. There was no murmur. There was a moderate increase in the area of cardiac dulness; the apex-beat could not satisfactorily be determined; dulness posteriorly, as far as the seventh and eighth ribs, with faint distant respiratory sounds and bubbling; thoracic expansion diminished, especially at left base.

It was agreed that there was dilatation with, perhaps, fatty degeneration. There was, moreover, a strong presumption of the existence of some valvular disease, which was primary, and which did not reveal itself by the usual bruit.

It was suggested that further examinations of the urine be made, although I had several times made such examinations, and never detected albumen, tube-casts, or other abnormal product. The urine of twenty-four hours was saved; quantity, two litres (polyuria from digitalis). A few narrow hyaline casts were found in this specimen, considerable coagulated mucus, a few blood-corpuscles, some flat epithelium, and the faintest trace of albumen; phosphates, chlorides, sulphates, urea, and urates nearly normal. Some passive congestion of the kidneys was diagnosed as the result of this examination,* but nephritis was ruled out. There was no ascites or abnormal abdominal enlargement.

Dr. Knight insisted at this visit, and another made shortly before Christmas, that there must be some pathological condition other than fatty degeneration of the heart to account for the symptoms of this interesting case. Although authorities admit of dropsy as a possible consequence of fatty heart, he felt that there must be some obscure valvular disease also.† Dropsy of the pleural cavities as well as of the air-cells, renders the determination of enlargement, and also of valvular disease, much more difficult and uncertain.

The patient was at that time taking digitalis in the form of infusion; one gramme of the powdered leaves being steeped in four ounces of water, strained, and given in the dose of a tablespoonful every four hours. Besides that he was taking three times a day tinct. ferri sesquichlorid., ten minims, with a tablespoonful of the wine of quinine (French codex). It was advised that the nightly hypodermic injection should be continued and that an occasional hydragogue purge should be administered.

For the paroxysmal dyspnœa I had occasionally allowed the nitrite of amyl to be inhaled—one or two drops on the palm of the hand.‡

* Dujardin-Beaumetz: Clinique Thérapeutique, p. 147. Paris, 1880. Solutions of morphia, etc., in cherry-laurel water will keep indefinitely.

† See, in support of this opinion, Gros, in Alger Medical, 1875; De Fourcault, in Mouvement Médical, 1875; Oliver, in Practitioner, 1876, and Dujardin Beaumetz, in the excellent practical guide just cited.

‡ "Even in the slighter forms of cardiac valvular disease . . . the patient lies at night with his head raised, employing two or three pillows, whereas a man in health would only require one. And in the more severe degrees of such disease the patient is often utterly unable to lie down, or even to recline backward. . . . . In the recumbent posture the diaphragm is pressed upward by the contents of the abdomen (themselves greatly augmented in size), so that the enlarged heart is embarrassed in its movements" (Dr. C. Hilton Fagge in Reynolds' Syst. of Med. (Am. Rep.), vol. iii., p. 749).

* Examination made by Dr. E. G. Cutler, Boston.

† See in this connection Niemeyer's Practice of Med., Am. ed., vol. i., p. 363. There must be enough muscular degeneration to produce all the phenomena of "asystolie," the same as valvular disease with dilatation, produces, before dropsy can ensue.

‡ With regard to the nitrite of amyl in aortic incompetency, Dujardin-Beaumetz (one of the leading Continental therapeutists) speaks highly in its favor. It stimulates the heart, and is a general tonic to the circulation: "Il paraît logique d'appliquer ses propriétés incontestables d'excitation du cœur et de congestion encéphaliques au traitement des affections cardiaques, et je l'avoue, je suis étonné qu'on ne

My diagnosis of the case (long hesitating) was now fully made. We had, in the case of Captain S., to deal with aortic insufficiency uncomplicated with any other valvular disease, with a weak, dilated, perhaps fatty heart, and a dilated atheromatous aorta.

The absence of a murmur was a stubborn fact against such diagnosis, but the general symptoms compelled us to overrule the objection.

Especial emphasis should be laid on the following symptoms: The regularity of the cardiac pulsations and the pulse. Authors have much insisted on the regularity of the pulse in aortic valvular disease as compared with mitral disease. Irregularity is the rule in the latter disease; it is the exception in the former.*

Although the pulse of my patient was regular and seemed forcible, yet there were plain indications that the arteries were unfilled, and that the *vis a tergo* was incompetent to fill them; the veins were everywhere distended; the dyspnœa, both paroxysmal and habitual, was such as good observers had described as a part of the tableau of the disease. The lividity and pallor, the gradual emaciation, the fatigue after slight exertion, the peculiar encephalopathic and psychic condition of the patient, all were common symptoms of aortic regurgitant disease. The good effects of morphia in allaying the encephalopathy had long struck me as an important diagnostic feature of the case. There is a remarkable consensus of opinion as to the beneficial remedial action of opium in cerebral anæmia, due to aortic insufficiency.†

The pulse, though not always a well-marked Corrigan pulse (owing to feebleness), yet was generally bounding and compressible. There was no visible pulsation of the arteries, nor were there any indications that the mitral valve was affected secondarily; such valvular affection being generally a precursor to and a necessary factor in general dropsy from cardiac disease. This was one consideration which led my learned friend, Dr. Knight, to hesitate before accepting my diagnosis of the case, and here he is supported by the authority of Flint. (See lectures by Dr. Flint in MEDICAL RECORD, 1877; also, Flint on "Diseases of Heart.")

Capt. S. continued his daily rides (with a gradual decline in strength) till the middle of January, when he took to his room, never to leave it alive. About the 15th of January I aspirated the left chest, drawing off thirty-two ounces of fluid. This was attended with marked relief to the dyspnœa. The digitalis was now given in the form of Trousseau's diuretic wine. (See "Stillé's Therapeutics," vol. ii., p. 256.) One pint of broom-top tea to be taken daily in divided doses.

The aspiration was repeated in a week, about the same amount of fluid being removed. The œdema of the feet and legs was so great that relief was sought by bandaging them.

Thursday, February 10th.—I aspirated the right chest, drawing off thirty-six ounces of fluid. This mitigated the habitual distress of breathing. There was now much dryness of the mucous membranes with hoarseness; appetite had failed, so that a diet of pure milk was deemed advisable. Of this he took about three quarts a day. This sustained his strength better than solid food, and had an excellent diuretic effect on the kidneys.* Broomtop omitted. The digitalis which had been given for several months was continued, not because any marked effect was observed from its use, but because we feared to discontinue it, my experience convincing me that there is less to be feared from its cumulative effect (a bugaboo for which there is little warrant) than from its suspension after the feeble heart has come to depend on the stimulus of the drug.

The amount of morphia now used each day subcutaneously was half a grain; of atropia, one-seventieth of a grain.

On Friday, February 11th, my personal friend, Dr. G. M. Garland, of Boston, saw Capt. S. with me in consultation. Dr. G. thought my diagnosis warranted, and predicted a speedy dissolution. The lungs seemed to have well expanded after the aspiration, the respiratory sounds being quite audible at the bases.

But little change in the condition of the patient occurred after this. His nights were made comfortable by the opiate; his days were spent sitting in his arm-chair, much of the time in a state of lethargy.

Thursday, the 17th, he was bright and cheerful most of the day, but toward night the dyspnœa was more intense. Friday morning there were signs of an accumulation of water in the right chest, and before there was an opportunity for aspiration, an attack of pulmonary apoplexy ended the scene.

Sunday, February 20th.—An autopsy was held thirty-six hours after death; Dr. J. F. Young assisting. Only the chest was examined. Rigor mortis, general venosity, and lividity of the integuments. Heart hypertrophied and dilated; weight, twenty-four ounces. Four ounces of serum in pericardium. Aorta dilated, atheromatous and rigid, with calcareous patches occupying all its tunics. Atheromatous degeneration of the large vessels springing from the aorta; the minor arterial vessels normal. Coronary arteries atheromatous and rigid; one of them plugged and solid as a pipe-stem. *All valves healthy, except sigmoid valves of the aorta*, which were thickened, cartilaginous, puckered, and shrivelled, resembling narrow, flat shelves, projecting a little way from the wall of the artery; the corpora arantii with their thin curved borders had disappeared. It is needless to say that closure of the aorta during diastole was impossible. (This was tested by pouring water.) The mitral valve was quite healthy, permitting perfect closure, as proved by the water-test. The walls of the left ventricle and auricle were thickened, those of the ventricle measuring nearly an inch. The left auricle was dilated to the size of a normal ventricle. The right cavities were dilated, thin, and soft; there was much fat in the parietes, which encroached on the muscular substance; the muscular structure did not, however, seem to have undergone fatty degeneration (from microscopic examinations made by Mr. Castellun and myself). In the right pleural cavity there were about forty ounces of fluid; in the left about

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l'ait pas fait plus tôt" (Clinique Thérapeutique, p. 166). Lauder Brunton, in St. Bartholomew's Hospital, has used this medicament with singular success in cases of aortic insufficiency, reported by him in the English journals. It has also been favorably reported on by Dabney, Baral, Bordier, Schuller, Goodhart, Bader, and Munro. Squibb and Piffard (see MEDICAL RECORD, vol. xix., p. 192) regard it as safe to push its inhalation till the face flushes.

* *Vide*, in corroboration, Jaccoud, Clinique de la Charité, p. 198. Jaccoud attempts to explain the variability of the pulse in mitral regurgitation (and the corresponding sphygmographic tracings) as compared with the regularity of the pulsations in aortic insufficiency pure. The variable volume of the blood wave at each cardiac systole is the principal cause of the irregularity of the mitral pulse; in aortic disease the volume is more uniform, and the heart clears itself better by steady forcible contractions.

† *Vide* Gubler, Commentaires du Codex, article "Opium." Opium does good in these cases by the static congestion which it produces in the meninges and substance of the brain. See also Huchard—"De la Medication Opiacée, dans l'Anémie Cerebrale, due aux Affections du Cœur," Journal de Thérapeutique, 1877. Also A. Renault, Union Méd., 1874. See also Dujardin-Beaumetz, loc. cit., p. 143.

* On the Milk Treatment of Dropsies, see an excellent lecture by Jaccoud, in Clinique de Lariboisière.

four ounces. The lungs were compressed, shrunken, and collapsed and full of bloody frothy mucus. The liver was enlarged from passive congestion.

Microscopic examination of one of the calcareous patches showed deposits of calcium carbonate in an amorphous gelatinous basis.

The noteworthy points in this observation are the following:

First.—The absence of a murmur. The distinguished expert who hesitated to make a diagnosis of aortic regurgitation in the absence of a murmur was right. "If no such diastole murmur can be detected," says Dr. C. Hilton Fagge, * "there is, perhaps, no combination of symptoms (unless it be by the aid of the sphygmograph) that would justify the physician in asserting that the aortic valves failed to close." Dr. Fagge adds that the proportion of cases where incompetence has existed without any murmur being present is very small. In twenty-six out of forty cases at Guy's Hospital, regurgitation had been diagnosed during life, and in the fourteen remaining cases no notes had been taken of the auscultatory signs.

It is impossible to assign any very satisfactory reason why no murmur existed in the foregoing case. The left ventricle must have been always nearly full of blood. The cardiac pulsations were 100 a minute—the arteries were thus constantly supplied by a sort of overflow. The inelastic aorta being unable to react on the outgoing wave, the regurgitant shock during diastole was too faint to be audible.†

Second.—The absence of any imperfection in the mitral. It has often been asserted that dropsy cannot occur till the mitral valve has been forced. Fagge (loc. cit., p. 743) denies this, and cites cases in evidence. In one case where the autopsy disclosed aortic disease with retroversion of the valves, dropsy had occurred before death, and the lungs contained apoplectic patches. The mitral valve was healthy and did not permit regurgitation.

Third.—With reference to the etiology of the above case, it is probable that a gouty diathesis was an important factor. Gout undoubtedly predisposes to atheromatous arterial degenerations;—a point much insisted on by Guenean de Mussy in his useful "Clinique Médicale."‡ Rheumatism is excluded. The patient had had gout. He was a man of naturally active habits, and had been prone to indulge in severe exercises, practice with dumb-bells, wood sawing, etc. It is possible that mechanical strain of the aortic valves may have had something to do with originating the fatal disease. Dr. Allbut tells us that in Leeds, in hospital practice, heart diseases due to acute rheumatism are, among young men, fewer than those which he has learned to attribute to overexertion of body ("Effects of Overwork and Strain on the Heart and Great Blood-vessels," in "St. George's Hospital Reports," cited by Fagge).

Fourth.—The attacks of temporary angina (which constituted the first subjective symptom), the distressing cardiac asthma, at first paroxysmal, then gradually losing its paroxysmal character (under treatment) and becoming habitual, as venous pressure increased and dropsical effusions embarrassed the lungs, were conspicuous features of the case, and have perhaps been sufficiently accounted for in the preceding pages.

Fifth.—The encephalopathic symptoms clearly pointed to a diminution in the arterial blood-supply to the brain, and were such as are generally witnessed in aortic regurgitant disease, though attacks of faintness and giddiness (generally observed in this disease) were absent.

Sixth.—The good effects of aspiration in prolonging life were witnessed in the above case. Performed with a proper instrument, aspiration is a perfectly safe operation. The favorite site is a little below, and half a hand's-breadth in front of the inferior angle of the scapula. The needle may be plunged in boldly till the feeling of resistance is overcome and the point is felt to be free in the pleural cavity. Generally all the fluid that will run out may be safely withdrawn. Even the pericardium has been punctured with success in dropsy of that sac. See the RECORD, vol. xviii., p. 655; also vol. xix., p. 82.

Since the foregoing was in type, I have received the following note from Dr. Knight, which will be read with interest in connection with the above report.

BOSTON, March 15, 1881.

"MY DEAR DOCTOR: I think there can be no doubt whatever of mitral incompetence from dilatation during life, however the valve may have appeared post-mortem. The absence of murmur can be accounted for by the rigidity of the aorta diminishing or abolishing the recoil, together with the weakness of the propulsive force of the left ventricle." [Precisely the explanation that had occurred to me. Vide supra.]

"When I examined the pulse it did not strike me as a well-marked Corrigan pulse, and I did not see any pulsation of the arteries. I think it probable that both these signs were more marked when you first saw him.

"Looking at the case, with the developments of the autopsy before us, I do not see but that we did about as well as we could in the way of diagnosis. You were right in *suspecting* the aorta as the primary seat of the disease, considering the symptoms and the frequency of degenerative disease of this vessel in a man of his age and habits of life, but there were not sufficient signs for demonstration.

"Very truly yours,

F. I. KNIGHT."

EMBRYOTOMY OF A HYDROCEPHALIC FŒTUS.—Dr. Geo. E. MacDonald, of Schenectady, N. Y., writes to us describing a peculiar case which he saw in consultation with Dr. Young, of Glenville. The patient, a primipara, twenty-two years of age, had had slight labor-pains for two days, when Dr. Y. was called in. The os was then dilated and the membranes protruding. These latter soon ruptured; violent pains followed, together with the protrusion of an arm. No further progress was made, however, the uterus became tightly and tonically contracted down on the fœtus. Dr. MacDonald with a knife and scissors removed the protruding arm, it being impossible to pass the hand into the womb. He then removed the clavicle and some of the ribs, and was able to pass a blunt hook round the neck and decapitate the fœtus. The body was then extracted, and afterward the head. The latter was hydrocephalic. The whole fœtus weighed about twelve pounds. The patient made a good recovery.

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* Diseases of Valves of the Heart, in Reynolds' System of Medicine, Am. Rep., vol. ii., p. 750.

† See the similar explanation of Dr. Knight further on.

‡ See the lecture on Atheroma, in vol. i., p. 289. Also the lectures by Broadbent, on the Pulse, in Lancet, 1875; also those of Mahomed in the Lancet for 1879. See also Charcot, Maladies des Veillards, p. 58. According to this writer, urate of soda is often found in the walls of the aorta, atheromatously degenerated.

Progress of Medical Science.

Charcot on Hypnotism.—Charcot has delivered a lecture on hypnotism at the Salpêtrière, demonstrating on a patient the essential features of this nervous state. He considers that hypnotism is a real pathological condition, precluding any possibility of simulation on the part of the persons experimented upon. Hystero-epileptics are most susceptible to the hypnotizing influences; it is merely sufficient to fix their attention for a brief period of time on some object in order to throw them into this morbid sleep. At this stage of hypnotism their neuro-muscular apparatus is in the state of overexcitability. By touching any nerve-trunk the muscles supplied by it are made to contract, and the spasm lasts as long as the nerve is acted upon. When this ceases the muscles relax. If the eyes of the patient are now opened the preceding lethargy is replaced by the cataleptic condition, the limbs retaining any position given to them. Although the lethargy and catalepsy exclude each other, under certain circumstances they can coexist. This occurs if only one eye is opened, when on one side is lethargy and on the other catalepsy. During the hypnotic condition hemianæsthesia of all nerves occurs. Persons may lose the sense of taste, smell, and hearing. The color-blindness is of a constant type. If the perception of only one color is lost, it is violet; if of two, they are violet and green. As long as the patient retains the perception of violet there is no color-blindness. When the perception of a given color returns, it appears first at the periphery, extending gradually to the centre, which looks gray. These hemianæsthesiæ are temporary and frequently oscillating.—*Gazette des Hôpitaux*, 8 Février, 1881.

Rectal Alimentation.—From experiments made in Prof. Vulpian's laboratory, M. Catillon infers that in order to secure the full nutritive benefits of injected foods, they should first be transformed into peptones. For one enema he used: peptone of meat (the solution saturated at 19° C.), forty grammes (about an ounce and a half), water, one hundred grammes (about three and a half ounces), laudanum a few drops, and bicarbonate of soda thirty centigrammes (four and a half grains).—*L'Abeille méd.*, in *Journ. de méd. de Brux.*, December, 1880.

Surface Temperature of the Joints in Health and Disease.—According to Redard, in health the temperature of the joints decreases with their distance from the trunk. He finds the average temperature of the knee, anteriorly, 91.4° F. (33.0° C.); posteriorly, 95° F. (35° C.); of the ankle, anteriorly, 93.2° F. (34.0° C.); posteriorly and laterally, 92.3° F. (33.5° C.); of the elbow, anteriorly, 93.2° F. (34.0° C.); posteriorly, 91.4° F. (33.0° C.); of the wrist, anteriorly, 91.4° F. (33.0° C.); posteriorly, 86.9° F. (30.5° C.). The temperature is higher in the flexures and in proximity to the large blood-vessels. Repeated movements of the joint raise its temperature from 0.5° to 1.0° F.

In disease the thermometer can be of value only in the superficial joints. In sprains the temperature rises in a few hours after the injury; it reaches its maximum on the second to the fourth day, when it begins to decline. If the elevated temperature continues it is due to a complicating arthritis. In arthritis the temperature rises from 2.0° to 3.0°, and tends to approach the general temperature. Hydrarthrosis is always accompanied with an elevation of temperature varying from 0.5 to 1.0° F. In cases of effusion following fracture, a foreign body in the joint, or an old anchylosis, elevation of the temperature is always present, and it corresponds to the severity of the arthritis. The temperature in white swelling is also proportionate to the acuteness of the morbid process.—*Journal de Médecine de Bordeaux*, 13 Février, 1881.

Pneumothorax following Excessive Respiratory Exertion.—A youth, aged eighteen, possessing an excellent constitution, amused himself one evening in exhibiting the power of his chest and the force of his breath. Suddenly he felt a sudden pain in the left side, his face became blanched, and he experienced great oppression. During the night he made attempts at vomiting, and in one of these efforts was seized with a sense of something tearing in his side. Syncope immediately followed. Dr. Delgrange was called in, and found unmistakable evidences of pneumothorax. Under appropriate treatment the patient recovered after about eight days.—*Journ. des sc. méd. de Lille* in *Le Réveil méd.*, January 29, 1881.

A Case Illustrating the Condition of Large Arteries after Ligature under Antiseptic and non-Antiseptic Measures.—At a meeting of the Royal Medical and Chirurgical Society, Mr. Frederick Treves presented specimens of the right carotid and subclavian arteries, from a man aged forty-seven years, in whom those vessels had been ligatured for innominate aneurism. In reviewing the subject (*British Medical Journal*, February 12, 1881), Mr. Treves dwelt in detail upon the comparative physiological condition of the two vessels at the time of ligature, and urged that in this respect the condition of the subclavian artery at the time of ligature was actually less favorable than was that of the carotid when subjected to operation. In the details of the two operations, and in the health and general surroundings of the patient, no differences were apparent that could account for the difference in the result. The conclusion, therefore, would appear to follow, that the failure of the carotid ligature was due to the antiseptic measures adopted. The patient gave a history of previous good health, and no definite date for the commencement of the local symptoms. A small aneurism of the innominate artery was diagnosticated, and ligature of its two branches resolved upon. On June 30, 1880, the right carotid was ligatured above the omohyoid muscle. The operation was performed under antiseptic precautions without hinderance or difficulty of any kind; a stout catgut ligature was used, and tied with a double and then a single hitch. The wound healed rapidly by first intention without the formation of a drop of pus, and in twelve days the antiseptic dressings were discontinued. After the operation, the aneurism, although it did not diminish, ceased to increase. On July 21, 1880, the third part of the subclavian was tied; the operation was not performed antiseptically, and the vessel was readily found; a stout catgut ligature was used, and tied with two simple hitches. The aneurism improved greatly; all the previous symptoms of discomfort gradually disappeared, and the man was discharged, thirty-six days after the operation, with the tumor apparently cured, or at least, greatly benefited. He returned, however, on October 14, 1880, complaining of severe pain in the back, of cough, and of general feebleness, and was readmitted. After a slight attack of hæmoptysis, he died sud-

denly two days after admission. At the time of death, therefore, one hundred and eight days had elapsed since the carotid had been ligatured, and eighty-seven days since the subclavian operation. Death was found to be due to the rupture of an aneurism of the thoracic aorta; this had produced great destruction of some of the dorsal vertebræ. The great vessels were examined *in situ*. A small aneurism, about the size of a Spanish chestnut, was found connected with the innominate artery at its commencement; its sac was almost filled with laminated fibrin, leaving only a cavity about the size of a horse-bean in the centre of the tumor, and that communicated with the vessel. The brachiocephalic vessel was quite patent, as were also the first portions at least, of its two branches. In the region of the carotid operation, the restoration of the parts to their normal condition was remarkable; the skin-scar was slight, and had formed no adhesions to the parts beneath; no trace of wound could be detected in the carotid sheath; no adhesions had formed between the artery and the vein, and every trace of the ligature had disappeared. No constriction could be seen in the vessel, and its external outline was unaltered, and the seat of ligature indicated only by a faint transverse, bluish mark on the vessel, due, apparently, to the thinness of the arterial coats in that situation. The vessel was found to be patent, but to be narrowed at the seat of ligature by a kind of perforated diaphragm, or miniature pylorus, leaving a central aperture about one and a half lines in diameter. The diaphragm was formed by the incurvings of the ruptured ends of the middle coat. The third part of the subclavian artery was found embedded in a mass of very firm inflammatory material, and was occluded for three-fourths of an inch, and entirely obliterated for half an inch. No trace of the ligature could be detected. The subclavian vein was patent; the aorta was very atheromatous, and the summit of its arch calcareous; the aperture leading from the aorta to the left carotid was extremely small, and that vessel was found to be occluded, save for a minute channel through which air could only with some difficulty be forced. This unsuspected closure of the left carotid was evidently present at the time of the patient's admission, and much embarrassed the early diagnosis, for when the patient came under notice, it was observed that the left temporal pulse was much feebler than the right, that the aneurismal *bruit* (most clearly marked over the innominate tumor) was more distinct in the left than in the right carotid, and that in the left vessel a thrill could be felt not noticeable in the right. These symptoms aroused strong suspicions of aneurism in the aortic arch, and were explained by the almost solid condition of the left carotid. As an operation for closing a blood-vessel, the carotid operation must be considered to have failed, and the reasons for that failure were matters of great importance. The question remained, as to whether, for some surgical purposes, the perfect healing aimed at by the supporters of the antiseptic treatment was desirable or successful.

Some New Facts from a Small-Pox Hospital.—From a résumé of a service of four months at the small-pox hospital in Troy, N. Y., Dr. Schuyler has contributed some interesting facts on the etiology and symptomatology of small pox (*Medical and Surgical Reporter*, February 19, 1881). The whole number of cases treated was two hundred and sixteen. The average mortality was about twenty-two per cent., but was greatest among infants, forty-five per cent. dying. The lowest rate was between the ages of forty and fifty (twelve per cent.). Precursory signs, excepting the fever, were in some cases wanting, and the pronounced headache and backache were wholly absent. It was also observed that when the eruption did not appear until the fourth day it was invariably discrete. In this form it was often difficult to find umbilicated vesicles at any stage of the disease. That form of eruption appearing in clusters or patches, and referred to by Bartholow as "corymbic," was seen in one instance. A cluster, the size of a silver dollar, appeared upon the face, upon the left cheek, and there were a few isolated vesicles at the margin of the hair on the forehead. A number of patches were also present upon the legs and arms, the skin between them being wholly destitute of eruption for a distance, in some places, of at least twelve inches. The vesicles in some of the clusters were coherent, or in immediate contact, without being really confluent. In the hemorrhagic variety, death was inevitable, as a rule; it usually took place before the period of pustulation was reached. Two adults recovered, one of whom suffered from abscesses for a month after. Two cases were admitted during a pregnancy, of five and six months respectively; one was hemorrhagic, the other discrete. The former aborted on the fourth day and died on the fifth; the latter made a good recovery without death to the fœtus. In two cases of the confluent variety, the eruption was confluent on every part of the body—one was a young woman aged twenty years, the other a girl fifteen years of age. The former died on the tenth day of the disease, the latter on the ninth day. In those cases where the patients were apparently suffering from œdema of the glottis, no diphtheritic membrane was observed, not even in the hemorrhagic form. In the treatment, nothing gave so much comfort during the stage of desiccation as a warm bath, the patient frequently begging to have it repeated. In the hemorrhagic variety, tincture of the chloride of iron with turpentine seemed to be given with good effect.

On the Mechanism of Colles' Fracture.—Mr. John F. Knott, in commenting on this subject in the *Medical Press and Circular*, February 9, 1881, observes that a great variety exists both in the forms, and probably, also, in the mechanism by which fractures of the lower end of the radius are produced. While he does not wish to appear as the advocate of any one hypothesis, yet he would agree with Bennett, who has well observed that we have ample proof that the simple transverse fracture, without impaction, the impacted, and the fracture *par écrasement*, with a shattered lower fragment, are all possibilities, and there can be little doubt that modifications in the mechanism of production exist to a corresponding degree.

Despotism in Lunatic Asylums is the title of an article by Mr. Dorman B. Eaton in the *North American Review* for March. He characterizes the American system of asylum management as follows: "A deceptive and vicious system, adroitly and ably administered, has lulled and misled public opinion; screening abuses by secrecy, shutting out light by arbitrary methods, defying exposure and change by the exercise of a despotic authority which ought never to have been conferred upon the managers of asylums." He suggests remedies for these abuses, drawn from a study of asylum management in Europe.

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CAN A MAN GRADUATE WITHOUT HAVING SEEN A CASE?

A few months since we published an extract from a letter of a correspondent of the *Lancet*, to the effect that clinical study in the medical curriculum of Philadelphia was apparently unnecessary, and further, that it was possible for a man to take his degree in medicine and go forth to practise his profession without having seen a case. Shortly after the appearance of this item we were favored with a letter from Prof. Gross, of Philadelphia, denying the truth of the statements of the *Lancet* correspondent, and expressing his regret that we should not have been ready with a flat contradiction at the time of their publication. We inserted the letter of Prof. Gross, remarking that the item from the *Lancet* was quoted for what it was worth, and expressed our pleasure that the distinguished professor was in a position to deny the facts in an authoritative manner. So far we did our best to get at the facts of the case, and gave an opportunity for the refutation of what was said to be a slander upon the Philadelphia hospitals and medical colleges. We were not then in a position to deny the assertion of the *Lancet* correspondent. We always prefer, when contradictions are to be offered, to found them on actual facts. Prof. Gross took the responsibility of asserting that the quoted statement was false in every particular, and received due credit for so doing by the Philadelphia medical journals.

Although on general principles the Record was willing to assume that clinical instruction in our medical colleges virtually amounted to nothing, it seemed that an exception was to be made for the medical schools of Philadelphia. It was with no little satisfaction, then, that we gave the fullest opportunity for a general denial of the charge of the *Lancet* correspondent. It now appears, however, that the distinguished teacher has gone further in his plea for clinical instruction than is warrantable, and that further explanation is necessary.

In the *Lancet* for March 5th there is the following letter.

After referring to the fact that Dr. S. D. Gross wrote a letter to the Medical Record asserting that the statements made by the correspondent in the *Lancet* were "false in every particular," he continues:

"The absence of clinical clerks and dressers in the Pennsylvania Hospital, Philadelphia, led me to make inquiries of the doctor who most courteously showed me around. His reply so surprised me that before leaving the hospital I asked the question again, to be sure that I was not mistaken. 'I was assured' by this gentleman, 'that at Jefferson College, which is one of the leading medical schools in the country, *a man might take his degree in medicine without ever having seen a case.*'

"I am surprised that Dr. Gross should call my statement false and then endorse it himself. In the last paragraph of his letter he makes the supposition that I have taken a degree at Jefferson College, 'without ever having seen a case,' and in proof that I am not a solitary exception he adds, 'precious pearls are daily thrown before *such* swine in the ample amphitheatres of the Philadelphia hospitals.'

"If I or any other man can obtain the degree of M.D. at Jefferson College, Philadelphia, 'without ever having seen a case,' I think I may justly remark that 'clinical study is apparently unnecessary;' and in so doing make no reflection on 'the standard of clinical teaching in Philadelphia hospitals.'

"I am, sir, your obedient servant,

"A. E. Broster, M.R.C.S., Eng."

Mr. Broster has presented facts which require definite answers. Prof. Gross, in his letter, confines himself merely to ex-cathedra assertions. While such demand respect, they are not to be accepted in place of positive proofs. After so much has been said by the Philadelphia medical press concerning the triumphant refutation of the so-called slander, we confess to a little curiosity in learning of the actual facts in the controversy. Prof. Gross, in his letter to the Record, merely states that it is not possible for a student to graduate without having seen a case, and as an apparent reason for the assertion proceeds to speak of the clinical advantages of Philadelphia, the ability of her teachers, and the high standing of her medical schools. It may be admitted that the clinical advantages of that city are good, but in absence of any direct proof to the contrary, it may still be possible for not only one, but scores of students, to graduate without having seen a case. Unless our esteemed friend can prove that clinical instruction is actually compulsory with the student, that the clinical study of disease is a requisite for graduation, he must acknowledge the position of the *Lancet* correspondent is a just one. Unless Mr. Broster's letter and other alleged facts can be interpreted in a way which does

not seem possible now, Prof. Gross has made to us statements that are incorrect, and what has been so warmly commended by the college journals as a scathing reply to a slander, dwindles into a commonplace plea for the advantages of Philadelphia medical colleges in general, and Jefferson Medical College in particular.

TRICHINA SPIRALIS AND THE CONTINENTAL POWERS.

THE *trichina spiralis* is a nematoid worm, having an average length of only about one-twelfth of an inch. But, in spite of its longitudinal insignificance, it has recently thrown a large part of Europe into considerable consternation.

The *trichina spiralis* finds its cheeriest home and the elements of its completest domestic happiness in the succulent tissues of the hog (*sus scrofa*). It prefers the German hog, but American pork is not disdained, as the whole world now knows. Last December, M. Leclerc, of Lyons, France, discovered trichina in hams imported from this country, and reported his discovery to the authorities at once. Official circulars, cautioning the people, were immediately issued, but they had little effect, for the trichinæ clung patriotically to the tissue of America's swine, evidently preferring death there to life in a Frenchman. In other words, no cases of trichinosis appeared. Still, the Minister of the Interior continued to receive alarming statements regarding the infected condition of the imported hams; and recently an edict issued prohibiting their importation entirely. All Paris and France has been put in a state of excitement by this prohibition.

In order to keep abreast of public feeling on the matter, a meeting of the Academy of Medicine was held on February 22d, and the time was devoted to discussing the viability of trichinæ. It appeared that MM. Colin, Davaine, Vallin, and others had all been boiling, roasting, and salting trichinous pork to their own great edification and for the good of their countrymen. They arrived at a number of conclusions which have been reached many times already, and which are perfectly familiar to persons whose knowledge is not, like that of the Frenchman, circumscribed by the literature of his own country.

But the apprehension of evils from American pork has not been confined to France. Importation of this article from the United States is now forbidden by Russia, Germany, Italy, Spain, Greece, and Portugal. The consequent injury to American trade from these restrictions is, of course, very great. We export annually about eighty million pounds of pork to France. The amount sent to England is twelve times as great, and the total value of all the meat thus sent out from this country is estimated to be about one hundred million dollars annually. The *trichina spiralis*, therefore, is an animal of an importance very disproportionate to its dimensions.

The question whether the danger from infection by American pork is great enough to justify the present action of foreign governments very naturally comes up. We are of the opinion that the English government has taken the most sensible course in the matter. It declares that in spite of the immense amount of pork imported, there have as yet been no cases of trichinosis detected in Great Britain or Ireland. It does not feel warranted, therefore, in cutting off so large a food-supply without some more urgent reason than the tales of the microscopists.

The fact is that only a small percentage of American pork is trichinous, and a still smaller percentage is badly infected. The curing of hams kills some of these trichinæ; the subsequent cooking of them kills still more. A few trichinæ can be taken into the body without any injury. Thus, though there is a possibility of infection by exported pork, it is reduced to a minimum. We can only urge that this possibility should make it imperative upon our country and our pork dealers to do their best to investigate and get rid of the disease.

Following close upon the above alarms over trichinosis is the announcement that a new organism has been discovered in pork, which causes diarrhœal discharges and severe prostration of the system, ending sometimes in death. A diarrhœal outbreak at Welbeck, England, and a few cases of alleged pork-poisoning at Nottingham, have both been traced to this new organism.

The representations given of the germ show it to resemble very closely the ordinary rod-bacteria. One can hardly help believing, from the evidence so far given, that this is what the parasite really is, and that if it sets up for a new specific organism it will eventually turn out to be a humbug. *Sic semper bacillis!*

THE PROGRESS OF CREMATION.

THE organization in this city of a cremation society is an indication of the deeper interest that is being taken in this subject. It is now about six years since a cremation society was started in England, numbering among its members many distinguished names. Two years later a similar society was formed at Milan, and since that date such organizations have rapidly multiplied. There are now societies for promoting the practice of cremation at Lodi and Rome, at Gotha, Zurich in Switzerland, at Brussels, and in Holland. Last November a society was organized in Paris. It is said that a crematory is to be, or has been, erected in Rio Janeiro.

The prevalence of the practice, however, is hardly to be measured by the number of these societies. In England, a crematory has been erected at Woking, but it has not yet been used, owing to a fear that the practice of cremating is illegal. At the last meeting

of the British Medical Association, Mr. T. Spencer Wells read a paper advocating the practice, after which nearly two hundred names were received to a petition praying that the Home Secretary would make cremation legal. The matter is still being urged, and meanwhile the furnace waits.

In Switzerland no bodies have yet been cremated, so that at present Germany and Italy are the only European countries where incineration of the dead is really practised. It is far more popular in the latter country than in the former, and Milan is just now the chief cremating centre. During the past four years over seventy bodies have been burned in the furnace in that city. There have been ten or fifteen cremations at Lodi, and a larger number at Gotha. The number is greater, however, each succeeding year, and there is every sign of a growing popularity of the practice. In England the sentiment of many of the very best men is either in its favor or not against it. The graveyards are a bane to England, and in some places another mode of disposing of the dead is almost a necessity. The Earl of Beaconsfield, the Bishop of Manchester, and others have spoken loudly upon the danger to health of the English churchyards. Since last summer quite a strong feeling in favor of cremation has shown itself among medical men.

The method of cremating the human body has been most perfected at Milan. Here there is erected a crematorium in which the body is burnt, while connected with it is a cinereum, in which the ashes of the dead may be preserved in urns. Here also religious exercises, previous to the cremation of the body, may be held. The furnace that has been used until lately is that of Garini, which is very simple in its construction and reduces the body to ashes in about two hours. The remains weigh about one-twentieth of the original body weight. Recently a new and, it is claimed, more perfect furnace has been tried, the inventor being a Signor Venini. Both furnaces are patented, and at present Signors Garini and Venini are quarreling over the patents. But this does not seem to interfere with business.

The cost of a cremation in Milan is not great. The actual price of the fuel alone is about one dollar. But the society charges a fee of thirty francs, there is a city tax of ten francs, the cost of an urn is four and a half francs, the cost of its storage in the cinereum is three francs, or, if a person desires a special compartment, fifty francs, so that the total cost is nearly ten dollars. To this must be added the cost of bringing the body to the crematorium.

We have, before this, expressed our opinion in regard to the practice of cremation. From a sanitary point of view it is to be highly commended, and is, indeed, in some places, particularly in the crowded cities of the Old World, almost a necessity. The objections to it are made on æsthetic, on economic, and on medico-legal grounds. Regarding the first, none have successfully refuted the argument that it is only prejudice which makes the practice seem revolting or irreligious. It is claimed that cremation may destroy evidence in criminal cases. And it is certain that there will have to be special legal regulations of the practice. It is probable that after all cremation will succeed or fail, according as it does or does not afford a means of disposing of the dead more cheaply and decently than by burial. If cremations are expensive, and crematories offensive, they will not become popular even though grave-yards are unwholesome. The principles of economic science live after us. As far as experience goes now, it seems likely that cremations in large cities can be done cheaply. And here the sanitary value of the practice is most apparent. We shall watch with interest the work and progress of the New York Cremation Society.

Reviews and Notices of Books.

Twelfth Annual Report of the Board of Directors of the New York Physicians' Mutual Aid Association. 1880.

The membership in 1879 was 341, in 1880, 350. The fund has been increased from $3,000, to over $6,000. Six deaths occurred last year. The society is, in the main, prospering.

Quarterly Report of Medical Officers, U.S.A., January, 1881.

There are allowed by law one hundred and ninety-six medical officers. The retired list contains twelve names.

Ninth Annual Report of Roosevelt Hospital. December, 1880.

Number of patients during the year, 1,332; death-rate, 10.$\frac{3}{4}$ per cent.; operations, 121; annual expenses, $56,422.91.

Fifteenth Report of the Connecticut Hospital for the Insane. 1881.

The report shows total number of patients during the year, 654; admissions, 144; recoveries, 30; deaths, 30.

Minor Surgical Gynecology: A Manual of Uterine Diagnosis and the Lesser Technicalities of Gynecological Practice, for the Use of the Advanced Student and General Practitioner. By Paul F. Mundé, M.D. With three hundred illustrations. New York: William Wood & Co. 1880. Wood's Library of Standard Medical Authors.

The author, in his introduction, apologizes for presenting to the reader so many minute directions and apparently trivial details. He believes, however, that a knowledge of them is especially essential to the student of gynecology, and is a knowledge not to be obtained in any of the standard text-books. Although Croom has written a small work on the same subject, and although Emmet's work is very full and gives details to a considerable extent, yet Dr. Mundé is, we think, quite right in his opinion that what he

has written comprises a great many facts and minutiæ which are necessary to be known, and which cannot be learned in other text-books or in general practice. His book really fills a gap in medical literature, a thing which cannot very often be said of the medical works of the day.

The author divides his subject into two parts: the first is devoted to gynecological examinations, the second to minor gynecological manipulations and applications. The kinds of gynecological examinations are the verbal and the local, in its various phases. The positions for examination, examination-couches, examination with and without instruments, are described. The remarks upon these various subjects are clear and explicit, but there is necessarily nothing in them that is very novel. This part is also copiously illustrated. To the non-gynecological mind, indeed, the illustrations will appear too copious and obtrusive; and the necessity of such cuts is hardly apparent, despite the scientific character given to them by an outlining of the bones.

Case of Pyopneumothorax Subphrenicus. By William Gardner, M.D.

The case here related was that of a patient suffering from perityphlitic or subphrenic abscess, communicating with the bowel, perforating the diaphragm, and then perforating the lining and communicating with the bronchi. The few other examples of this rare affection are collected and the characteristic symptoms laid down.

Address in Medical Jurisprudence. Psychology, State Medicine, etc. By Jas. F. Hibberd, M.D. Reprint from "Transactions of the American Medical Association."

Dr. Hibberd shows the increased interest taken generally in the subject of which he speaks, by the statement that during the past year there had been 2,211 publications upon it. The address is a brief and instructive one.

Proceedings of the Alumni Society of the Medical Department of the University of Pennsylvania, with the address by Traitt Green, A.M., M.D., LL.D.

The address of Prof. Green is one of much more than usual merit, and contains many facts in regard to the growth of medical education and the medical profession, which are of much interest.

Winter Health Resorts. The Climate of Atlantic City and its Effects on Pulmonary Disease. By Boardman Reed, M.D.

In reading praises of the health of Atlantic City, to whose hotel proprietors the city of Philadelphia appears to have sold itself, it should be remembered that most serious charges are made against the sewage of the place. The soil is said, in some places, to be saturated with filth from the outhouses.

Sir Wm. Gull and Dr. Pavy.—The Censors of the Royal College of Physicians have reported upon the conduct of Sir Wm. Gull in testifying against the diagnosis of Dr. Pavy in the Ingles case. The report is beautifully a lapted to making both parties feel as comfortable as possible. They consider Sir Wm. Gull justified in swearing to anything he sincerely believes in; and they think that Dr. Pavy's diagnosis and treatment were entirely above correction or suspicion. Thus the matter stands, Sir Wm. Gull having received the largest *placebo*, however.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, March 9, 1881.

Dr. T. E. Satterthwaite, President, in the Chair.

The President presented, in behalf of a candidate, specimens removed from the body of a man who died from

ARSENICAL POISONING.

Dr. A. Jacobi presented, in behalf of a candidate, a specimen of

CANCER OF THE DURA MATER AND THE LUNGS.

Dr. George L. Peabody presented microscopical sections of the tumor, and the dried bones from a case of

SARCOMA OF THE LEG AND THIGH.

William P. W——, aged nineteen; U. S.; single; clerk. Admitted to New York Hospital, December 10, 1880. Four months ago patient first noticed a pain in right popliteal space which was not accompanied by any swelling or redness, was constant and dull in character, and caused no other disability than a slight limp. This pain grew gradually worse for a month, at which period he noticed a slight enlargement of the limb at the knee, without any tenderness or redness. The affection was, at this time, supposed to be rheumatic, and the patient was treated accordingly. The swelling steadily increased, and three weeks before admission it became very tender to pressure. At this time the skin became bluish in color, the superficial veins became prominent, œdema of the foot developed, and sharp spasms of pain became very annoying. A few days before admission a hypodermic syringe was introduced into the mass, and clear serum was withdrawn. This was followed by a constant oozing from the site of the puncture. Patient stated that he had always been healthy. His father was healthy. His mother died of phthisis some years ago.

On admission his general condition was poor. Pulse feeble and rapid. He was much emaciated and very anæmic. Pain in leg not severe unless it was disturbed. Examination showed his left lower extremity to be the seat of a fusiform swelling, which extended from six inches above the knee to the beginning of the lower third of the leg. In various spots fluctuation was detected. It was very tender. Its greatest circumference was at a level with the knee-joint, where it measured 20½ inches. The circumference of the sound knee was only 13¾ inches. The leg and foot were very œdematous. There was no enlargement of the lymphatic glands in the groin.

On the day following his admission the limb was amputated in the upper third of the thigh. Considering his condition at the time of the operation, he made a good recovery, and was discharged cured on March 8th.

The swelling was found to contain numerous discrete masses of encephaloid material, varying in size from a chestnut to a turkey's egg. These were partly in the intermuscular septa, and partly occupied the place of muscular tissue that had apparently been destroyed by pressure. These masses contained numerous cysts of different sizes, that were filled by a serous fluid of a yellowish brown color. The high-

est point reached by the growth was on a level with the knee-joint posteriorly. Above that the tissues were normal. The neoplasm had evidently originated in the periosteum, that membrane being in many places raised from the tibia, and much thickened. There were, in places, small fragments of bone in the mass, indicating that ossification had taken place to a slight extent. The portions of the tibia denuded were rough and porous. The microscopical examination of the neoplasm shows it to consist almost entirely of round and spindle cells, with very distinct nuclei and nucleoli, and some of the round cells are about the size of lymphoid cells. These cells lie side by side, supported by a stroma of very fine connective tissue. Others are about three times the size of white blood-corpuscles, and others very much larger. The tumor is not very vascular.

Remarks.—These facts would place the tumor in the category of the sarcomata. I place upon the table for your inspection microscopic specimens of the neoplasm and the bones of the amputated limb. You will see that for a space of nearly six inches below the knee-joint the compact tissue of the tibia is in great part destroyed, the parts of it that are left being very porous and spongy. The femur was not affected.

Dr. Peabody also presented a specimen of

ANEURISM OF ABDOMINAL AORTA.

W. S——, aged forty-eight; Ireland; married; gardener. No history of syphilis. Admitted to New York Hospital, December 7, 1880. At intervals for a year past he had noticed sharp pains in the lumbar region. A tumor in left groin, with no local pain or tenderness, appeared four months ago. Of late he has suffered from nausea and vomiting, accompanying paroxysmal pain in lumbar region.

On admission his general condition was fair. Though weak, he had a good pulse. On the left side, in the dorsal region, on a level with the tenth rib, was a swelling which pulsated synchronously with the action of the heart. This swelling could be traced by percussion and palpation down to the crest of the ileum. No bruit could be heard in it, but the heart-sounds were heard throughout the extent of the tumor. There was no difference in the femoral pulses, and their force bore a normal relation to that of the radial. There were no cardiac murmurs, but some hypertrophy was made out.

Urine was normal. Patient complained of what he called a "dead feeling" over anterior and internal aspects of left thigh. Pain in the lumbar region had become constant and severe.

He was given opiates at night, kept quiet in bed, and put upon potass. iodid. and tincture of digitalis. Pain in the back became less severe, but a severe pain in the left thigh soon manifested itself, and about this time he began to keep his thigh constantly semiflexed.

For three weeks there was no material change from this condition; then the pains became severer, the tumor increased slightly in size, he began to have a slight elevation of temperature, the lymphatic glands in the left groin became enlarged, he grew gradually weaker, and had several severe attacks of dyspnœa.

On January 4th he had become very weak. At 6.10 A.M., on the fifth, he suddenly died in collapse, after a severe attack of dyspnœa.

Autopsy.—Thirty-two hours after death. Body was emaciated and anæmic. Rigor mortis not marked. Superficial veins of legs and thighs full of blood. Slight œdema of left leg and foot.

The peritoneum contained about ℥ ij. of serum, but there was no peritonitis. Completely filling the posterior part of the left hypochondriac and lumbar regions, and extending thence into the iliac fossa behind the peritoneum, was a soft, dark-colored, fluctuating mass. It raised the peritoneum about three inches from the subjacent abdominal wall. Above the diaphragm in the posterior mediastinum, and coming from below between the crura, was a semi-solid mass forming a tumefaction about as large as a fist.

Remarks.—It is seen here that this tumefaction is an aneurism of the abdominal aorta arising between the crura of the diaphragm and extending thence downward over a vertical space occupied by four vertebræ. On the right side the sac, as you see, extends two inches from the median line, and on the left side about four, lying in this situation up the tenth, eleventh, and twelfth ribs. Just beneath the upper part of the left kidney the sac has ruptured and poured blood freely into the subperitoneal tissue, causing the tumefaction above described in the abdomen. The aorta, both above and below, is very atheromatous. The bodies of the tenth, eleventh, and twelfth dorsal and first lumbar vertebræ are extensively eroded. The eleventh and twelfth ribs are also extensively eroded, the latter being completely divided at a point about an inch from its head. The spinal canal is not opened. The upper part of the aneurism is filled by laminated clots, the other part, as well as the retro-peritoneal tissue on left side, is filled by recently coagulated blood. I will not take up your time with the other details of the post-mortem examination, because, though not devoid of interest, they do not relate to the specimen before me.

Dr. Peabody also presented a specimen of

ANEURISM OF THE THORACIC AORTA.

It was interesting chiefly from the fact that the patient was entirely unaware of the existence of anything abnormal in his chest. J. F——, aged sixty-nine years; U. S.; single; no occupation. Patient had had three calculi removed by crushing within sixteen years—last two by Bigelow's method within a year. Died three days after last operation. Nothing known to be abnormal in his chest.

Autopsy.—On the left side beneath the costal cartilages of the first, second, and third ribs was found a solid tumor, rather larger than a hen's egg. This was in part covered by pericardium, and the left lung was adherent to it. The tumor, together with the heart and aorta, I show you here. The heart is normal in size; the mitral valve is much thickened, there being a calcareous deposit in its posterior segment along the attached border. The aortic valve is also thickened. One coronary artery has rather a high origin. The tumor mentioned above is an aneurism of the anterior wall of the arch of the aorta, beginning one inch below the origin of the innominate and extending as far as the origin of the left subclavian artery. It communicates with the aorta by a circular opening about an inch in diameter. The interior of the sac is lined by laminated fibrin about one-half inch thick, the rest of the sac being filled by recent coagula. The aorta is atheromatous throughout its entire extent. In the abdominal aorta are two ulcers covered by a layer of recent fibrin.

FISSURE OF THE SKULL—PACHYMENINGITIS.

Dr. William Henry Porter then presented the brain and membranes of a patient with the following history, furnished by the house physician, Dr. Wetmore.

C. G——, aged forty-seven years; German; brewer; single. Was admitted to the Presbyterian Hospital, November 3, 1880. The patient was found by the police lying in a vacant lot, and was carried to the hospital in an ambulance. On admission he experienced some difficulty in walking and appeared stupid, but when asked said he felt no pain and soon fell asleep. No external head injury was detected. The pupils and temperature were found to be normal; pulse 70. Nothing unusual was noticed during the succeeding night, but in the morning he passed both fæces and urine involuntarily. After being awakened to take nourishment, he immediately fell asleep. When aroused he made no complaint of pain. Examination of urine gave: color, amber; reaction, acid; specific gravity, 1.024; phosphates, but no albumen. On November 7th, no special changes in the symptoms were noted. On the following morning, however, he was nearly comatose, and at that time the left pupil was contracted, the right dilated. The left leg and arm, also, were not moved voluntarily, but only when irritated, as by the prick of a pin or the application of the battery. Still the motor excitability was less marked on the left than on the right side. The breathing was slightly stertorous, pulse full and slow, temperature 98⅘° F. On the 9th there was complete left hemiplegia and probably right facial hemiplegia, although this point could not be fully determined. There was complete coma, the right pupil was widely dilated, the left contracted to a pin-hole; stertorous breathing; unilateral sweating of the right side; involuntary passage of urine; temperature, 99° F.; pulse, full but more rapid. On the 10th, all the symptoms were intensified; the coma was marked, there was complete stertorous breathing with puffing out of the cheek on the left side; right pupil still widely dilated and the left completely contracted. The folds of the left side of the face were relaxed. The pulse was increased in frequency. Temperature, 99.5° F.; profuse sweating. At this time he was unable to swallow. At five o'clock P.M., the temperature had risen to 104° F., and he was sweating still profusely. Pulse weak and rapid. The patient died in complete coma at 7.20 o'clock P.M.

Necropsy sixteen hours after death. Rigor-mortis well marked.

Thoracic cavity.—Absolutely no fluid in the pericardial sac, and only a very little dark fluid blood in the left side of the heart; on the right side the heart-cavities were about half full of fluid blood. No distinct coagulum, however, was found on either side. Valves free and normal. Weight of heart nine and one-half ounces, which was slightly under normal for a man of his build. The heart was flabby, and microscopically showed slight evidence of fatty degeneration. The central portion of the base of the left lung was adherent to the diaphragm, otherwise free; weight, only ten ounces; slight œdema of lower lobe. The right lung was quite firmly adherent throughout its whole extent. There was a little induration at the apex—the so-called "fibrous phthisis;" slight hypostatic congestion of the lower lobe, also slight bronchitis, evinced by the escape of mucopurulent fluid from the cut ends of the bronchi. Weight of the right lung, fifteen and one-half ounces.

On the right side there was an ununited fracture of the third rib, within three inches of the costal end.

Abdominal cavity.—The large intestine was moderately distended with gas. The small intestines were collapsed, small, and hard. The contents were fluid fæcal matters, and no obstruction or special inflammatory action was noticed. Stomach exhibited slight evidences of chronic gastritis. The *spleen* was very firmly adherent to the splenic flexure of the colon; it was also very soft, almost gelatinous; weight, four and one-half ounces, or two and one-half ounces under the normal. The *bladder* was empty and the ureter was free. The *left kidney* weighed, with the attached fatty capsule, five ounces. The *right kidney*, free from its fatty capsule, weighed five ounces.

The capsule of the kidneys was non-adherent, and appeared about normal in thickness. Both glands were congested, and the epithelia looked fatty to the naked eye. Microscopically, they were found to be in a state of chronic diffuse degeneration, the morbid changes being most marked in the epithelial structures. The *liver* weighed only twenty-six ounces; its surfaces were smooth. None of the naked eye appearances of cirrhosis were present, but when cut it was very hard, and almost creaked under the knife. The cut as well as the external surfaces were studded with numerous pale spots, which were found, upon microscopical examination, to be due to fatty degeneration of the epithelia. There was also evidence of cirrhosis in the shape of increased interstitial tissue. The bones of the cranium were very thick. On removing the calvarium, the dura mater was found deeply congested, and that portion covering the convexity of the right hemisphere was firmly adherent to the brain-substance. Upon incising the right side, a large mass of clotted blood was found covering the whole hemisphere. The clot was firmly attached to the overlying dura, while that portion covering and lying in immediate contact with the brain-substance was partially decolorized, and seemed to be partly organized. The middle portion seemed to be laminated, while the remainder was more fluid as the dura was approached. The left dura presented a remarkable appearance, the internal surface being mottled, as it were, with dark coagula, which seemed to be within its substance. The convexity of the *brain* was congested, but the ventricles contained no fluid. The point of special importance was a fissure of the cranium, extending from the parietal boss down and into the apex of the petrous portion of the temporal bone. This fissure was nearly opposite the *hæmatoma*, and it was inferred that the injury was received at the time the rib was fractured.

Dr. Porter remarked that fissures of the skull might, as was well known, exist for some time, and give rise to a hæmatoma or its equivalent, pachymeningitis interna. In such cases, an inspection of the bone might not detect the fissure, and the patient might live a long time, or may become apparently convalescent.

CARCINOMA OF PANCREAS, LIVER PERITONEUM, AND RETROPERITONEAL GLANDS WITH PERITONITIS.

Dr. Porter also presented a specimen of cancerous pancreas, liver, and retroperitoneal glands, from a patient who had recently died in the Presbyterian Hospital, during the consecutive services of Drs. Alexander Hadden and A. H. Smith. Dr. John A. Wells, House Physician, furnished the history, which was as follows:

J. B ——, sixty years of age; Ireland; widower. Was admitted to the hospital, January 11, 1881. His family history was good, so far as he knew, and special inquiry as to the prevalence of cancer in any branch failed to discover evidence of the disease. He had been intemperate, but denied venereal disease. His first symptoms of illness developed in the early part of December, 1880, when he felt a general depression, and began to lose strength and weight. On the 22d of that month he was suddenly seized with cramps in the epigastric region, and a sharp diarrhœa followed. The bowels remained loose after the commencement of this attack. His prostration continued, and there was a constant feeling of soreness in the epigastrium, and occasional nausea. No jaundice. In other respects he was free from pain.

On admission, physical examination revealed that the heart and lungs were normal. The liver dulness, however, extended from the fourth intercostal space of the right to two and one-half inches below the free border of the ribs. The abdominal surface was tender, there was slight tympanitis, and a gurgling sound could be detected when the ear was applied to the part. Tongue heavily furred; temperature and pulse normal. The urine had a specific gravity of 1.016, an acid reaction, and amber color; chemical and microscopical examinations gave negative results.

On the evening of January 13, 1881, the temperature had risen to 99.5 F., otherwise the symptoms remained about the same. Two light-colored semi-solid passages usually daily. Tongue clean, appetite still poor, but abdomen less tender. Several nodules were felt upon the surface of the liver, through the abdominal walls. There was one hard, movable lump, about the size of a hickory-nut, just outside the right external abdominal ring, which, by invaginating the scrotum, was easily pushed back into the inguinal canal. When the tympanitic distention of the abdomen became excessive, it was relieved by enemata containing oil of turpentine. The liver did not apparently enlarge in size while in the hospital, but the surface nodules became more prominent. The edges of the liver were rough. The patient gradually became more emaciated, and the conjunctivæ became quite yellow. The passages, also, were more profuse and watery, ranging from five to eight in the twenty-four hours. None of the remedies used had any effect whatever in arresting or even checking the profuse diarrhœa.

He died January 18, 1881, of exhaustion. Necropsy, by Dr. John A. Wells, fifteen hours after death. Rigor mortis well-marked; body very much emaciated skin jaundiced.

Pericardium and heart.—The heart-sac contained four ounces of straw colored serous fluid. There was one small milk patch over the anterior surface of the right ventricle. The heart weighed ten ounces and was soft and flabby, but nothing specially abnormal was noticed further than as just stated.

Pleuræ and lungs.—The left lung was freely movable in its pleural sac. The superior lobe was partly collapsed and devoid of air; the inferior lobe was slightly congested. The right lung was slightly adherent posteriorly, and slightly œdematous, with hypostatic congestion of the dependent portions. Weight of left lung fourteen ounces, and of right lung twenty-four ounces.

Abdominal cavity.—The enlarged and irregular surface of the liver could be felt through the abdominal parietes. A tumor about one inch in diameter was also quite noticeable at the right external abdominal ring. When the abdomen was opened, thirty ounces of fluid were removed from the peritoneal cavity.

The surface of the peritoneum was studded with small white tumors of almost stony hardness, and varying in size from a millet-seed to that of a large pea. There were three large tumors in Douglas' pouch, covered by a distinct layer of lymph.

Spleen.—This organ was firmly adherent to a large neoplasm involving the tail of the pancreas, and like the peritoneum was covered by many small nodules.

Kidneys.—The left gland, like the spleen, lay against the neoplasm, and the capsule had become so firmly united to the new growth that a thin and superficial layer of the kidney separated in the removal of the organ, but the main body of the kidney did not seem to be infiltrated with the new growth. The capsules were non-adherent, and were normally thin. The kidneys were congested, and the epithelia looked fatty. The weight of the organs was seven and one half ounces each.

The right gland presented the same gross appearances as the left, excepting the involvement by the neoplasm. The bladder was distended with urine; the trigone deeply congested. Otherwise the urinary tract was normal.

Alimentary tract.—Upon attempting to remove the colon, the splenic flexure was found so firmly bound to the new-growth in the pancreas that it could only be removed at the expense of the intestinal wall or the growth. In the centre of the neoplasm there was a cavity which evidently communicated with the lumen of the gut during life, as the intestinal wall was wanting at this point.

Liver.—This organ was greatly enlarged, weighing one hundred and ninety-three ounces. The enlargement was due to numerous white masses, varying in size from a small pea to a hen's egg. The centre of many of the larger nodules contained fluid, tinged yellow, probably colored by bile-pigment.

Pancreas.—The tail of the pancreas was the point of interest, being involved by a new growth about three inches in diameter. In the centre of this neoplasm there was a cavity, the area of which was equal to about one-half of the whole mass. There was a free communication between this cavity and the lumen of the colon at the splenic flexure. The cavity contained some fecal matter, and the walls presented a ragged and sloughing condition. The head of the pancreas was free from any new growth, and was to all appearances healthy. Extending from the new growth, however, along the superior border of the pancreas to the liver there was a chain of small tumors, two of which in the transverse fissure of the liver were about one inch in diameter.

Microscopical examination.—The growth in the pancreas gave marked evidence of *scirrhous carcinoma* in the shape of dense fibrillated connective-tissue bands forming irregular alveolar spaces. The alveolar cavities were filled with large nucleated epithelial corpuscles, packed together without any reference to order of arrangement. The only difference between the main growth in the pancreas and the many surrounding smaller nodules, was a more abundant epithelial development and less of the fibrous elements in the latter.

Brain.—Nothing abnormal worthy of note was detected.

FIBRO-SARCOMA OF THE BREAST.

Dr. A. Jacobi presented a tumor which he had removed from the right mamma of a girl seventeen

years of age. The history of the case was as follows: A little more than a year ago she presented herself with a small and very hard swelling in her right breast, near the axillary line. It was scarcely of the size of a hazel-nut, was not painful. She had had it for some time, and could not give any reason for its existence. He regarded it as the result of slight local mastitis, produced, perhaps, by pressure from her corset. For that reason he began local, and, after a time, general treatment. The tincture of iodine, iodoform ointment, and collodion were used, and the nodule not disappearing, she took iodide of potassium for some time, with but little effect.

He saw her some time afterward, when the tumor had reached the size of half a walnut, and again recommended a line of treatment, and she disappeared. Thus he saw her occasionally, and ten weeks ago, not having seen her for nearly three months, she came again, when he was surprised at finding nearly the entire mamma a solid mass, and at the same time an axillary gland upon the same side was swollen. The question of diagnosis then arose. It was possible that he had to deal with a malignant tumor and glandular axillary swelling, or it was possible that the old tumor remained and was accompanied by mastitis and glandular swelling in the axilla of a benign character.

Dr. Jacobi proposed to remove the breast immediately after it would have been determined that the use of the galvanic current for one week produced no favorable effects. He used an ordinary small battery, sent the current from fourteen or sixteen cells as much as possible through the tumor, with daily sittings of seven or eight minutes' duration, and within one week the swelling was reduced in size about one-third. The treatment was continued, and at the end of the second week the swelling had been reduced in size about one-half, and the glandular enlargement in the axilla had disappeared. That plan of treatment was pursued for four or five weeks, and after that the tumor remained stationary, being about the same size as it was four or five months previously.

The treatment with galvanism was not adopted with the expectation of removing the malignant disease, but for the purpose of reducing the inflammatory swelling and giving the patient the benefit of the doubt with regard to diagnosis. When the tumor became stationary Dr. Jacobi removed it. He found it to be encysted, and, upon microscopical examination, sarcomatous in character, consisting of round and spindle-shaped cells and a large amount of stroma. It was possible that more tumors of the same character, sometimes called adenomatous, were developing, for upon the same side, near the sternum, there were two hard spots, and several more in the left mamma. It was not very uncommon for several nodules to develop in the same mamma, but it was not so frequent in the mamma of a young person; hence the interest in the specimen. The immediate removal of the other tumors would be a proper plan of treatment.

Dr. Peabody had lately made an autopsy on the body of a woman who was operated upon last August for a fibro-sarcoma of the mamma, which was gangrenous nearly all the way from the external surface to the muscles of the chest. A number of portions, however, remained sufficiently intact to permit of satisfactory microscopical examination, which proved that it was a fibro-sarcomatous tumor. The woman made a slow but apparently complete recovery. In November last, however, the disease had recurred in the cicatrix, and about ten days ago the tumor had involved an area fully six inches in diameter, and over a space two or three inches in diameter it was gangrenous and sloughing. The growth was again removed, but the patient died within thirty-six hours after the operation. The second tumor was distinctly of a more malignant type than the first, containing a much larger proportion of cellular elements. Autopsy revealed metastatic deposits in both lungs, in the occipital lobe of the left hemisphere of the brain, and besides there were large tumors in the left lumbar and inguinal regions. The woman was between forty and fifty years of age, and the growth had been in existence several months before the first operation.

Dr. Beverley Robinson asked whether metastatic deposits were more malignant than the original tumor.

Dr. Peabody believed that there should be no confusion, microscopically, between sarcoma and adenoma of the breast, because the growths, in their ultimate elements, are essentially different. The prognosis, also, is different, for adenoma may recur; but it is not nearly so apt to do so as sarcoma, and there are no metastatic deposits.

Dr. Jacobi remarked that the tumor which he had presented was evidently a sarcoma. He used the term adenoma simply because even now the one was frequently taken for the other, although it was incorrect, as stated by Dr. Peabody. There was no doubt, when a return of the disease occurs, that the neoplasm is more malignant than the original growth. That the common adenoma, or sometimes erroneously called fibro-sarcoma, should not return after removal, was the ordinary experience of surgeons.

CHRONIC VALVULAR DISEASE OF THE HEART—ADHERENT PERICARDIUM.

Dr. Beverley Robinson presented a heart which, with the pericardium attached, weighed thirty-two ounces. There was hypertrophy of the right, and hypertrophy and dilatation of the left ventricle. Hydrostatic test showed free tricuspid regurgitation, slight mitral leakage, and very free aortic regurgitation. The aortic orifice was stenosed, the valve leaflets were thickened, congested, and retracted, a small valvular aneurism existed in the posterior leaflet, and one leaflet was fenestrated. The mitral valve was thickened and smooth. The chordæ tendineæ were fused together, and their fleshy columns were atrophied. The pericardial cavity was obliterated by old adhesions.

The kidneys were the seat of chronic congestion, as also was the liver and spleen. The right pleural cavity was obliterated by old adhesions; the left contained fluid hydrothorax. The lungs showed a moderate amount of brown induration, and were moderately œdematous. Autopsy fourteen hours after death. Dr. Maxwell, Curator.

The history was furnished by Dr. Merriam, House Physician. Charles M——, aged twenty-seven years, had had rheumatism. He was admitted to Charity Hospital on the 12th of February, and on examination cardiac hypertrophy with three murmurs were diagnosticated—namely, tricuspid regurgitant, mitral regurgitant, and aortic regurgitant. The man was well-nourished and apparently healthy. On the evening of the 13th he cried out to the watchman that he could not breathe, and within fifteen minutes was dead.

The point to which Dr. Robinson directed special attention was a decided *elevation* of the intercostal

space synchronous with the apex-beat, in a case of completely adherent pericardium.

Dr. Robinson also presented a specimen of

ŒDEMA OF THE LARYNX, OCCURRING WITH CHRONIC ALBUMINURIA.

D. Mc——, aged forty-two years; native of United States; and a carpenter. Was admitted to Charity Hospital, February 2d, and died February 24, 1881.

History.—Patient denies having had venereal disease. Has been a hard drinker. Has had slight attacks of dysentery for the past four or five years. Gives the history of an acute attack of Bright's disease fifteen years ago. Says that four months ago he went upon a prolonged spree and afterward was obliged to work in all kinds of weather and often substituted drink for food. During this period he continually "took cold." Ten days ago his legs and hands began to swell—the swelling coming on suddenly during the night. The scrotum soon after became œdematous. Thinks he is passing the normal quantity of urine. Appetite poor. Bowels regular.

General condition.—Patient appears suffering with general anasarca. Left arm much more swollen than right. Patient sitting up, both arms in same position, the space immediately above the clavicle seen to be much more marked on the right side than on the left, but there was no œdema of cellular tissue on either side at this point. Pulsation more marked in the right carotid than in the left. Pulse at wrist much feebler on the left side than on the right. Sight lost in the left eye; imperfect vision still in the right. Loss of sight came on suddenly about two weeks ago. Hoarseness, which came on suddenly February 18th, and a peculiar shrill, harsh cough, with purulent expectoration. Complains of severe pain over the left mastoid process, neuralgic in character. Some œdema in this latter situation.

Physical examination revealed dulness at the base of both lungs. Prolonged expiration at the apex of the left lung in front. Subcrepitant râles at the base behind. Râles heard on coughing; feeble respiration over both lungs behind.

Heart.—Doubling of first sound at apex, heard more distinctly over mitral orifice.

The abdomen contained a small quantity of fluid.

Larynx.—Shows pink color of both vocal cords, moderate infiltration of arytenoid cartilages, and at the commissure. During ordinary respiration the vocal cords do not leave the median line as much as normal. In saying a, e, and h, in phonation, the vocal cords approximate imperfectly, and leave between them posteriorly a triangular gap with the base looking backward. No ulceration anywhere, and epiglottis normal.

Eye.—Examination by Dr. Callan. Swollen disk, tortuous vessels, with here and there small hemorrhages. Left eye more marked than right.

Urine.—Albumen in large amount. No casts.

Autopsy by Dr. Putzel.—Cardiac hypertrophy, œdema, atelectasis, and hypostatic pneumonia; chronic diffuse nephritis, œdema, and anæmia of brain.

The point to which Dr. Robinson directed special attention was the existence of œdema of the larynx in connection with chronic Bright's disease.

Dr. Jacobi thought it probable, inasmuch as such a combination was so rare, that there was something in the history of the patient which facilitated the occurrence of œdema in that locality. If œdema occurred in the larynx, it was not extraordinary that it should take place in the aryteno-epiglottic folds where the submucous tissue is so abundant. In common cases of pharyngitis, particularly with œdematous swelling—for example, in diphtheritic cases—it was not uncommon that just that locality should be the seat of œdema, and in a number of cases of so-called croup, when the vocal cords are paralyzed and the voice is retained, we have to deal with nothing except œdematous softening in this exact neighborhood.

With reference to œdema of the larynx being an uncommon occurrence in chronic nephritis, he thought there was something in the history of the case by which it could be explained. He would direct Dr. Robinson's attention to what has lately been found in a small number of cases. Now and then cicatricial indurations have been found following diphtheritic symptoms, very small, but sufficient to give rise to hoarseness, and occasionally to dyspnœa and attacks of œdema. If, upon microscopical examination, any induration was found, then we might suppose that it was a local cicatrization, as the result of an old inflammation, or in consequence of some disease, and it might be the cause in this case of the œdema that occurred.

Dr. Robinson remarked that so far as his observation with the laryngoscope extended he had rarely met with œdema of the larynx that caused considerable dyspnœa, or suggested tracheotomy, except in cases of pulmonary phthisis.

The society then adjourned.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, February 8, 1881.

Dr. H. B. Sands, President, in the Chair.

SINGLE HARELIP.

Dr. A. C. Post presented a boy, six years of age, upon whom, ten days previously, he had operated for a simple and single harelip, the fissure being of considerable breadth, but not extending quite up to the nose. The case was exceptional, in the fact that the lip was developed more upon the left than upon the right side. The operation was performed by making two crescentic, concave incisions, so that when the cut surfaces were brought in apposition the middle of the lip pouted somewhat, removing all tension by loosening the mucous membrane thoroughly, and securing the apposition of the parts with *one* pin suture and six fine sutures. The pin suture was removed at the end of three days, and the others at the end of a week. Adhesive plaster was applied after the removal of *all* the sutures. The result was excellent.

Dr. C. K. Briddon then read a paper entitled

SOME REMOTE CONSEQUENCES OF SECTIONS OF NERVES,

in which he first considered the disturbances of nutrition, that might or might not depend upon the implication of special nerves, and then studied the effects produced upon nerves which preside over sensation and motion. Complete section of a compound nerve was followed by destruction of motion and sensation in the territory presided over by such nerve, and if inflammation does not arise on the wound, the loss of sensation and motion will be followed by atrophy and muscular contraction. If, however, the nerve has been only partially divided, the remaining fibres may give rise to spasm, hyper- and dysæsthesia, etc., and if inflammation follows, a

neuritis may supervene that may give rise to the most intractable neuralgia.

Dr. Briddon narrated three cases which had come under his immediate supervision. One of the patients was presented.

Case I.—In November, 1859, by invitation of Prof. Willard Parker, he operated on a patient at his clinic, who was twenty-one years of age and had a tumor situated on the inner aspect of the arm, movable laterally, and painful on handling. The patient first noticed the tumor seven years previously, and at the operation it was found that the ulnar nerve was imbedded in it. On microscopical examination made by Dr. W. H. Draper, the tumor was found to consist of fibro-plastic nuclei, cells, and fibres, the fibrous element predominating. There was no evidence of change in the structure of the ulnar nerve. No observations were made subsequently with reference to temperature, but sensation and motion in the parts supplied by the ulnar nerve were destroyed, and muscular contractions followed rapidly. The trophic changes were not marked. The disease returned and necessitated amputation at the shoulder-joint.

Case II.—In 1875, he was consulted by a woman, aged fifty-eight years, who had suffered from intense neuralgia of the right upper extremity for twenty-five years. It began in a small space over the back of the wrist-joint and gradually extended and increased in severity, until the entire limb was involved. In the centre of the axilla was a tumor about the size of a billiard-ball. The tumor was removed October 20, 1875, and was found situated in the musculo-spinal nerve at its origin from the posterior root of the brachial plexus. It was examined by Prof. Arnold, of the University of the City of New York, and pronounced by him to be a myxoma, developed within the neurilemma. The following is an abstract of the notes of the case, taken by Dr. E. C. Seguin. The principal phenomena were as follows:

Observations began in March, 1877.

First.—Extreme anæsthesia of outer side of forearm and hand, as far as knuckles, and about four inches above the olecranon process. The skin over the supinator longus and the fourth metacarpal bone was sensitive. There was only a small spot over the second metacarpal bone (index) that was completely deprived of sensibility when irritated by a high-tension faradic current, delivered through a wire point. In January, 1878, it was noted that there had been a remarkable increase in sensibility; a finger or feather contact being felt everywhere, except over the second metacarpal bone, and even there pinching or the faradic current were distinctly perceived. The development of this improved sensibility was extremely gradual.

Second.—There was complete paralysis of the triceps and all the extensor and supinator groups in the forearm, which was accompanied by extreme atrophy. No recovery of motion or nutrition occurred while the patient was under observation.

Third.—The anæsthetic and atrophied region supplied by the musculo-spiral was frequently tested with Caselli's and Dr. Seguin's surface thermometer, and on each occasion symmetrical measurements were made on both extremities. The results indicated a slight and nearly constant lowering of temperature, but not so marked as is met with after division of the ulnar or median nerve. This would indicate that the musculo-spiral nerve contains only few vaso-motor nerves.

Fourth.—Faradic excitability of musculo-spiral was wholly abolished. A strong galvanic current gave slow and faint contractions in all the parts involved at the date of the last note, in January, 1878.

Case III.—*Division of ulnar nerve—Piece of glass imbedded between the ends—Suture of nerve, and failure of union.*—For the notes of the case he was indebted to Dr. J. W. Stickler, House Surgeon at the Presbyterian Hospital. A. C——, aged twenty-two years, Italian, admitted June 22, 1880. No family history of neuroses. Last October patient fell and struck his left elbow upon a piece of glass. Examination revealed an incised wound between the olecranon and the inner condyle of the humerus. After the wound healed, it was discovered that there was loss of sensation in the parts supplied by the ulnar nerve. On admission, a painful cicatrix was found between the olecranon and inner condyle of the left arm, and pressure on it gave rise to muscular tremors. Left upper extremity slightly atrophied. Burning sensation along the ulnar side of the little finger; anæsthesia of the dorsal and palmar surfaces. Strength diminished in the left hand. First phalanges of the ring and little fingers extended; second and third phalanges flexed. The flexor carpi ulnaris responded to the faradic current; no muscular contraction on ulnar side of hand from the wrist to the tip of the little finger; no contraction on outer side of ring finger; violent contractions of the thumb, of the index, the middle, and the radial side of the ring fingers.

On January 24th, Dr. Briddon made an incision parallel with the cicatrix, found the proximal end of the ulnar nerve bulbous, and connected posteriorly by a portion of the sheath with the distal end, which was retracted beneath the flexor carpi ulnaris muscle. The ends of the nerve were separated about three-quarters of an inch, and between them was a piece of glass one-quarter of an inch long, imbedded in connective tissue. A clear transverse section of each end of the nerve was made, and the surfaces were united and held in accurate apposition with three fine catgut sutures. The wound was dressed antiseptically, and an immovable apparatus applied.

On January 30th the wound had healed completely. There was no swelling, and the burning sensation in the little finger had disappeared. On February 21st the patient was discharged improved.

In the autumn of 1881 the patient called at Dr. Briddon's office, and he found evidence that the operation had failed to afford any permanent relief. All the muscles supplied by the ulnar nerve were atrophied, and most of them were contracted and did not respond to the faradic current. The ulnar side of the forearm and hand were anæsthetic, with a small area over the track of the nerve itself above the wrist hyperæsthetic, the ring and little fingers flexed, end of little finger clubbed, its nail arched vertically and laterally, and marked by a transverse notch. The cicatrix, from the operation, was tender, and on raising it the patient complained of pain passing up to his shoulder down to the end of the third and fourth fingers, and sometimes it passed up to the shoulder and down into the opposite hand. Dr. McBride examined, microscopically, sections of the central portion, removed at the time of the operation, and reported that he found nothing but connective tissue, and regarded, as the cause of non-union, the failure to remove sufficient of the extremities of the severed nerve.

Dr. Markoe remarked that Weir Mitchell made special reference to atrophy of the distal portion, after section of nerves, to be followed by regeneration

after a lapse of a certain period of time; he therefore asked if, in Dr. Briddon's first case, the distal portion of the nerve was examined after the amputation.

Dr. Briddon said that it was not. The disease recurred several times, and always in the bulbous extremities of the nerves.

Dr. L. A. Stimson thought a noteworthy fact in Dr. Briddon's third case (the patient was presented) was the absence of the typical deformity of the hand, such as is found after ulnar paralysis. The paralysis of the interossei muscles seemed to have involved only the third and fourth fingers, while the others could be flexed and extended with almost complete freedom and showed no retraction.

Dr. Briddon thought that the muscles of all the fingers were markedly atrophied. He further remarked that in his second case there was manifest improvement in the condition of the muscles of the hand, while Dr. Seguin was applying galvanism, but as soon as its use was discontinued, atrophy and contraction went on rapidly.

Dr. Erskine Mason referred to a case in which certain trophic changes did *not* take place. A woman, thirty-three years of age, entered Roosevelt Hospital, where he operated upon her for the removal of sarcoma of the sciatic nerve, December 11, 1873. Six inches of the nerve were removed. Dr. Delafield examined the specimen microscopically and named it angio-sarcoma. On December 13th, it was noted that sensibility was absent from the plantar and external surfaces of the foot, and especially along the outside of the leg. She was able to flex and extend the leg with freedom, but had no control over the foot.

On the 21st of December, she had twitchings of the foot and complained of stinging pain in the sole of the foot.

On the 29th of December, a plaster ankle-splint was applied and she was then able to walk with comfort. The patient left the hospital on the 31st of December. Within two or three months the disease returned in the same locality, but she was able to walk perfectly well by means of a leathern splint beneath the sole of the foot and extending up the leg. There was no paralysis before the operation. The muscles were not examined with electricity. The diseased limb was one inch less in circumference than the sound one before the operation, but there was no atrophy after the operation. There was only slight incurvation of the nails, and the twitchings all disappeared. There was neither glossy surface nor burning pains. The patient died in October, 1874, from recurrence of the disease in the thoracic cavity. At that time Dr. Mason was unable to find any account of removal of a portion of the sciatic nerve, and since then had seen the report of only one case, but it gave no account of the subsequent condition of the limb.

Dr. Briddon thought that the glossy appearance and the burning pain rarely appeared when *complete* section of the nerve was made, unless inflammation supervened.

Dr. Mason referred to a case of gunshot wound, in which the musculo-spinal nerve was injured, and those symptoms appeared very soon after the accident and quickly disappeared under treatment.

Dr. Briddon remarked that they occurred much more commonly in connection with gunshot than with other wounds. He further remarked that Dr. Seguin expresses the opinion that in most of the reported cases of success after suture, subsequent examinations had demonstrated that union had not occurred.

Dr. Mason referred to a case reported by Sir James Paget, in which the radial nerve was divided and union occurred without unpleasant consequences.

Dr. Markoe thought that Weir Mitchell's collected cases, in which section of nerves had been performed for various neuroses, threw some light upon the question; for, subsequent examination showed that the nerve had been almost completely restored, so much so that he advocates the turning back of the nerve and tying it with catgut ligature in order to prevent this recurrence.

The President asked Dr. Briddon, as bearing upon the posible early solution of the fine catgut suture, if much force was required to bring the ends of the nerve in apposition in his case.

Dr. Briddon replied that no traction whatever was necessary to bring the ends together, and they were maintained in position by a narrow strip of neurilemma, through which the sutures were applied. He thought that the parts would have lain in apposition without sutures, and yet it might have been the early solution of the fine catgut sutures that caused the failure in the operation. He regarded Dr. McBride's explanation of the failure as insufficient, because the central end of the nerve was bulbous.

Dr. Post remarked that in all the successful cases the silver wire suture had been used.

CARBUNCLE—MULTIPLE ABSCESS.

Dr. Post narrated a case, as follows: In December he was called in consultation to see a man, aged forty, who was suffering from a large carbuncle in the back of his neck. It had occurred as a complication of a previously existing diabetes mellitus of a severe character. A free crucial incision was made in the carbuncle, and stimulating dressings were applied. Extensive sloughing occurred, and after two or three weeks the case progressed very favorably. In the meantime deep suppuration took place beneath the pectoral muscles upon the right side, and an opening was made near the sternum, and a counter-opening occurred beyond the clavicle. Several small abscesses occurred upon the back and upon both sides, and finally, a very large suppuration took place in the left thigh, near the groin, which was preceded by severe pain, and diffuse suppuration extended through the intermuscular spaces of the entire limb nearly down to the knee. The limb became enormously swollen, and there was no point at which a counter-opening could be made upon the posterior aspect with reasonable certainty of reaching pus, and thus effecting drainage. He had never seen a case of such multiple suppuration in connection with diabetes.

Dr. Briddon suggested that the abscesses were pyæmic, following the carbuncle.

Dr. Post remarked that there was undoubtedly blood-poisoning. But in each instance, when counter-openings could be made and drainage effected, local improvement followed.

CICATRICIAL CONTRACTION FROM A BURN.

Dr. Post reported that on the 17th of January he operated on the web connecting the index and middle finger in the case of deformity of the hand, of which a plaster cast was exhibited at the stated meeting of the society held. His incision was so free that after healing occurred the space between the fingers was a little larger than that between the other fingers. That result was accomplished by carefully dressing each finger and keeping the granulations down with the frequent and thorough appli

cation of nitrate of silver. He thought that success in these cases depended upon crowding back the granulations with adhesive plasters and destroying them with caustic as they grow.

EPITHELIOMA OF THE PENIS—METHOD OF AMPUTATION.

Dr. L. A. Stimson presented a specimen of epithelioma of the penis. The patient was fifty-one years of age, and the disease began nine months ago in the glans. It has now destroyed the greater part of the glans and has broken through the skin covering the body of the member at three points, situated from one to two inches above the glans. The member was red and œdematous throughout nearly its entire length, and the erectile tissue could be felt very hard and somewhat thickened to within one and one-half inch of the pubes. Three small inguinal glands could be felt on each side, but the patient said he had noticed them long before the appearance of the disease.

Two and a half years ago, M. Cabadé reported to the Paris Surgical Society a case of epithelioma of the penis, in which he had removed almost the entire organ, including the bulb, by making an oval incision at its root and dissecting it out in front and behind until he reached the membranous urethra, which he then transfixed with the chain of an écraseur, and divided each half, with the corresponding crus, close to the ramus of the pubis. The operation lasted forty minutes, and the hemorrhage was insignificant. The funnel-shaped cavity, at the bottom of which the urethra opened, healed promptly by granulation, and there was no contraction of the urethral orifice. M. Berger, to whom the case was referred for a report, said that he had found no reported case of an equally extensive removal. He approved of it on the same grounds that make a free removal necessary in epithelioma of the tongue, the probability of a return in the stump, but he added that a repetition of the operation on the cadaver had shown it to be much more difficult than he had anticipated from reading M. Cabadé's report, and he therefore suggested that the operative method should be modified by the adoption of a plan recommended by some of the older surgeons, viz., division of the scrotum in the median line, and prolongation of the incision into the perineum. In the discussion that followed M. Verneuil approved of the principle of very free removal.

Dr. Stimson had repeated the operation several times upon the cadaver, and believed the removal of everything back to and including the bulb unadvisable, except when the latter was actually diseased, because of the difficulty of the dissection, the free hemorrhage, and the shortness of the urethral stump. He had operated in this case by a circular incision about the root of the penis, and a vertical one extending from the former well back into the perineum, and dividing the scrotum into two lateral halves. The attempt to divide the corpora cavernosa after transfixion just in front of their point of union with each other, by means of the écraseur, failed, the wire breaking four times, and he was compelled to complete the division with the thermo-cautery. The corpus spongiosum and urethra were divided with the knife in front of the bulb, bleeding averted by forcipressure forceps, and the urethra stitched to the edge of the perineal incision. He believed in the advisability of prolonging the incision into the perineum, and of fixing the urethra there, because it diminished the chances of a return of the disease in the stump, by making a more extensive removal, and because it furnished a more convenient outlet for the urine, which could thus be voided without wetting the scrotum or the thighs.

Dr. Briddon referred to cases in which amputation of the penis had been made anterior to the scrotum, and the stump had remained healed for several years. In two cases the ability to have sexual intercourse was not destroyed.

Dr. Mason had removed a cancerous glans penis from a man fifty-two years of age, and there had been no return of the disease. The operation was performed five years ago last August.

The President had removed a cancerous penis from a man sixty years of age. The operation was done by the common method of amputation through the middle of the organ, between three and four years ago, and there had not been any recurrence of the disease. It was his impression that cancer of the penis stood nearly at the other end of the scale as compared with cancer of the tongue, cancer of the tongue recurring very rapidly as a rule, while cancer of the penis gave the best prognosis, unless the operation was done at a time when the neighboring lymphatic glands were diseased.

Dr. Stimson referred to a case which was operated upon last December, and the stump was already the seat of a return of the disease.

Dr. Post referred to a case reported in a medical journal, in which, after amputation of the penis, the patient's urine scattered very much, and the urethra was then slit open and so stitched as to make it assume the form of the nymphæ of the female, and the current of urine afterward was very good.

About four years ago he amputated the penis of a man whose father died of cancer of the penis, and at the end of three years there had been no return of the disease.

Correspondence.

A BOLD LITERARY PIRACY.

To the Editor of The Medical Record.

Dear Sir—Dr. Fancourt Barnes, M.R.C.P., Physician to several *Lying*-in hospitals of London, has recently issued a "German-English Medical Dictionary," which has been imported and is offered for sale by Blakiston, of Philadelphia.

After a careful examination I find that Dr. Barnes has copied nearly every one of my words, with their definitions; the latter in the same sequence and with the same punctuation. The few typographical and other errors which escaped correction in the first edition and remained in my plates have, in nearly every instance, been so faithfully copied as to appear ludicrous, were it not for the fact that this alone affords sufficient proof of a shameless piracy. In reading German it is necessary to know the genitive as well as the plural termination of the noun, and a verb may have an entirely different signification according to the auxiliary used. These I have given, but Dr. Barnes has erased them; occasionally he has neglected to do so, and then they have been copied by his printer. Dr. Barnes must have corrected his proof very carelessly, or he would have detected these inconsistencies, as well as many errors in spelling, misplaced and omitted *umlauts*, etc., not contained in my dictionary, and which must prove very confusing to the student. The Latin word for *or* is often used in my definitions. Dr. B. attempted to

suppress this resemblance by substituting a comma for this word; his frequent failure to do so is significant. In the definitions where I have accidentally omitted a comma, where a semicolon has been wrongly used, where words closely related are separated by others which should appear earlier or later, etc., Dr. Barnes has carefully followed suit. In short there is not a page in his book which does not reveal the fact that he has stolen my whole work, adding a very few medical words and a number of chemical and zoological terms which may be found in the ordinary German dictionaries. I do not find more than a score of my words omitted, and the two books contain the same number of pages.

As stated in my preface, my dictionary is an original work, the result of many years of industrious research. The sale of such a book is necessarily limited, nevertheless I hoped soon to be able to issue a revised edition, containing several thousand more words. Though Dr. Barnes' book has not facilitated the reading of German medical writings, he has—unless discountenanced by the press and by the profession, as I have every reason to expect he will be—rendered my new edition impossible for many years.

Respectfully,

G. R. Cutter, M.D.

312 Second Avenue,
New York, March 3, 1881.

ARE WE RIGHT SIGHTED?

To the Editor of The Medical Record.

Sir—In the number of the Medical Record for March 19th, the following experiment, made by the editor of the *Louisville Medical News*, is given:

"As you sit in your chair, point to any object across the room with both eyes open and no attempt at 'sighting.' Close the left eye and you will find you are still accurately on the object, but close the right eye and you will discover with your present vision you are pointing clear over to the right, provided you are right handed."

In trying this, the finger or pencil appears double that is used to point at the object. In the case where the right eye sights, the direct or true pointer is to the left. The one to the right is seen by the left eye and is off the mark. This is reversed when the left eye does the work.

From such experiments it has been asserted that binocular vision does not exist.

Any one who has any doubts on the subject of binocular vision can be convinced by experimenting fifteen minutes with a stereoscope, provided he does not squint and has fair vision in each eye.

Although we have binocular vision, it does not of necessity follow that both eyes do an alike amount of work. That we use one eye for sighting, pointing out the direction of any given object, any one can prove for himself; but to prove the unequal use of our eyes is more difficult.

Three years ago, while assisting Dr. H. D. Noyes, I went over with care the records of more than a thousand of his private patients where each eye had been carefully examined, and the vision and refraction noted. The general results were as follows: When myopia existed there was a higher degree in the right than in the left eye.

When hyperopia was present there was a less degree in the right than in the left eye, and, *ceteris paribus*, the hyperopia became sooner manifest in the right than in the left eye.

In the hyperopic cases the vision was more acute in the right than in the left eye. In the myopic cases, the vision was almost the same in each eye, taking all degrees into consideration.

In other words, of all the eyes examined, the right was longer in antero-posterior diameter than the left eye, the increase in length being caused by the extra work done by the eye.

The better vision found in the right eye of the hyperopic cases means more use and a higher development. A highly hyperopic eye is an undeveloped one and not best suited for the requirements of our modern civilization. On the other hand, myopia is an outcome of civilization and is a disease due to abuse—overwork. To draw positive conclusions from the examination of two thousand odd eyes, is, to say the least, unscientific.

The inference is, that with binocular vision we use one eye more than its fellow—that one being generally the right eye.

Peter N. Callan.

159 W. Thirty-fourth street, New York.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from March 21, 1881, to March 26, 1881.

Gibson, J. R., Major and Surgeon. Relieved from duty at Fort McHenry, Md., and to report to the commanding officer United States Barracks, Washington, D. C., for duty as Post Surgeon. S. O. 52, Department of the East, March 22, 1881.

Brown, H. E., Major and Surgeon. Promoted from Assistant Surgeon, vice Otis, deceased.

Meacham, F., Capt. and Asst. Surgeon. To report for duty to the commanding officer Fort Hamilton, New York Harbor. S. O. 52, C. S., Department of the East.

Reed, W., Capt. and Asst. Surgeon. Awaiting orders at Fort McHenry, Md., to report to the commanding officer of the post for duty. S. O. 52, C. S., Department of the East.

Porter, J. Y., Capt. and Asst. Surgeon. Granted leave of absence for one month, to take effect from 6th proximo. S. O. 28, Department of the South, March 22, 1881.

Schuê, E. D., First Lieut. and Asst. Surgeon. When relieved at Fort Grant by Asst. Surgeon J. B. Girard, to report in person to the commanding officer Camp Thomas, Arizona Territory, for duty. S. O. 27, Department of Arizona, March 8, 1881.

King, J. H. T., Capt. and Asst. Surgeon. The leave of absence granted him in S. O. 253, November 29, 1880, from A. G. O., is extended to June 30, 1881; and his resignation accepted by the President of the United States, to take effect June 30, 1881. S. O. 65, A. G. O., March 21, 1881.

Regulating Medicine in New Jersey.—A Paterson physician was arrested on March 23d, for practicing without a diploma from any regular school of medicine, contrary to the law of the State. It is the first arrest ever made in the county under the law in question, and the issue is looked for with interest by the regular and irregular physicians. The latter claim that the prosecution should be in the nature of a civil instead of a criminal proceeding.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending March 26, 1881.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
March 19, 1881.	41	12	146	22	69	92	39	0
March 26, 1881.	5	32	145	25	53	106	39	0

UNIVERSITY OF MARYLAND.—Dr. I. Edmondson Atkinson has been elected Professor of Pathology in this school. He still retains the Clinical Professorship of Dermatology, previously held by him. Prof. Louis McLane Tiffany has been elected Professor of Surgery in the University of Maryland, Baltimore, *vice* Christopher Johnston, made Emeritus Professor.

ANOTHER CASE OF NEPHRECTOMY in a child, with suppurating and cystic kidney, was performed recently at the Evelina Hospital, by Mr. Morrant Baker. The child was, at last accounts, doing well.

THE INTERNATIONAL MEDICAL CONGRESS AT LONDON. —The arrangements for this Congress have now been quite fully matured. Sir James Paget is to deliver the Inaugural Address on Wednesday morning, August 3d. The following mornings will be devoted to the business of the Sections, while the afternoons (except Saturday) will be occupied by the general meetings of the Congress, at which four addresses will be delivered by distinguished men of four nationalities. Three gentlemen have already promised to deliver these addresses: Professor Huxley, probably on "The Connection of General Science and Medicine;" Professor Volkmann, of Halle, on "Modern Surgery;" and Dr. Billings, of Washington, on "Medical Literature." The fourth address, to be given by a distinguished Frenchman, has, as yet, not been finally arranged. Amended programmes have been compiled and bound with the rules of the Congress into a pamphlet. This is printed in three languages, and can be had by any medical man on application to the Secretary-General. It is certain that there will be a thousand medical men present, and probably twice that number. There will be two large receptions given to the members, besides a dinner which the Lord Mayor will give in the Mansion House.

NIGHT MEDICAL SERVICE.—This service reports sixty calls for the month of February. In several cases the patients paid their own bills.

There has recently been introduced into the State Assembly a bill amending the present Night Medical Service law. The principal provision is the following:

"If any person shall have become suddenly and dangerously sick, or shall receive dangerous injury, within the times mentioned in section 7 of this act, and shall be at a distance exceeding two blocks from any Police Station, any person may call upon a physician registered as provided in this act, who may be near any such sick or injured person, without first applying at a Police Station, and such physician may attend to and administer to such person. If such physician shall not receive a compensation from any such person so attended, after requesting the same, he may, within twenty-four hours after such call, file proper evidence before the police captain, and will then be paid three dollars."

This is manifestly an undue extension of the law, and it should not be made.

The Committee on Public Health has reported favorably the bill to establish a Night Medical Service in Brooklyn.

CREMATION SOCIETY.—The following officers of the Medical Corps of the Navy are among the members of the New York Cremation Society, to wit: Delavan Bloodgood, M.D., Medical Inspector; Henry M. Wells, M.D., Surgeon; George R. Brush, M.D., Surgeon; John W. Ross, M.D., Passed Assistant Surgeon, and others will soon be enrolled.

U. S. MARINE HOSPITAL SERVICE.—Surgeon Bailhache has been ordered to proceed to Wilmington, N. C., and assume temporary charge of the United States Marine Hospital at that port.

A marine hospital will be erected at Memphis during the coming summer, under the direction of Supervising Architect Hill, of the Treasury Department. About $30,000 will be expended for this purpose.

SMALL POX continues to prevail throughout the country. Its chief centres are at Philadelphia, which reports between forty and fifty deaths per week, Chicago, where it is next in frequency, eight or nine deaths a week being reported, New York, Brooklyn, Pittsburg, Pa., and Brownsville, Texas.

MEDICAL LEGISLATION.—A bill has passed the Indiana Legislature authorizing the Governor to appoint a State Board of Health.

A bill has just passed the Michigan Legislature which provides for supplying dissecting material to the medical colleges. The previous law was practically prohibitory of the colleges receiving legitimate material.

BILLROTH'S OPERATION FOR CANCER OF THE STOMACH.—The patient from whom Billroth removed a cancer of the pylorus, by excising part of the stomach, is reported to be nearly well. She takes food by the mouth without trouble.

TYPHUS FEVER AND SMALL-POX.—The Board of Health has appointed eight physicians as lodging-house inspectors, for two weeks, with a view to discovering and preventing typhus. Seven physicians have been appointed for a month as auxiliary to the vaccinating corps. Dr. J. B. Taylor, Chief of the Vaccinating Bureau, says nearly every person stricken with small-pox had never been vaccinated.

CHEMICAL EXAMINATION OF DRINKING-WATER; REQUEST FOR SPECIMENS OF SUSPECTED WATER.—The National Board of Health publishes the following in its weekly *Bulletin*: "A careful study of the chief methods in use for the chemical examination of potable water, so far as organic matter is concerned, has been undertaken by order of the National Board of Health. It is particularly requested of the correspondents of the board, of medical men throughout the country, and of others interested in sanitary matters, that any well-marked case of disease which may

seem on medical grounds fairly attributable to organic impurities in drinking-water, be promptly reported to Dr. J. W. Mallet, University of Virginia, Post-office, Albemarle County, Va., with a few lines stating clearly the medical nature of the case, and the character of the evidence on which the water in question is suspected of having actually caused disease in persons who have used it.

"It is further desired that a sample of each such water be forwarded for examination, *but not until notice has been received from Dr. Mallet that the analysts are ready to proceed with it*, since it is important that no useless delay should occur between the shipping of the sample and its investigation in the laboratory. In notifying any one who may be able to furnish specimens of suspected waters that may be forwarded, clear instructions will be sent as to the quantity of water required, and the mode of collecting, packing, and shipping it.

"It is particularly desired that no case be presented on doubtful or vague evidence, since one important object of the inquiry demands that all such be rejected, and only those cases examined which involve the strongest grounds for believing that mischief has really been caused by organically foul drinking-water.

"The cost of packages and transportation for samples will be borne by the Board of Health."

Improved Dover's Powder.—Dr. H. D. Vosburgh, of Lyons, writes: "In your issue of February 12th I find a note from Dr. S. Mitchell, Jr., giving the composition of *his* Dover's powder.

"Every practitioner knows what a valuable remedy Dover's powder is, still that prepared according to the formula of the United States Pharmacopœia is susceptible of improvement. I find, on inquiry, that many physicians who dispense their own remedies have their own Dover's powder.

"After trying various compounds, I have for several years used the following with results entirely satisfactory.

"In order to keep gum-camphor in a perfect powder, I grind it with an equal bulk of the English creta preparata; this I dispense as pulverized camphor. Now, my Dover's powder is compounded as follows, viz.:

℞. Opii pulv.,
Ipecac pulv ..... āā ʒ j.
Potass. nit. pulv. ..... ʒ iv.
Pulv. camph. (prepared as above noted),
Rad. glycyrrhiza pulv..... āā ʒ ij.
M.

"This seems to me a better anodyne, a better sudorific, and a better hypnotic than any other compound I have ever seen called Dover's powder."

The Local Origin of Diphtheria.—E. J. Bergen, M.D., of Wamego, Kan., writes: "I send you an account of the surroundings of some persons who had diphtheria here during the early part of November last. It may add a little to the evidence that the disease is of local origin. If there is one place more than another which from its surroundings and locality would seem to be exempt from zymotic diseases, it is this town. Situated on the north bank of the Kansas River, with the ground gradually rising toward the north, and having a subsoil composed of sand and gravel, affording excellent drainage, and the town being less than fifteen years old, there has not been that accumulation of filth found in larger places, together with an almost constant wind blowing from the south, makes the place in a favorable position for health.

"Still, there has been diphtheria here, and that of a severe type. The first cases that came under my care were in a family about four miles east of the town. The family consisted of the parents and four children, three of whom had the disease, one—the youngest—dying in about thirty-six hours from the onset of the attack. The house was situated on the bottom, and about one hundred yards west of a pond of water. This pond covered about eight acres, and its edges were covered with decaying vegetable matter. While a south wind usually prevails here, still sometimes the wind comes from other points. These children were taken sick the first of November, and for a few days previous the wind had blown from the east (there had been no frost here at this time of any amount), and as I examined carefully all other suspected places about the premises, and could find no apparent cause for the disease, I attributed it to the locality near the pond, from the reasons stated. The next case was a young man—his business that of a dealer in vegetables, and his place of business in a cellar. It was necessary for him to remain in the cellar most of the day. On examining the cellar I found all manner of decaying vegetable refuse. The condition of this place was evidence enough where he had contracted the disease. Dr. Jennings, of this town, saw this case with me and agreed as to diagnosis. The other cases I did not see, but am satisfied they were genuine cases of diphtheria. The house and surroundings I examined and found them well suited for the development of any disease which filth produces. On the southwest side of the house and about seventy-five feet from it, was a hog-pen and cow-stable; in the stable was two dead calves, and the hog-pen was also in a miserable condition; the hogs were allowed outside of the pen, and in fact it is almost impossible to describe the filthy condition of everything about the house. The well was also in the yard. Here was a house situated so that the wind from its usual quarter blew the odors arising from the yard direct to the house. As there has been no other cases of the disease here, the facts above seem to point that it was due to local causes; at any rate you have them for what they are worth."

Phosphide of Zinc in Locomotor Ataxy.—Two cases of ataxy are reported by Dr. Hastings Burroughs, of Paris, in which very great benefit was obtained by the use of phosphide of zinc. The drug was given in doses of one-tenth of a grain per day, increased to half a grain per day.—*Medical Press and Circular.*

The Columbian Institute is the name of a medical establishment recently incorporated in this city, having for its main object the treatment of chronic diseases. It is organized in such a manner that patients who so desire can be treated by their own physicians, and without any interference by the Medical Board of the Institute, except to enforce an observance of its rules. The by-laws have been so framed as to place all matters of a medical nature, and those involving any question of professional ethics, exclusively within the jurisdiction of the Medical Board. The Medical Board is as follows: Henry A. Hartt, M.D.; Edwin H. Davis, M.D.; Kenneth Reid, M.D.; Stephen De Wolfe, M.D.; L. C. Vincent, M.D.; Thomas McLees, M.D.; M. Josiah Roberts, M.D.; Robert Newman, M.D., and J. S. Billings, M.D.

Original Lectures.

TYPHUS FEVER.

By ALFRED L. LOOMIS, M.D.,

PROFESSOR OF PATHOLOGY AND PRACTICE OF MEDICINE IN THE UNIVERSITY OF THE CITY OF NEW YORK.

(Phonographically reported for THE MEDICAL RECORD.)

LECTURE II.

GENTLEMEN: I told you, at the close of my last lecture, that the changes in the blood are perhaps more marked and more rapidly developed in typhus fever than in any of the other infectious diseases. It assumes a darker color than normal, and coagulates imperfectly, if at all; the red blood-globules are increased in number at the onset of the fever, but become diminished as it progresses; the blood contains more ammonia and urea than normal, and when withdrawn from the body it rapidly undergoes ammoniacal decomposition; the serum of the blood is more fluid than normal, contains less of albumen, and is of a darker color than in health. It is claimed by some authorities that the saline elements of the blood are increased in quantity; if so, it is due to an increase of the ammonia salts. At the time of death from typhus fever the blood is sometimes found already to have undergone ammoniacal decomposition. You will rarely find blood-clots formed in the arteries or heart, and when you do find them they will be of a putty-like consistency. These changes in the blood occur much earlier in some cases than in others, and are much more extensive in the severer types of the disease than in the milder types.

There is the same tendency to parenchymatous degenerations of the different organs and tissues of the body in typhus fever as in typhoid, but they are not, perhaps, as marked or of the same nature as are met with in some of the other fevers. Granular degeneration of the muscles of the body takes place; they are of a darker color than normal, and contain less fluid elements. In some instances they lose their contractile power to a great extent, as has been determined by the application to them of the galvanic current. There can be no question that loss of muscular power is one of the earliest pathological changes of this fever, and it is caused undoubtedly by a change in the elementary constituents of the muscles.

The liver is increased in size, only, however, from congestion. The spleen may be increased in size, but its enlargement will not be accompanied by the softening and other changes which so constantly take place in typhoid fever; you are not likely to find it in that fluid-like condition which it so often presents in typhoid fever. The most marked parenchymatous changes are to be found in the kidneys. The cortical substance is increased; there is cloudy swelling of the epithelium of the renal tubes, and the kidneys are very much increased in size, partly from engorgement and partly from granular infiltration of the uriniferous tubules. I early recognized that, in the clinical history of typhus fever, albumen was present in the urine in all the severer forms of the disease, and having kept a record of the condition of the kidneys at the post-mortem examinations in a large number of cases, I was disposed to believe that the changes which I found were similar to those which take place in the severer types of scarlet fever; but a more careful and more extended study has shown that it is not a desquamative nephritis, but rather a granular infiltration of the spinal epithelium; the function of the kidneys is, earlier in the severer forms of the disease, as thoroughly disturbed as in the ordinary nephritis arising from scarlet fever, and perhaps more so. This interference with the function of the kidneys constitutes an element of danger to all patients severely ill with typhus fever.

The muscular power of the heart is diminished, but you will not find the heart presenting that flabby appearance which it so often presents in other forms of infectious diseases. The heart retains very nearly its normal outline, and yet, a microscopical examination of its tissue will show that it has undergone changes similar to those which take place in other muscles of the body.

The stomach and intestines present no marked lesion. There may be a slight catarrh of the intestinal tract, and the Peyerian patches may be elevated and present the "shaven beard" appearance; but none of those characteristic changes which occur in the glands of the intestines in the course of typhoid fever, and which constitute so marked a feature of that disease, take place in typhus fever. If you should be in doubt whether a given case were one of typhus or of typhoid fever, the condition of the glands of the intestines would settle the question. No degenerative inflammatory process of the glands of the intestines occurs in typhus fever, although they may be enlarged from catarrhal process, as often happens in scarlet fever.

The sinuses of the brain are engorged with dark blood, and its entire venous system is more or less distended, varying in degree in different epidemics. In some epidemics the venous engorgement within the skull is a constant pathological change; in other epidemics there is little venous engorgement, but a large amount of serous effusion underneath the arachnoid, lifting it up from the surface of the brain, sharpening the convolutions and deepening the sulci; and when you remove the calvarium and open the dura mater, from four to ten ounces of clear serum will flow out from the meshes of the pia mater. The ventricles of the brain also contain more or less serous fluid. This serous effusion on the surface of the brain and in its ventricles may be blood-stained. I neglected to state, when speaking of the changes in the blood, that in some cases—especially in those in which a petechial eruption exists—there is more or less disorganization of the red blood-globules. When they are examined under the microscope, their edges present a serrated appearance, and some of them are completely disorganized. It is in these cases that the membranes of the brain and the brain-tissue become more or less blood-stained. To the form of typhus fever which presents these changes the name petechial typhus has been given. Please to remember that there is no fibrine in this subarachnoid effusion; that there are no deposits of fibrine on the attached or free surface of the arachnoid. The serous effusion is not the result of an inflammatory process. There is no meningeal inflammation.

Glandular enlargements occur in some epidemics, not in all. The glands about the neck, as the sublingual and the parotid, are most likely to be enlarged, and they may be enlarged to such a degree as to make it impossible for the patient to swallow even liquids. The post-cervical, the inguinal, and other glands may be enlarged.

You will observe, gentlemen, that, among the path-

ological lesions which I have mentioned, not one is characteristic of typhus fever. There is *no characteristic pathological lesion of this fever.* It is possible that some such change may exist in the blood which we have not yet been able to discover.

The complications which occur in typhus fever are so constant, that most observers have regarded them as a part of the pathological history of the disease; but they are not, strictly speaking so, for they differ in no way from the complications which may occur in other fevers. The character of the complications varies in different epidemics. In the first epidemic of typhus fever I ever saw, all the complications had their seat in the glandular organs; in the next they were cerebral; again, they may be pulmonary; and again, all these complications may exist in the same individual, but usually one is more prominent than the others. The pulmonary complication may be either pneumonia, bronchitis, pleurisy, or congestion and œdema. At almost all of your post-mortem examinations of those who die of this fever, you will find more or less pulmonary congestion and œdema. This is the result simply of falling vitality which comes on during the last hours of life—it has no particular significance. If a bronchitis or pneumonia complicate typhus fever, it may come on so insidiously that you will not detect it by the rational symptoms, and, unless you make a physical examination, it may pass unrecognized during life. There may be no cough, no expectoration, no change in the temperature, and you will simply notice that the patient is getting more and more severely ill, that the pulse is becoming more frequent and feeble, the respiration more frequent and imperfect, the extremities and face assuming a dusky hue. Under these circumstances you will be led to examine the lungs, and will find pneumonia or capillary bronchitis. These do not differ in their pathological changes from those changes which occur in capillary bronchitis or pneumonia occurring independently of typhus fever, excepting that there is no activity in their development.

The cerebral complication is meningitis, and this also is insidious in its development. It is very difficult to distinguish between the coma which results from pressure by a serous effusion of a non-inflammatory origin and the coma which results from pressure by a serous effusion of an inflammatory origin. You will not find pus as a product of the meningeal inflammation very often; the inflammatory products will be serum and fibrine in the meshes of the pia mater. The serum does not present the clear appearance which it does when no inflammation is present; it is more or less turbid. The arachnoid membrane loses its natural brilliancy, and becomes more or less opaque, and along the lines of the vessels there are distinct fibrinous deposits.

When glandular enlargements complicate typhus fever, there will usually be suppuration and a cellulitis in the neighboring tissues.

Such, gentlemen, are pathological changes which you will find at post-mortem examinations of patients who have died of typhus fever. I have not yet found any special lesion at a post-mortem examination of a typhus patient which would enable me to say unqualifiedly that the patient had died of typhus fever.

I will now give you an outline of the phenomena which attend the development of typhus, and then consider in detail some of its prominent symptoms.

The ushering-in symptoms of typhus fever are generally well-marked. It begins, in a majority of cases, with a distinct chill. A chilly sensation may exist for a day or so, but a distinct chill will occur before the fever develops. The ushering-in chill of typhus fever differs from the chill of intermittent fever in that it is short, sharp, and decided. It does not come on as a feeling of cold running down the back—a creeping chill—but as a distinct, short, sharp chill. At the time of the chill or of the chilly sensation, there is a pain in the head, which increases in severity from hour to hour, until it becomes so severe that it compels the patient to go to bed. At this time, perhaps before you notice any other symptoms, there is muscular weakness, which is more marked in this than in any other disease. I remember that when one of my house physicians in the hospital had the commencing symptoms of typhus fever, etc., he insisted on making the rounds with me, believing that he had the will-power to resist the disease, and being unwilling to admit to himself that he was ill; but before I had completed my rounds he fell to the floor by my side, being unable to stand on his feet, simply because of muscular weakness; and yet he had not been ill for more than forty-eight hours. The pain in the head has been described by patients as one of the most intense pains one can suffer. I have suffered from it in a slight degree at different times, when first entering upon typhus fever service.

Before the chilly sensation passes off there is a rise of temperature; and after the chill it rises rapidly, reaching, perhaps, 104° or 105° F. within twenty-four hours. At the time of the rise in temperature there is an acceleration of the pulse, reaching, within forty-eight hours after the commencement of the disease, 120, perhaps 140 per minute. The headache will subside within three or four days and delirium will follow, which may be either low and muttering, or violent in character. A few persons, after their recovery, have remembered the delirium, and they describ eit as "exhilarating delirium;" my impression is that the delirium will differ with the mental condition and peculiarity of the patient. The delirium of a common laborer is more likely to be gross and of a muttering character, less exhilarating than that of a man of active intellect. A Frenchman once thought that the typhus fever which the English described was merely a modification of typhoid fever, and he went over to England to investigate the matter, and while doing so contracted the fever. On his recovery he remembered his delirium, and he described it as exceedingly pleasant; he saw most beautiful sights, and heard the sweetest and most exquisite sounds, and was carried above the earth and earthly things. I think the delirium of typhus fever, when such sensations are experienced, differs from that of most cases in other diseases.

The face very soon assumes a dark, turgid appearance and presents what is termed the mahogany countenance. The countenance is like that of pneumonia, with the exception that the eyes, instead of being bright, are dull and heavy. They are suffused, and the conjunctivæ are congested. The tongue is at first moist, and covered with a thick, yellow coating; but it very soon becomes brown in the centre, and it finally becomes so swollen that it is difficult or impossible for the patient to protrude it beyond the teeth. A large, swollen, thick tongue is rather characteristic of the severer types of typhus fever.

The temperature keeps for twelve days very nearly the range which it reached within the first twenty-four hours of the disease; some say until the fourteenth day. There unquestionably is a day of crisis

in typhus fever, and you may expect it to be reached by the end of the second week. When the crisis is reached the temperature usually falls quite rapidly, and within a day or two becomes normal. In this respect it differs from other fevers. There is no typical range of the temperature, as occurs in typhoid fever, but it remains high during the first eight, ten, or twelve days of the fever. In the milder forms of the disease the temperature may not exceed 103° F.; but, whatever height it reaches within the first twenty-four hours, it will probably remain at that range for ten days or two weeks.

While the pulse may run rapidly up to 120 per minute, it usually corresponds to the range of the temperature for eight or ten days, when it begins to be irregular, and is accelerated by the slightest cause. It is not unusual for the pulse to reach 140 per minute in the severer types of typhus fever.

On the fifth day of the disease, or between the fifth and the seventh, an eruption makes its appearance upon the surface of the body, consisting at first of little red dots, which soon increase to two or three lines in diameter, and are surrounded by a grayish or brownish discoloration. There is over the surface of the abdomen often a mottled appearance, which Dr. Jenner described as the mulberry rash of typhus fever. Some of the newspapers lately represented some of our good physicians as speaking of spotted typhus, and it seems that they mixed it with spotted fever. By spotted fever we understand cerebro-spinal meningitis. Now, in typhus fever the eruption assumes a mottled appearance rather than the appearance of distinct spots. They are not distinct red dots, as occur in typhoid fever. The eruption is quite bright at first, but soon becomes darker, and the whole surface assumes the mulberry rash appearance. The spots at first disappear under firm pressure, but they soon cease to do so, and remain visible until convalescence is established or until death occurs, and it may often be seen when the body is lying on the autopsy-table. The eruption may appear on the entire body, excepting the face; it may appear on the arms, on the legs, on the abdomen, and on the chest. Sometimes you will find with the mulberry rash quite dark spots—called petechial spots, and it is for this reason that typhus fever was once called petechial fever. These petechial spots are nothing more than little blood-extravasations, the result of the extensive changes which have taken place in the blood—changes caused, perhaps, not by the typhus fever, but by the bad hygienic conditions under which the disease was developed. You will understand me when I refer to a remark made at my last lecture: that when persons breathing the atmosphere of decomposing animal and vegetable matter are subjected to filth, bad nutrition, and other unhygienic conditions, they sometimes develop a fever which has been called camp-fever, hospital-fever, jail-fever—resembling typhus fever, but not caused by the specific poison of typhus fever. If typhus fever shall develop among persons under such conditions, you will find the petechial spots not due to the typhus poison, but to the anti-hygienic surroundings under which the fever is developed.

International Medical and Sanitary Exhibition.—In connection with the International Medical Congress to be held in London this summer, there will be a medical and sanitary exhibition. Means are now being taken to advertise this. Applications for space must be in by the 16th of April, according to a recent cable dispatch.

Original Communications.

ON STATICAL ELECTRO-THERAPEUTICS;

Or, Treatment of Disease by Franklinism.*

By W. J. MORTON, M.D.,

new york.†

physician to the department for nervous diseases, metropolitan throat hospital, new york, and professor of diseases of the mind and nervous system, university of vermont.

(Continued from last number.)

REPORTS OF CASES.

Space forbids in the present paper more than a few briefly reported cases typical of the relief and cure effected by statical electricity.

Case I.—Mrs. K——, seventy-two years of age, hysterical spasm. This lady applied to me for advice two years ago, but I was unable to afford, notwithstanding persistent and various medication, the least relief. Despairing of curing her, and considering the case interesting, I obtained her consent to going before the meeting of the American Neurological Association, in June, 1879, from whose records I extract a few lines describing her condition: "Dr. W. J. Morton presented a patient who for many years had suffered from sudden attacks of great distress, both mental and physical, attended by apparent eructations of immense quantities of wind. The seizures lasted from one-half to one or two hours, during which the patient was greatly distressed. The attacks were developed by any form of excitement. They were in no way related to dyspepsia. None of the members had seen a case exactly like it. Nothing in the way of treatment had afforded any benefit."

Mrs. K—— has been subject to these attacks daily for twelve years, she attributes their origin to emotional troubles. The attack is usually ushered in by a tired feeling and much apprehension. At the same time she generally feels nausea. They are most often brought on by surprise, a question, or a variety of slight causes, though frequently occurring without any known exciting cause. Their onset has no relation to the food she takes. Shortly following the sense of weariness succeed excruciating pains, first in the wrist and fingers, then in the elbows, and up the arms. She at once begins to rub these parts in great distress; the pains soon reach the knees and feet; a sense of tickling begins in the throat, which quickly becomes tense and rigid, and creates a sense of suffocation; finally there is severe pain between the shoulders, the patient now presenting a case of greatest distress. The muscles at the articulations named are tensely contracted. The order of events described is sometimes varied by the origin of the attack in the face, alongside of the nose, and in the teeth and gums. Suddenly the patient's distress is in a degree relieved by what appears to be a great belching of wind from the stomach. This phenomenon I cannot explain. A feather held at these

* Abridgment of a paper read before the New York Academy of Medicine, March 3, 1881.

† Owing to an inadvertence Dr. Morton's address on the title page of the last number of the journal was stated to be "Vermont." It should be as above.

times before the mouth is neither drawn inward nor blown outward. There is, therefore, no real belching. The sound more nearly resembles that of cribbing horses or the grunting of certain fishes. The attacks break up with profuse involuntary lachrymation. Such an attack often lasts two hours, and occurs several times daily. She believes that under such circumstances life is a great burden to her.

I will not further enlarge upon her symptoms. Unable to relieve or cure her, I had abandoned the case. Returning from Europe this summer, she again called, and stated that she was much worse.

As a last resource I suggested static electricity, with the following history :

November 16th. Insulation, half hour, and sparks at epigastrium. November 18th. No spasm since insulation ; yesterday was the first day for twelve years that she has passed without an attack. Insulation and sparks to spine. November 22d. No attack since last record. Feels perfectly well. November 23d. Pain in the arms and between the shoulders was beginning when she mounted the insulating platform ; this disappeared in ten minutes. November 24th. A slight spasm yesterday, with pains. November 27th. No further attacks. Treatment thrice weekly was continued during December, with no returns of attacks. January 7th. To-day fell on the ice, which brought on severe attack of pain in the epigastrium, arms, and legs, and suffocation, the whole lasting about eight hours. From this date treatment was continued two weeks, and the patient was then entirely cured. No other form of treatment was made use of. No appearance of a return has occurred to date.

It need hardly be said that the sudden cessation of the misery of years was equally gratifying to physician and patient.

Case II.—*Hysterical spasm and paralysis.*—Mrs. M——, aged twenty-six ; married seven years ; three children ; no neuropathic history.

Present trouble began three years ago last June. While walking noticed something like a flame before the eyes, then her sight failed her, her arm and leg grew heavy, her tongue thick, so that she could only sputter, but she in no wise lost consciousness.

She laid in bed eleven months, paralyzed in the *entire* left side. The face was flat on the left side, and drawn to the right ; the leg, arm, and hand were numb, but were also subject to stinging, prickling pains ; her face and lips also prickled ; had globus hystericus. Though she left her bed at the end of eleven months, she has never been well.

Present condition.—Attacks occur daily. The whole left side suddenly grows numb and heavy as lead. At the same moment the leg shortens, the arm also shortens and retreats up the cuff of her dress, the tip of the shoulder mounts nearly to the left ear, while the whole left side of the face is in the condition of facial spasm. At the same time the throat constricts and the jaws are set in a complete trismus. She now can neither speak nor eat, though suffering little pain. She is often obliged to have her food in the form of soup administered through an opening in the mouth produced by a former extraction of a molar tooth.

These daily attacks often continue three or four hours. They come on suddenly. Sensibility on left side, at times anæsthetic, at times hyperæsthetic. The phenomenon of *transfert* may at any time be produced. Left eye amblyopic and achromatopsic. Left side of tongue has no sensation of taste. In short, the complete sensitivo-sensorial anæsthesia described by Charcot exists. Dynamometer, during attack, left hand 5 ; right hand, 36 ; out of attack, left hand 25 ; right hand, 36.

Treatment.—December 29th. Insulation, positive charge for half hour, sparks to left side ; transfert soon effected. December 30th. Same. December 31st. Now no limp in left leg, while the arm also is more manageable. The daily facial spasm and trismus has not returned. Normal sensation on left side with the exception of a numb area over the deltoid and on the dorsal aspect of the forearm. Dynamometer, left hand, 38, right hand 40. January 4th. But one attack now for four days. Treatment same. January 7th. No further attacks ; only remaining trouble is a slight stiffness about the neck, and a tendency to blepharospasm. Appetite excellent. January 8th. Slight attack of facial spasm. January 13th. Says she is perfectly well. Treatment, insulation and sparks to spine. January 15th. A slight twitching about the right eye ; this is the first motor trouble on this side. January 16th. Again a slight attack ; left side of face feels stiff and its muscles are a little drawn. These symptoms can always be relieved by pressure on the facial nerve. January 23d. One severe attack. Face much drawn and stiff. Left side very anæsthetic and cold to the touch. Temperature, surface of left arm, 75 ; right arm, 88. Insulation for twenty minutes. Oscillations of temperature and sensibility first took place, with finally transfert of anæsthesia to the right side, followed by hyperæsthesia in the left. The temperature was now stationary at, left arm, 95 ; right arm, 90. January 27th. With daily insulations and sparks to the spine, all signs of attack seem now to have ceased. March 2d. The patient has been under treatment during February with but now and then the slightest admonitions that she is not yet completely cured. But the great change in her condition, from three to four hours of helplessness to almost complete health, justifies this much abbreviated report of her case.

Case III.—December 2d, 1880. Miss C——, twenty-three years of age. Muscular rheumatism. Subject to rheumatism for ten years. Began with a severe attack of acute articular rheumatism. Scarcely a week during the last five years but she has felt pain in some part of her ; frequently as a "stiff neck." Had sciatica for one year and walked with a cane.

Present condition began eight months ago, though worse during last few weeks. Has pain and feels stiff in the neck, back, legs, and arms. Every movement occasions great pain. She is, in short, crippled. Each morning she must be raised from bed, but in several hours she is able to get about better than at first.

Treatment.—Positive insulation and slight sparks. Patient improved with each day's treatment. December 6th. All pains had disappeared, and patient, for the first time in many months, walked freely. December 7th. After overwalking, suffered again from a moderate general lameness in the muscles. December 10th. Every vestige of pain disappeared. Appetite much improved. Though so well, patient was so fearful of a return of pain that she continued treatment up to January 7th, when she discontinued it, satisfied that the cure was absolute. Up to date, nearly two months ago, no return has occurred. No other treatment was used. A number of cases of rheumatism may be alluded to very briefly.

Case IV.—December 15th. Mrs. B——, thirty-four years of age. Pain in both shoulders to such extent that she never raised the arms ; deltoids and

trapezei chiefly affected; also pain in right hand; this condition existing very steadily for three years.

Treatment.—Insulation and sparks; one application. Pain has never returned.

Case V.—December 6th. Mrs. J. B. F——. After sitting in the draft from a window one year ago, pains began in the right arm and shoulder. At present does not raise her arm on account of pain in the shoulder-joint. Has also pain in the wrist and in the joints of the fingers, some days in one joint, some days in another. The arm feels "woolly," *i.e.*, anæsthetic, and heavy. Insulation and sparks. Complete relief in twenty minutes, with no return to date.

Case VI.—Mr. U——. Chronic rheumatic pains and stiffness in both shoulders. During the entire winter it has been impossible for him either to raise the arms at the shoulders or put them behind his back.

Treatment.—Insulation and two inch sparks. To the patient's great surprise, he was able, after five minutes' application of the sparks, to throw his arms about freely in every conceivable direction. No pain or impairment of motion remained. The result was surprising also to a number of physicians who were present.

Case VII.—December 31, 1880. Miss R——, twenty-two years of age. Pain in left biceps; also in elevator muscles of left scapula. Unable to use left arm, and suffering much with it during the last month.

Treatment.—Insulation and sparks. Relieved by the first application of every vestige of pain, and enabled to use the arm freely. No return to date. It would be wearisome and needless to quote more of these cases from my record-book. I have known no instance of failure to completely relieve in from one to ten insulations all cases of muscular rheumatism. Lumbago of long standing seems to require patience for one, and to ensure entire recovery, perhaps two weeks.

A single instance of sciatica and cruralgia will suffice for all.

Case VIII.—December 11, 1880. Mr. H——, twenty-eight years of age. Begun three years ago. Subject to severe attacks of shooting, throbbing pain in hip, thigh, and extending to the toe, lasting generally three or four weeks. He walks lame, seldom sleeps more than an hour at a time during the night without waking up in pain. During the last week, in addition to a painful sciatica, he has had great pain in the line of the anterior crural nerve extending as far as the inside of the knee. Medicines and a great variety of liniments have given no relief.

Treatment.—Insulation and very severe sparks (three inches), since patient was perfectly willing to take them. December 12th (next day). Patient reports that he has had no pain since leaving the office, that he slept well, and now walks without lameness. Up to date no return of trouble.

Case IX.—*Bell's paralysis*, right side.—Mr. F——, medical student, twenty years of age. Referred to me by Dr. Hammond. January 1, 1881. Patient, after walking in a very cold wind on December 19th, noticed the next morning that his face drew to the left side. The next day he could not close the right eye, and on examination found that the whole right side of his face was paralyzed. Faradaic electricity and strychnia had been used up to January 1st, with no effect. He accordingly wished to try the static electricity. At the time of beginning treatment there was no possible voluntary motion on the part of the muscles supplied by the facial nerve. Water ran out of his mouth, and food lodged between the cheek and teeth.

Treatment.—Each muscle was singled out and treated by sparks, and also the trunk of the facial nerve.

The patient writes: "After the third insulation there was a marked improvement in some of the muscles each day, and after the seventh my face was entirely straight."

Case X.—*Bell's paralysis.*—January 7, 1881. Mrs. A——, aged forty. Absolute right facial paralysis, of two months' standing (untreated). Right eye open and staring and much inflamed; saliva flowing from right angle of mouth, and other symptoms usually seen in these severe cases.

Treatment.—Insulation and sparks. January 8th. Can now very nearly close the eye. January 9th. Buccinator less flabby; eye closes. January 14th. At the end of the seventh application all the paralyzed muscles had recovered their proper action with the single exception of the occipito-frontalis. I continued treatment two weeks longer, hoping to restore this muscle, but was unable to do so. Its nerve-supply is apparently irreparably injured, owing probably to the two months' neglect in treatment.

Case XI.—*Pressure paralysis.*—Mr. A. D——. One week previously went to sleep with his arm thrown over the back of chair. On waking up found his arm paralyzed; it was numb, heavy, and pricking, as if asleep; he could not hold objects in his hand. To tests of sensibility there was anæsthesia; dynamometer, right hand, five; left hand, sixty.

Treatment.—Insulation and sparks. After the fifth application the arm was cured.

Case XII.—*Progressive locomotor ataxia.*—The early diagnosis of locomotor ataxia carries with it a promise of cure directly in ratio to the accuracy of the diagnosis and the immediate application of remedial measures. November 24, 1880. Mr. A. L——, aged sixty. During the last year patient describes very accurately the symptoms common to pre-ataxic or neuralgic stage of locomotor ataxia. He is now just entering upon the ataxic stage. Present condition: shooting, stabbing pains in the legs, occurring in paroxysms, particularly preceding changes in the weather. The same pains sometimes occur in the arms. Patient often rolls in agony on his bed during a paroxysm of several hours, and though a strong man, the pain is such as to bring tears to his eyes. No spot in his legs seems to be free from these pains, though they are worst in the thighs and great toes. The exclusion of simple sciatic pain was clear, especially as the affection is bilateral. The patellar tendon reflex is absolutely abolished at the left knee, and but a very weak response can be evoked at the right. The vesical and rectal reflexes are also much diminished. Urination and defecation are both slowly accomplished and difficult. Sexual power is absolutely abolished. No strabismus or ptosis, but diplopia has existed for two years. The reaction of the pupillary reflexes is diminished; carefully tested in shade and light they showed but little normal response. The patient seems to be just entering upon the ataxic stage, for he walks with a heavy cane, complains that he does not feel the ground well, particularly on the sole of the left foot; cannot walk in the dark without retaining his hold on the wall or banisters, and exhibits the usual swaying with closed eyes.

The whole group of symptoms, fulgurating, bilateral pains, abolished reflexes, and ataxia, render the diagnosis of locomotor ataxia perfectly clear.

I found the patient in a paroxysm, and prescribed the usual remedies, proposing that the next day he should begin treatment by electricity.

Treatment.—The treatment was simple and offers little variety in the records. It was insulation and heavy sparks from the spine, continued daily, from November 24th to December 23d, in all twenty-two applications. The pains disappeared at the end of the tenth application. The patient returned to his home cured of his ataxia and of his pain.

In a note written ten days ago, nearly two months and a half since his return home, he says: "I now walk perfectly well, and have had no pains, not even a twinge, since my return home."

With these few cases, briefly synopsized, I leave this part of the subject.

I am well aware of the value of statistics, and shall take occasion to collect them as soon as is possible. For the present I am obliged to select from the records of private practice only a few typical cases of a form of treatment which I have only lately employed.

CONCLUSIONS.

First.—Static electricity as a curative agent in medicine may fairly be placed on a level with galvanism and faradism. In certain diseased conditions it is superior to either. Cases I., II., III., etc.

By insulation and sparks, paralyzed muscles and nerves are stimulated just as by induced currents.

Second.—The main objections to static electricity are based upon the inconvenience, the working uncertainties of the apparatus, and the difficulty of measuring and controlling the electricity administered.

These objections fail to have weight with the use of a modern improved Holtz machine, and a proper electrometer.

Third. Insulation and sparks, both or either, more notably sparks, relieve cutaneous anæsthesia more quickly than galvanism or faradism. In hemiplegia with organic lesion, numbness and anæsthesia is at once relieved by this treatment.

Fourth. Decided motor improvement may be obtained in hemiplegia of long standing. The dragging of the toe, the tread on the outer side of the foot, the outer swing to the leg, the rigidity at the knee, elbow and shoulder, may all be to a very apparent degree and often entirely removed.

The contracture at the wrist and fingers is incurable.

Fifth. In paraplegia and systemic diseases of the spinal cord in general, there is every reason to expect that by means of long and strong sparks to the spine that results not now attainable may be reached. Case XI.

A distinguished and careful observer,* familiar with the treatment by sparks, thinks that "patients suffering from paraplegia who are now benefited by the constant current were previously cured by static electricity."

Sixth. In the sense that medicines are tonic, the positive electrical insulation is tonic.

Seventh. Statical electricity by insulation and sparks is principally useful in conditions of paralysis, spasm, and neuralgia, and pre eminently in subacute and chronic rheumatic affections, whether tendinous, fascial, or muscular.

Eighth. Static electricity cures disease, as other forms of electricity do by stimulations of nerves and muscles, organs, and nerves of special sense. It likewise cures, by aid of the spark, in virtue of a sharp, deep, mechanical agitation of the diseased tissue, acting in this instance like physical exercise and massage, by causing alteration of nutrition.

But above and beyond these methods of curative action is the principle, as lately established by Brown-Séquard, of reflex action in remote parts by peripheral irritation of the terminal distribution of the sensory nerves. In electrification by insulation electricity of high tension is actively accumulating on and beneath the skin, *i.e.*, the nerve distribution, and as actively discharging: the effects of static electricity are then in this instance produced from the periphery; and, owing to the fact that the electrification is general and the tension high, no other form of electricity offers equal promise in the treatment of diseases or conditions that can be affected either in a sedative or stimulating manner from the general peripheral nerve-distribution. The recent experiments of Brown-Séquard lead us to believe that many diseases may be thus acted upon.

Ninth. The invention by the author of a method of obtaining an interrupted static induction current from a frictional electrical machine adds to medical electricity a new and practical means of electrical treatment. This current is more agreeable in its administration than ordinary induction currents. Both nerves and muscles are stimulated by it to a higher degree than is possible by means of any other induction current now in use, and a corresponding advance in the efficacy of electrical therapeutics in these two directions may be confidently expected.

The new current, furthermore, greatly enlarges the scope of statical electrical machines in medicine by combining in a single machine all the advantages both of static and induction electricity.

* Dr. Wilks, a physician of long experience at Guy's Hospital, London, where statical electricity was formerly largely used.

CONJUNCTIVITIS FROM IMPURE DUST OF THE STREETS.

By EDWARD G. LORING, M.D.,
NEW YORK.

THERE can be no question but that catarrhal affections of the eyes are more prevalent at the present moment in New York than for many years past, if not at any time. That this is not due entirely to local causes is shown from the fact that the catarrhal epidemic began in Continental Europe some two or three years ago, advanced eastward to the British Islands, where it was very prevalent, then passed to our own coast, in a pronounced form, some eighteen months ago, where it has prevailed ever since to a great and what would appear to be an increasing degree.

That the trouble, so far as New York is concerned, is not, however, purely due to atmospheric influences and of foreign origin, is proved by the fact that those who come from neighboring places without the trouble are very liable to an attack in New York, and get well as soon as they leave the city, while those who are native to the city, and who have contracted the trouble here, either are much improved or entirely cured as soon as they leave the city, only to have their troubles return the moment they come back.

That there are many causes peculiar to city life which produce troubles of the different mucous membranes, many of them of a dangerous or fatal character, cannot be denied. That such factors of

disease exist to an alarming degree in the city of New York also cannot be gainsaid. It would lead me too far, even in regard to the condition of the eyes alone, to rehearse here the evil effects arising from the style of architecture of the dwelling-houses; parlors heated by a pestilential furnace and lighted with a thousand and one lamps supplied by the cheapest and most noxious gas that can be made; bedrooms into which no ray of sun ever enters, and the prevailing odor of which is a mixture of sewer-gas and stale bedclothes.

Bad ventilation, bad light, bad drainage, and an insufficient water supply, are, it is true, but too common to every city in the land, but there is one factor in the production of catarrhal diseases, which is more frequent in occurrence and worse in kind here in New York than anywhere else, probably, in the world, and that is the dust arising from the neglected and filthy streets. This is mostly made up of desiccated manure ground to a powder, and not only are the streets so full of it that miniature bonfires line the way, lighted by a rejected cigar or half-consumed match, but the houses themselves are so permeated with it in the shape of a fine impalpable powder that there is not a single dwelling in the city where one cannot write one's name on any piece of polished furniture half an hour after it has been thoroughly dusted, while a slanting sunbeam will show so dense a quantity of minute particles in the air as to create a wonder how one can breathe such an atmosphere without choking. Ash-barrels, dead dogs and dead cats, with putrescent refuse of every kind pervade each and every street in town, and the garbage-box, if not exactly a parlor ornament, is so near to it as to be unceasingly seen and usually smelt from the parlor window of nearly every house in the city.

To this mass of impure dust is added, of course, the minute particles of stone worn from the pavements by the ceaseless attrition of wheels.

It would be almost impossible, with every possible care, to prevent the penetration of this filthy and noxious dust; but it is futile even to try to do it so long as every house is penetrated by an air-box placed in the area, and nothing can be expected but absolute saturation of the house by the worst forms of filth, both solid and gaseous. I will venture to say that there is not one properly placed or well-constructed air-box within the city limits.

The result of all this is that eyes, ears, noses, and mouths are constantly filled with an acrid and intensely irritating substance, which is always provocative of discomfort, oftentimes directly of disease.

That the mucous membrane of the eyes is peculiarly susceptible to the irritating influence of such a dust hardly needs mentioning. Turn down the lower lid of any dweller of the city, even of those who do not complain, and in ninety-nine out of one hundred the mucous membrane will be abnormally congested, and in almost every case particles of dust of no inconsiderable size will be found entangled in a web of mucous secretion.

There never was a time when there were so many red-eyed and red-lidded people, men and women, seen in the streets as now, and there can be no question but that a great part of it is due to the accumulated filth in the streets.

From this and other causes catarrhal complaints of all varieties are very prevalent, but the kind of conjunctivitis to which I particularly allude has two pronounced characters—first, its great mildness, and secondly, its intractability to treatment.

The trouble usually begins with a slight lachrymation, or perhaps a little smarting sensation; but there is little or perhaps no injection of the conjunctiva, and the ordinary observer would not know that there was anything the matter with the eye. The most distressing, and sometimes the only symptom of which the patient complains, is the great annoyance he experiences under artificial light. During the day the eyes are often perfectly or comparatively comfortable, but the moment the gas is lighted the patient is seized with a desire to close the eye, which is accompanied with a burning, pricking sensation. This inability to keep the eyes open is sometimes so great that the sufferer is forced to leave a lighted for a dark room, or to go out into the street and wander about for the rest of the evening, or to end his misery by going to bed at nine o'clock. On waking in the morning there is a feeling of stiffness about the lid and a roughened sensation for a moment, which rapidly passes away, leaving the eyes apparently in their normal condition, only to break down again as soon as they are subjected to artificial light. Should the patient be wakened from a sound sleep he finds it almost impossible to raise his lids, and when once open the intolerance to light for a moment or two is very great, not so much from any absolute pain or distress, as from an inability to keep the eyes open under the irritating ray of the ordinary gas-light. All artificial light is irritating, candle-light less than gas or kerosene, but the electric light less than any other.

The condition of distress just described goes on day after day for months, or even for years, and I have seen many who, especially for the last eighteen months, have suffered in this way with little or no remission to their sufferings.

In the first stages of the trouble there is little or no secretion, and the only sign of the trouble is that the conjunctiva of the lids appears, as a rule, more hyperæmic than it should. Occasionally, too, when the trouble is no longer recent, the ocular conjunctiva, which is usually of its normal whiteness, will flush up for a short time to become white again in an hour or so. After the disease has lasted for several months, more or less, in some cases, and in some only, a slight secretion is noticed at times, especially at night, and on waking in the morning, there is more or less gluing of the lids. This may be looked upon as a happy condition for the patient, as his sufferings are so much mitigated as to produce comparative ease and comfort, while it is also the most favorable condition for the application of remedies. It will be said at once that the condition described is simply hyperæmia of the conjunctiva, and this I readily admit, though it has recently, according to my observation, assumed a form in which the disproportion between the injection of the membrane and the discomfort and annoyance experienced is vastly greater than it usually is, and this excess of irritability is due, I think, to the more irritating effects of the dust-loaded atmosphere. Moreover, some of those who complain and really suffer the most not only do not show any increased injection of the conjunctiva, but even, at times, the reverse—an unnatural paleness of the entire membrane. It would appear as if in these cases there was some slight but acrid secretion brought about by reflex nervous action under artificial light or irritating substances.

Hyperæmia of the conjunctiva is certainly one of the most intractable, and, although in a pathological sense one of the most trivial, it is also one of th

most annoying of eye diseases, and all the changes on caustics, astringents, and emollients, as they are usually applied, may be and often are rung with little or no benefit to the patient, and sometimes to his positive detriment. Yet astringents often do have a most beneficial, though temporary effect, and it has been noticed and commented upon before now that the weak solutions are better borne and give a better result than the strong, and in accordance with these views I too have been accustomed to use what has hitherto been considered very mild remedies, especially when nitrate of silver was used. But I have gradually come to look upon what was formerly and is now considered as very mild as exceedingly strong. Thus, the weakest solution of nitrate of silver which I have been able to find in the current text-books, employed, not as a collyrium, but as an application to the surface of the lids has been a solution of one per cent., or gr. v. to the ounce. Collyria, as weak as two or even one grain, are still recommended but seldom employed, as nitrate of silver in the form of eye-drops has not been a favorite remedy with the modern school of oculists.

Recognizing that the good effects which immediately followed the application of weak solutions of nitrate of silver (from one to two grains to the ounce) were temporary in character and sure to be followed by a reaction, which counterbalanced in a great degree the first benefits and left the trouble usually as bad as before, it occurred to me that, inasmuch as the reaction was in proportion to the strength of the solution, it might be possible so to reduce this in strength that, although the primary good effects might be lessened, the reaction which followed would also be reduced to its minimum, if not entirely absent, and thus a little permanent benefit be acquired. Acting on this principle, the strength of the solution was gradually reduced from one grain to one-half, then to one-fourth, and then to one-eighth of a grain, the solution which I most frequently employ being gr. ¼ to the ounce. I usually order, on account of the difficulty and care required in weighing out fractions of a grain, gr. ss. to water ʒ iv. The mode of application is by means of a camel's-hair brush upon the everted upper lid. Care should be taken to have rather a large brush, which should be as full as it will hold, so that the fluid will pass to the surface of the lid as soon as the brush makes the slightest contact with it. Much painting over the surface should be avoided. Care also should be taken that the fluid does not come too freely in contact with the surface of the cornea, though should this take place little or no harm is done, since, as a rule, the application of so weak a solution, even to this, the most sensitive part of the eye, is entirely painless. Sometimes, however, when there is greater than normal sensitiveness to the mucous membrane, a solution as weak even as one-eighth of a grain will produce a slight stinging sensation. When this is the case, a still weaker solution, say one-tenth or even one-sixteenth of a grain to the ounce may be used.

It would be said at once that solutions as weak as these could have but little or no effect either for good or evil, as they would be neutralized as soon as they entered the eye. Still it must be borne in mind that solutions, as the writer knows from personal experience, as weak as a tenth of a grain put into the eye, can be tasted after a longer or shorter period, which shows conclusively that the solution was not entirely neutralized even after it had passed through the lachrymal sac and nasal canal.

I have also found these weak solutions of silver very useful in syringing out the sac and lachrymal passages, as the irritation which even the mildest form of astringents heretofore used was almost sure to produce, is entirely avoided.

So, too, with those forms of keratitis accompanied by a muco-purulent secretion, where an astringent would appear to be indicated and yet where there is danger of increasing the ulcerative process from too active a constriction of the vessels to render the ordinary astringents either advantageous or safe.*

That chronic hyperæmia of the conjunctiva is, after all, one of the most annoying and intractable of complaints, and that an alleviation is oftener obtained than a cure, cannot be denied. Still, the writer knows of so many cases that have experienced benefit from the use of these very weak solutions, which had resisted all other applications and methods that he believes the use of nitrate of silver in this way (which is new to him at least), is worthy of mention and trial.

In using these solutions care should be taken to give directions to have them put up in blue glass bottles, or to have the bottle covered with dark paper. It is better also to keep the bottles in a dark place.

THREE CASES OF DIPHTHERIA TREATED BY THE MURIATE OF PILOCARPINE.

By EDMUND C. WENDT, M.D.,

NEW YORK.

In the *Berliner klinische Wochenschrift*, October 4, 1880, Guttmann warmly advocated the use of the alkaloid of jaborandi in cases of diphtheritis. Indeed, this drug, it was claimed, possessed specific properties in relation to diphtheria. Very naturally the profession refused to place credence in the reliability of statements couched in words so enthusiastic; and yet before long the power of this medicament was tested by others, and though it was not again asserted to be a specific, nevertheless excellent results always seemed to follow its use.

Notwithstanding Guttmann's method soon became known in our country, it seems to have attracted little or no attention, perhaps for the very reason that he claimed too much. It is solely on this account that the writer has ventured to make public his own very limited experience in this connection. Whenever new curative powers are earnestly claimed for a medicament, it is but right and proper that any individual experience bearing on the subject should be made known. Collective results will then enable us to strike an average, and thus determine the proper status of the drug. Before relating the cases which came under my observation, I may premise that, although the good results of the pilocarpine treatment were to my mind sufficiently evident, yet I would hesitate on such grounds to pronounce the drug in any degree curative. It is the old question of *post* or *propter*, and future experience only is able to decide it. Meanwhile the alkaloid should be tried by others, for it is too late now to entirely ignore its claims.

* Wishing to test the efficacy of the solution on some other mucous membrane than that of the eye, the writer tried it on a case of gonorrhœa of long-standing, but of very mild form, where the active inflammatory stage had passed into a simple hyperæmic condition of the membrane, and where all other applications had only aggravated the discomfort and increased the discharge. The injections were made twice a day, and with the happiest result. At the end of the second day the discharge entirely ceased and did not again return.

It was thought best to make these introductory remarks, as the cases presently to be related will be offered without comment and must speak for themselves. It is to be hoped, however, that this contribution, insignificant as it may seem, will at least prompt others to make known their personal experience in this direction.

Case I.—This was a young lady, about twenty-three years of age. When I saw her for the first time she was scarcely able to speak. Her mother stated that two days previously she began to complain of general malaise, alternately hot and cold sensations, loss of appetite, and sore throat. An ordinary cold was thought to be the cause of her indisposition, and a chlorate of potash gargle was used for the throat. The patient, however, apparently growing much worse, medical advice was sought. I found her in bed, with flushed cheeks, injected conjunctivæ, hot dry skin, in a drowsy stupor, scarcely able to answer questions. The temperature was 105⅖° F.; the pulse, 148, regular, but feeble; respiration, 28. Inspection of the throat revealed the characteristic redness and swelling of acute inflammation, and thick diphtheritic patches on the right tonsil, uvula, and right lateral half of the soft palate. Enlargement of the neighboring lymphatic glands was present on both sides of the neck. Quinine and salicylate of soda were ordered in three full doses. A mixture of chlorate of potash and the tincture of the chloride of iron was prescribed in half-hourly doses, and a lactic-acid spray was directed to be locally applied.

In the evening of this day her temperature was 105°, there was no change in her general condition except increased stupor and a refusal of nourishment. The family were alarmed. The pilocarpinum muriaticum was now prescribed, strictly in accordance with Guttmann's directions. After each tablespoonful of the solution the patient was directed to take half an ounce of old sherry wine. Treatment to be kept up all night.

On the following morning the temperature was 101⅖°, pulse less feeble, and beating at the rate of 94 per minute. She talked, but in a "voiceless" voice, so to speak. Had been very restless during the night, slept a little toward morning; complained of severe burning pain on swallowing the wine; would rather not continue its use, it made her feel "so funny." Copious expectoration had set in after the second dose of the new medicine. No nausea. Heart's action regular. In the throat no new membrane; the old membrane still there, but apparently loosened. The whole throat was bathed in moisture. The tongue, which had been rather hard and quite dry on the previous day, was now coated by a moist, whitish gray fur. The same plan of treatment was continued, and the mother promised to make her take the wine. In the evening the temperature was 100⅗°; on the left side a portion of the tonsil and soft palate were denuded of membrane, her condition seemingly much improved. There was some nausea, and she complained bitterly of the burning pain in her throat, caused by swallowing the wine. Occasionally she had experienced some cardiac palpitation. Had taken fluid food without complaint. The pilocarpine was stopped, and the original potash mixture again ordered.

Next day I was told that she had spent a miserable night. Headache, restlessness alternating with stupor, pain in the throat and about the neck, chilliness followed by oppressive heat, and a whole catalogue of evils was recited. The objective symptoms were also worse than on the previous evening. The whole isthmus faucium seemed a mass of fetid, grayish membrane, sprinkled here and there with yellowish dots. Temperature was 103¾°, pulse about one hundred and twenty, speech slow, hesitating, reluctant. Apathetic condition. Refusal of nourishment. Again the muriate of pilocarpine was administered, and again quite a prompt improvement was observed. This treatment was now kept up for two more days. Nausea again developed, but the drug was persistently given, and vomiting did not take place. The progressive improvement was not again interrupted by a relapse. Complete recovery was, however, rather tardy in its establishment.

Case II.—A merchant, about thirty-two years old, came to the office with the usual symptoms of moderately severe diphtheritis. He was told to remain in bed, to take a brisk cathartic, and was ordered the muriate of pilocarpine (half a grain to a four-ounce mixture). The membranes were found only on one side, over the tonsil and soft palate, just touching the uvula. His temperature was 102°. Headache quite severe, but otherwise no marked symptoms. Medicine taken regularly all through the night.

On the following day he had no fever. The wine he had taken as directed, but complained that it hurt him in the throat. Expectoration was profuse, sweating only moderate. No nausea. No cardiac irregularity. The drug was continued during that day, and at night, as he stated the next morning, until 1 A.M. On that day he complained only of weakness. Membrane not visible, throat moderately sore. Medication discontinued. Up and about, attending to his business, on the fourth day after his attack.

Case III.—A boy, of about eight years of age, was seized with a severe rigor in the afternoon, and at once took to his bed. Headache, sore throat, and sleeplessness were his principal complaints. He was kept in bed and given some family medicines, but grew visibly worse, causing his parents to become alarmed. I saw him that evening. He was quite dull and languid. Tongue coated and dry. Temperature, 103⅖°. Diphtheritic membranes on both much-swollen tonsils, a few patches on soft palate; none on uvula. He was given the pilocarpine mixture followed by sherry wine, both in teaspoonful doses every hour. Treatment kept up during the night. His mouth, which he had kept open, was directed to be covered over with a bit of linen dipped in carbolized water.

On the following morning there was a membrane only on the left tonsil, and this, too, was so loose that it was readily drawn off with a forceps, a manipulation which caused no bleeding. The mother had become somewhat anxious on account of the child's profuse expectoration. She showed me about a pint of fluid which the boy had spit out. In this turbid, somewhat viscid fluid, a few membranous patches were readily seen. The child had never complained of nausea. He was now without fever. The muriate of pilocarpine was regularly taken every hour until a second five-ounce bottle of the mixture had been used. Then all medication was stopped. The child, being rather weak and pale, was merely directed to be carefully nourished with proper food.

Bromide of Potassium and Calomel are said by Prof. Taylor to be incompatible. A soluble mercurial compound is formed which is highly poisonous, a kitten having been killed by some of it in the course of an hour and a half.—*Virginia Medical Monthly.*

SOME OF THE PROBLEMS OF INEBRIETY.

By T. D. CROTHERS, M.D.,

HARTFORD, CONN.

The presence of one hundred thousand inebriates in this country is not a matter of chance, or accident, or the sudden outburst of a vicious element in human nature, but simply the result of certain physiological and psychological forces, moving in fixed orbits to a definite end. The problem of inebriety is physiological and not moral, and notwithstanding all the efforts of moralists and reformers, and all the advance of science, education, and civilization, inebriety is not only the most widely diffused and fatal of all diseases, but is rapidly increasing. There is no malady more intimately connected with the physical and mental conditions of the race, and yet the study of the subject is almost entirely in the hands of clergymen and reformers, who seek to perpetuate the old superstition of the vice of inebriety, its cure and study, by moral or legal means—merely a repetition of the same barbarous spirit which sought to drive the devils out of lunatics, etc., the history of which is the saddest chapter in human progress. The natural history of the phenomena of inebriety furnishes the strongest proof of its physical nature. Beginning from some general or special cause, the case always follows a progressive line, obeying a certain order of events, down through various stages to a fatal termination, always marked by positive symptoms of nerve and brain deterioration, morbid impulses, hallucinations, and general physical conditions, which in many cases appear to precede, and always follow sooner or later in this disorder. These are only hints that suggest the wide unknown yet to be studied. The problem presented to every physician is, What is the nature and character of inebriety, and how can it be reached practically? If inebriety is ever a vice, or sin, it is a question for church and state alone, and not for science or medical study. There is no half-way ground: inebriety is either a vice or a disease; it cannot be both. The alterations of temper, disposition, or habits noted among the earliest symptoms of insanity represent more clearly a stage of vice in this disease than anything ever seen in inebriety; yet no one thinks of calling insanity a vice at one time, and a disease after. If inebriety is a vice to be reached by moral means, then every advance of society and civilization will lessen or diminish its presence, and all the vast machinery of societies, church and state, for its prevention and cure, will be eminently successful. The facts show that inebriety is increasing, following all ranks and conditions of society, keeping pace with every advance of the world; also that all personal efforts addressed to the moral side of the inebriate alone have failed, and in most cases have been followed by chronic incurable conditions. If inebriety is a physical disease, then we must look for the causes of its increase in physical conditions, surroundings, and civilization, and expect only to reach it by positive material remedies, which shall control these and other conditions manifest in every case. As a physical disease, practically unknown, and never studied from a physiological point of view, it would be natural to expect the most superstitious views and confused theories regarding its nature and treatment from those who approach it only from the moral side. A glance at the temperance literature of the day amply confirms this.

In the second century of the Christian era, Vulpian pronounced inebriety a physical disease, and from that time down the idea has been urged in almost every age. In this country it has taken root and grown slowly and steadily, passing through the stage of indifference into that of active denial and opposition, and on to that of recognition and endorsement. The problems connected with the physical disease of inebriety cannot be solved by any hasty generalization, or understood except from the most careful study and observations of all the mental and physical conditions which enter into the causation and appear in the various complex symptoms. The exclusive study of insanity for over a century by able and learned men has only laid the foundation for more exact knowledge, and while solving many problems before unknown, has left as many more still in obscurity. Inebriety, as a disease, is more complex than insanity, and has never been accurately studied, and yet a learned specialist doubts the disease theory, because one or two inebriate asylums have failed, and he cannot find all the problems of inebriety solved in the scanty literature of a few pioneers in this field. Another specialist admits that disease may be present, but wants to draw lines between it and vice, defining the responsibility, and because this cannot be done, denounces all who study the subject as enthusiasts. The mass of the profession fall in with such views and the opinions of moralists and judges who dogmatically pronounce on the nature and character of inebriety, of which they know practically nothing. These facts simply show that the profession are at least half a century behind the public in the study of inebriety. The latter realize the threatening danger from this malady, and seek, by the best means in their judgment, to understand its nature and cure. Millions of dollars are spent, and millions of men and women are agitating the question, "What shall we do with the inebriate?" On the other hand, the medical profession, to whom this subject rightly belongs, and who should both study and teach the public what inebriety is, and how to treat it, are coldly indifferent, either endorsing the moral efforts of the public in this direction, or looking down upon them with scorn. The time is rapidly approaching when the necessities of the subject will demand scientific study. The anomaly of attempting to reach this vast army of inebriates by spiritual and moral means will mark this age as yet shadowed by the superstitions of the past. Inebriety and its problems may be studied by every physician. I have indicated that the natural history of every case follows a certain progressive line which may be understood.

I now propose to point out some general facts, about which the many problems of inebriety centre. I am convinced that every case of inebriety has an early preliminary stage, in many instances before ever any form of spirits are used, and in others dating from the first toxic effect of alcohol. These periods are often obscure and variable in duration. They are easily recognized in children of inebriates, epileptics, or insane, and in those who have no special hereditary. They live on the border land of inebriety, likely any moment, from the slightest exciting cause, to develop this malady; or go on to certain periods, then become inebriates when not exposed to any prominent cause. For instance, in the latter case, any nervous strain or shock to the system past the middle of life, or the natural decline of the organism, will develop a craving for alcohols

or narcotics in circumstances and conditions removed from all special temptation. As an example, a clergyman who inherited an inebriate diathesis, began to suffer from prostration and colic after his Sunday work, when past fifty; for this nothing but alcohol would bring relief. At first tincture of ginger was sufficient, then stronger alcohols, and finally he became an inebriate. This was a case of inebriety from a long premonitory stage, breaking out when his health declined. Common examples of the former class, who, subject to some powerful shock, such as grief, joy, injury, or any violent strain, become inebriates at once, will be recognized every day. Alcohol seems to explode a condition of nervous exhaustion or perversion of energy which has been gathering through the past. They were inebriates in all things except the use of alcohol long before. The other class give no special symptoms until after suffering from the toxic action of alcohol or being profoundly intoxicated. From this point alcohol may not be used again for years, yet positive symptoms of the early stage of inebriety will be unmistakable. The impress of the toxic action of alcohol is never effaced, and very often goes on in regular progressive stages from this point to chronic inebriety. In others it is variable and obscure. Complete intoxication for the first time in early life may be followed by a long life of total abstinence, ending in inebriety in old age. Any one who has suffered from intoxication or complete alcoholic poisoning many times will always exhibit some of these symptoms when excited. If he does not drink for years these symptoms remain, although less prominent. This starting-point is like a germ from which all subsequent disease can be dated. Inebriety is undoubtedly epidemic, and moves in cycles which can be clearly outlined, following in obedience to some great psychological law at present unknown. The social history of every community that can be traced for a century or more will show the presence of inebriety, at certain times appearing with great intensity, then dying away, and recurring again after an uncertain period. These great waves of inebriety are followed by counter-waves of temperance agitations. The Washingtonian movement in 1840, that spread over all the country, was the reaction from one of these inebriate cycles. From the records of courts and statistics in prisons, also from the history of legislative enactments controlling inebriates and the liquor traffic, which at times have attracted great attention, then passed into forgetfulness, distinct traces of these epidemics may be seen. The records of these waves are also noted in the moral progress of the country, in the history of church movements, and all philanthropic efforts for the welfare of the race. Inebriety is also clearly endemic, and follows some local causes which are more or less apparent; every sharply contested election, political revolution, or social change is marked by waves of inebriety. The Black Friday in New York was notorious for the inebriety which followed directly from it. In a certain New England town a large number of inebriates appeared after a freshet which washed away the mills and suspended work for months. Local disasters which produce profound impressions on the community are followed by the same result. Revival efforts and protracted periods of emotional excitement often react in this way. Almost any cause which produces violent agitation or commotion, breaking up the normal healthy living and methods of thought, often ends in inebriety. There are certain districts in this country where inebriety seems indigenous; no matter what the people may be or how much is done to counteract it, inebriety is always present. Sudden climate changes and particular occupations are known to encourage its growth. In a certain small town in Pennsylvania, after every presidential election, inebriety increases double or treble to what it was before, and after a few months declines again to a normal condition. The police records in cities, and the tides of tramps and paupers that come up unexpectedly, point clearly to its endemic character. These are only general hints of the great forces which gather and break like storm-waves on the beach, or the fierce tornados of the upper air, all governed by laws and following certain causes which are as exact as that which governs the planets.

The inebriate, from the time of the first toxic condition, is always filled with the delusion that he can recover at will, and that his friends exaggerate both the nature and gravity of his disorder. This follows down to the last moment of life, and under all conditions. The teachings of a bitter experience never effaces it. In a personal study of many cases, I have never seen one who did not feel when free from alcohol that he could stop forever, and under no circumstances would use it again. This delusion assumes many curious phases, and is a source of much mystery to the friends of the patient, who after a time doubt all causes, except the power of evil habits. Sometimes this delusion is a prominent premonitory symptom, and is always suspicious of inebriety, especially when the patient exposed to temptations asserts his immunity from all dangers. This overweening confidence in his strength to recover any time, is a pathognomonic symptom. One of the most obscure of all phenomena seen in inebriety is the loss of consciousness of right and wrong, the failure of the last acquired faculty in the progress of human evolution, the moral sense. The intellect may remain clear, and apparently be undisturbed, and yet the previously honest, truthful, and moral man, as an inebriate is often deceitful, lying, and obscene in his relations to the world. Deceit and lying seems to be the most common moral perversion, and appears in every case, no matter what the previous character may have been. Unlike that seen in criminals, it is aimless, foolish, and often without purpose. A kind of progressive paralysis of the moral faculties, manifested in a want of veracity about themselves at first, but in the chronic stages reaching out to indiscriminate lying and slandering of anything they come in contact with. In all matters relating to his disorder the inebriate seeks to hide and cover up by prevarication; at first these methods are shrewd and skillful, but when the disorder increases, they are more apparent, the intrigue is coarser and more conspicuous. Irreverence is also a common symptom equally mysterious to many. An impulsive, aimless scepticism and doubt about all settled questions of the day and respect for superiors is often present. On business and social matters the inebriate will reason with clearness and good sense, but on religious or scientific topics he entertains the most delusive theories. All recognition of conventional or social laws are ignored, and a reckless disregard of the rights and positions of others are very noticeable in certain stages of the disorder. Respect and obedience, which are the first principles taught in the army, are the first to be disregarded by the inebriate. In the thirty cases of inebriety which came under official notice in the army last year, disobedience to orders and disrespect for

superiors are mentioned with every charge. In most cases this symptom comes on early, and grows to startling proportions. Why this faculty should be among the first to suffer is yet to be solved. But strangest of all, the patient never realizes that he has changed his views or has less of these essential qualities than before. Through all the history of this disease, extending over years, there is a delusive changeable appearance of health that seems to be paradoxical with disease. The patient will, after a paroxysm of drink, stop and regain a high degree of apparent health, both physical and mental, then in an hour become a trembling, delirious inebriate. Every symptom of dissolution will be impending, and the mind passing into the final eclipse, when suddenly the patient will arouse himself and resolve not to use alcohol again, recovering as rapidly almost as he went down. Men who have used alcohol for years will suddenly recover and be apparently healthy ever after. The most exemplary temperance man will fall into inebriety without any apparent temptation, and die from the lowest forms of the disease. One man will sign the pledge, or come under the influence of religious emotion, and be changed; another will do the same and have the same influence, but keep on in secret for a time, then break out into worse conditions. I have seen men who could, under the most adverse conditions, keep the pledge, if it was for a stated time, but on the expiration of that time relapse in the most abject manner. A Boston physician, who had been given up as an incurable inebriate, signed the pledge for seven years, six months, ten days, and five hours, and lived a strict temperance life up to that moment, when he drank hard, having made preparations for weeks before. He died a few weeks after from this cause. How the power of the will could so far paralyze the diseased organism, and hold it up to the very day and hour, is incomprehensible. Some inebriates retain their usual mental health in certain directions, and for a long time give no general evidence of change. For instance, a business man may carry on some special work without anything noticeable in health, and yet at home or away from business be a chronic inebriate. In many cases attempts are made to cover up and conceal the malady, which for a time are quite successful.

These symptoms are simply unexplainable because they are unknown. The periodicity of inebriates is also a field of wonderful interest. In some cases the intervals between the recurrence of the desire for alcohol can be calculated within an hour. So certain is the return of this diseased craving that no will or desire can check or change it. No circumstances of society, food, or medicine, will avail. When the time comes, the most precipitate revulsion of character takes place. These free intervals are full of strong symptoms, and vary in duration. In some instances they are marked by great efforts to build up what was lost during the paroxysm, in others, chimerical struggles for wealth and fame, or extravagant labors for family and relatives, or enthusiastic temperance work. Many of the most earnest Christian temperance lecturers of this country are periodical inebriates, who spend the free intervals of their disease in efforts for others. One of these men has been able for a long time, by large doses of chloral and morphine, to conceal his real condition; many others, like him, are making a hopeless struggle to cover up and control a disease which will surely conquer in the end. Hereditity, plays a very active part in the cause of inebriety. Passing down directly from parent to child, or skipping one generation, only to appear in the next with more intensity; slumbering in obedience to some unknown laws, in conditions that seem adverse, then bursting out like the fires of a pent-up volcano, thus appearing and reappearing in a manner equally mysterious. Indirectly, it comes from the heritage of other diseases, and alternates in the same obscurity, evidently dependent on special chains of causes and conditions. Most cases of inebriety are either traced directly to the next generation, or to some collateral form of disease, any one of which may follow or precede the other. Inebriety is positively transmitted to the next generation in some form or other. This diathesis, or special predisposition, may be seen through two or more generations, but will always bear the marks of its original character; sometimes going on to extinction, or bursting out again. The laws and facts which govern its march from one form of disease to another are still unknown. The many strange conditions known as cerebral trance, which are present in all cases of inebriety, have a medico-legal interest of great importance. The defects of memory, preceding this state, appearing in sudden blanks, or failures to register passing events, which, like the clouds over the sun, make a partial eclipse for a time, leaving the other faculties intact, also the automatic action of the mind at these times, and the loss of consciousness of the relation of things, are psychical phases that are yet to be studied. These are only a few of the many problems which appear in a careful study of the history and nature of inebriety. Here, as in other diseases, there is a general correspondence which is significant of the presence of natural laws, which can only be understood by a new and wider study of the whole subject. All theories of causation and treatment not based on accurate knowledge will fail. Two general facts may be considered demonstrated beyond all doubt—that inebriety is a physical disease, and curable by the proper means, in special hospitals.

Stretching out from this are vast ranges of fields, covering all the complex conditions of causation, development, and decline, which we cannot ignore by the vague term—vice. A scientific advance is demanded, and inebriety must be a medical study before we can understand and apply the means for its prevention.

Mr. Tennyson and the Doctors.—It has come out, as the result of a lively discussion in English papers over Mr. Tennyson's poem of "Emmie," that Mr. T. is a relative of the treasurer of Guy's Hospital. It is surmised that this fact has excited his sympathies with the nurses and against the medical profession.

Apropos of the present unpleasantness toward the laureate, Mr. Algernon Charles Swinburne has recently been criticising him in a lurid style, which may interest the medical readers of "Emmie." It is the measure meted out by one poet to another. Speaking of the kind of male lovers which Mr. Tennyson generally typifies, Mr. Swinburne says:

"It cannot respectfully be supposed that Mr. Tennyson is unaware of the paltry currishness and mean-spirited malice displayed in verse, too dainty for such base uses, by the plaintively spiteful and mannikins, with the thinnest whey of sour milk in their poor fretful veins, whom he brings forward to vent upon some fickle or too discerning mistress the vain and languid venom of their contemptible contempt."

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THE BOGUS DIPLOMA TRAFFIC.

THE confession of Buchanan, the bogus-diploma trader, published in a recent number of the Philadelphia *Record*, is full of items of interest, and offers much for sober reflection. It is well known that a representative of the Philadelphia *Record* was the means of exposing the bogus-diploma traffic in Philadelphia, and eventually, by direct and indisputable testimony, securing the conviction of Buchanan. The story of the pretended suicide of Buchanan, his recapture and sentence, are still fresh in the minds of our readers. When there appears to be no chance of escaping his punishment, and with no other apparent motive than to ease his guilty conscience, he makes confessions of his multifarious wrong-doings. It appears from the statements made by Buchanan that the bogus-diploma business was not only a distinct branch of industry but was a business of immense proportions, having its recognized agents, drummers, go-betweens, and influential advisers. Through this concern alone sixty thousand bogus diplomas have been sold within the last forty years; of these forty thousand were disposed of in Europe. The price for each of these pieces of parchment varied from ten to two hundred dollars, according to the means and gullibility of the applicant. Nothing was required from the candidate but the money. The representative of the Philadelphia *Record* purchased several of these diplomas without having studied medicine a single day, and without making the slightest pretension to a knowledge of the science. Fac-similes of these documents are published by the gentleman in question, and help to make up an interesting part of the history of a stupendous and barefaced fraud. As Buchanan has nothing to gain one way or the other by his statements, it is fair to presume that they are worthy of some credence. At all events they are corroborated by the documents which he has surrendered to the authorities.

As a matter of course many other parties are implicated in the fraudulent dealings. Many a Buchanan graduate who may be quietly plying his calling in this or another State will hardly thank his distinguished "Dean" for dragging him from security by the publication of his name in the list of men who have graduated from one or other of the fraudulent Philadelphia diploma mills. The disclosures in some instances are quite startling, and implicate many parties whose reputation for fraudulent dealing has been heretofore above suspicion. For instance, we find the names of some persons who have been looked upon as respectable eclectic physicians who were the accredited and confidential agents of the notorious "Dean." Altogether the eclectics, as a class, have not added to their reputation by the recent disclosures. The repeated association of their distinctive title with the bogus colleges is, to say the least, unfortunate.

The lessons to be learned from this miserable business are numerous and important. The possibility of the existence of fraudulent diplomas is proven beyond a doubt, as also the extent to which their traffic may be carried on in the heart of a city celebrated for the high character of its universities. The ease with which an act of incorporation for any so-called university can be obtained is demonstrated in the history of the foundation of each of the fraudulent concerns. The manner in which legislative investigations can be warded off, the methods of obtaining favorable reports from legislative committees are clearly shown in the confession. The relative value of diplomas is seen to be fixed by arbitrary, ignorant, and bribed legislative action, instead of by a recognized standard of actual medical qualification.

It is true, when public sentiment became thoroughly aroused, the charters of these bogus institutions were annulled; but unless something more is done, there is no guarantee that the history of diploma traffic will not repeat itself. There is some promise, however, that good may come out of these revelations. Already, as an offshoot of the discussion, we hear of the introduction of a medical bill in the Legislature of Pennsylvania, having for its object the fixing of qualifications concerning which there shall be no reasonable question. At the bottom of all is the system of compulsory registration. When this is properly enforced, there is no dodging the issue. Even Buchanan himself acknowledges that when the medical registration law went into force in England, his diploma trade, which had been brisk before in that country, almost ceased.

But there is one thing in obtaining a registration law and another thing in enforcing it. If Pennsylvania follows the example of New York State in the latter respect, those who practise on the authority of bogus diplomas and false licenses can feel quite secure from molestation.

THE PREVENTION OF TRICHINOSIS.

THE recent fatal case of trichinosis which occurred in Hoboken, N. J., has served to draw renewed attention to the disease. At a time, too, when so much interest is awakened in the recent action of European authorities condemning American pork, the discovery that the cause of the disease was traced to a home product has more than usual significance. Briefly told, the facts were as follows: A newly married couple, of German nativity, fell ill with symptoms correctly interpreted by the attending physician, Dr. Rudlich, as those of trichinosis. After a week's illness the wife died and the husband became convalescent. Immediately after the autopsy a microscopical inspection of portions of the deceased woman's muscles was made by Dr. Wendt, and numerous living trichinæ were discovered in all the examined specimens. All the other organs were found to be healthy. Death was therefore solely due to the trichinose invasion. Although human trichinosis is not reckoned among the frequent diseases of the American continent, it may, nevertheless, be assumed to occur oftener than is generally supposed. The percentage of American swine infected with the little parasites has been lately ascertained to exceed very largely that of other countries. Thus, while the most notorious German breeding-places of this malady reveal the presence of one infected pig among five hundred or one thousand, with us the proportion reaches the rather startling figures of one in twenty-eight, or even one to eight. But perhaps these calculations, although made by competent and reliable persons, do not fairly represent the average. Nevertheless, it would be an absurd undertaking to deny the prevalence of trichinosis among our swine. On the other hand, the question of percentage is not of surprising importance. As soon as adequate measures will have been taken to prevent the spread of the disease among swine and to prohibit the exportation of doubtful meats, the high percentage, if it exists at all, will speedily become reduced. Finally, we may venture to hope, it will cease to exist at all.

But, if trichinosis is so frequent among our swine, why do we hear so little of it in connection with our pork-eating community? The answer to this query will have to embrace the consideration of several points.

In the first place, we must remember that raw or insufficiently cooked meats can alone become carriers of infection. For this reason the disease has almost invariably been confined to the Teutonic element of our population, since these are probably the only consumers of absolutely uncooked pork. Again, even among the Germans the disease is not always recognized as such, apart from the fact that it may not be invariably recognizable. It is to be remembered that the severity of all observed symptoms must vary greatly in different cases, being proportionate to the greater or less abundance of ingested trichinæ. Moreover, the primary manifestations of the disease, such as vomiting, diarrhœa, and abdominal pains, are not in themselves sufficiently characteristic to warrant a positive diagnosis. As regards the accompanying febrile movement, with the concomitant prostration of the patient, such symptoms ordinarily suggest typhoid rather than trichinosis.

In the secondary period of the disease, the muscular pains, which should certainly awaken our suspicion, may be masked by more immediately striking phenomena. Besides, in milder cases they are not very prominent, and are apt to be mistaken for some insignificant rheumatoid ache. The facial puffiness, the occasional general anasarca associated with albuminuria, are certainly alluring symptoms on which to base a diagnosis of Bright's disease. Should the latter happen, then other symptoms, including, perhaps, muscular pains, may be easily referred to the supposed nephritis as an adequate cause.

That such perhaps excusable errors of diagnosis are actually made would appear to be a fact, when we contrast with the rarity of the diagnosis of trichinosis during life, its comparative frequency in the dead-house. Some such conclusion, at least, we are forced to entertain, unless, indeed, we are willing to concede that trichinosis invasion may take place without giving rise to any morbid symptoms. But experiments upon animals, and in Germany, also, upon criminals awaiting execution, have amply shown that any such assumption is untenable. In view, then, of the actual presence among us of this disease, the wary physician will do well to be on the lookout for its occurrence, not that his chances of successfully combating the enemy are very great—though even here the fundamental importance of an early diagnosis is at once apparent—but in order that we may have a greater array of available facts at our disposal with which to enforce preventive measures. The latter, to be effective, must strike at the root of the evil—for an evil it is—be the danger incurred by the American consumer never so small. But the root of the evil is our popular porker—that much-maligned animal—who is now debarred from entrance into European society.

On the whole, it may be said that, although trichinosis prevails among our swine, their presence there is a matter more threatening to the purse of the pork-dealer than to the community at large. It is a very short-sighted policy, however, which dictates either the suppression or the exaggeration of facts which the public are entitled to know. If the consumer of American pork insists on eating it raw, let him know that he incurs certain risks which might have been overcome by a sufficiently long application of a high temperature. On the other hand, if the American pork-dealer intends to preserve a flourishing condition of his business, let him not be driven by a mis-

taken parsimony to avoid the light of day. Rather let him do his best to elucidate the actual status of affairs. Above all, let him at once adopt rigid measures of microscopical inspection at the slaughtering house. Having done this, he can give the only suitable guarantee of the fitness of his pork for food.

This, then, is the peaceful solution of a problem apparently so perplexing. Prophylaxis is the key-note which sounds it. What we wish to see, in the interests both of protection from danger to our mixed population, and of a continued commercial prosperity to our pork industry, is prompt action on the part of the mainly interested parties—the dealers themselves. If the latter select to hesitate, such wavering will prove ruinous, for the public will at length itself demand the legal enforcement of obligatory inspection of all slaughtered swine. And such a demand will suffer neither postponement nor the shirking of clearly defined duties.

THE ABOLITION OF THE PLUMBER.

It is rumored that a society is to be organized for the total abolition of the plumber, including bills. Whether this is true, or only an unseasonable jest, we find statements circulated in connection with the report which merit the attention of the profession. These statements are, for the most part, historical in character, and tend to show a causal relation between the plumber and certain acute infectious diseases, as well as certain periods of deep financial gloom.

The ravages of diphtheria, it is said, began in this country in the early part of the present century, and the plumber began to develop the peculiar characteristics of his craft at about the same time. A marked increase in diphtheria was noticed, we are also told, a very short time after plumbers had introduced the habit among sewer-pipes of siphoning out the water-traps. This peculiarity was advocated as illustrating a beautiful law in physics, and as having educational advantages in that direction which fully compensated for the extra smells. The Society for the T. A. P. will, if organized, take strong ground against this view.

In the year 1842 the plumbers first brought into use another method of mending pipes. This consisted in cutting open the pipe at the place where it did not leak, and putting in some old rags. The pipe was then closed up, and the plumber went home to await developments and commence on the bill. At about this time the distinction between typhoid and typhus fever began to be recognized, and there is assumed to be a dark meaning in the coincidence. The merit of first distinguishing between the diseases referred to has generally been assigned to Sir William Jenner, but the part of the plumber in developing these distinctions has never until now received historical recognition. The proposed society, whose suggestive arguments we are reviewing, very plainly accuses the plumber with being the cause of enteric fever.

It was about eight years after the event above alluded to that the sanitary engineers, by which term we mean the plumbers, introduced the very excellent and popular porous cement for uniting sewer- and water-pipes without confining the gases within them. With this cement all the plumbing in the house can be made water-tight and the smells not be abated. The plumber, therefore, can be called in at frequent intervals, while the calls involve no labor except the subsequent clerical work of making out a bill. During his visits, however, he has an opportunity of inhaling carburetted and sulphuretted hydrogen, carbonic oxide, and various specific infections, all of which seem only to please the senses and invigorate the system of the plumber. At the same time with the introduction of this cement the average size of the sewer-mains was cut down, and patent immovable traps were placed in them. The water-pipes were also arranged so that they would freeze in winter at a temperature of 34° F. If we are not misinformed, it was within two years of this period that Dr. Alonzo Clark began his admirable lectures upon cesspool fever. The improvements referred to still exist.

We notice that the plumber is distinctly charged with being able to produce scarlet fever *de novo*, and with being the direct cause of perpetuating the malarial poison in our domestic establishments. This charge is based largely upon a new way of repairing and joining pipes now generally adopted by the craft. It is a modification of the old rag-stuffing plan referred to above, and which the plumber never could make popular. It consists of four different series of manipulations, each taking place on successive days. The pipe is first cut into several small pieces. Another plumber is then sent for, who has to go back for more tools. Both then go home, and the morning and the evening are the first day. The details of the subsequent stages we have not time to relate. We would simply say, however, that, according to the descriptions given, they show a wonderful mechanical skill in getting over the most unprecedented difficulties in sanitary engineering. After it is all done, the leak is discovered to have been in another place.

The above are some of the reasons assigned for organizing a society with the object of extinguishing the plumber. We cannot but think, however, that such a society would take too severe a view of an ingenious and useful class of workmen. We do not advise the medical profession to favor its ends. In giving reasons for this, we enter a delicate part of the subject; but it must be said that a craft which is in intimate, if not causal relations, with so many interesting morbid states, should not be discouraged, much less abolished by us.

But, however this point may be regarded, the plumber has certainly other uses, on account of which we cannot spare him. These uses are mostly in the line of moral discipline. Whoever has seen and paid a plumber's bill has experienced an emotion. All subsequent documents appear tame in comparison. The plumber alone charges for his time, his advice, his material, and his labor, which latter has invariably to be done over again from two to seven times. After an experience with the plumber, life brightens up by contrast. Even sickness appears trivial, the doctor an angel of light, and his fees the inadequate expression of boundless gratitude.

It is undoubtedly the fact that there are exigencies in society which justify the existence of every class, and the plumber cannot be excepted. We do not believe in abolishing him, and we trust to have the support of the profession in the stand that is thus taken.

THE PAUPER QUESTION.

It is quite patent that none of the systems of relief established by charitable associations, so-called, meet the requirements of all cases, and it is equally evident that, in the majority of instances, the applications for relief are based upon fraudulent pretence. This is the more to be regretted, as vast sums of money are annually donated to these objects, in the hope that the really deserving may be benefited thereby. The reports of the associations make a good showing of work done at the end of each year, but there is nothing to prove that all the cases ministered to were worthy. The force of argument is generally in the direction of showing that such and such a charity has greater claims than any other upon the benevolence of the public. There is thus developed a zeal of competition for doing good which partakes more of a spirit of business than charity, and which reminds the rich and charitably disposed individual that this or that way is the surest by which he can successfully squeeze his camel through the eye of the needle. Then, again, the expensive salaries paid to officers of some of the associations is an offset to the ardor of giving by such as are actuated with the desire of helping the really poor. Perhaps no one understood this better than the man who subscribed a penny to the poor and donated a dollar to get it there. In so many places charity is vaunting itself in handsome buildings, expensive officers, and consequential and well-paid officials, that the care of the poor is becoming a secondary consideration.

Hence, the recent movement made among leading clergymen and philanthropists to systematize the various charities, under the direction of a central bureau of relief, commends itself to the thoughtful consideration of every well-wisher for the poor.

It is conceded that many of the charitable societies do their work thoroughly and well, but it is equally true that other similar organizations are given to indiscriminate alms, giving more for the show of the deed than for the deed itself. Consequently, professional paupers, taking advantage of the situation, go from one bureau of relief to the other, appearing as newcomers for each.

Every one who has experience in alms-giving knows that the greatest care is necessary to discriminate between the deserving and the undeserving. In no way can this care be exercised to the greatest advantage to all than by house-to-house inspection. To make this effective, every chance of error should be guarded against, and every possibility of fraud should be removed. A central bureau of relief would do this by distributing necessary information to branch associations, and apportioning the distinctive work of each particular guild. When such can be accomplished we can lay the foundation for the enactment of poor laws, can punish vagrancy, and can make professional pauperism a crime.

BIOLOGICAL STUDY AT THE JOHNS HOPKINS UNIVERSITY.

We have received a circular of the Johns Hopkins University, lately issued, and devoted especially to biology. It contains announcements which deserve the attention of medical men, especially of those who have occasion to give advice regarding the preliminary education of persons intending to study medicine. The Johns Hopkins University has arranged a preliminary course for this class, and it has certain advantages which ought to make it attractive and advantageous to many. The course includes a series of studies running over three years. A student, in order to get the degree of Bachelor of Arts, which is finally given, must pass a matriculation examination about equal in severity to that exacted by ordinary classical colleges. He must then pursue two major and three minor courses, and be able to pass a satisfactory examination in them. The biological course to which those desiring to study medicine are recommended includes as its major courses chemistry and biology, while among its minor courses are physics, German and French, mathematics, logic, and psychology. By diligent work the student may go over these and get his degree of B.A. in two years.

The course in biology is that for which the special provisions are greatest and that in which prospective medical students will gain the greatest special advantages. It teaches, in the first place, a knowledge of the laws of life in general, as exhibited in unicellular and higher organisms. After this mammalian anatomy and animal physiology is taught. The use of the microscope, instruction in embryology and in the proper methods of dissection belong to the first year; also human and comparative osteology. Zoology and comparative anatomy, with dissection of certain mammals, animal physiology and histology

are chiefly taught in the second year. There is a great deal of laboratory work combined with it all.

A course of study such as is indicated above would clearly take off a great deal of the pressure involved in beginning and completing a medical education in two or three years. It would manifestly also tend to infuse a greater amount of the scientific spirit into medicine.

In this connection, we take the opportunity to refer to the general physiological work which is being done at the Johns Hopkins University. It was the intention of the founder of this institution that one of its chiefest aims should be the advancement of medical science. In accordance with this view the establishment of a fully equipped biological laboratory was one of the first things undertaken. For it was desired to establish branches of study or work not existing in other educational institutions. It is the policy of the university to supplement rather than to compete with other institutions. The result is that the opportunities for physiological and morphological study and research at the university in question are probably the best to be found in this country. And it is a centre which has already shown evidences of good scientific work.

The medical profession should feel gratified that opportunities for such original work now exist in this country. There are a few places where physiology has been studied, but they have been very few. The physiological text-books published in this country have no claim and have made little pretensions to being scientific manuals. And, with few exceptions, physiology has hardly been taught as a science in our medical schools. At least this was the case a few years ago. We can recall the time when physiological instruction at Harvard amounted to very little. And there is now a thriving medical college in New England, that at Dartmouth, which has no separate chair of physiology. The importance of this study to pathology, therapeutics, and rational medicine generally, was brought out very forcibly by Prof. Michael Foster at the meeting of the British Medical Association last summer, and his views have since been widely discussed. There is no doubt that physiology is getting more of the attention it deserves. And it is a source of gratification to know that the amount of original work in it is increasing with us as well as abroad.

Seventh Annual Report of the New York Diet Kitchen for the Sick Poor, 1880.—This admirable institution is intended to do for the sick poor, in the way of food, what dispensaries do in the way of drugs. It now has several branch establishments connected with the dispensaries. Physicians can, therefore, at the same time order for their cases medicines and nutritious food. A number of strong commendations of the institution by physicians are quoted in the report; but we doubt if its full value and usefulness is yet appreciated as it should be.

Reviews and Notices of Books.

Aphorisms in Fracture. By R. O. Cowling, A.M., M.D. Morton's Pocket Series, No. 2.

This is an excellent little work, and covers succinctly nearly the whole subject. There are added to the "aphorisms" some criticisms upon them by various eminent surgeons, and there is, in addition, a spicy criticism of Prof. Hamilton's views on the subject of shortening in fracture.

Pharmacopœia of the Hospital for Diseases of the Throat. Edited by Morell Mackenzie, M.D., London. Fourth Edition. Philadelphia: Presley Blakiston. 1881.

In this new edition a few of the old formulæ for inhalations, lozenges, and gargles have been omitted. There have been added a number of new drugs, including boracic acid, bromide of iron, ergotine, iodide of ethyl, iodide of sodium, iodoform, salicylic acid, salicylate of soda, and terebene. The new formulæ include nasal bougies, pastilles, insufflations, aural solutions, and ear-drops, with fourteen new mixtures, etc.

The book retains the same general character which has made it so popular heretofore.

A Manual of Diseases of the Throat and Nose. By Francke Huntington Bosworth, A.M., M.D. Pp. 427. New York: William Wood & Co.

This book professes to embody the results of the author's own experience in dealing with throat affections during a period of nearly ten years. The author claims, however, that he has not omitted to give the methods of others when they have been found of value. Dr. Bosworth's untiring efforts in a large field of clinical practice, in the capacity of observer and teacher, entitle him to a considerable hearing, which we doubt not he will have, although of late there have appeared numerous works on this subject. We should not be unmindful of the fact that for the past fifteen years a vast amount of work has been done in the field of laryngology, the fruit of which is just now being put forth. Under such circumstances, we cannot array ourselves among those who would prohibit the making of many books, for they are the natural fruition of man's labor. Surely, from the most of these books we may glean much valuable information, and from the worst of them a useful warning at least may be obtained.

The classification followed in Dr. Bosworth's book is based on the general laws which govern the manifestation and development of morbid processes in all mucous membranes; they are inflammations of a catarrhal, croupous, or diphtheritic form. The catarrhal inflammations are regarded as being liable to assume either acute or chronic forms, while the latter are always acute. A broad line is drawn between diphtheritic inflammation and the other forms, this process occurring only in connection with blood-poisoning, as diphtheria. The author thus summarizes the affections under consideration:

Acute catarrhal inflammation may occur in the nose, pharynx, or larynx, resulting in acute coryza, acute pharyngitis, acute laryngitis, etc.

Chronic catarrhal inflammation may occur in any portion of the air-passages, resulting in chronic coryza, chronic pharyngitis, chronic laryngitis, etc.

Acute follicular inflammation may occur in the upper or lower pharynx, or in the tonsils, resulting in acute follicular tonsillitis, acute follicular pharyngitis, etc.

Chronic follicular inflammation may occur in the pharynx or tonsils, resulting in chronic follicular pharyngitis, enlarged tonsils, etc.

Croupous inflammation may occur in the pharynx or larynx, resulting in croupous pharyngitis or membranous sore throat, or in croupous laryngitis, or true croup.

Diphtheritic inflammation may occur in any portion of the upper air tract as a local manifestation of the blood disease, diphtheria.

This classification seems to be more satisfactory than any which includes such names as acute and chronic sore throat, granular pharyngitis, clergymen's sore throat, etc.

The author disclaims any intention of making his work a complete treatise on the throat, but rather a description of the affections more commonly met with in ordinary practice. He has, therefore, omitted diphtheria and the throat manifestations of the exanthemata as belonging to general medicine.

Chapter I. treats of the use of the laryngoscope; the second chapter treats of the anatomy, physiology and pathology of mucous membranes. The third chapter is devoted to methods of treating mucous membranes and the use of instruments.

The devices for spraying, syringing, douching, sponging, and dusting the throat are seen to be very numerous when they are catalogued together. The instruments for burning, cauterizing, and snaring morbid processes in the parts are exhibited elsewhere.

The author adheres to the use of the nasal douche for cleansing, and the transmission to the nasopharynx of medicated fluids. While alluding to the possible danger to the ear from this method, he seems to doubt whether the douche is responsible for deafness occurring in those who have used it, inasmuch as a very large number of persons with impaired hearing, as the result of catarrh which has extended from the naso-pharyngeal cavity through the Eustachian tubes to the ear, have never used the douche. He thinks there is fair ground for regarding it an open question whether the use of the douche or the original catarrh is responsible for the impairment of hearing.

We believe the author has failed to comprehend the force of the accusation which our otological brethren have hurled against the practice of passing liquids through the nose by means of the use of the nasal douche. As we understand it, a large number of cases of acute purulent inflammation of the middle ear have unmistakably originated from the use of the nasal douche, the fluid thus used having entered the tympanum through the Eustachian tube. This grave accident cannot always be avoided when the douche is used by the patient or by the physician himself, and we think, therefore, that a more decided objection should be made against this procedure.

The fourth chapter treats of taking cold. The author has presented the literature of this subject, together with his own observations, in an admirable manner. The chapter is very complete, without being loaded with tedious details.

Chapter V. treats of catarrhal affections of the pharynx, and is capitally written; indeed, we may here state that the author, throughout the book, maintains a clear and straightforward manner of expressing himself that merits special mention.

In Chapter VIII. we find an account of hypertrophy of the tonsils, two forms of which are described—the hyperplastic and the hypertrophic. The author regards the hypertrophied tonsil as probably the result of acute attacks of catarrhal inflammation, while the hyperplastic tonsil may be said to depend for its origin and growth upon an increased vascular supply, with increased growth and cell-proliferation, often a result of the strumous diathesis; it is chronic from the beginning.

Five chapters are devoted to diseases of the nasal cavity and eight to diseases of the larynx. The various operations upon these parts are also discussed in full, but the space at our command will not permit of such an extended notice of this portion of the work as its merits demand. The author's treatment of some of the diseases of the pharynx deserves special mention, the subject having received much attention at his hands; his operation for the removal of morbid growths by the snare may be mentioned as an example. Should this method prove as successful in other hands as it has in his own, it may be considered as a most valuable contribution to laryngology.

An appendix to the book contains a large number of formulæ, which will be found to be exceedingly valuable to the practitioner. The illustrations, as a whole, are not such as the merits of the book demand, although they serve to clearly explain the text, and some of them are very good. The illustration on page eight has the figure of an operator, which, accidentally no doubt, bears a considerable resemblance to the author, who is in the act of examining the throat of a patient.

Of Dr. Bosworth's therapeutics it may be said that there are hopeful indications of a disposition to lay aside much of the profuse medication which has been so fashionable of late years; and we may add that a reform in this direction can come none too soon.

The defects of the book are few, the merits are many; and although a comparison with its great English companion—the work of Mackenzie—which has just appeared, can scarcely be made, yet, as far as it goes, it *does* compare most favorably. It is not so exhaustive as regards the literature of the subject as Mackenzie, nor yet so complete in details, but it is *par excellence* the book for those practitioners and students of medicine whose opportunities limit their selection to one monograph on this subject; for they may here find every throat disease, with the exceptions before alluded to, carefully considered as regards the diagnosis and treatment.

A Doctor's Suggestions to the Community: being a Series of Papers upon Various Subjects from a Physician's Standpoint. By Daniel B. St. John Roosa, M.D. New York: G. P. Putnam's Sons, 1880. 12mo, pp. 234.

We confess that we have experienced more than ordinary satisfaction in reading Prof. Roosa's work. Not only has he taken very practical and sensible views of his subjects, but he has presented them in such a charmingly persuasive manner that the reader accepts the conclusions as a natural and inevitable consequence. His style is easy, graceful, and perspicuous, and gives to the work the interest of an entertaining story, at the same time his propositions are made with a directness of purpose that proves the faith within him. The subjects are not numerous, but their range of discussion is compensatingly comprehensive. This latter element is particularly manifest in the treatment of the relation of the medical profession and the public. In the presentation

of his plea for a better understanding between the people and the doctor, he very properly takes the ground that advancing civilization must swallow up petty prejudices. His views upon the question are broad, liberal, and of practical application.

His remarks on the maintenance of health are interesting, but necessarily are confined to general principles. The chapter on care of the eyes is full of valuable suggestions, and cannot fail to interest the medical as well as the lay reader. But we are not disposed to refer to each subject in detail, choosing rather to give the readers a general idea of the excellence of the work. We cannot refrain, however, from a special mention of the chapter on the New York Hospital, which we are free to acknowledge is the most entertaining of any in the work. The descriptions are admirable and hardly leave room for the exercise of imagination. In following the house surgeon in his rounds, in visiting old Aunty, in joking with Roberts, in hurrying to the night ward, in answering the call of Jimmy, the "accident" man, and in doing many other things expected of an interne in those days, we live over the times of yore and wish that we were young again.

The work is tastefully published on fine paper with large type, and is in keeping with its entertaining contents.

Bodines; or, Camping on the Lycoming. By Thaddeus S. Up De Graff, M.D. Philadelphia: J. B. Lippincott & Co.

This is a very readable and instructive work, giving the author's experiences in camping out on the Lycoming. His descriptions of trouting are well calculated to inspire an enthusiasm in his readers. Any overworked medical practitioner can read it with profit and prospect accordingly.

Compendium of Microscopical Technology: A Guide to Physicians and Students in the Use of the Microscope, etc. By Carl Seiler, M.D. Philadelphia: D. G. Brinton. 1881.

The author makes a confession in his preface. He says that he felt a want, etc. The result of this condition of his feelings is the book before us. It is very small, and that is its only merit. It contains a *résumé* of what Dr. Seiler has been in the habit of using for the preparation of microscopical objects. Now, if the world had manifested any anxiety to have this valuable information imparted to it in poor English, there might be a *raison d'être* for the present work. As if he had a presentiment of the superfluous character of his work, the author has appended to it a good classification of neoplasms. Although this is entirely out of place in an alleged compendium of technology, it is the best thing in the book, and may be read with profit by both student and practitioner.

A Phenomenal Singer.—The recent reappearance upon the stage, at the age of sixty-eight, of Mrs. Anna Bishop, furnishes a remarkable illustration of the preservation of the vocal powers. Although she has lost much of the freshness of her voice, her notes are still pure and her execution is remarkable. Her voice has still a wide range also.

There seems to have been no loss of power in or control over the laryngeal muscles, but the chords and the cartilages are not quite so elastic as in younger days. Such is the physiological basis of her performance.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, March 17, 1881.

Fordyce Barker, M.D., LL.D., President, in the Chair.

CROUPOUS PNEUMONIA AS AN ACUTE INFECTIOUS DISEASE.

Dr. Edward Sanders read a paper on the above subject, of which the following is an abstract: With reference to the nature of the disease, there were two theories: first, that it is a local inflammation; and second, that it is an acute infectious disease or essential fever dependent upon a specific blood-poison. The writer first attacked the older theory that the disease is a local inflammation, and brought the following objections against it: The phlegistic theory does not apply in all cases. Artificial croupous pneumonia cannot be produced in animals by irritating the air-passages. The pneumonia which follows division of the vagus is catarrhal. There is no case upon record which shows that croupous pneumonia has been produced by any of the causes that give rise to other inflammations. Cold has been supposed to be a cause of pneumonia, but there is no foundation for the belief. There is a definite relationship between latitude and pneumonia, and Dr. Sanders presented charts illustrating that point. Bronchitis increases as we ascend from the equator, and pneumonia increases the nearer we approach the tropics. Such is true of the United States. Pneumonia is essentially a disease of the winter and spring months. Those following out-door occupations are less liable to the disease than those who have in-door employment, and the disease occurs less frequently in the country than in cities.

With reference to symptoms, a parallelism should exist between the local lesion and the constitutional symptoms, if pneumonia is a local inflammation; whereas the general symptoms of the disease do not bear any relation whatever to the extent of the local lesion, and the treatment now commonly employed is contrary to all accepted notions concerning local disease. Formerly it was combated as if it were a local phlegmasia, but the old plans of treatment had been entirely discarded, and that now employed does not differ from the treatment commonly adopted for infectious diseases. Local measures are employed, it is true, but they are used solely for the relief of such local manifestations as demand special attention.

How does pneumonia resemble acute infectious diseases? He defined an infectious disease as one dependent upon the introduction into the blood of specific germs capable of reproducing themselves indefinitely. Infection does not necessarily imply contagion; but, under certain circumstances, acute croupous pneumonia possesses a contagious character.

Dr. Sanders then referred to several recorded facts which he regarded as substantiating the belief that pneumonia may be contagious. He next directed attention to

THE CHARACTERISTICS OF INFECTIOUS DISEASES,

and compared the features of pneumonia with those presented by that class of diseases.

First.—Infrequency of occurrence and number attacked. That is, acute infectious diseases do not prevail extensively some years, and when they appear the proportion affected varies very greatly. Pneumonia has occurred only rarely in some years, and it has at times prevailed epidemically in cloisters, prisons, barracks, etc. Special reference was then made to the occurrence of the disease as an epidemic. Again, abortive cases of pneumonia—the occurrence of such cases being acknowledged—indicate their infectious character.

Second.—Acute infectious diseases cannot be produced experimentally; neither can croupous pneumonia.

Third.—Acute infectious diseases have a stage of incubation. This is not well understood in croupous pneumonia.

Fourth.—Acute infectious diseases have a premonitory stage. So does croupous pneumonia.

Fifth.—Acute infectious diseases pursue a uniform and classical course. There is no disease which has so uniform and classical a course as lobar (croupous) pneumonia, and local symptoms remain as they do in typhoid fever, etc.

Sixth.—In acute infectious diseases there is absence of a direct relation between the constitutional symptoms and the local lesions. So it is with croupous pneumonia.

Seventh.—In acute infectious diseases certain complications appear in certain epidemics, and are absent in others. The complications of croupous pneumonia vary in different years.

Eighth.—Acute infectious diseases are self-limited. So is croupous pneumonia in a marked degree, and to no other disease with greater propriety can the term self-limitation be applied.

Ninth.—The rate of mortality varies in each epidemic of an acute infectious disease.

Tenth.—In acute infectious diseases there is a localization of morbid changes in some organ or set of organs. In croupous pneumonia the localization is in the pulmonary structures, and consolidation of lung-tissue is the essential lesion of the disease.

Eleventh.—In acute infectious diseases the use of remedies against the disease itself is useless.

Twelfth.—The great characteristic of acute infectious diseases is their specific nature. The producing element for each member of the class is a specific poison acting upon and through the blood.

The main conclusion reached was that croupous pneumonia is an acute infectious disease dependent upon the introduction into the system of a specific poison; that it belongs to the miasmatic-contagious group; and that in all probability the specific poison is taken into the body by inhalation.

Dr. Austin Flint opened the discussion and said that his views were substantially in accord with those advanced by the author of the paper, and had been placed upon record in a paper which he read before the Medical Society of the State of New York, in 1877 (see Medical Record, vol. xii., p. 433), and also in a more recent publication. He was glad to hear Dr. Sanders' remarks with regard to cold as a cause of pneumonia. He thought we should get rid of the old idea that diseases are produced by cold. With regard to this particular disease, he published, about twenty years ago, an analysis of one hundred and forty cases which had escaped the observation of the author of the paper in his researches in the literature of the subject, and the result of that analysis showed, besides other things, that there was nothing whatever to sustain the view that pneumonia is caused by cold.

His statistics also showed a different result from that presented by the author of the paper in another particular, namely, that those whose occupation involve an out-door life are more likely to have pneumonia than others. Quite possible it was that an analysis of a larger number of cases might show results which would differ from those he had obtained. Dr. Flint then referred to a point not presented in the paper, namely, the treatment of pneumonic fever, as he had chosen to call it, by antipyretic measures. At Bellevue Hospital three cases had been under his observation, which were treated successfully by the use of the cold pack or the wet sheet, and their average duration was somewhat less than it is ordinarily. The details of the histories of the cases would soon be presented in the form of a paper.

Dr. William H. Draper thought that the onset, the progress, and the termination of lobar pneumonia showed that it is not a fever secondary to a local inflammation; but, on the contrary, that it is an essential fever with a lesion belonging to it. He had been struck with the analogy which it bears to typhus fever and idiopathic erysipelas. Then the question arose, What do we mean by an essential fever? Do we mean necessarily that it is due to a morbid process excited in the blood by the introduction of a germ? He thought it was very doubtful whether we can give any such definite limitation as that to essential fevers. He doubted if any one believes that rheumatism depends upon the introduction into the blood of any infectious poison, and yet it must be regarded as a fever. He thought that the author of the paper had perhaps fallen into an error in restricting the definition of infectious disease in that way. Dr. Draper was not prepared to say that croupous pneumonia always depends upon the same cause. He was not prepared to admit that the epidemics of pneumonia which had been alluded to in the paper were made up of cases of the very same disease, which, occurring sporadically, we call croupous pneumonia, no more than he was willing to admit that every case of cerebro-spinal meningitis is a case of epidemic cerebro-spinal meningitis. The epidemics of pneumonia mentioned, like those of cerebro-spinal meningitis, occurred under conditions which can only suggest the operation of some infecting cause. He was not prepared to say that the cases of croupous pneumonia which we see now in hospitals and in private practice are the same disease as that which occurs under circumstances when pneumonia becomes epidemic. It seemed to him that the question of essential fevers embraced something in explanation of them besides the introduction of germs. He believed that, under the influence of exhausted nerve-power, a lesion may occur which cannot be distinguished from the lesion of croupous pneumonia. He regarded it as a striking fact in the history of pneumonia that a large majority of cases occur among men, and among those who are exposed to the vicissitudes of the weather in severe occupations, and all those circumstances which tax the nervous system in a peculiar manner. He also thought that it might be a mistake to say that the lesion of croupous pneumonia can only be produced by the introduction of a specific poison into the blood by inhalation.

Dr. A. L. Loomis thought that Dr. Draper had struck the key-note of the discussion, that is, are we prepared to accept the doctrine that pneumonia depends upon a specific poison which produces a constitutional disease with a local lesion? Some five years ago, in a discussion on pneumonia

hold in a sister society, he stated that he did not believe pneumonia to be a local disease. Since that time experience has so convinced him that he no longer, under any circumstances, regards croupous pneumonia as a local affection. Nor was he prepared to regard it as a specific constitutional disease with a local lesion. In other words, he was not prepared to accept the doctrine that in order to have pneumonia one must receive the specific pneumonia poison, and that that poison alone has the power to develop the local changes which characterize the disease. He preferred to occupy a middle ground—that pneumonia, like many other inflammations, may be developed by a variety of poisons. A man loaded with alcohol is especially liable to pneumonia. A man weighted down with the specific poison of malaria, if it is specific, when brought under certain influences which depress the nervous system, is very liable to get pneumonia. The same was true with regard to insufficient action of the kidneys permitting the system to become poisoned with urea, and in all these cases there is the same record, so far as pathological changes are concerned, but the disease depends upon different causes. They are infectious pneumonias, but the infection is not the same in each case; and, it seemed to him that this is exactly the point upon which the discussion hinges.

As regards the action of cold in the development of pneumonia, there could be no question that it is not the essential cause; but it probably is an exciting cause in many cases. If the relationship of pneumonia to acknowledged acute infectious diseases was carefully examined, it would be found that all hangs upon nervous phenomena. It is the chill, or nervous shock, which marks its beginning; and, usually, a nervous shock indicates the commencement of most infectious diseases. The patient does not die because the lungs are crowded, but because there is failure in nervous supply; heart-failure, it may be called, but the heart-failure comes through the effect upon the nervous system.

The Academy then adjourned.

OBSTETRIC SECTION OF THE NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, March 24, 1881.

DR. HENRY E. CRAMPTON, CHAIRMAN.

THE TREATMENT OF PLEURISY IN CHILDREN.

DR. J. LEWIS SMITH read a paper on the above subject, in which he spoke of the treatment appropriate to each of the three stages:

1. The stage which precedes the effusion;
2. The stage of effusion; and
3. The stage of absorption and convalescence.

In the beginning of the disease measures should be adopted which are appropriate for reducing inflammation and limiting exudation. The abstraction of blood in idiopathic pleurisy may be beneficial if judiciously employed, but only one or two or three leeches should be employed in a robust child two, three, or four years old. As a rule, the loss of blood is injurious in all cases of secondary pleurisy, such as follows scarlet fever, etc., and also if the quantity of effusion is great. Emollient and simply irritating poultices are serviceable in the first stage, and he recommends a mixture of *one* part of mustard to *sixteen* of linseed. It should be made very wet, spread thin, applied over the chest in front and behind, covered with oil-silk, and changed twice in twenty-four hours. For children under six or seven months of age, rubbing the chest with camphorated oil, and applying a simple poultice, may be sufficient.

Blistering at this early stage of the disease should not be employed, as it increases the inflammation, and Dr. Smith has seen a case which terminated fatally, in which there was found an increased area of inflammation corresponding exactly in situation, size, and shape to a blister that had been applied.

The indications for the use of internal remedies in the first stage are to diminish the frequency of the pulse, relieve the pain, and allay the cough.

To a child *three* years old the tincture of aconite may be given in doses of half a drop, and for a child *six* years old in doses of *one* drop, every three hours for two or three days. In the first stage of primary pleurisy the cardiac sedatives may be used; but digitalis is a safer and better remedy in all other cases, and it also can be used in the second stage.

To a child *two* years old the tincture of digitalis may be given in doses of *one drop every three hours*, and to a child five years old *two* drops with the same interval. An opiate is ordinarily required: Dover's powder, one to three grains, every three hours. Hyoscyamus may be used to relieve the pain and cough; digitalis may be combined with an opiate; and morphine and aconite may be combined.

In secondary pleurisy digitalis is preferable to aconite.

In the *second* stage, unless the effusion is small, measures designed to remove it are required. The propriety of using blisters in this stage is very doubtful.

A relaxed condition of the bowels favors absorption of serous effusion. Diaphoretics do not aid much in the removal of the fluid. Pilocarpine produces a depressing effect, which renders it unsafe.

Diuretics and tonics are beneficial. Digitalis, with the acetate of potash, is very serviceable.

℞. Infus. digitalis..... ʒ iv.
Potass. acetat..... ʒ j.

M. S.—Teaspoonful every three hours, to a child four or five years old.

Bitter tonics are especially useful in this stage, and the acetate of potash may be combined with a decoction of cinchona, with good results. A full amount of nutriment should be taken, with but little fluid. Of course, the suggestion to use a dry diet and diminish the quantity of drink is not applicable to young children. If the appetite and the general health are good, and there are no symptoms due to the presence of the fluid, but little medication is necessary. If there are such symptoms and the fluid does not disappear, the question of surgical interference arises, and the indications for it are the following:

First.—Oppressed breathing due to the liquid present, whether it be sero-fibrinous, purulent, or hemorrhagic.

Second.—If there be flat percussion-note over the entire affected side, with displacement of the heart, even if there be no dyspnœa, for the latter may occur suddenly.

Third.—Moderate effusion, without material decrease in quantity by absorption after some weeks of treatment. There is danger that catarrhal pneumonia terminating in cheesy pneumonia and tuberculosis may occur in portions of the compressed lung. Besides, the longer the lung is compressed, the slower will it return to normal expansion after the pressure has been removed.

Fourth.—A moderate quantity of fluid co-existing

with disease of the opposite lung, or of the lung of the affected side.

Fifth.—Extension of the inflammation to the pericardium. Pericarditis as an extension of the inflammation is not infrequent.

Sixth.—The existence of valvular lesion of the heart.

Seventh.—The presence of pus; empyema.

The operation of thoracentesis should be performed in the eighth intercostal space, on a line perpendicular with the angle of the scapula. The admission of air to the pleural cavity should be carefully avoided. The thickness of the thoracic wall is about half an inch; in emaciated children it is less. Introduction of the canula to the depth of *one inch* is sufficient to pass beyond the exudation and allow the liquid to flow through the canula. The sharp needle should not be used. Washing out the pleural cavity is unnecessary; it is injurious rather than beneficial, except in cases in which the pus is offensive. To empty the pleural cavity and approximate the pleural surfaces is the indication. Dr. Smith thinks there will be a reaction against the removal of a portion of the ribs in cases of empyema.

Dr. A. C. Post favored free incision rather than aspiration in empyema.

Dr. Caro disapproved of bloodletting, even in the first stage of pleurisy. He uses bromide of potassium in doses of two or three grains every one or two hours, for the purpose of reducing the capillary congestion. Aconite may be used if there is much elevation of temperature. He especially favored the use of acetate of potassium in free doses in the second stage.

Large doses of calomel also diminished capillary congestion and favored resolution of the inflammation. Externally, in the second stage, he recommended the tincture of iodine or Lugol's solution, covered with oil-silk. He favored the internal use of jaborandi in infusion, and believed it to be preferable to hypodermic injections of pilocarpin. Take *two* drachms of the leaves to three or four ounces of water, and give the whole in two or three doses.

The Section then adjourned.

MEDICO-CHIRURGICAL SOCIETY OF LOUISVILLE, KY.

Stated Meeting of March, 1881.

THE TREATMENT OF ERYSIPELAS.

At the preceding meeting the subject of erysipelas was brought up by the report of a case in which tincture of aconite had been employed with good results. The discussion which followed its introduction led to its selection for discussion at this meeting.

Dr. Clements opened the discussion by reporting a case: An infant four months old was brought to me two weeks ago, having on the middle finger of the right hand a slight wound. The finger was swollen, tender, and bore signs of erysipelas. I warned the mother of the danger, put the child upon the tinct. ferri chlor., and recommended her to poultice it and see me next day. She did not return for two days. At this time the swelling extended to the elbow. I ordered a simple cranberry poultice (altogether on empirical grounds), and increased the tincture of chloride of iron. This failing to arrest it, and the fever increasing, I ordered spiritus mindereri, with spirits of nitre, and the addition of tincture of aconite to the poultice. Its march was not at all impeded, apparently, as it soon reached the body, and taking a downward course, progressed to the umbilicus and below, when the opposite arm began to be likewise affected. Five days ago the child was opisthotonotic, and remained so for forty-eight hours. This yielded to full doses of bromide of potassium and gelsemium, but meantime the erysipelas progressed on toward the foot on the right side, and to near the elbow on the left arm. Day before yesterday, after an increase in the local trouble on the finger, there was a fresh lighting up of the disease at that point, and after a lively progress, followed by as rapid fading in its wake, it has now gone over all that portion of the body again, and is now half-way between the umbilicus and the pubes, and still progressing. The temperature has ranged from 101° to 104°. It has been difficult to keep track of its pulse. It has nursed regularly, except during the manifestations of the meningeal trouble. The fact that the child is now living, with a good prospect of final recovery, is not less novel to me than the behavior of the disease.

Several authorities were then quoted by Dr. Clements to justify the means used locally with a view to check the progress of the disease.

Dr. F. Wilson said: Since the last meeting I have had a number of opportunities to test the tincture of aconite as a local application in erysipelas. I could not perceive that it lessened at all the burning pain, and after applying it three or four times I abandoned it, substituting the lead-and-opium wash. In the case to which I have reference, the temperature at one time reached 105½°, and there was, for almost a week, low, muttering delirium. Yesterday the fever had subsided, and the appetite was returning, and every circumstance now indicated a speedy recovery.

Dr. Larrabee detailed two cases—one occurring in an infant six months old, treated by the internal administration of tinct. ferri, and the external application of a solution of sulphate of iron (℥—O.), cloths being wrung out of this solution and kept applied to the parts involved in the inflammation. This treatment, however, failed to arrest the progress of the disease, which ran its course unchecked, and ended in recovery after a great deal of trouble. Another case—that of an adult—treated by the internal administration of tinc. ferri chlor. and applications of iodine, continued its course until the solution above named superseded the iodine, when the disease at once was held in abeyance, and convalescence was quickly established.

In regard to the discussion of the subject, Dr. Larrabee said that, inasmuch as at the last meeting the sweeping assertion had been made that all local applications with a view to arrest the disease were of questionable advantage, and that inasmuch as some surprise had been manifested that in this enlightened day physicians could be found who would advocate such means, he felt quite free to express surprise himself that any one could be found who would deny the efficacy of local applications. There was no work extant, said he, either ancient or modern, which was followed as a text-book, which did not endorse the application of astringent solutions for the arrest of inflammation in the early stage. That was one of the three principal indications for an astringent. Therefore, without the discussion of this point, it must be self-evident that the local treatment formed an important part of any rational mode of combating erysipelas or any other inflammatory disease, provided it had not progressed

to the formation of the products of inflammation. Therefore he took it that the treatment of erysipelas should be both local and constitutional, and the local treatment should always be something more than palliative. As to arresting its progress at once and for all by the application of nitrate of silver, he had never been successful. He had tried it to his satisfaction in both hospital and private practice, and he now preferred the treatment of Virchow, as he had given it, because he found he could make the parts moist and comfortable, and in the vast majority of cases arrest the disease.

Dr. Brandeis: I believe, sir, that erysipelas is entirely a toxæmia, from the fact that the slightest abrasion of the skin, placed under the condition of the impression by the poison, gives rise to erysipelas, while without this particular condition a large wound may exist without the appearance of the malady. Now, if we have such a science as pathology, we should make it an object to treat diseases according to that science. In the treatment of erysipelas, as many applications have been advocated for external use as there have been specifics recommended for whooping-cough. If it were an object to treat the disease with the view of subduing the local symptoms of inflammation, I would prefer the application of cold. But, if erysipelas is a toxæmia, it would appear more rational to treat local manifestations by palliative measures, using tonics, iron, and quinine internally, these being possibly supplemented by the hyposulphite of soda. But, as to the application of aconite, iron, or iodine, these have been used thousands of times without curtailing in any way the course of the disease.

Dr. Bailey: I would express sentiments somewhat in conformity to those of Dr. Brandeis, believing, as I do, this disease to be one of the blood, having as a local and secondary manifestation this inflammation in the skin. I believe this to be true because we have constitutional symptoms twenty-four, forty-eight, and even a greater number of hours before local manifestations. When it occurs as the result of trauma, I do not believe the trauma alone adequate to its production. There is something beyond this and back of it that we do not comprehend, perhaps we never may, that renders this patient susceptible to erysipelas, and that insusceptible. Hence, I believe the disease to be first constitutional and afterward local.

As to the management, I should say it ought to be largely expectant, not in a do-nothing sense, but I think it important not to meddle with a case until indications arise that demand treatment. The majority of cases are not modified by any treatment; it is a self-limited disease, and as for local applications, they appear to me to be worthless, from the fact that the processes they are intended to modify take place far beyond and out of reach of their influence. I cannot believe that local treatment shortens the disease one day. I have seen so many cases limited to such a small space without any treatment, that I am inclined to scepticism as to the result of all treatment in the disease. Patients often die for the want of support, and if I were the subject of it again, as I have been several times, I would watch for depression and endeavor to support myself, using any local applications solely with the view of promoting comfort.

Dr. Larrabee, our worthy president, has enunciated his views in no uncertain tones, and as we hold views so directly opposite, I feel it incumbent upon me to reply to his observations. I believe erysipelas is local before it is constitutional; and as he cites instances for maintaining the opposite view, in which the chill precedes local manifestations, so, in support of the opposite doctrine, I may appeal to the experience of every man to prove that we have local symptoms very frequently for hours before the patient feels the constitutional effects of the disease. The same thing is observed in idiopathic erysipelas that is seen in traumatism; it very rarely attacks a part unexposed. Let us suppose we have a patient brought into the surgical ward of the hospital with a clean, healthy-looking wound, and that he is placed under circumstances favorable to the development of erysipelas. On the second day that wound will be dry, and the granulations, instead of being bathed in laudable pus, and of that bright, healthy-looking aspect, have become dry and sordid in appearance. The patient may have felt no change in himself up to this time, but a keen surgeon sees what that local condition will result in. Now, from the fact that in so-called idiopathic cases the disease begins in an exposed part of the body, it is presumable that a solution of continuity existed there for the reception of the disease prior to the general symptoms of rigor and nausea.

As to the treatment, if, as the gentleman says, the disease has a tendency to rapid destruction and disintegration of blood-corpuscles, why should we wait for this actual destruction to take place. Would it not appear more rational to attempt to prevent this result than to attempt to restore them when once destroyed. I dare say he would not advocate that principle of treatment in diphtheria or any other disease in which it is an object to preserve the integrity of the blood.

It seems to me these points are well taken. Upon the decision as to the local or constitutional origin of the disease the treatment of each individual will be based.

Correspondence.

INSANITY AND UTERINE DISEASE.

To the Editor of The Medical Record.

Dear Sir—In a communication to the Medical Record of March 26th, Dr. Pitkin states that "the almost invariable presence of some one or more of the various uterine diseases, either functional or organic, in those cases of insanity occurring among females, and the facts brought forth by a thorough and searching inquiry into the history of a large number of cases, have convinced me of the important and serious effect often produced by a diseased condition of the uterus upon the nervous system."

I have been surprised to find that views similar to those expressed in the above extract have obtained wide credence among the profession, not alone with regard to nervous diseases in general, but also with regard to insanity.

In my capacity as pathologist to the insane asylum at which Dr. Pitkin was assistant physician, I have had the opportunity of making nearly one hundred post-mortems upon insane females. Although I have no statistics to offer upon the subject, I am nevertheless convinced, from a comparison of the results of the autopsies above-mentioned with those derived from considerable experience in autopsies upon sane females, that there is, perhaps, less uterine disease present in the insane than in the sane,

and in relatively few cases among the former have any lesions of the genital organs been found worthy of note.

Comparatively few women with unbalanced minds will refuse the physician a history of uterine disease if closely questioned concerning the genitalia, and long-continued investigation with regard to the influence of sexual derangements upon the production of nervous diseases in general have convinced me that in very many cases the mere coexistence of uterine and nervous disease is regarded as sufficient proof of their interdependence. It is unnecessary to dilate upon the fact that the maintenance of such an erroneous view with regard to etiology may be associated with pernicious results with reference to treatment.

L. Putzel, M.D.

252 East Forty-eighth Street.

New Instruments.

NUNN'S UTERINE POWDER-APPLICATOR.

By R. J. NUNN, M.D.,

SAVANNAH, GA.

So trifling a matter as the application of a powder to an eroded or ulcerated os has often proved to be a proceeding of much difficulty. Syringes, insufflators, pledgets of cotton, etc., are among the devices which have been tried, but have been found either impracticable or wasteful. All difficulties have been overcome by the simple little device shown in the accompanying illustration.

The instrument consists of a piece of india-rubber sheet, of greater or less dimensions, as may suit the case. This is held in a lock-forceps, or better, is set into a handle, as much as possible of the rubber projecting beyond the holder, the whole forming a little paddle with an elastic blade.

In using the instrument the powder is spread upon one surface of the applicator, in a layer of such thickness as may be desired. The end of the rubber is then gently laid against the lower edge of the surface to which it is desired to apply the powder, then by a quick onward motion the rubber is doubled upward against the part and the powder gently pressed into position by the elasticity of the india-rubber blade. In practice, when a large surface is to be covered with powder, it will be found much better to commence at the upper part and work downward. If, on the contrary, the lower portion is first covered, the end of the india-rubber, when pressed against the part as above described, will disturb some of the powder already put in position.

The cheapness and efficiency of this little instrument cannot fail to recommend it to the profession. It can be supplied by Messrs. Tiemann & Co.

119 York Street.

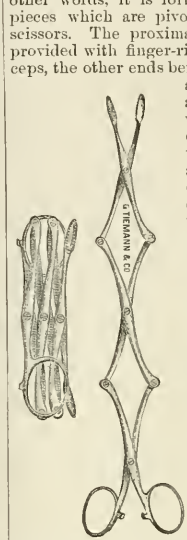
A New Lunatic Asylum is to be erected in Arkansas at a cost of $150,000.

NUNN'S FOLDING FORCEPS.

By R. J. NUNN, M.D.

SAVANNAH, GA.

The folding-forceps, of which the accompanying illustration will convey a good idea, is made upon the same principle as the well-known "lazy tongs;" in other words, it is formed of a number of similar pieces which are pivoted together in pairs as are scissors. The proximal ends of the first pair are provided with finger-rings or hooks, like other forceps, the other ends being pivoted to the second pair, and these again to the third, and so on until the number wished is attained; the outer end of the last pair being provided with whatever blades are desired, scissors, forceps, or other. These end-blades can easily be changed, and thus one forceps be used for many purposes. By a catch and ratchet at the handle-end they can be used as an artery-forceps, and for the other purposes to which locking-forceps are applied.



When fully extended, the length of this forceps is equal to the united lengths of its constituent pieces; but when folded to be put into a pocket-case, its length is that of one piece and its breadth will equal the united thickness of the blades. Thus, assuming a forceps twelve inches long, of quarter-inch steel, to be made in four sections, such an instrument, when folded, would occupy a space three inches long by one inch wide, and could be readily carried in an ordinary pocket-case.

Although originally designed to overcome the inconvenience of carrying a long uterine dressing-forceps, it will be seen that the principle is applicable to the whole class of two-bladed instruments, with the result of increasing their portability and diminishing their weight. This latter condition results from the fact that the distance between the power and the fulcrum, and between the fulcrum and the resistance, can be so greatly diminished that the blades can be made much lighter, and yet give a grip equally as unyielding as long single-jointed instruments made three or four times as heavy.

The original instrument was made for me by Messrs. Arnold & Son, of London, and subsequently in an improved form by Messrs. Tiemann & Co., of New York.

119 York Street.

A Case of Pneumonia in the Ox, successfully treated with infusion of *Hieracium venosum* (rattlesnake-weed), is reported by Dr. W. S. Forwood, in the *Maryland Medical Journal*. The animal was induced to drink two or three gallons daily. He had been gradually getting worse, but began at once to improve. Dr. F. recommends further use of the rattle-snake weed.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from March 27, 1881, to April 2, 1881.

WOODRUFF, E., Capt. and Asst. Surgeon. Relieved from duty in Department of Texas, to proceed to New York City, and by letter report arrival to the Surgeon-General. S. O. 72, A. G. O., March 30, 1881.

AINSWORTH, F. C., Capt. and Asst. Surgeon, now awaiting orders in New York City, to report in person to the commanding general, Department of Texas, for assignment to duty. S. O. 72, C. S., A. G. O.

WORTHINGTON, J. C., Capt. and Asst. Surgeon, now on leave of absence, to report in person to the commanding general, Department of the East, for assignment to duty. S. O. 72, C. S., A. G. O.

Medical Items and News.

CHILBLAINS.—In response to an inquiry in the *British Medical Journal*, the following suggestions for the treatment of chilblains are given:

Have the patient wear large shoes which do not compress the feet. Touch the toes with nitrate of silver. Galvanism has always proved successful with one writer. Liniment of aconite is recommended.

An ointment of lard and dry mustard rubbed in before the fire for twenty minutes will cure the trouble after a few applications.

Paint the affected parts with flexible collodion to protect them from the air. Very hot water, applied with flannels or sponges, is efficacious. A strong solution of acetate of lead was highly recommended by Sir Astley Cooper. Sulphurous acid is useful in mild cases.

MEDICAL GRADUATES FOR 1881.—The number of graduates so far reported is as follows: Bellevue Hospital Medical College, 118; University Medical College, 109; Jefferson Medical College, 207; Medical College of Ohio, 103; Cincinnati College of Medicine and Surgery, 30; Miami Medical College, 34; Rush Medical College, 172; University of Pennsylvania, 115; Louisville Hospital Medical College, 25; Louisville Medical College, 54; University of Louisville, 100; Woman's Medical College, Philadelphia, 17; Woman's Medical College, Chicago, 15; Michigan Medical College, 29; University of Maryland, 73; Baltimore College of Physicians and Surgeons, 144; University of Buffalo, 48; Detroit Medical College, 27; total, 1,510, with several not yet heard from.

REGULATING THE PRACTICE OF MEDICINE IN ARKANSAS.—A bill to regulate the practice of medicine has been introduced into the Arkansas Legislature, and, at time of writing, had been passed by the House.

A similar bill that is before the Pennsylvania Legislature has been favorably considered by the committee, and gone to its third reading.

A bill to regulate the practice of medicine in Missouri is said to have passed.

A very elaborate and judicious article upon the subject of regulating medical practice appears in the April number of the *International Review*. It is from the pen of Dr. Cushing.

ON AUTOPSY SOCIETIES.—There have for some time been rumors regarding the formation of an autopsy society in Paris. The prospectus of the organization has now been issued, and it shows an earnest purpose on the part of the originators to accomplish results of genuine scientific value. The society aims chiefly, it would seem, at securing some advances in psychology, as well as in anatomy and pathology. Its members pledge themselves to utilize their bodies after death "for the profit of the scientific idea," by leaving them to the anthropological laboratory, to be submitted to a post-mortem examination, or to be made use of for dissection or other purposes, as may seem fit. A *procès verbal* of the results of the post-mortem will be drawn up at the lowest price, for the information of the family of the deceased. Every member must subscribe at least 5f. annually, in return for which his autopsy will be performed free of charge, providing he dies in Paris. In the prospectus, great stress is laid on the disadvantage to science arising from the fact that at present the subjects of post-mortem examinations are unknown to the operator. Especially is this disadvantageous in the case of the brain, for it is impossible to study scientifically the relations between the structure and the functions of that organ, unless the scientific psychologists can dissect the brains of those whose character and personality have been known and noted. The prospectus concludes with a glowing appeal to persons of every sect or political opinion, who, after having been useful during their life, are fired by the ambition of being useful after death.

THE CONFESSIONS OF BUCHANAN.—Buchanan, the bogus-diploma seller, has recently made what purports to be a confession of his various misdeeds. He tells how he bribed a legislative committee to let his college alone; he gives a history of bogus-diploma selling in England and on the Continent, and shows that they have been by no means behind us in the matter. England was the head-centre of bogus degrees prior to 1857, when the medical registration laws went into force. Up to a recent time degrees from several German universities could be bought. Buchanan relates the work done in his own institution at Philadelphia. The papers given up include a list of foreign diplomas sold and a catalogue of addresses, including over five thousand persons who had corresponded with him. He tells of twenty-five concerns in this country and in Europe by which degrees are sold. He figures that fully twenty thousand bogus diplomas are current in America, and forty thousand more in Europe.

THE DOCTOR'S HORSE.—A new departure in medical journalism has been made by the *Southern Clinic*. It has a department which, under the title of "The Doctor's Horse," is to be devoted to veterinary science.

WAR ON THE ADULTERATION OF FOOD IN FRANCE.—A vast laboratory is to be built in Paris by official order of the prefect of police. Competent chemists are to be in constant attendance. Wine, milk, chocolate, coffee, meat, in fact eatables generally, are to be carefully examined, with a view to the detection of adulteration or falsification. The fee is to be paid by applicants, but is to be maintained at a low figure.

LONGEVITY IN EUROPE.—The latest European census has supplied the director of the Vienna Statistical Bureau with some interesting figures concerning longevity in the European states. It appears that of the 102,831 persons who have reached an age above ninety years, 60,303 are women and 42,528 men. When the figures of centenarians are examined, this preponderance of the female sex becomes

still more marked. In Italy, for example, there were 241 women and only 141 men who had attained their one hundredth year of life. In Austria, 229 women to 183 men. In Hungary, however, there were 526 women and 524 men. In Austria there were 1,508,-359 sexagenarians, or seven and one-half per cent. of the entire population.

THE MEDICO-CHIRURGICAL COLLEGE OF PHILADELPHIA.—The new medical college in Philadelphia, referred to in these columns some months ago, has issued its announcement for the spring session of 1881, and the winter session of 1881–82. It is called the Medico-Chirurgical College, exists under a charter obtained many years ago, but never employed, and is located at the southwest corner of Broad and Market streets, in one of the upper stories of the Third National Bank building. The faculty consists of Drs. G. P. Oliver, Goodman, Swayze, Stubbs, Waugh, Gerhard, and C. L. Mitchell, who require all applicants for graduation to have attended three winter courses of lectures, the last of which shall be in this college.

A CURIOUS CASE OF MALFORMATION.—Dr. Frank H. Todd, of Painesville, O., writes: A few evenings since, while making a visit in the country, I was asked by a prominent farmer to go to his barn and see a valuable ewe which was in trouble. We found a ewe which had been in labor for twenty-four hours, presenting the following peculiar symptoms:

With frequent and regular pains, I found protruding from the vulva a mass of what proved, on examination, to be a healthy, well-formed liver, two kidneys, with ureters and bladder, and large and small intestines. Oiling my hand, I proceeded to carry it into the uterus, where I found a lamb, doubled upon itself laterally, lying transversely across the mouth of the womb in such a shape that it could not be born. But where the viscera came from was still a mystery. In searching for the head I found an acute angle in the spinal column, just posterior to the shoulders, so that the head could not be brought over, in order that it might be born. By main strength of my hand I broke up the angle, hooked my fingers into the inferior maxilla, and in a few moments extracted the lamb, which, to all appearances, had not been long dead. Another live and perfect lamb soon followed.

On examination I found the protruded viscera belonged to the first lamb, to which they were still attached. It appeared that in early fetal life the lamb had been doubled upon itself, and the abdominal plates, opposite the angle of the spine, had failed to approximate and unite, so that an opening five inches long existed in the median line of the abdomen, through which the viscera protruded. The heart and lungs were in normal position and condition, and the chest-walls were perfectly formed. Whether the protruded viscera were formed within the abdominal cavity and forced out by the uterine contractions, I do not presume to say.

TYPHOID FEVER IN GERMANY.—Dr. Dudley P. Allen, writing from Leipsic, says: "Typhoid fever, which was previously very prevalent in Germany, has greatly decreased in many cities. This decrease is largely due no doubt to the improved water-supply, which, however, many cities have been very slow to introduce, Leipsic, for instance, having had a public water-supply for only fifteen years and Dresden but ten years.

"The wells from which water for drinking and cooking was formerly taken are still in existence, and are to be seen in the streets and courts of houses, where they are most admirably arranged to catch all sewage.

Whether the arrangement of water-closets has anything to do with the cases of typhoid fever or kindred diseases that occur at present is perhaps difficult to say. If, however, the foul gases to which they give rise can cause sickness, it might certainly be expected. Living, as families almost universally do, in flats, each flat is supplied with one or two water-closets. Very commonly these are ventilated into the corridor leading up through the centre of the block, and during the winter, when the street doors are closed, the stench in the corridors of many houses is almost unbearable. What the relative frequency of typhoid fever and kindred diseases is in Germany, when compared to other countries, I am unable to say. The treatment of typhoid fever in the wards of E. Wagner, of Leipsic, has for its object to keep down dangerous temperatures and to nourish the patient. Cold baths are extensively employed, and it may be of interest to detail the exact method in which these baths are given. The typhoid patients are placed in beds with rollers. When a patient is to be bathed the bed is rolled to the end of the ward, where the bath-room is located, and the patient is lifted from the bed and placed in a sitting posture in a long bath-tub, half full of water. Water is then dipped from the tub and poured constantly over the shoulders. The patient remains in the bath from five to ten minutes, according to the amount of his fever, provided he is not in a very weak condition. The patient is lifted from the bath, placed in a chair, wiped dry, and is again placed in bed and well covered. If he complains of cold he is given a cup of warm broth or a glass of wine.

No definite rule is followed as to the temperature at which a bath shall be given. It is almost always given if a temperature reaches 40° C. or 104° F. but is very frequently given at a much lower temperature, even at one very little above normal.

The object of the bath is primarily to reduce the temperature, but by cleansing the skin and changing the position it also greatly decreases the frequency of the bed-sores. When a patient is in a low typhoid state, it frequently rouses him to consciousness, improves respiration, and causes him to clear his lungs of secretion by coughing, and thus is thought to lessen the frequency of lung complications.

The baths are given according to the temperature and indications of each case, but are not commonly more frequent than once in three hours during the day. At night, if a high temperature is to be anticipated, from fifteen to twenty-five grains of quinine are to be given, and the patient is allowed to rest quietly and is not disturbed for a bath during the night, unless the temperature should become dangerous of itself, say 105° F.

In cases of intestinal hemorrhage baths are not given, lest the moving might cause fresh bleeding. Very weak patients are sometimes given a sponge-bath in bed, instead of being placed in the bathtub.

If the patient's pulse is very weak, subcutaneous injections of a solution of one part camphor to four parts olive oil are given. At each injection is given from fifteen to thirty minims, and this is repeated as often as the condition of the patient requires the stimulus. Camphor is preferred to other or other stimulating injections, on account of its more satisfactory action. Abscesses are very rarely produced.

The temperature of the baths varies. If a patient is weak or old, he is placed in water at about the temperature of the body, and this is cooled to perhaps 92 F. If the patient is young and less feeble, the temperature of the bath may be reduced to 89° F.

The diet of the patients is of milk, broth, eggs, buttermilk, etc. Wine is used as a stimulant.

Since the introduction of baths in the treatment of typhoid in Leipsic, the percentage of deaths has been reduced, I am told, from about seventeen per cent. to between eight and ten per cent.

The number of cases of recurrent typhoid has increased, on the other hand. Since August, 1880, out of sixty-five cases of typhoid, there have been ten cases of recurrent typhoid. This second manifestation of the disease has, as a rule, been mild, and these cases have usually recovered.

The cause of the increased number of recurrent cases of typhoid is uncertain, but Prof. Wagner suggests that these cases may simply represent those that, under previous treatment, have died at an earlier stage of the disease. Prof. Wagner also supposes the second manifestation of the disease must be in some way due to a renewed infection, but how this occurs is undetermined.

Syphilis and the Regulation of Prostitution.—Dr. F. Cadell, Lecturer on Syphilology in the Edinburgh Medical School, recently read a paper before the Medico-Chirurgical Society, of Edinburgh, in which he took the ground that "Syphilis is not a sufficiently serious disease to require any special legislation."

The Mortality from Anæsthetics in Great Britain, for the decade ending 1880, was *(British Medical Journal)* as follows: Chloroform, 101; ether, 11; chloroform and ether, 7; methylene, 10.

The late Senator Carpenter and the Colon.—The bright, mirthful soul of Carpenter was not overawed even by the shadow of death. The evening before he died he suffered excruciating pain, and in his agony wanted an explanation of the cause. "The pain is caused, Senator," replied a physician, "by a stoppage of the colon." "Stoppage of the colon, eh?"—and again the sense of humor overcame pain itself—"Well, then, of course *it isn't a full stop.*"

Death of Esquimaux from Variola.—A number of Esquimaux on exhibition at Paris were taken with small-pox in a malignant and hemorrhagic form. All were vaccinated as soon as the first symptoms occurred, but it was too late, and every case proved fatal. On autopsy, the livers were found to be enormously enlarged and fatty. This, it was thought, was due to their peculiar diet.

Trichinosis Cured.—Dr. J. M. Barton *(College and Clinical Record)* states that four cases of trichinosis have recovered under large doses of glycerine. This treatment, which has been quite widely recommended, is based on the fact that glycerine, applied to living trichinæ, at once shrivels them up and kills them.

The Medical Registration Law in Alabama is said *(Independent Practitioner)* to be wonderfully well enforced. Of ten candidates for diplomas who came before the Examining Board at Huntsville, nine were rejected. The county societies have also the power to enforce preliminary examinations of persons desiring to study medicine.

Napoleon's Laxative, prescribed for him by Corvisart, was as follows;

℞. Potass. borotartrat. ..... ʒ ss.
Antimon. et potas. tart. ..... gr. ¼.
Sacchar. ..... ʒ j.
Aquæ ..... ʒ xv.
M.

Dose, a wineglassful frequently till it operates.

Private Hospitals in New York City are becoming quite popular institutions. We have had an infirmary for diseases of the rectum and another for diseases of the skin. Dr. T. G. Thomas has recently started a new private hospital for diseases of women. Dr. James B. Hunter is physician in charge. The rates generally are $40 per week, exclusive of medical attendance; $22 per week for medical attendance, operations extra.

The Work which John Hunter did.—In the Hunterian oration recently delivered by Mr. Luther Holden, he said: "It was the great mission of Hunter to found pathology on comparative physiology; to rescue disease from the grasp of quacks, fanatics, and system-mongers, and to restore it to the rank where Sydenham would have placed it—beside the beneficent regulations of nature which govern the body in health; and he must read history amiss who does not set a high value on such work."

A Serious Abuse of medical charity is said by the Superintendent of the Massachusetts General Hospital to attend the working of the out-patient department of that institution. There were thirty-seven thousand cases treated gratuitously in this department last year, and at the present rate the number will soon be one hundred thousand. A large proportion of these, says the superintendent, are not needy persons. After April 1st medical attendance will be given only to those who cannot pay fees.

A Case of Protracted Gestation is reported by Dr. J. M. Merchant, in the *Boston Medical and Surgical Journal.* The mother, a multipara, was pregnant for three hundred and twenty-four days, or nearly eleven months, at the end of which time she was delivered of a healthy living child. The case is very well authenticated. There were no other peculiarities about the pregnancy. The child weighed twelve and three-fourths pounds.

Medical Laws in Connecticut.—The Legislature of Connecticut, now in session, has under consideration the matter of passing a law regulating the practice of medicine. The matter is being considered with more seriousness than ever before. The same State is proposing to amend its law relative to color-blindness. The plan is to take the matter of examining railroad employés out of the hands of the State Board of Health and have it put in charge of a commission composed of a mechanic, a railroad official, and any regular (but generally the company's) physician. Such a change must tend to lessen the force and benefits of the law.

Has Diphtheria a Prodromus?—Dr. E. L. McKinnie, of Viola, Ill., writes: "On January 26, 1881, I was called to see O. M——, aged five years, the youngest of five children, sick with diphtheria. I excluded the other children from her room, but twice daily examined them carefully. I noticed nothing abnormal in their condition until the morning of the 31st. I found the following to be E. M.'s condition, viz.: pulse, 76, *and every seventh or eighth beat absent;*

temperature in axilla and rectum, 97½°; respiration normal; appetite very good; the boy presenting no evidence of illness. I confess I did not fully understand the import of these symptoms, but I called the parents' attention to the facts and put him *under treatment for diphtheria*, still excluding him from his sister's apartment. Same condition present next day. Treatment continued for two days longer, when, the pulse and temperature being normal, treatment was suspended, it seeming useless to medicate a boy who was apparently well. Four days after suspending treatment the boy had fever, a diphtheritic deposit on tonsils, and on the ninth day from that time, or the seventeenth from the first abnormal condition noted, he died of exhaustion, the disease making slow, but sure progress.

"*I noticed precisely the same condition in Z. M.'s case*, the next oldest child, and having received the MEDICAL RECORD of January 29th, containing the note of Dr. J. R. Brandt calling the attention of the profession to these symptoms, the first intimation I had (and I believe the first on record) of them being a prodromata of diphtheria, I put Z. M—— under the same treatment and continued it without intermission for ten days. All the constitutional symptoms of diphtheria manifested themselves, but there was no local lesion. Now, if the above narrated conditions are prodromatic, then the question arises, did I hold the disease in check in E. M.'s case for eight days, and abort it in Z. M.'s? And could I have had a like happy result in E. M.'s case had the treatment been continued? I am very firmly of the opinion that I did hold in check in one case and *checkmated* in the other.

"Will not other members of the profession make careful examinations of apparently unaffected persons as they may have opportunity, and possibly confirm Dr. Brandt and myself in these observations, or convince us that they were merely coincidences."

HOW SHALL THE DOCTOR GET MORE MONEY is a question just now being agitated in medical journals. There are four ways of getting more money, viz.: by stealing it, borrowing it, earning it, and marrying it. The code of ethics, Mosaic and medical, cuts off the first; various accidents, personal, geographical, etc., generally prevent the application of the last method; plan number three has long proved a failure. We advise the medical man who wants more money, therefore, by all means to borrow it, and pay up by treating the creditor.

LARGE DONATIONS TO MEDICAL INSTITUTIONS.—Thomas A. Scott, Esq., has recently made four large gifts to Philadelphia institutions. To the Jefferson Medical College he has donated $50,000; to the Orthopædic Hospital, $30,000; to the Episcopal Hospital, $20,000; and to the Department of Arts of the University of Pennsylvania, $50,000, to endow the chair of mathematics. These munificent gifts of the well-known railroad president show that liberality and culture go hand in hand with pre-eminent executive ability. Mr. Scott, it may be added, has been for some years one of the trustees of the Jefferson College.

MEDICAL COMMENCEMENTS.—At the annual Commencement of the Jefferson Medical College, of Philadelphia, there were 205 graduates, and yet it is stated that nearly eighteen per cent. of the candidates were rejected at the first examination. But few are understood to have passed at the re-examination. The Medical Department of the University of Pennsylvania had, a few days later, 115 graduates. The graduating class of the Pennsylvania Dental College numbered 67, and that of the Philadelphia Dental College, 58. The Dental Department of the University of Pennsylvania conferred the degree of doctor of dental surgery on 47 students. This gives a total of 320 physicians and 172 dentists.

STATISTICS REGARDING THE PRACTICE OF MEDICINE BY WOMEN.—At the recent Commencement of the Woman's Medical College, in Philadelphia, some interesting statistics were given regarding the success of women physicians in this country. Of 276 that had graduated in the past thirty years, 32 had died, 31 had given up their profession, 151 were then practising.

Of these, 77 were practising gynecology, gynecology and obstetrics, or gynecology and general medicine; 15 practised obstetrics, or obstetrics and general medicine; 55 practised general medicine with more or less surgery; 3 practised surgery; 144 claimed to have received ample social recognition; 7 had not received such.

The incomes of 24 were between $1,000 and $2,000; of 20, between $2,000 and $3,000; of 10, between $4,000 and $5,000; of 3, between $5,000 and $15,000; of 4, between $15,000 and $20,000; of 10, less than $1,000. The average income was $3,000.

Sixty-six were members of medical societies; 51 were *married* after studying medicine; and 61 before. Of 50 who were married, 43 reported that the practice of medicine had no unfavorable effect upon their domestic life; with 6 the effect was not entirely favorable; with 1 it was unfavorable; 3 were prevented by practice from marrying; 5 gave up practice on account of marriage.

THE SEA-SIDE NURSERY.—St. John's Guild has received funds sufficient to enable it to begin the building of the Sea-side Nursery at Cedar Grove, Staten Island. The contractor has lumber now on the ground, and is required by the terms of his contract to have the nursery ready for the reception of sick infants and mothers in June. The Sea-side Nursery is intended to receive from the Floating Hospital such sick children as require more than one day of fresh sea-air.

OLEOMARGARINE.—The subject of the food-value and healthfulness of oleomargarine is now being investigated by the State Board of Health. Much excitement is being aroused by the testimony before the committee. Additional interest is caused by the fact which has recently come out that artificial cheese, composed mostly of lard, is being made in large quantities.

ANOTHER DEATH FROM TRICHINOSIS occurred in Hoboken, N. J., on March 28th. The deceased had been eating raw ham. Her husband was suffering severely from symptoms of the same disease, but is now convalescing.

TWENTY-FIFTH ANNUAL REPORT OF THE TRUSTEES OF THE STATE LUNATIC HOSPITAL AT NORTHAMPTON, MASS., 1879–80.—The Northampton Lunatic Hospital, under the care of Dr. Pliny Earle, has been made one of the best in the State. The report for the past year makes a very favorable showing. Dr. Earle, as is well known, is sceptical as to the ordinary statistics of the curability of insanity, and believes the disease much less curable than is ordinarily represented. A discussion of this subject is given in the present report.

Original Communications.

MYXŒDEMA.

By A. CLIFFORD MERCER, M.D., F.R.M.S.,

INSTRUCTOR IN HISTOLOGY AND CURATOR IN THE COLLEGE OF MEDICINE, SYRACUSE UNIVERSITY.

(A paper read before the Syracuse Medical Association, Feb. 15, 1881.)

It is reasonable to suppose cases of this somewhat rare disease, now known as myxœdema, have from time to time come under the observation of earlier physicians, and have been regarded as cases of other diseases, such, perhaps, as cretinism, renal anasarca without albuminuria, polysarcia, or, possibly, sclerema or locomotor ataxy, with all of which myxœdema might have been confused. For the differentiation of the disease the profession have to thank Sir William Gull, who was the first to describe it as a distinct disease in a paper on a "Cretinoid Condition Supervening in Women in Adult Life," read before the Clinical Society of London in 1874. In addition to the five cases then described by Dr. Gull, Dr. William Ord, three years later, was able to describe five more before the Royal Medical and Chirurgical Society of London. Of the two of these which had died, one had been carefully examined post mortem, with interesting results. The nearly, if not quite, universal mucous œdema, having an apparently causal relation to the clinical phenomena, seemed to justify Dr. Ord in naming the disease myxœdema. Including the above cases, there have been, up to the present time, about thirty brought to the notice of the two societies, the other gentlemen to whom the societies are indebted being Drs. Sanders (of Edinburgh), Duckworth, Goodhart, Sémon, Hadden, Lloyd, Andrew Clark, and Greenhow.

In France, M. Charcot had independently discovered the same disease, and was about to publish a paper on the subject, under the title "Cachexie Pachydermie," when he became acquainted with the researches of Dr. Ord, and adopted Dr. Ord's nomenclature. In our own country, so far as I can discover, Dr. William A. Hammond, of New York, was the first to recognize a case of myxœdema; of this, "with special reference to its cerebral and nervous symptoms," he gave a detailed account before the American Neurological Association in June of last year. Besides what has been published in Transactions of societies, little has appeared in print concerning myxœdema, the most important papers being a "Clinical Lecture on Myxœdema,* by William Ord, M.D., F.R.C.P., Physician to and Lecturer on Medicine at St. Thomas's Hospital" (London), "Du myxœdème,† par Hadden, D.M., membre de la Société Pathologique de Londres, et ancien 'Medical Registrar' de St. Thomas's Hospital," and Dr. Bristow's article in the second and third editions of his "Treatise on the Theory and Practice of Medicine."

The etiology of myxœdema is obscure. At first the disease was thought to be confined to adult women, and the few cases occurring in men, reported by Drs. Fenn, Savage, and Hadden, and M.M. Charcot and Olive, were regarded as exceptional until quite recently. At a meeting of the Clinical Society, January 14, 1881, Dr. Andrew Clark said, for ten years he had been more or less familiar with cases agreeing with those principally described by Drs. Ord and Duckworth, but that the majority of his cases had been in men. Most recorded cases, however, have been in women between the ages of thirty and sixty. The disease is not endemic, epidemic, or hereditary; is not syphilitic or a result of excess in eating or drinking. It is seen in both the single and married, and in those of light and dark complexion. It has followed acute rheumatism and pregnancies. In one instance (Dr. Sémon's case) it has occurred directly after an injury to the brain, and in another (Dr. Ord's case, very advanced) its course has been hastened to a fatal end by the receipt of bad news. Perhaps the most common event in previous histories is frequency of labors and miscarriages, or some uterine irregularity. But it must be confessed, as is true of many another disease, that little is known about the causes of myxœdema, and that that little is negative rather than positive. It might be said of mucoid changes in general, and they are by no means common, the most frequently seen is peculiar to the cartilages of old age, suggesting myxœdema may perhaps in part be due to such various causes as greatly exhaust vitality, such as, for instance, "fourteen children and seven miscarriages," as occurred in Dr. Sémon's case.

Of the five fatal cases recorded (three, Dr. Ord's; one, Dr. Greenhow's; and one, Dr. Lloyd's) at least two have been, and one is being thoroughly examined for pathological changes. Dr. Ord finds the essential lesion to be in the connective tissue. Its fibrillar element is remarkably increased, and the fibrils separated by unusually large interstices filled with transparent material yielding mucin, an excess of the normal intercellular cement, together with ab-

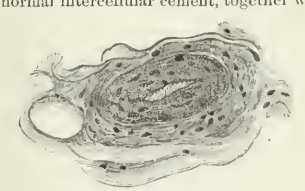


FIG. 1.—Section of a small artery from the tongue. The lumen is filled with blood-corpuscles. The thickened middle coat with nuclei is surrounded by the adventitia, swollen, fibrillated, and with nuclei. A fat-cell is seen to the left. Magnified 200 diameters.

normally numerous swollen nuclei. The fibrils are unusually distinct, being swollen as well as teased apart, as it were, by the interfibrillar material. With the great overgrowth of the mucin cementing material, connective tissue appears embryonic, even resembling the umbilical cord, and suggests a retrograde metamorphosis. The skin, subjected to chemical examination, is found to contain as much as fifty times the scarcely weighable quantity found in ordinarily œdematous, or healthy, skin. A portion of skin cut from the body retains its shape, the œdema being somewhat solid, while dropsical skin under the same conditions collapses as the fluid oozes from it. The new material surrounds and partially insulates the touch-corpuscles and other nerve-terminations; surrounds and chokes the secretory glands; but is most abundant in the lymphatic spaces

* British Medical Journal, May 11, 1878.

† Progrès medical, 1880, Nos. 30 et 31. See also British Medical Journal, October 27, 1877, April 27, 1878, October 18, 1879, November 20 and 27, 1880, January 22, 1881; Lancet, October 27, 1877, April 27, 1878, October 18, 1879, November 20, 1880, January 22, 1881; Medical Press and Circular, October 15, 1879; Medical Times and Gazette, May 1, 1880; Journal de médecine et de chirurgie, July, 1879; American Journal of Medical Sciences, July, 1875, and April, 1879; New York Medical Record, September 20 and November 29, 1879, and August 28, 1880.

and the loose cellular tissue around the blood-vessels. The adventitia of the arteries is swollen and infiltrated so as to show unusually clearly its fibrillar structure. The middle coat is also thickened (Fig. 1). In some places the arteries are quite obliterated.

Changes similar to those occurring in the skin occur to a less or equal extent in connective tissue everywhere, and, in a similar way, tend to crowd or even destroy the essential elements of the part. The tongue is swollen, and its muscular and other elements in microscopical sections fall away from one another, separated by the overgrowth of cement. The changes are well seen in the uvula (Fig. 2), and

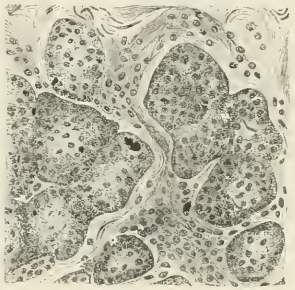


FIG. 2.—Section from the uvula showing glandular structure and intervening overgrowth of fibrillæ and nuclei. Magnified 240 diameters.

probably exist in every part of the respiratory organs and digestive apparatus. The heart, as a whole, is enlarged and firm, the left ventricle dilated and hypertrophied, its muscular elements being separated and even destroyed by the new material, while the great vessels at its base are atheromatous. The kidney is not enlarged or notably discolored, but it is too firm, and, while its surface is smooth and capsule not adherent, the cortical substance is atrophied and presents the aspect of granular kidney. In microscopical sections the very abundant transparent intertubular overgrowth is seen to compress the excretory structures, in part imitating the microscopical appearance of the early stage of granular kidney, the capsule of the Malpighian body in some instances being pressed in upon the contained glomerulous almost to the extent of obliterating the latter. The spleen and liver are also too firm, and in the latter a certain number of hepatic cells have atrophied under pressure. That from two-thirds to three-fourths of the thyroid gland are destroyed is regarded as an important matter by some, especially Dr. Hilton Fagge, to whose opinions it will be necessary to refer later.

In the first two cases, Dr. Ord could not satisfy himself that there existed the same or any parallel condition (excepting some degeneration of the arteries) in the central organs of the nervous system. Nevertheless, Drs. Goodhart, Hammond, and Hadden were fully persuaded some analogous lesion existed in these structures, and in Dr. Lloyd's case, the tissues of which are still being examined, Dr. Ord has found a general increase of the connective tissue of the cord, especially around the arteries and central canal; but he has not found any evidence of destruction or degeneration of the nerve-elements. In Dr. Lloyd's case, the dura mater was firmly adherent to the cranial bones. There was much atheroma in the vessels at the base of the brain. The cerebral convolutions were flattened, the right hemisphere especially being atrophied, while the ventricles were normal. The serous cavities contain more or less fluid, the chemical composition of which has not been compared with that of ordinary effusions.

Clinically, myxœdema is characterized by a "general œdematous condition of the skin, unassociated with albuminuria, and combined with physical and mental torpidity." The patients are mostly stout adult women, who at first sight have the aspect of those suffering from renal disease. But the mucoid œdema, unlike ordinary œdema, does not gravitate on changing the patient's position, and the skin does not pit on pressure. Because the cutaneous glands are choked, there is no sebaceous secretion, and little or no perspiration, the skin being dry and, excepting that of the face, coarse, and sometimes scaly —much the same condition as that in which one's hands are after washing them in strong alkaline solutions. To the touch the skin loses its elasticity, becomes somewhat doughy with the soft solid infiltration of the subcutaneous tissue, and feels as dry and harsh as leather, or even emery paper. It is apt to become yellowish as the disease advances. That of the face has a dry but smooth, delicate, slightly translucent look, resembling wax or alabaster. This waxy appearance is very striking; the bloodless circle around the eye contrasts with the persistent, circumscribed, delicate rose tint of the cheek, readily increased in color by emotional influence, the two meeting abruptly at the lower border of the orbit. The broadened features and puffy cellular tissue around the eyes suggest but do not imply the existence of albuminuria. The lower eyelid is swollen in hanging folds, which do not yield to pressure. The nose is large, alæ nasi thickened, and the base flattened, so as to cause the eyes to appear too far apart. The somewhat cyanotic lips, thickened and pendulous, especially the lower, are separated by an expressionless, transverse slit, all the more slit-like because the mouth opens only a little by an up and down movement of the lips. In fact the whole face is placid or expressionless, as if in a mask.

The hair is fragile, and tends to fall off, perhaps to a greater extent (Charcot) from the pubes and axillæ than from the scalp. Dr. Sémon's case had lost the hair from every part. The tongue is thick and too large for the alveolar cavity, and is liable to be bitten, as it gets in the way of the teeth. Toothless patients, for this reason, will not wear false teeth. The soft palate, inner surface of the cheeks, fauces, and pharynx are swollen. The larynx presents a glistening mucous surface and anæmic cords. This condition of the voice cavities, together with want of power in the muscles of articulation, interferes with natural speech. It becomes low-pitched, slow, uncertain, and measured ("scanned"), monotonous, and nasal, is frequently interrupted by an act of swallowing (done to displace the swollen uvula), and little explosive sounds produced in the posterior nares, in some respects resembling the voice of acute tonsillitis. Respiration may be more or less difficult, and some patients suffer from bronchitis.

The neck is full, and the skin and subcutaneous tissue may be thrown into permanent unyielding folds. In most cases it is difficult to detect the thyroid gland, partly because the neck is so thick, and partly because the gland is largely destroyed. Above the clavicle on either side is commonly a fatty tumor, similar to that found in sporadic cretinism. Dr. Hadden has seen a similar tumor flattened beneath

the temporal muscle. The thickened hands lose their markings and contour, and become expressionless, the fingers pressing against one another so as to become square in section instead of round, giving to the whole hand the "spade-like" appearance of Dr. Gull. The fingers are flexed and extended with difficulty. The hands are very clumsy; it is troublesome, or impossible, to thread a needle. The nails, like the hair and teeth, are fragile and easily broken. The feet are similarly affected. Gloves and boots become too small. Walking is difficult and cannot be kept up for long, and may be attended with a sense of pressure in the lumbar region. The gait is a slow, deliberate shuffle, waddle, or stagger, with general quivering at each step, apparently an effort at balancing, as though the flexors and extensors could not act in harmony, and the quivering was set going to effect the adjustment. The quivering is not the trembling of spinal disease. The patients are subject to sudden falls when walking, caused by the flexors ceasing to act before the extensors begin, letting the body fall between the two. Both ligamentæ patellæ have been ruptured in succession in one of Dr. Ord's cases by the violent tardy action of the extensors during a fall. Co-ordination is bad as to time, but there is no paralysis (nor numbness and tingling). There is want of tone, but no wasting of the muscles. Dr. Andrew Clark says in his cases the inco-ordination was worse in the dark or when the patient was blindfolded, resembling ataxy in this respect.

The inco-ordination Dr. Ord believes to be due to the partial insulation of the peripheral nerve-terminations in the skin and muscles; so, notwithstanding the skin is everywhere sensitive, perception is slow, and muscular response tardy. This slowness of perception and tardiness of response belong to all other acts of the patient as well as to that of walking. It contributes to the troubled speech and clumsiness of the hands. The simplest acts of life—dressing, knitting, and the like—require double, or more than double, the time usually necessary. In advanced cases this is very distressing; the day is spent in chasing the duties that should have been accomplished during the first hours of it. The slowness and clumsiness cause the patient to be timid, and she does not like to venture into the street alone. Not only is slow perception followed by slow action, it is also followed by slow thought. The mental act, though slow, is well done, however, and the patient is painfully aware of her general slowness, which she is unable to overcome. She may be somewhat morose and irritable. She can write; her memory, though in some cases impaired, is fairly good until late in the disease, when delirium, or even incurable insanity, may supervene. Then, too, the special senses may fail. Headache is sometimes pronounced. She gets in the way of being indifferent to all that goes on about her, and is inclined to sleep a good deal.

This general lethargic condition of the body and mind is worse in winter than in summer. Cold is keenly felt. This is not simply a subjective symptom; the color of the lips, already noted, and the somewhat cyanotic extremities, and above all the actual axillary temperature tell too plainly its objective character. In a few notes I made at the bedside of one of Dr. Ord's cases, I found the axillary temperature ranged for some days between 96.4° F. and 97.8° F. Only in one instance has Dr. Hadden seen the temperature above normal, and then it was only 99.2° F. In all other instances the temperature has been below normal by one, two, or more degrees, with slight variations from day to day and from morning to night. The temperature is usually a little higher in one axilla than the other (Duckworth). In one of Dr. Ord's cases the temperature, several hours before death, was 87° F., and a few minutes before death only 79° F. The heart is weak, sometimes with, and sometimes without a murmur. The pulse is small and regular, varying in frequency between forty-five and eighty-five, being commonly below sixty. Toward the last the arteries became tortuous, their coats thickened, and the second sound at the base of the heart accentuated, as in cases of granular kidney. Indigestion and constipation are frequently present, as might be expected. The excretion of urea is much less than normal. In a number of cases in St. Thomas's Hospital the quantity of urea passed in twenty-four hours was reduced to from two-fifths to one-eighth its normal quantity, the reduction being in keeping with general sluggishness and low temperature. The quantity of urine is about normal, or a little less, and of low specific gravity, but contains no albumen, nor casts, until late in the disease. In women there is frequently more or less uterine trouble, but not sufficient to interfere with pregnancy and labor.

In addition to the œdema patients commonly have considerable subcutaneous fat. One thigh measured thirty-nine inches in circumference. They sometimes complain subjectively of "bands" binding down their muscles, constricting a limb perhaps. In eight or nine cases Dr. Duckworth has also noticed moles, acquired, not congenital, on the face, scalp, and shoulders. He suggests there may be a relation between the mental torpor and the moles in myxœdema, similar to that existing between the mental condition and the cutaneous growths in molluscum fibrosum.

The prognosis of myxœdema is bad. Beginning insidiously, it very slowly and surely advances; the symptoms, perhaps scarcely noticeable at first, become gradually more marked, while others develop. Years—five, six, a dozen or more, perhaps—slip by in this way. Some day a noticeable change takes place. We have already had occasion to note some of the symptoms of the last stage. Renal trouble supervenes with its albuminuria and casts, ordinary anasarca, tortuous, thickened arteries, arterial tension, accentuated second sound of the heart, and hypertrophy of the left ventricle. Curiously, as these nephritic symptoms become established, there is for a short time improvement in the general condition. But to this last stage also belong the decided failing of memory, impairment of the special senses, delusions, more or less delirium, and even persistent alienation. Toward the last the skin tends to become wrinkled and movable on the parts below. The muscular and will-power may become so feeble as to allow the chin to fall against the sternum, producing marked dysphagia. In some cases the hanging head, the coarsely broadened features, the saliva dribbling from between the separated blubber lips, together with the general torpidity, both physical and mental, present indeed a very cretinoid aspect. Eventually, with a greatly reduced temperature, the patient becomes comatose and dies.

All treatment, hygienic, tonic, stimulant to the circulation, has failed to check the general progress of the disease. The effect of living in a warm climate or of wearing Dr. Chapman's spinal bags would seem worthy of a trial.

After the elucidation Dr. Ord has given myxœdema its differential diagnosis is not difficult. Though it has symptoms in common with cretinism, the facts that it begins in adults, well-developed physically and mentally, and is not endemic or in any way associated with goitre, at once distinguish it from both sporadic and endemic cretinism. In the early stages it is easily distinguished from Bright's disease. The swollen skin does not pit on pressure, the urine is normal, or nearly normal, in quantity, and contains neither albumen nor casts. Myxœdema is now a definite disease, while polysarcia is a vague term and may mean nothing more than obesity. Sclerema and allied conditions differ in having a hard skin and in being local, with a tendency to heal in one direction as they extend in another. Ataxy seldom occurs in women, is not associated with mucous œdema, while paralytic and neuralgic symptoms are prominent.

In the first two post-mortem examinations Dr. Ord was unable to detect a lesion in the nervous centres. He was, therefore, led to regard the mucous swelling in other parts as the direct or indirect cause of all the symptoms. We have already seen how some of the symptoms evidently depend on this swelling. Before following out Dr. Ord's fuller explanation, it would be well to glance at Dr. Hilton Fagge's opinions* already referred to. From the cretinoid stand-point, the destruction of from two-thirds to three-fourths of the thyroid gland in myxœdema was somewhat in favor of his views. He and Mr. Curling had found no thyroid gland present in cases of sporadic cretinism in England, and as the worst cases of endemic cretins often had no bronchocele, he believed there was an antagonism between the thyroid gland and cretinism. When present the thyroid was a kind of filter, or safety reservoir, which by enlarging saved the patients from cretinism; they suffered with goitre instead. When the thyroid was absent, other causal conditions being present, cretinism resulted. He was inclined to believe myxœdema identical with the sporadic cretinism of children, seen in England, and due to the mucoid destruction of the thyroid gland. Most other observers, however, are opposed to this view of identity, and Dr. Ord, who at first entertained a somewhat cretinoid view of myxœdema, and hoped to investigate cretinism from a myxœdema stand-point, in places where cretinism is endemic, regards the question of overgrowth or atrophy of the thyroid as of little importance. Dr. Ord believed the padding of the nerve-terminations in the skin and in the muscles would account for the slowness of motion. Further, the padding made of the skin a more or less insulating cushion which interrupted a means of communication between the outer world and the nervous centres, upon which the education and development of the latter largely depend. In fact, Dr. Ord held that the natural process of development of the central nervous organs was directly dependent upon the exercise of these organs, stimulated to work by impulses from the periphery—that the surroundings of the growing animal "lick it into shape," so to speak. He also held that the intrusion of an insulating medium would tend to arrest development in proportion to the completeness of insulation. The intrusion of myxœdema, he thought, then, was a sufficient cause to give rise to the increasing torpor of the centres and the gradual mental impairment, the brain getting rusty, as it were, for want of proper exercise. He cited instances of temporary torpor produced by temporary failure of normal peripheral stimulation, and thought the long-continued influence of a slight failure could be expected to be followed by a gradually increasing torpor of the centres, just as any other unused part wastes for want of exercise.

Dr. Goodhart has objected to Dr. Ord's rationale. He admits the possibility of such an explanation were the disease one of infancy, but as it occurs in adults, when the brain has completed its development, he believes Dr. Ord's views untenable. He thinks past impressions would furnish mental food. Persons become blind without suffering any impairment of intelligence, and intelligence may be more active after than it was before the accident. One might add, too, the sense of touch is not lost in myxœdema; its only impairment is manifest in slow response. Now, a response at the periphery necessitates six acts, each of which involves a length of time the physiologist can measure: 1, the peripheral impression; 2, the transmission to the brain; 3, the perception by the brain; 4, the determination to respond; 5, the transmission of the response; and 6, the peripheral act. Of the whole time required for the six acts by a person in health, the mental acts (3 and 4) have about one-fourth, and the peripheral impression (1) about one-tenth. To the slowness of which one or more of these acts the slowness of myxœdema is due can only be determined positively by experiment. Further, if one pad one's own fingers with various materials, one finds, if he makes through the padding an impression which can be felt at all, he can feel it as quickly, apparently, as he could were a thinner or no padding present—certainly there is no "perceptible" difference. It is possible, however, that the padding of myxœdema benumbs the touch-corpuscles by compression as well as by partial insulation. But aside from all this the mental symptoms seem to require a central as well as a peripheral lesion. Drs. Duckworth, Hammond, and Hadden have believed a lesion in the connective tissue of the nervous centres, analogous to that found in other parts, necessary to account for the nervous symptoms. This view has now been confirmed by a post-mortem examination, the result of which, so far as it has been obtained, was reported by Drs. Lloyd and Ord before the Clinical Society, January 14, 1881. At the same meeting the president, Dr. Greenhow, said, in one case within his experience, there was found distinct sclerosis of the spinal cord.

Dr. Hadden calls attention to the fact that myxœdema patients resemble cold-blooded animals in their torpid circulation, low temperature, and inactivity of physiological processes, suggesting the condition is due to a lesion of the sympathetic involving the vasomotors. Dr. Duckworth believes the disease has a trophic neurotic origin.

The facts Dr. Andrew Clark has collected are at present in the hands of Dr. Burnet for arrangement and publication, but he imagines the stages of the disease are marked by, 1, affections of the nervous system; 2, renal inadequacy; and 3, affections of the circulatory system. We await with interest Dr. Clark's promised publication and the full report Drs. Ord and Savage are to make on the tissues of Dr. Lloyd's case.

Finally, then, until the results of farther investigations are known, we may consider myxœdema a substantive disease having a trophic neurotic origin, resulting in an increase of the mucin cementing ma-

* Transactions Royal Medical and Chirurgical Society, 1871; Lancet, March 11, 1871; British Medical Journal, March 11, 1871.

terial of connective tissue in all parts of the body; that its phenomena are due to the partial insulation, compression, or destruction of the more essential elements of structure in the various parts by this mucoid overgrowth of the connective tissue; and that the disease slowly but inevitably progresses to a fatal termination in spite of all treatment.

For the material of this paper I have been obliged to draw largely from articles Drs. Ord and Hadden were kind enough to give me while in London. I thank them for their kindness, and Mr. Seymour Taylor, of St. Thomas's Hospital, London, for his, to whom I am indebted for the section of myxœdematous structures exhibited under the microscopes to-night.

NOTES ON CONSTIPATION AND ITS EFFECTS.

By E. S. F. ARNOLD, M.D.,
NEW YORK.

Some forty years ago the late Sir Astley Cooper, when presiding at the distribution of prizes at Guy's Hospital, in his address to the students, urged upon them, among other things, the necessity of strict attention at all times to the condition of the prime viæ, and quoted approvingly the saying of an old Scotch physician, "Keep your mind easy and your booels open and ye're sure to do weel." Where the latter portion of this advice is habitually neglected, it is difficult, in the long run, to follow out the former. I have known persons usually regular to feel a sense of discomfort during the entire day if they occasionally missed their morning evacuation. In others no noticeable discomfort occurs, though temporarily constipated for a more lengthened period. As it becomes more and more habitual, they learn to take it as a matter of course, pay little attention to it, and whatever evil consequences may follow in its train, they are apt to attribute them to other causes. After a longer or shorter period they begin to suffer at intervals with dyspepsia, lose their healthy color and cheerfulness, complain that their liver is torpid, occasionally take a few corrective doses of medicine, feel relieved, and then fall back into their old condition. If matters become still more aggravated, dyspeptic feelings become more frequent and more severe, there will be occasional periods of depression, anomalous pains, fears that they have consumption, or that there is something wrong about the heart, general depression of the nervous system, and a corresponding sense of weariness, and want of muscular and mental power. A person cannot say that he is ill, and yet hardly ever feels entirely well. The feeling of debility is often far greater than the actual condition of the system would warrant. Under the stimulus of business or pleasure it is for a while forgotten, and an amount of fatigue borne which a really feeble person could not endure. Such an one, if he has nothing to do, may feel weak and miserable in the morning, and life a weariness; in the afternoon, around and enjoying the pleasures of life. *Per contra*, he may feel well and active in his pursuits in the morning, and when the excitement that has kept him up is over, experience the same miserable feeling of goneness later in the day.

These symptoms are not persistent, and vary greatly in degree. There may be considerable periods of time between the attacks, but even in the intervals there will often be a feeling of malaise and a general consciousness of poor health. If under a more severe attack, as regards either symptoms or duration, a person applies to a physician, he will be told possibly that he is suffering from the effects of malaria, some purgative will perhaps be prescribed, with quinine, and with temporary benefit, but in a little while he will be as bad as before. In truth, the symptoms will be very similar in both, arising as they do from a poisoned condition of the blood, and consequent nervous depression. In the one class of cases the disorder is produced by influences from without, in the other from influences within, and entirely independent of local surroundings. When the body is in health, and the processes of digestion, absorption, and excretion are carried on normally, nature provides against injury from septic matter generated within, even under slight temporary deviations from the regular course. When, however, these functions become chronically disturbed, the digestion impaired, the bowels habitually torpid, and a portion of their contents unduly retained most of the time, fermentive and putrescent action may be set up, and portions of effete and poisonous matter thus generated may be partially reabsorbed into the system. Their contact even with the sources of nutrition could not fail to create bodily disturbance or to aggravate any that might be already existing, especially if accumulations take place in the small intestines, where they are not readily reached. Several years ago I read a paper before a county society on constipation as a source of disease, with full reports of some remarkable, and, I think, rare cases, by which my attention had been specially called to the subject under consideration. That paper is lost, but as the main features of those cases are entirely within my recollection, I will here detail them.

I was attending a lady during convalescence from an attack of pneumonia during the early part of March, when one day her husband, a German gentleman of bilious and highly nervous temperament, slender in form and of middle age, stayed home to consult me. He was looking pale and somewhat jaundiced, and told me he had lately been very costive. Attributing his condition to torpor of the liver, I prescribed for him a dose of jalap and calomel. Two or three days later I saw him again, as in the meantime he had gone to his business as usual. I learned that the medicine had not operated. He, Mr. P——, had taken subsequently a large dose of oil with no better results. He now remained at home and soon took to his bed. He gave the following account of himself. Several years previously he had made a voyage from Europe to South America as supercargo; while on the trip had once been three weeks without a movement from the bowels, and from that time forward had always had difficulty in regulating them, necessitating, at frequent intervals, the taking of a little blue pill, followed by some mild cathartic, mineral waters, etc. At Christmas the pigs had been killed, and he had recently indulged freely in leberwurst (a sausage made with fresh liver), at the same time had neglected the usual means to keep himself regular. Of late he had found it difficult to get a movement at all, his appetite had failed, as also his bodily strength, until now he felt himself even unable to sit up. His countenance was anxious, general aspect chlorotic, lips pallid, tongue moist, and loaded, pulse about 80 and feeble, skin moist, almost clammy, and his general condition one of great nervous and physical depression. These symptoms varied little during the whole progress of the case. Occasionally the skin would feel dry and harsh, but never hot, his appetite not only failed, but

he loathed the very idea of food. He did not complain of pain, but hated to move, took no interest in anything around him, and lay, in fact, most of the time, in a state of wretched mental depression. On examination, the organs of the chest appeared healthy. In the abdomen there was some flatulence, but on percussion great dulness over most of the umbilical region. Having only a short time previously had a case, to which I shall presently refer, with very similar symptoms, I was led to conclude that the present difficulties were caused by large accumulations in the small intestines, undergoing putrefactive changes and exerting a poisonous influence upon the blood and general system. I now commenced a course of active treatment with purgatives and tonics, including rhubarb, colocynth, aloes, etc., in various combinations, strychnine, nux-vomica, iron, quinine, phosphorus, the mineral acids and bitter infusions, persevering with each prescription steadily for a reasonable time. I used, also, for a while, frictions, electricity, and enemata. Finally I settled down upon the Decoct. Aloes C. of London Pharmacopœia with compound infusion of gentian thrice daily. There would be an occasional movement of the bowels, sometimes scybalous, sometimes of a healthier character, but the main difficulty was not reached. There was, however, this encouraging feature, that although the general symptoms continued the same and the patient remained utterly feeble and prostrated both in mind and body, the dulness shifted slowly and by imperceptible degrees into the region of the colon and along its course. Of course none but fluid food was given, and of as nourishing and concentrated a character as possible, with moderate amount of stimulus, as milk-punch, brandy, eggnogg, etc., although it was with difficulty he could be induced to take nourishment at any time. So matters went on until the beginning of May, when, as the dulness now extended down pretty much the whole length of the descending colon, I should also add, the mass could be distinctly felt most of the time, I determined to try copious injections; accordingly myself pumped in a large quantity of warm water and awaited the result. After twenty minutes this was thrown off, and I was shortly after preparing to leave the house somewhat disappointed, when a message arrived that there had been an enormous passage, seeming to fill nearly half a chamber, semifluid in character and so putrid and offensive in character as to drive everybody out of the room. There was an immediate sensation of relief. The enemata were now continued twice daily for several days, and were each time followed by considerable evacuations of a similar character to the first. In about a week the obstruction seemed to be entirely removed the nervous oppression had lightened, the appetite improved considerably, and great weakness was the principal feature. He now craved raw oysters. As he lived at some distance from the city, and it was difficult to supply the want in the now unseasonable and warm weather, he removed to Brooklyn. As I subsequently learned, the oysters had an excellent effect, the bowels began to act naturally, and he shortly felt able to undertake a voyage across the Atlantic. It was not, however, until the latter part of summer, in the mountains of Switzerland, that he began to feel himself gaining much strength.

I have alluded to another case, experienced previously to the one just narrated, and in many respects similar in its causation and symptoms. It occurred in a young lady, Miss S——, aged about seventeen, tall and well developed, who had menstruated, I think regularly, but somewhat scantily for more than a twelvemonth. Her teeth being very defective she had not masticated her food well, accordingly, had been subject to occasional attacks of indigestion, and was constipated most of the time. One day I was sent for in great haste, and met messenger after messenger, who told me she had spasms, on my way thither. On my arrival I found her in bed, quiet, pallid, and bathed in perspiration. Her countenance was anxious and depressed, and her whole nervous system seemed completely unstrung. She complained of a fulness in the bowel but no pain. Her pulse was quick and feeble. I found well-marked hardness and dulness on percussion in the middle bowel, with considerable flatulence in other portions, which led me to suspect that large accumulations existed in the small bowel, of which I later became fully satisfied. The progress and termination of this case were precisely similar to those of the one just recorded. She had positively refused to have enemata administered, and probably in the early part of the treatment they would have had no effect. When she finally consented, the mass had become sufficiently softened and had got within reach accordingly, the first one brought away an immense quantity of semifluid and exceedingly offensive matter, and the same occurred to a minor extent day after day for several days, with rapid improvement in the general condition of the patient. The entire duration of the attack was several weeks, but at no time was there any fever. Marked depression was the unvarying characteristic. Sometimes there were very curious nervous manifestations. For a considerable period she would lift up her right arm from the bed, throwing it up over her head and down with a pump-handle motion for hours together; when this ceased, every expiration would be accompanied by a peculiar strong moan, and this too would last for hours, then the pump-handling would recommence, and this would go on alternately for eighteen out of the twenty-four hours, when she would get a few hours' sleep from exhaustion. She had hallucinations once for a few hours only, otherwise her mind was clear; she simply had lost control of her nervous system. The slightest pressure on the hand would stop the movement. Under the action of the medicines she would have an occasional movement, sometimes scybalous, sometimes almost healthy, at other times passed considerable quantities of offensive wind. She loathed even the idea of food, and would say, "Doctor, I will take anything in the way of medicine, I do not care how bad it is, but do not make me take food, I shall burst if you do." She expressed a great sense of relief after the first powerful movement and rapidly improved as the action of enemata was kept up day after day. The appetite and spirits soon returned and her recovery was rapid.

The above two cases presented only such symptoms as are usually found in those whose bowels are habitually constipated, greatly intensified, it is true, because there were unusually large fecal accumulations. They certainly showed unmistakably the poisonous effects of the latter upon the blood and nervous system.

The following case is interesting in connection with this subject: Hon. H. B. C—— resided on a farm some distance from the city. He was a retired lawyer, lived well but temperately, taking sufficient active exercise, and apparently enjoyed ordinary good health. Small and spare when young, he had

become very stout after passing middle age, and was, at the time of what I am now about to describe, about sixty. In the early part of 1870 or thereabouts he thought himself growing larger in the abdomen than he ought to be, found his walks on the farm becoming more irksome than usual, his breathing somewhat oppressed at times, and this increased upon him until he scarcely ventured out of the house; he grew anxious about himself, became more and more disinclined to any kind of exertion, and finally took to his bed. I had some time previously been casually consulted, and as he had assured me that he always kept his bowels in perfect order, and did not appear to have any difficulty in the abdominal organs, I was inclined to think the trouble arose from fatty accumulations about the heart. I now found that his appetite had gradually been growing poorer and poorer, his abdomen was much distended by flatus, but there was no fluid; his breathing was oppressed, and he sat in an upright position; but as I could not find any particular trouble in the principal organs, I was greatly puzzled to diagnose the case, when he remarked that there was one thing he ought to tell me, namely, that he had in former years been greatly troubled with prolapsus of the bowel, and that since that period he had always used a daily enema, with an astringent after it; he had had no further recurrence of the difficulty. This gave me a clue. I thought the difficulty might arise from a torpid and partially paralyzed bowel, never thoroughly evacuated, while the dyspnœa was largely due to upward pressure of the diaphragm. The enemata were discontinued, and I began a course of treatment calculated to strengthen the digestive organs and restore healthy action to the bowel, in which, although for some time there appeared to be little or no improvement, I succeeded, in the course of two or three months, in bringing him round to a state of health such as he said he had not enjoyed for many a year. In the above cases we have striking instances of the direct effects of constipation and the attendant derangement of the nutritive functions. There are others in which these effects may be less apparent on the surface. In chlorosis, for instance, we seldom go beyond the period at which the physician is called, yet if we look closely into the past history of the patient we shall mostly find that, probably from neglect in school-days, there has been obstinate constipation from an early period; that with her growth her appetite has become poor or capricious, the digestion enfeebled, nutrition, therefore, impaired, the blood disordered, an anæmic condition superinduced and normal development arrested. When, therefore, the period of puberty arrives, nature makes a futile effort to establish the menstrual flow, the nervous system is unusually disturbed, pain in the back and other distressing symptoms are added, and now alarm begins to be felt.

Constipation is almost an invariable attendant upon chlorosis, and I believe may be regarded rather as a cause than a mere symptom. Of derangement of the nervous system from the same source, hysteria is not an infrequent consequence. I think, too, that uterine displacements may sometimes be caused by pressure occasioned by hardened accumulations in the lower bowel. When attending as a New York delegate the meeting of the State Medical Society in Pennsylvania, in 1865 or 1866, the question of puerperal fever came up incidentally. I ventured to suggest that, under the peculiarly irritable condition of the system just after parturition, constipation might have much to do as a predisposing cause of puerperal fever or puerperal peritonitis, that, of course, other causes would determine which should result. I remarked that owing to the great pressure upon the bowel during the later months of pregnancy, it would often become more or less paralyzed, and considerable accumulations occur when not suspected. That on the first signs of fever after delivery, I invariably gave a full dose of oil, or calomel followed by oil, and I was happy to be able to say, that in more than twenty years' practice, though attending my full share of midwifery cases, I had never yet had a case of puerperal fever. Dr. Ashwell, in his teaching and in his work on midwifery, laid great stress on this matter of bowel irritation after confinement. My views were energetically attacked on all sides, and I seemed to find no seconder, until, finally, Dr. Gebhard, of Philadelphia, one of the first presidents of the society, rose and said: "I think the doctor is right. You all know that in my practice of more than fifty years in Philadelphia I have attended as much midwifery as any man. It has been my rule on the first signs of fever to give ten grains of calomel to my patient, and I, too, can say that I have never had a case of puerperal fever in my own practice." There the debate ended. I remember only two cases, in which fever set in suddenly with so much violence as to cause alarm. The first, Mrs. S——, a primipara, and remarkably healthy. She habitually took plenty of exercise—indeed had walked three miles the day before her confinement. She stated that her appetite had been very good, her bowels quite regular, and her general health perfect. She called her husband up at 6 A.M. At 7, I was just in time to take the placenta, and everything went on perfectly well during that and the following day. On the third morning I was called early and found her in a high fever, with hot skin, flushed face, and a pulse of 120. I immediately ordered calomel and oil, and, as toward evening no action had taken place beyond the passage of a few scybala, and the fever was unabated, I ordered the nurse to prepare some senna tea with plenty of ginger, and give a small wineglassful every two hours, warm, until the bowels moved. The nurse was horrified. On my visit the next morning I found the fever gone, my patient in excellent condition. The second dose had been followed by solid evacuations so copious as to astonish the nurse more than my prescription had done. The other case occurred in a lady, Mrs. M——, who usually enjoyed excellent health, and had remarkably easy labors with as good recoveries. With the third (or fourth) child, all had gone on as usual, and she continued well for the first forty-eight hours or so, when she was attacked with high fever, the pulse running rapidly up to 110, 120, 130. I now bled her, then gave a dose of calomel. This was followed by copious evacuations loaded with bile, the fever subsided quickly, and all went on well. I may add that in neither of these cases was there any reason to suspect accumulations.

I need not further multiply these notes. It is, perhaps, because constipation is so common that people ignore it as a factor in the production of disease, and even physicians too often pooh-pooh the subject. When habitual, people come to regard it as a part of their natural condition, and even though they may have a smart attack of piles every now and then in consequence of it, do not think it worth while to make any prolonged effort to overcome it. While they pay strict attention to sewer-gases and soil-pipes outside, they allow effete matters and putrid gases to accumulate within, to be absorbed and poi-

son the system. They will insist upon it that they are victims of malaria, when it would be hard to account for its origin, and when, perhaps, malaria may have nothing to do with it.

Regarding the chylo-poietic viscera as the laboratory of the body, in which its whole nutriment is prepared, it stands to reason that no excrementitious products should be allowed to be unduly retained in contact with the absorbents of that nutriment, and this applies not only to those cases where large accumulations take place, but equally and more frequently to those where the evacuation is only partial, where a portion is thrown off, and part retained, while new matter is added.

In concluding, I will venture to assert, as a rule, that we can only be said to enjoy perfect health in proportion as assimilation and excretion are carried on in a perfectly healthy manner. Just in so far will the nervous system be in good condition, and the body vigorous and capable of resisting external morbid influences. On the other hand, equally in proportion as there is a deviation from the healthy performance of these functions will the general health suffer, the organic nervous system become deranged, and the liability to succumb to external sources of disease be increased. Little attention is paid to this subject in works on medicine, certainly less than the importance of the subject deserves. It should be, in all cases, our effort to pay as strict attention to the past and present condition of the liver and bowels as to those of the kidneys and bladder. Derangements of the former, in the absence of organic changes, may be less prominent in their symptoms, but are not less injurious than those of the latter, in which serious, often fatal complications are induced by them. There is a great truth involved in the quotation with which this article was commenced.

SYMPATHETIC OPHTHALMIA DUE TO SYMBLEPHARON—A CASE.

By E. S. PECK, M.D.,

SURGEON TO THE NORTHWESTERN DISPENSARY, METROPOLITAN THROAT, AND CHARITY HOSPITALS.

In the MEDICAL RECORD of March 5th, Dr. David Webster, in an article entitled "Sympathetic Neuro-Retinitis," and based upon the clinical and microscopical records of one private and one hospital patient in the practice of Dr. Agnew, states that the "second case here reported is the only one I remember to have seen in which sympathetic ophthalmia was caused by symblepharon." The final paragraph of the paper alludes to a case of Dr. Mathewson, of Brooklyn, where both eyes were lost by sympathetic inflammation on account of monocular symblepharon.

I take this occasion to add the brief notes of another case, in which not neuro-retinitis but irido-choroiditis was the form of sympathetic expression.

A boy, sixteen years of age, came to the Charity Hospital with the left eye in a condition of phthisis as a result of ancient kerato-iritis with final perforating ulcer of the cornea. No story of trauma was obtained. Eye was one-half the size of its fellow; cornea was diffusely opaque and showed an irregularly vertical cicatrix with poorly defined limits of whiteness; cornea had not been operated on, though the cicatricial track was indrawn; conjunctiva hypertrophied and sensitive; eye bathed in tears and *painful in upper part of its ciliary region*. There was a small anterior symblepharon attaching the margin of the upper lid to the corneal junction at the upper limbus for about half an inch. The symblepharon was partly membranous and partly fibrinous.

Right eye. Vision much diminished and had been so for a long time; pupil irregular and lazy; iris slightly thickened and apparently convex on its anterior surface, suggesting trabecular infiltration; vitreous, hazy. The eyeball was flat, and conjunctiva was sensitive, red, and watery. No positive pain was present, even with the photophobia. Opinion was expressed that this eye would develop irido-choroiditis, if, indeed, it had not already had these symptoms in a more or less spurious form. The treatment was expectant, viz. . hot water, recumbency, and atropine. The same applications of hot water were made to the left, or lost eye, but atropine was not used here. The symptoms were only ameliorated by this treatment, and in three weeks the left eye was removed, its symblepharon being at the same time released. A good stump resulted, the tongue of symblepharon participating in the retractile process with the mucous tissues of the orbit. Irritation soon ceased in the right eye; there was some improvement of vision; and patient was discharged from the hospital at his own request.

It is pertinent to inquire whether the symblepharon, whose cause could not be traced to a severe trauma, and was probably due to some ordinary exposure of the eye, or whether the phthisis bulbi, due to an old kerato-iritis and irido-choroiditis, was the cause of irritation and partial loss of sight in the fellow eye.

In this connection, it may be said that the position of a surgeon with reference to the removal of an eye is a painful one. Irritability, photophobia, and excess of tears do not necessarily imply sympathetic inflammation. A suspected eye should be carefully examined with a plane (Jaeger) mirror to detect any floating opacities in the anterior chamber, or fine deposits on Descemet's membrane. These precede an infiltrated iris in impending iritis, and should decide the question of sympathetic inflammation. The loss of visual power in an eye should not consign it to enucleation, and make it a fitting object of microscopic study, unless the appearances above described have supervened in the fellow eye.

It is still a mooted question whether sympathetic ophthalmia can express itself in neuro-retinitis. While that portion of the eye most richly endowed with ciliary nerves, viz.: the ciliary body, is the main point of election of sympathetic trouble, a knowledge of the excretory tract of the ocular fluids leads us to include the perioptic region among its possible locations. Leber and Knies* find the channels of secretion and excretion of the eye to be from behind forwards; or, more particularly, the *essential elements of nutrition of the whole eye are contained in the uveal tract*. If we compare the choroid and retina to the pia mater and brain cortex, to which the two former genetically correspond, it is fair to infer, on the basis of lymph-supply from behind forward, that there may be a true perivaginal inflammatory œdema of the optic nerve; or, in other words, sympathetic neuro-retinitis is possible. In harmony with this view is the clinical fact† that in the majority of cases irido-choroiditis is propagated from the iris to the fundus of the eye.

3 WEST THIRTIETH STREET, N. Y.

* Knies: Nutrition of the Eye, and the Avenues of Exit of the Intraocular Humors. (Translation.) Arch. of Ophth. and Otol., vol. vii., p. 347; also, Idem, Virchow's Archiv., vol. lxv., p. 401 ff.

† Wecker: Ocular Therapeutics, 1880, p. 188.

A RARE PRESENTATION.

By J. TURNER PERKINS, M.D.,

YORK, PENN.

During the afternoon of June 15, 1880, I was called to the country to see a patient in labor. Upon being informed that two physicians had been in attendance since Friday A.M. (this was Tuesday), I concluded that I was going to meet a difficult case, and one which was calculated to give us all trouble.

Arriving at the house I was met by my colleagues, who informed me, that despite their strenuous efforts they had made no progress for forty-eight hours, and, indeed, were uncertain as to the presentation. The woman had borne other children, but had not been pregnant for six years; she was about thirty years

of age, strong and healthy, but, through her protracted suffering, was well-nigh exhausted and prayed for relief.

Upon digital examination I found the fingers of both hands protruding through the vulva; the palmar surfaces together (see Fig.). I passed up the hand expecting to find the head, but instead, came in contact with the cervical vertebræ and scapulæ, the feet I also failed to find. The uterine contractions were as violent and protracted as I had ever seen them, and suspecting that natural efforts had been stimulated, I was told upon inquiry that ergot had been given in the (vain) hope of expelling the fœtus, whatever its position might be. So rigidly and persistently was the os contracted that I could neither return the arms nor reach the feet. I changed the position of the patient to the knee and elbow, but the result was attended with the same signal failure to move the child from its position.

After being baffled in this attempt, I saw that chloroform (which had not been thought of), would in all probability be the best assistant we could engage; so without hesitation I administered it freely. In a few minutes our patient was thoroughly relaxed. While in this condition I returned the hands, managed to bring down the feet, turned, and delivered without further trouble.

The child, though well developed, was dead, and probably had been for twenty-four or forty-eight hours. The woman did well, and in the usual time attended comfortably to her household duties.

A CONFIRMATION IN THE HUMAN CORTEX OF THE EXISTENCE OF THE NEW CELLS DISCOVERED IN THE CAT'S BRAIN.

By GRAEME M. HAMMOND, M.D.,

PHYSICIAN TO THE DEPARTMENT FOR NERVOUS DISEASES IN THE METROPOLITAN THROAT HOSPITAL.

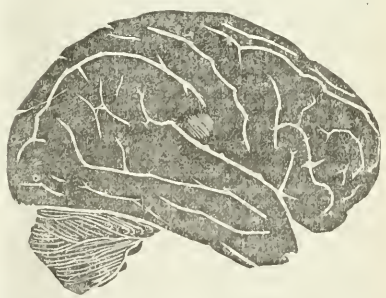
In view of the fact that no discovery of peculiarities in the cortical structure of the brains of carnivora can be of definite value in its application to the physiology and pathology of the human brain, unless the peculiarity has also been identified in the human brain, I determined to examine the human cortex more thoroughly than I had ever previously done for elements similar in proportionate size, shape, and distribution to those already described by myself for the cat's brain in the Record of March 18, 1881.

At the suggestion of Dr. E. C. Spitzka, I explored principally the cortex above the posterior third of the horizontal branch of the fissure of Sylvius, and also the cortical region extending from that locality to the lobulus tuberis.

My examination of this region is not yet completed, but at the very first point to which I directed my attention I was enabled to confirm my discovery made in the case of the cat.

In the region indicated on the diagram—that is, just above the horizontal branch of the fissure of Sylvius, at its posterior extremity, I found cells corresponding with those already mentioned as existing in the cat's brain.

They are circular and subpyramidal in shape, with a central nucleus, and possess from two to four vis-



ible processes. They occur both in nests and in rows. They measure from 0.03 mm. to 0.06 mm. in length, and from 0.03 mm. to 0.05 mm. in width. The nuclei measure from 0.01 mm. to 0.02 mm. in diameter.

In comparing this description with the one given for the cells in the cat's brain, it will be seen that they coincide throughout, with the exception of the measurements, which are smaller in the former case than in the latter. There is a marked similarity between these cells and others found with them, which resemble the ordinary multipolar cells of Betz and Lewes on the one hand, and those of the auditory nucleus on the other.

I would provisionally call attention to the bearing of this discovery on the homology of the convolutions of the carnivora, and also on the question of the localization of sensory recipient areas. The proximity of the two varieties of cells found in the same area is, to my mind, decidedly opposed to the theory that shape is essential to function.

REPORT OF THE FIRST OUTBREAK OF TRICHINOSIS IN SYRIA.

By S. MONSALLY, M.D.,

BEYROUT, SYRIA.

On the 23d of last December, my friend, Dr. W. T. Van Dyck, read me a letter written from El-Kheyam, a small town of Northern Palestine, by a missionary there on a tour in that region.

The letter was dated December 20th, and contained a brief account of a sudden outbreak of disease among the Christian population of said town, by them attributed to eating the flesh of a wild boar, which was shot near the marshes of El-Hâleh (the waters of Merom), brought to El-Kheyam, and there sold.

The letter stated that up to date two hundred and twenty-five persons had been attacked.

From the description given of the symptoms, we were inclined to call the disease trichinosis; and the question was an interesting one to settle, from one point of view at least, namely, as proving that even wild animals may be the source of trichinæ—a fact not yet known, so far as I can gather. I therefore made up my mind to go and study this outbreak.

The exact date at which the animal was brought to El-Kheyam is not known, but we can safely say toward the latter part of November. With the exception of a very few, all ate the meat raw, and it is evident that at that time the people there had an attack of generosity, for each one treated his friend, relative, or neighbor, to a mouthful of raw meat, only a few escaping a share.

The result was something fearful! two hundred and twenty-five men, women, and children, without any regard to age, were attacked and laid down, unable to move, and suffering excruciating pain. Some made the number of sufferers two hundred and forty-five, and some even more. This difference was perhaps due to the time of counting, as new cases were daily reported. I did not count them myself, but, taking the number of those I saw, and those seen by others, then making an allowance for error, I estimated them at about two hundred and fifty.

Dr. John Wortabet, who saw them later on and was the last to count them, reported them at two hundred and fifty-seven.

At the time of the attack the people invented several nonsensical stories to account for it, of which I mention only one, namely, that the boar had swallowed a snake, from which its flesh became poisoned; and it was also asserted that, a few years ago, the same thing occurred in a neighboring village, where a wild boar was eaten, forty or fifty persons being attacked in a similar way, and twenty of them dying. This may have been, for aught we know, another outbreak of trichinosis.

I was the first regular physician to reach El-Kheyam, arriving about four weeks after the pork was eaten, and even more than two weeks after the symptoms had appeared in most of the cases. The people being so ignorant, I encountered difficulty even in getting their own story up to the time I saw them. They seemed to forget everything but their present sufferings. "We are as you see us," was their favorite answer, while some used merely to say, "We have the disease." I suppose they wondered why on earth I did not feel their pulses, and spare them all those questions, for people there think it is not their business to tell the doctor what is the matter with them; he must find out *everything* by simply feeling the pulse. Many also used to laugh at me because I asked every one whether the meat he or she ate was cooked or raw.

For several reasons I was unable to note down all the minutiæ necessary to make up a full report, but I shall endeavor to state what I observed as faithfully as possible.

The number of patients I saw and treated was one hundred and thirty-five, and *every one* of them had eaten raw meat. After the lapse of a period varying between seven and twenty days, symptoms began to make their appearance, as nearly as I could ascertain, in the following manner:

Severe headache, vertigo, colicky pains, vomiting, and purging (in some constipation). The appetite was lost or became capricious, and thirst was excessive. Next came loss of strength, severe muscular pains, tenderness, numbness, immobility of the joints, and fever. Œdema appeared in most cases in the eyelids first, then became general; but a few said the swelling appeared first in their feet.

Most of them had a rash, with intense itching; they also had profuse sweating and bloody urine, and a few complained of hoarseness.

At the time of my arrival the following were the symptoms:

Excruciating muscular pains, tenderness, general stiffness, locked-jaw in some from intense pain, œdema either local or general, chilly sensations, and fever; also dyspnœa and cough in some.

The general appearance resembled that of Bright's disease—pale, waxy, and bloated.

The mental powers were perfectly clear, except in one case, an old man, who was already in collapse when first I saw him, and died soon after.

Respiration was normal in some, though difficult and increased in others, and a few coughed.

The pulse, in the few cases where I noticed it, was frequent, weak, regular, short, and compressible. In some cases, however, it was even difficult to feel the radial pulse, from excessive œdema. Temperature I could not record in every case, for obvious reasons; neither could I ascertain the highest point it had reached, as most of the patients had been ill for over two weeks. In one very severe case, which I saw fifteen days after its commencement, the temperature at 11 A.M. was 103° F.; in other cases it varied between 99° and 101° F. Perspiration was still copious. Thirst also excessive, and *appetite* good or capricious. Bowels were constipated in some and loose in others, while *urine* remained bloody. For want of necessary apparatus, I failed to get a chemical or microscopical examination of it.

Immobility and numbness remained in most, while many still suffered from intense itching in connection with an urticarial rash, mostly situated on the trunk and extremities. This, I believe, has not been mentioned before among the symptoms of this disease.

A few complained of muscæ volitantes, one of night-blindness (hemeralopia), and one woman had a miscarriage.

The symptoms of those who were convalescing were only those of debility, with slight stiffness of the limbs.

Young children had milder symptoms, due probably to imperfect digestion, followed by diarrhœa, thus expelling many of the parasites. As a rule, the symptoms were graver in those who ate freely, though some who ate but little suffered just as severely. This can be accounted for by the large number of trichina-cysts in the piece of flesh eaten.

A man from a neighboring place called Hasbaya happened to be in El-Kheyam at the time the boar's flesh was sold. He bought the head, stomach, and intestines, but luckily escaped the disease, as did those who partook of his share, for these parts could not easily be eaten raw, and were therefore cooked before being served. A few, however, even of those who ate the meat roasted had mild symptoms, due in all likelihood to the survival of a few trichinæ.

Though this disease is often accompanied by complications such as gastro-intestinal inflammation, peritonitis, pneumonia, etc., I did not meet with any. In one case the patient had an attack of pleurisy, but whether it was secondary or accidental I cannot tell.

The ratio of deaths has been very low, indeed; thus far only six have died. Two of them I saw, and the cause of their death was mere exhaustion, for both of them were quite old.

At first the diagnosis of trichinosis could not be settled beyond all doubt, because we could not get a piece of flesh for microscopical examination; still we were almost positive that it could be nothing else, considering the history and symptoms, besides excluding other diseases which closely resemble the one in question, as typhoid fever, acute rheumatism, etc. Subsequently, however, Dr. Wortabet succeeded in procuring a piece of flesh from the body of a woman who died, and the trichinæ being demonstrated under the microscope, the diagnosis was settled beyond question.

Some of the trichinæ were spirally coiled as beautifully as could be, but none were encapsuled; evidently the patient died too soon for that to have taken place.

The treatment I adopted was to meet symptoms, for unfortunately this is one of the diseases whose cause we know, but as yet cannot influence without placing the life of the patient in jeopardy.

Niemeyer says that benzine has not been given a fair trial, and believes it is efficient, but I could not get any here to try. First of all, I gave calomel to expel what parasites might have remained in the intestinal canal. I administered carbolic acid freely, simply for its antiseptic properties, or it may be because I had a large quantity of it. On the same principle I used salicylic acid. Quinine was given as an antipyretic and antiperiodic (the locality being malarious), and preparations of iron for those who were convalescing. I also gave iodide of potassium, out of mere curiosity, and used stimulants but very little, only when indicated by feebleness of the first sound of the heart.

After a stay of ten days I returned home, leaving my patients doing quite well, with very few exceptions. Whether this was due to the effect of medicine or not, I am not ready to say; all I can maintain now is that medicine alleviated the symptoms, and placed the patients in a better condition to bear the effects of this disease.

The National Board of Health has submitted to the Secretary of the Treasury its annual report for 1880, embodying a special statement for the six months ending December 31, 1880, which shows that the aggregate expenditures for that period were $88,126. The total amount expended from the date of organization has been $364,035. An appropriation of $203,219 is required to meet the estimated expenses of the board for the fiscal year ending June 30, 1882.

Progress of Medical Science.

On the Transmissibility of Hydrophobia from the Human Subject to the Rabbit.—Additional facts, and details of experiments by Raynand, Lannelangue, and Pasteur, have been reported by Mr. Dolan in the *Medical Press and Circular*, February 9, 1881. Three series of experiments were made by Raynand on forty rabbits. First. Inoculation with fluids from a living child suffering from rabies, in which the observations of previous authors were confirmed, viz.: inoculability of the saliva, non-inoculability of the blood. In the second series two rabbits inoculated with bronchial mucus from the dead body of the child, twenty-four hours after death, succumbed. Six rabbits were inoculated with fragments of the salivary gland, and one died. Two rabbits were inoculated with lymphatic ganglia; one lived two and a half hours, the other recovered. In the third series there was not a single failure, using saliva from dead rabbits of the preceding experiments. Five died in a space of time varying from twenty to thirty hours. The blood of a rabbit killed by inoculation produced death in thirty-two to forty-three hours. When the subject was discussed at the Academy of Medicine in Paris, January 13th, M. Colin urged that the rabbits in question died of septicæmia and not of rabies. In the herbivora, rabies went through a longer incubation than that described in M. Raynaud's paper, and rabbits were particularly sensitive to septic influences. M. Dujardin-Beaumetz shared the same opinion. To produce rabies in rabbits, the saliva should be fresh. In reply, M. Raynaud admitted the gravity of the objection raised, but he did not see how the deaths could be attributed to any other cause than rabies. Pasteur made experiments from the same subject, and claimed to have found in the blood of the rabbits a special microscopic organism, having the form of a figure 8, about a millionth of a millimetre in size, and surrounded by a gelatiniform substance. When placed in a suitable medium for culture, the organism fertilized, and still preserved its figure-of-8 character. It multiplied in the usual way. This organism Pasteur believed to be the cause of the disease and death of the rabbits, but whether the disease was rabies he could not state definitely, the only fact being that the rabbits died as a result of inoculating the saliva of a child that had died of rabies, and that there is a special mycelium at work which differs from the bacterium found in septicæmia.

Emotional Albuminuria.—The following case, reported by Dr. Filippowitch, illustrates that variety of functional albuminuria which depends on circulatory disturbances induced by the emotions. A young college student, in perfect health otherwise, noticed he was passing more than the normal amount of urine. The examination of urine at first was negative; later on, it contained, occasionally, albumen. A careful study being instituted, it was found that his urine was never albuminous in the morning, but, as a rule, in the afternoon, after college hours. The days of recitation were marked by an increased percentage of albumen.—*Vratch. Vedomosti*, No. 452.

A Case of Intermittens Perniciosa Pleuritica Tertiana, with the Temperature of 111.8°.—Dr. Bassanowitch, of Lom-Palanka, Bulgaria, reports the following case. The patient, a young private, suf-

fered from malaria for a number of years. One of these attacks began at noon (October 17th), at 3.40 P.M. The thermometer registered 114.8° F. in the axilla; pulse 115; respiration 26. There was no loss of consciousness or sign of psychic depression or excitement. The temperature remained at this height for eight minutes, after which it began to fall rapidly. At 5.30 P.M. it was 107.3°, and three-quarters of an hour later 105.8°, continuing to descend during the day and night. During the attack, patient complained of a severe pain in his right chest, which grew worse on forcible inspiration. Over the seat of pain percussion revealed dulness, and on auscultation, crepitant râles. Over the remaining part of the chest there was vesicular breathing, dry and sonorous râles. No albumen or sugar in his urine. During the night he had severe epistaxis and diarrhœa. Similar but milder attacks occurred twice every consecutive second day. The patient recovered.—*Meditz. Obozrenie*, XV., p. 64.

Enterotomy for Polypoid Growths in the Large Intestines.—The patient, a male, fifty-one years of age, for the past seven years suffered from abdominal pains, particularly in the left inguinal region, with obstinate diarrhœa, the passages containing frothy mucus, frequently stained with blood-clots, and pieces of undigested food. His general condition was reduced to a state of extreme debility. Prof. Selifasowsky found the rectal mucous membrane studded with polypoid excrescences, some pedunculated, others sessile, varying in size from that of a pea to that of a cherry. The mucous membrane was thickened. Enterotomy was successfully performed. During the operation it was found that these growths extended as high as the finger could reach. With the establishment of the artificial anus, the pains disappeared and the patient's general condition began to improve rapidly. Six months later he was able still to attend to his business.—*Vratch.*, No. 4.

Pathology of Alcoholism.—Dr. Platonoff, from the analysis of a number of cases of alcoholism occurring in women, comes to the conclusion that the disease is a neurosis of impulsive character, identical with kleptomania, nymphomania, pyromania, etc. It can develop without the previously existing abuse of alcoholic drinks, as the result of other conditions of the system. Similar to other psychoses, alcoholism has a central origin.—*Vratch.*, No. 6.

Duration of Pregnancy.—Dr. Helen Jdelsan arrived at the following conclusions, from the study of four hundred and eighty-eight cases of childbirth, in which the last day of the menstrual flow was exactly indicated and the gestation computed, judging from the weight and height of the child and the circumference of the head. The pregnancy lasts, on an average, 278.8 days. The maximum duration was 328 days and the minimum 226 days. The average male pregnancy is of shorter duration than that of female—277.5 and 280.5 days, respectively. The heavier the child and the younger the mother, the longer is the pregnancy. The pregnancy in married women is slightly longer than in unmarried women —279.3 and 278.5 days. The method of Naegeli to determine the duration of pregnancy is found exceedingly unreliable. In only 25 cases out of 488, the calculated duration corresponded to the actual; in 198 cases it was of shorter, and in 265 of longer duration than the actual. The first movement of the child occurs on the 135th day: in primipara on the 138th, and in multipara on the 134th day.—*Vratch.*, Nos. 1–4.

Behavior of Fungoid Vegetations on the Animal Organism.—Experimental researches on this subject have led Grawitz (*Virchow's Archiv*, vol. lxi., p. 355) to formulate the following conclusions in regard to the differences observed in infection with mould fungi and true bacteria: 1. The germs of *aspergillus* (aspergilluskonidien) may bud, but they never multiply as do the schizomycetæ, because they would need the free access of air for such development. 2. Such fungi in no instance lead to decomposition of the blood—the organs do not assume, under their influence, the condition of cloudy swelling; moreover, splenic enlargement is never produced by them, and a febrile movement is not set up. 3. Their energy of growth is much less than that of the pathogenous bacteria. They can grow only if injected directly into the vessels; when hypodermically inserted they remain sterile.—*Centralblatt für Chir.*, January 22, 1881.

Iodized Cod-liver Oil.—It has been found that the addition of iodoform and essence of aniseed will mask the unpleasant odor of cod-liver oil. M. Fonssagrives (*Le Moniteur Thérapeutique*) uses the following mixture: one hundred grammes of cod-liver oil to one-fourth of a gramme of iodoform; to this twenty-five drops of essential oil of aniseed are added. In this simple way the taste and odor of the oil are masked. Moreover, the iodoform is generally a serviceable adjuvant in cases where the oil is indicated.—*Arch. Méd. Belges*, January, 1881.

Changes of the Sympathetic in Parenchymatous Nephritis.—Banti (*Lo Sperimentale*, Dec. 9, 1880) examined the sympathetic ganglia of the renal plexus in four cases of acute parenchymatous and two of interstitial nephritis. He examined fresh preparations and specimens treated by osmic acid. Extensive degenerations were found to be present. Atrophy and destruction of the ganglion-cells by lymphoid infiltration he considers the direct primary cause of the disease. Changes were also discovered both in the medullated nerve-fibres and in the non-medullated fibres of the renal nerves. The ganglia showed, in addition to the infiltration with leucocytes, an increase in amount of interstitial connective tissue. The nerve-cells of the ganglia were replete with granules of fat and pigment, which obscured their nuclei. In the interstitial renal lesion a degeneration of the nerve-fibres of the renal nerves was not seen, but the ganglion-cells showed a distinct infiltration.

The influence of the sympathetic nervous system over urinary secretion, and its connection with albuminuria, have already been pointed out by Bernard, Vulpian, Knoll, and others. The primary œdema, the early vomiting, and certain cutaneous symptoms, in this way received the most satisfactory explanation. Similar changes in the vasomotor nerves might account for the renal symptoms observed after burns, colds, and interference with cutaneous secretion. In diabetes mellitus, morbus Addisoni, and some forms of anæmia, similar changes had been observed. Brigidi had also described them, in connection with three cases of Bright's disease (*Med.-chir. Rundschau*, January, 1881). Banti evidently had no knowledge of the researches undertaken by Da Costa and Longstreth on the state of the ganglionic centres in Bright's disease (*Am. Jour. Med. Sc.*, July, 1880); but this rather adds to the value of his independent investigations. The last-named authors, it will be remembered, conclude that lesions of the renal plexus were most constant in the contracting kidney,

whereas Banti believes them to be most rare in this particular variety of kidney affection. Since Da Costa and Longstreth's conclusions are based on the examination of a more abundant material, their opinions certainly deserve the greater credence. At any rate, it is encouraging to find that investigations into the true nature of this disease appear to have taken a new turn, which is bright with the promise of a knowledge more exact than has hitherto obtained.

Massive Pneumonia.—Grancher was the first to point out the existence of a variety of pneumonitis which gave most of the clinical symptoms of pleuritic effusion, and which deserved the special epithet of massive. Recently, two cases of this kind were observed at Prof. Lasègue's clinic. The first was that of a laborer, aged fifty years, who developed an acute pneumonia. Examination revealed absolute flatness in front and behind on the right side. At the base and in the axillary region resonance was still found; in the supraspinous and infraclavicular regions absence of respiratory bruit; in the infraspinous region fine moist râles, but neither crepitant nor subcrepitant. Bronchial breathing very marked at the inferior border of the scapula, extending from the axillary line to the vertebral column. Below this point there was a faint vesicular murmur, distant in sound and largely masked by sonorous râles. In front similar conditions existed, but there was no respiratory murmur. On the left side apparently only the signs of bronchitis. There was little cough, and the expectorated matter was not characteristic of any special lesion. Febrile movement not severe. The patient died soon after admission to the hospital. At the autopsy the upper lobe of the right lung was found completely hepatized, having assumed a dirty yellowish color. The other lobes and the left lung were not greatly altered. But the pathological status which led to the clinical diagnosis of massive pneumonia was found to reside in the bronchial tubes distributed to the upper lobe. They were completely filled to their finest ramifications with a white, elastic, apparently fibrinous substance, which was not elsewhere found.

Other cases are cited, and the writers, MM. Beurmann and Brissaud, finally conclude that, although massive pneumonia may at some time during its course closely resemble in its clinical aspects pleurisy with effusion, yet in certain cases bronchial breathing coexists with the flatness on percussion. This respiratory sound will be likely to exist at the beginning of the malady, when the fibrinous exudation has not yet advanced to the root of the lungs. In doubtful cases an exploratory puncture would appear to be justified.—*Archives générales de Méd.*, February, 1881.

The Treatment of Tetanus.—Dr. Ria (*Giornale internaz. delle scienze med.*, 1880, p. 7) believes that tetanus consists essentially of an exaggerated reflex irritability of the spinal cord, which may be indifferently caused by traumatisms, toxic influences, or so-called rheumatic action. Since the motor tracts of the cord respond in a morbidly exaggerated manner to all sensitive impressions, the main object of treatment will have to be to lessen sensory excitation; for, if this be accomplished, the cord will gain rest, and thus a return to its normal condition will be made possible. Ria, therefore, emphasizes strict isolation of the patients. They are to be separated from their friends, and to be kept from all possibility of sensory impressions. Even the physician or attendant should exercise great care in his intercourse with the patient, lest the latter be disturbed.

Four cases have been successfully treated by the author. In addition to complete and prolonged isolation, several drugs were employed. Thus, in the first case, in which tetanus developed after an amputation of the thigh, chloroform was applied externally by the use of the atomizer. Nearly three ounces were used daily. A gentle sleep was also maintained by the exhibition of chloral hydrate and morphine. The cure was complete in two weeks. In the second case, that of a youth twenty years old, the same plan of treatment was adopted. But one-sixtieth of a grain of atropine was given in conjunction with the chloral hydrate. A cure took place in twenty days. In the third and fourth cases the external use of chloroform was not enforced, and the last case was treated by bromide of potassium and isolation. This one recovered after forty days.—*Medic.-chir. Rundschau*, January, 1881.

Abdominal Faradization in Ascites.—A case is reported by Popow (*Vratsch.*, 22, 1880) in which a course of abdominal faradization was followed by the disappearance of persistent anasarca and ascites. The patient was sixty-three years of age, and had for many years been a sufferer from malaria. On admission to the hospital he had considerable œdema of feet and legs, and oppressive ascites. Jaborandi and Fowler's solution were given, and slight improvement noticed. The induced current was then daily applied over the abdomen and the region of the spleen. The urinary secretion was found to become much more abundant, and, as soon as faradization was discontinued, again grew less. Albumen, after a while, ceased to appear in the urine, the patient's general health improved, his abdomen became flat, and he was soon discharged cured. The spleen, however, remained large.—*Medic.-chir. Rundschau*, January, 1881.

The Etiology of Chronic Ostitis and Periostitis.—Professor Lücke (*Deut. Zeitschrift für Chirurgie*, vol. xiii.) does not fully share the prevalent belief (of German surgeons) that tuberculosis is almost exclusively the sole determining factor of chronic ostitis and periostitis. He holds also that tuberculosis may be a purely local joint affection, as for example, in cases of cheesy ostitis. Various other diseases may lead to similar osseous diseases, and in most of these cases the prognosis is more favorable than in general tuberculosis. Thus all acute and chronic infectious diseases may become etiological factors in the production of chronic bone trouble. He mentions especially pyæmia, infectious osteomyelitis and periostitis, typhoid fever, scarlatina, variola, diphtheritis, etc. Hence the advisability in all cases of chronic ostitis of inquiring after antecedent infectious disease, as this would alter the prognosis. In conclusion, Lücke gives the following table of causes, arranged in the order of their frequency and importance: A. I, hereditary tuberculosis; 2, acquired tuberculosis, scrofula. B. I, hereditary syphilis; 2, acquired syphilis. C. Antecedent infectious diseases, pyæmia, infectious osteomyelitis, typhoid, scarlatina, morbilli, gonorrhœa, variola, diphtheria, malaria, pertussis, erysipelas. D. Traumatism. E. Gout.—*Medic.-chir. Rundschau*, January, 1881.

Hot Water Compresses in Tetanus and Trismus.—Sporer has successfully treated cases of tetanus by merely applying to the nape of the neck and along the spine large pieces of flannel dipped in hot water, of a temperature just bearable to the hand (50–55° C.).—*Allg. med.-cent. Zeit.*, January 15, 1881.

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GEORGE F. SHRADY, A.M., M.D., Editor.

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THE STREET-CLEANING PROBLEM IN NEW YORK.

Our readers are quite familiar with the great agitation in the lay community with regard to the filthy condition of the streets of the metropolis. The medical profession has now taken an active part in the matter, and it becomes our duty to present the medical aspects of the question.

We may briefly recapitulate the facts of this agitation. During the autumn, when the weather was fine, the streets of New York, which have never been particularly clean, were in a condition almost beyond description. We made it our personal business to make inspections of various quarters of the city, and, quite independent of any other reports or any other action, we found that the most sensational accounts of the mixture of garbage and ashes, the strewing of offal and dead cats and vegetable-cans, together with the obstructions, by means of drays and carts, were not overdrawn. It was not necessary to go far to find the reason for this. We were in the midst of an exciting political campaign, and the politicians who manage the Street-cleaning Department were much more interested in other matters than they were in their legitimate duties. Hence the uncommonly bad condition; hence the extraordinary neglect. A very severe winter set in—one almost unprecedented in the number and severity of its storms. The removal of the snow—always difficult—became almost impracticable. But with this difficulty there came one benefit. The freezing did away, at least with some, of the harm arising from decaying vegetable matter and dead animal substances which were scattered about our streets. When the snow began to melt the situation again became disgusting beyond description. But our authorities seem to have folded their hands, either in apathy or despair. Literally nothing, or next to nothing was done toward correcting this condition. The indignation of the citizens could no longer remain pent up, and a mass meeting rivalling in magnitude and earnestness some of the great meetings at the outbreak of the rebellion, was held in Cooper Institute. A committee of twenty-one was appointed, composed, for the most part, of laymen—in fact, only two physicians were upon it. That meeting, however, was addressed by medical men, and the profession countenanced and approved of it almost unanimously. The only voice raised against the notion that a great deal of the malignity of disease seen during the last few months in New York was due to its filth, was that of an eminent police surgeon, who seemed to have a holy horror of refrigerators and dead fish as a possible source of epidemics and isolated cases of sickness.

This committee drafted a bill which put the power of cleaning the streets practically into the uncontrolled hands of the mayor. It was deliberately and carefully drawn, and no man possessing the average amount of common sense can reasonably doubt that it was a calm expression of the opinion of men in New York best qualified to judge as to how to solve this problem of cleaning the streets. The bill passed the Senate unanimously, but in the Assembly it met with the demon of personal politics which has taken possession of this country. On the last day of the debate in the Assembly the utterances of the politicians were brazen-faced and shameless. They were worthy of the last days of the Tweed ring. In the Assembly it was plainly stated that this was a question of patronage and spoils. The petition of *two hundred and fifty* physicians of New York was flouted simply because, in the opinion of the leaders of one wing of one of the great political parties, it would be unwise to give to the mayor of the opposite party the control of the men who were to clean the streets.

Can such disregard of public opinion—not hasty, but well-informed and thoughtful opinion—go any farther? The citizens have again met, the medical profession has assembled in mass meeting, but we are not yet able to acquaint our readers with the result of this action. We have no doubt that it will influence the Legislature, and that its members will yet listen to those who sent them there, rather than to the politicians without opinions on any subjects but the distribution of offices as a reward for party services.

There are two questions which we will briefly epitomize in closing what we have, at present, to say. First, is the condition of the streets the cause of our increased mortality? We have never for an instant supposed that this was the sole cause; but, if not one of the causes, then all the literature of the medical profession with regard to the baneful influence of the noxious exhalations from decaying animal and vegetable substances has been in vain. We should not be distracted by side-issues. Whatever other

causes may have been in operation, this filth, which exceeds that of the Augean stables, is certainly one.

We were very sorry to hear the statement of a health commissioner quoted upon the floor of the Assembly in defence of those who are retarding action upon this subject. It may not have been written for the purpose of causing delay, but it had that effect.

The *second* question to which we wish to call the attention of the profession is this: Has the Health Board of this city done its duty in this matter? We say, emphatically, No! The conditions for doing its duty are so unfavorable, that perhaps it should not be expected. The president of the board is an overworked chemist and professor. He has more to do than any two men should undertake to accomplish. He has no business to be President of the Board of Health, and we doubt even if he should be a member.

The health officer of this port, of whom we have spoken at other times, and of whose ability for the position our readers are quite well informed, is another member of this board. A gentleman from Long Island, who is thoroughly familiar with city politics, who is not scrupulous about carrying out the orders of political superiors, is a third, and a distinguished member of our profession is the fourth. No matter how determined this one member of the profession may have been to abate this particular nuisance of unclean streets, he must have been almost powerless with the environment of the other three; but, unfortunately, officialism seems to have wrapt her charms about him also, and it was reserved for private citizens and for private members of our profession to alarm the public upon this subject, while the only words we have heard from the Health Board, or the medical members of it, have been those of apology. They have not yet had time to make up their minds which of the street-cleaning bills is the better.

Let us be done with side-issues and subterfuges. Let us, as a profession, freely state that whatever defective water-supply, tenement-houses, and other causes may have to do with the great mortality, filthy streets have a great share in it. Let us, as a profession, not only aid every effort for their improvement, but let us be leaders and not followers in the movement. We have a right to control the sanitary condition of this city. We must demand it, and we must see to it that our demands are carried out. Our legislators must be taught that in matters medical they must be the servants of the doctors, as in matters financial and commercial they are the servants of the bankers and the merchants.

THE TREATMENT OF FRACTURES BY LAW.

Those medical men of the country who are wont to look to New York for improvements in the practice of our art will be more than gratified to learn that a new departure is about to be made in the treatment of fractures, whereby the usual deformities will be prevented, and the laboring man, so notoriously subject to broken limbs, will be shielded against malpractice. That some steps have not been taken long ago to secure such a result is, no doubt, a matter of regret to thousands of distorted cripples. It must be confessed that surgeons for a long time have been dodging the question of the liability of deformity in particular fractures, and have been inclined to protect themselves against the consequences of bad results by assuming that said deformities were the rule and perfect limbs the exception. Although these practitioners have been striving to secure the best results, and have been endeavoring to aim for perfection in all cases, it now appears that they have fallen so far short of their endeavors that a thorough and searching legislative examination of the whole subject of treatment of fractures has been demanded. By a coincidence that is somewhat striking we have in the present number a communication from a distinguished member of the profession, showing how difficult it is for high authorities to agree concerning comparative results of treatment. Consequently it more than ever appears that something should be done at once to bring the profession to a proper understanding of the whole subject. Indeed, no more powerful argument could be offered for such a step than the constant recurrence of similar discussions concerning shortening and other deformities after fracture. It seems, however, that we are to receive help in the matter from a quarter heretofore least expected, and problems which have puzzled such gentlemen as our present correspondent and others are likely to be solved in a novel and radical manner by legal enactment.

Quite recently it has been claimed, by a surgeon and late professor of a college in a neighboring city, that the profession, or at least that part of it which did not believe in his plan of treating fractures, have never understood the subject, and that it is possible by his methods to obviate all deformities and to guarantee perfect limbs in all cases. Like all reformers he has had a hard time in trying to convert his erring brethren. But, actuated by a love for the poor laboring man, who so frequently suffers malpractice at the hands of other surgeons, he has striven against almost untold opposition to enforce the truth of his statements, and failing to do this has gained the ear of the legislators. On the very sensible plea that the laboring classes have a right to the protection of the State, he has caused the whole matter of treatment of fractures to be brought up for discussion before the Committee of Public Health of the Assembly. It now appears that we are nearer the settlement of the vexed question of the treatment of fractures than ever. The Assembly Committee is empowered by law to summon witnesses and report accordingly. When it is proven that the methods of treatment of the surgeon afore-

said are the only ones that should be employed to secure perfect results, a suitable law may be enacted compelling all surgeons to adopt them under penalties of damages for malpractice. The only fear is that the testimony may be too voluminous to enable the Public Health Committee to come to a speedy conclusion. Of course, all the different apparatus usually employed by other surgeons in the treatment of fractures must be exhibited. We have not yet learned that any special arrangements have been made for the transportation or storage of these armamentaria, but presume that the chairman of the committee will give due notice thereof to all interested parties.

Each inventor of a splint should have a satisfactory hearing and be allowed to present typical cases; each man with a new system of treatment should be heard; the different kinds of adhesive plaster should be examined; the weight and pulley system should be thoroughly overhauled; the anatomical museums should be made to disgorge their quota of crooked bones, knotty callosities, ligamentous hinges, and gangrenous extremities; and, lastly, the surgeon reformer should forcibly and pathetically sum up the case, backed by the rebuttal testimony of an army of victimized cripples treated by other men. The people will certainly take a great interest in the matter if it is properly managed, and will, doubtless, urge the passage of a law which shall compel surgeons to treat their cases by the plan that never fails. The only thing the profession might regret, in view of the passage of such a law, is that they did not gracefully accept the views of the distinguished reformer when opportunities were offered, and thus avoid a possible scandalous public exposure of their ignorance of the first principles of their art. This mistake cannot now be offset by any comfort obtainable from the thought that the discussion is in proper hands and that the question is destined to be settled once and for all by an authoritative tribunal.

The only trouble may be, that in case the distinguished bone-setter is right and the remainder of the profession is wrong, the law of practice in cases of fracture may be very strict and the penalties commensurately severe. Some surgeons who may stubbornly persist in treating fractures by the usually recognized plans, may be compelled to show cause why their State licences should not be annulled, while such as may use a Buck's apparatus, or fondly cling to the traditions of Hamilton, may be indicted for misdemeanor. In any event the time for compromise seems to have passed, and we must patiently await the issue. But sadder than all will be the possibility of numerous suits for malpractice against such surgeons as have so long and defiantly sinned against the light. It is too bad that the distinguished bone-setter has been compelled to lay the matter before the legislature, but there was no other course left for him.

QUACKERY IN THE RELIGIOUS PRESS.

It is somewhat over eighteen hundred years since the first herald was sent into the world to announce the coming of a new dispensation. This messenger was a rugged man, who wore plain clothes, and who lost his head because he spoke the truth too plainly. As history tells us, he confined his attention to his mission, and, since that had no large salary attached, he made ends meet by reducing his expenses, living on the fauna of his native districts. In spite of his life in woods and fields he did not discover any specific remedies for consumption and rheumatism, which the career of some modern missionaries is incomplete without doing. The grand and the fundamental element in the character of Zion's first herald was that he attended to his sacred mission.

We have recently come across a paper which calls itself a *Herald of Zion*. It is a name of tremendous pretension, and few would care to undertake the responsibility of being, in a sense, heaven's especial organ. There have not many done so since the time of John the Baptist. Still, this is the name, and this must be in a measure the pretension of the paper in question, for we noticed at once an eloquent passage declaring the grandeur and beauty to be found in heralding the gospel, which heralding, it is rhythmically stated, "is music to the sinner's ears, is life and health and peace." We wished to know, of course, how the gospel as thus heralded in *Zion's* new *Herald*, brought "life and health and peace." There might be expected many novelties to have been developed in eighteen hundred years, and we never to have found them. The blessedness of heralding the gospel according to the modern method is to be seen, generally, on pages five and seven. Here the indications for getting "life and health and peace" are most positively and definitely laid down, are endorsed by leading clergymen and illustrated with cuts. They may be obtained according to one issue in several different ways:

First.—By taking the compound disassociated gas, which cures consumption, as is proved by the testimonial of the Right Rev. E. J. Brown, Bishop of all the Indias.

Second.—By taking a vegetable compound, which has for twenty years been raising up fallen wombs in all parts of the world at a dollar a bottle.

Third.—By consulting a native botanic physician, free of charge, whose marvellous cures have excited the wonder and elicited the testimonials of all the clergy connected with the religious press.

By three other different methods, which we cannot easily specify, because each claims to be the best remedy (and the most sold) for the same diseases.

The above are the ways of the modern herald of the gospel of peace. They bring in an income, as we have calculated, of between three and four hundred dollars a month.

We cannot entirely admire the method. It seems like preaching righteousness on one sheet and parading profitable deceits on the other. We prefer the robust character of the ancient herald whom people flocked to see because he told truths boldly, and did not use his position to put patent mixtures on the market. Still, we have such sympathy for the fate of John that we almost wish he had known how to start a modern religious newspaper. He could have made money enough through botanic balsams to have kept himself out of jail, or to have propitiated Herodias, and thus saved his head. And he could have died at last of gout and in the odor of sanctity, as may happen, we trust (though long, long hence), to our esteemed and thrifty contemporaries of the religious press.

[DISPENSING DRUGS IN THE OFFICE.

For some time the relation between physician and druggist has been receiving its own solution, because the physician has been giving his own medicine to a considerable extent. Recognizing the existence of this increasing custom, a firm has recently been established in the city which proposes to supply physicians with all needful drugs and preparations. We do not know anything about the commercial soundness of this new company, but the fact that it has been organized is an indication of a change in the practice of the physicians here, which is worthy of notice.

We must have our druggists still, for private dispensing can only cover a limited field. Still it will help to protect the physician and his patient in many cases, and for this reason it should be practised to its legitimate extent. There are few drug firms in the city which has not made money, or tried to do so, by appropriating and advertising some of their customers' prescriptions. It is possible to prevent this to some extent by keeping on hand the favorite prescriptions. In any event, it is one of the ways to practically settle the question as to the ownership of prescriptions. The only harm it can do the prescriber is that it may tempt him to give an undue preference to certain remedies merely because they may be at hand.

ENFORCEMENT OF THE MEDICAL LAW.

And still nothing appears to be doing among our societies in the direction of enforcing the medical law. In the meantime quacks advertise, incompetent men practise, and the regular profession suffer. We receive so many communications from different parts of the State asking how and when the Medical Society of the County of New York intends to make a start, that we repeat the question in a general way to such gentlemen as have the matter in charge.

Either the law is good for something or nothing. From present appearances we are no nearer deciding the question than we were when the law first came into force. The profession throughout the State practically endorsed the measure by promptly registering, but so far they have merely their labor for their pains. From present indications it would appear that the practical intention of the law was to keep the regular profession within bounds, so that the irregulars and quacks might have a better chance. It is claimed that the Medical Society of the County of New York had a great deal to do with securing the passage of the law, and that, very naturally, the county societies of other parts of the State look to it for example and instructions.

EXTENDING THE POWER OF THE STATE CHARITIES AID ASSOCIATION.

A very strong effort is being made to give the State Charities Aid Association legal authority to visit and inspect the various public institutions of the State. At present the Association is somewhat dependent on the State Board of Charities for its powers, and it desires to get rid of this dependence.

There are two very strong reasons for granting the request in question. The history of the Aid Association shows it to have been an extremely useful organization in the past. Though its work has been done chiefly by volunteers, who received no pay, yet many abuses have been exposed and corrected by their efforts. Again, it is most desirable, on general principles, that institutions under the care of public officials, supported by public taxes, should have their workings thoroughly exposed to the light of day.

In this way we can be best assured that our charities are being properly conducted. The State Charities Aid Association has done enough in the past to justify a further extension of its powers and of the confidence placed in it.

Probably our charity hospitals need such inspections as little as any class of public institutions, and the investigations in this direction of lay committees have sometimes been intrusive and their criticisms lacking in judgment, but the general result has been good, and we do not think that the medical profession would oppose the fullest scrutiny of institutions more or less under its control. In commenting on this subject before, we said that it seemed unfortunate that one Board was not enough to take entire charge of the State Charities. Facts show, however, that a supplementary Board is very useful indeed, if not an absolute necessity. And this being the case, it is proper that the medical profession should throw its influence in favor of the proposed movement to extend the usefulness of the Aid Association.

CRIME COMMITTED IN THE MESMERIC STATE.

At a meeting of the Medico-Legal Society, April 6th, Dr. W. A. Hammond introduced the subject of the possibility of crimes being committed by persons in the mesmeric state. Such persons, being responsive to every suggestion, could be made to perform criminal acts of which they themselves were innocent and unconscious. A patient was exhibited and, being mesmerized, was made to commit an imaginary burglary; he was then told to stab a certain person who, it was said, had killed his mother. Finally he was directed to forge a check, which he did very cleverly.

After these various performances had been gone through with, it remained to be shown that the man was really in trance and was not shamming. Demonstrative proof of this, Dr. Hammond signally failed to produce, and on that account his assertions regarding the criminal possibilities of trance were met with much more scepticism than they deserved. The patient was shown to be irresponsive to painful impressions such as burning and pinching. He was also shown to be capable of maintaining a remarkable rigidity. On the other hand, however, it was proved that these phenomena might possibly be simulated.

The theory offered by Dr. Hammond to explain the trance condition was, that the action of the higher cerebral centres is suspended, and that the subject is under the control, probably, of the basal ganglia. The mental acuteness shown at times by the mesmerized subject seemed plainly to disprove this.

In spite of a certain amount of failure, however, the society appeared to be convinced that the subject was one of importance and demanded further notice. It was voted to make the same subject the order for the next meeting.

The Kinds of Visual Sensibility.—An interesting analysis of the various modes of sensibility of the visual apparatus, the London *Times* reports, has been made by Mr. Charpentier. He has been experimenting by looking in darkness at an opaque screen in which were perforated three or four minute holes, quite near each other, but distinguishable when a moderate light shone through. Light was raised from zero on the other side; it was sometimes colored. The order of phenomena was proved to be this: the first action of the light entering the eye in very small quantity is in all cases merely to produce a diffuse luminous sensation not differentiated either as to color or as to form; with a greater quantity one gets the notion of color, if there be color in the light; and still more light is required to be able to resolve the luminous object into its different elements. Luminous sensibility is the most simple reaction; then comes chromatic sensibility, by which we distinguish color, and, lastly, what the author terms visual sensibility, by which we distinguish form.

Other experiments have shown that different concentric areas of the retina correspond to these different kinds of sensibility, the sensibility to luminous impressions having, of course, the largest area.

Reviews and Notices of Books.

Dr. Paul Börner's Reichs-Medicinal-Kalender für Deutschland auf des Jahr 1881. Theil I. und II. Cassel: Theodor Fischer. 1881.

Dr. P. Börner's German Medical Calendar for 1881. For all those who are anxious to receive reliable and complete information concerning medical affairs in the German Empire, this calendar will be almost indispensable. The complicated condition of German medical matters has received the author's careful and diligent attention, the result being a larger array of facts and items of information than we have yet found in any medical calendar. The first part of the work is a conveniently arranged medical diary, containing many needful tables for the use of the practitioner, though, of course, an American physician would hardly find it convenient to carry this German book about with him. Part II. contains besides many other useful lists, a complete list of the names of all the physicians now practising in Germany, both in civil and military service. Information regarding the different German universities, with their professors and teachers, is also found in this volume.

Elements of Practical Medicine. By Alfred H. Carter, M.D., Lond., M.R.C.P., etc. Pp. 374. Philadelphia: Presley Blakiston. 1881.

A compend of practical medicine, however small, elementary, and unoriginal, will always command the attention of a certain class of readers, provided it be fully up to the latest developments of the healing art and science of medicine. Out of sympathy with such readers Dr. Carter has compiled the little volume before us, and doubtless they for whom it is intended will feel thankful to the author for the pains he has taken to say much in as few words as possible. For our part we see no just ground for elevating, to the dignity of a distinct and separate book, those very elements of practical medicine which are taught by every competent lecturer on this province of our science. Nevertheless, this may be said in favor of the work, that those who peruse its pages for a rudimentary knowledge of the principles and practice of medicine, will at least not have to unlearn what is taught them.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, March 3, 1881.

Fordyce Barker, M.D., LL.D., President, in the Chair.

Dr. William J. Morton read a paper having the following title:

"On statical electro-therapeutics; or, treatment of disease by Franklinism; also, exhibition and description of an induction electrical machine adapted to medical uses." (See previous number of Medical Record.)

The paper being before the academy for discussion, Dr. A. D. Rockwell said that he had never become quite reconciled to an expression once made

use of in his presence by a distinguished practitioner, to the effect that "any old woman could apply electricity." He would therefore be inclined to base any remarks that he might have to offer on the aphorism, "that it is not so much electricity that cures as the method of using it." He agreed with Dr. Morton in much of his estimate of the value of static electricity, but quite disagreed with him in so far as he seemed to suggest its superiority to dynamic electricity. In old contractures in cutaneous anæsthesia and in a few other pathological conditions it might have some advantages, but from his point of view this was about all he was prepared to admit. For example, in *electro-diagnosis* static electricity is of limited value; those qualitative and quantitative changes, which are so important as indicating structural degeneration, being produced only through the action of the two forms of dynamic electricity.

It would be interesting to pass in review the various forms of disease in which electricity has a known value, and by appeals to experience and the rationale of electric action to discuss the relative value of the two varieties of electricity—the static and the dynamic, but a brief discussion would not tend to settle this question, and its determination must be left to individual experience and observation. It had been claimed in published articles that static electricity was especially valuable in its tonic effects. In 1867, in conjunction with Dr. Beard, he first enunciated this idea of the tonic effects of electricity and described and systematized the methods by which they are best obtained.

One of these methods—general faradization—was by name sufficiently well known, but practically it was but little made use of. On the part of the operator, its successful use demanded time, skill, and labor, and on the part of the patient some inconvenience. For these reasons, partial and incomplete methods were, as a rule, substituted for that thoroughness and attention to detail necessary, and hence come failures or but partial successes. He could readily appreciate, therefore, why those who adopted only partial methods might regard static electricity as possessing superior value. Upon an experience in the use of electricity in some thousands of recorded cases, he would base the following statement: while static electricity is of value, and in certain conditions and in individual cases is of especial service, the constitutional tonic effects are not equal either in variety or degree to those obtained by dynamic electricity, by the methods of general faradization and central galvanization, and for the relief of pain and the production of sleep it is far inferior. He well remembered the rare and interesting case of incessant belching of wind to which Dr. Morton first referred. He had seen two such cases, one having been sent to him by Dr. Agnew. In one no benefit accrued from treatment; in the other he had succeeded, by introducing a bulbous electrode into the stomach, in affording considerable, although not complete, relief.

Dr. H. G. Piffard confirmed Dr. Morton's statement concerning the lack of unpleasantness in the application of statical electricity by saying that while the reception of a spark four or six inches long appeared to be painful, it really was not, as he had had opportunity to test. He had used static electricity to a limited extent, but it was derived from a single pole of a Ruhmkorff's coil; and while the spark did not appear to be as powerful, it was much more painful than that derived from the apparatus presented by Dr. Morton.

The effect produced upon the skin by large sparks was somewhat curious. There occurred, almost immediately, minute papules, each corresponding to a point at which a spark was received. These soon looked something like the wheals of urticaria, with a slightly congested ground-work, as it were, intervening, which passes away in a short time, and the elevation soon subsides. The spark from a Ruhmkorff's coil produces red points, and they last longer and are more painful than the papules raised by the larger spark from the machine presented by Dr. Morton.

Dr. V. P. Gibney remarked that, according to his observation, the application of static electricity was not so painful as either galvanism or faradism when applied with equal strength. Certainly, wonderful relief had been afforded in many cases by the use of static electricity, but he had not been able to obtain such immediate relief as reported by Dr. Morton. The failure, however, might have been in the machine employed.

Dr. Birdsall was unable to see the special value of static electricity except in cases of hysterical anæsthesia and contracture. Although quite a variety of cases had been treated, of paralysis and spasm, it was mainly in cases of contracture and anæsthesia, particularly of hysterical origin, that benefit seemed to be obtained. Undoubtedly, in that class of cases it was of great value, perhaps more valuable than galvanism or faradism. The question, how much can mental influence affect the results obtained, was important, as it was in all methods of treatment of hysterical cases. The exhibition of a spark and the general display of the instrument had some effect upon the patient's mental condition, and certainly that should not be lost sight of in summing up the effects produced by static electricity. For producing effects upon the skin he regarded it as a valuable agent, perhaps more so than the electric brush which is so excellent—for example, in certain conditions of anæsthesia.

With regard to using an instrument of the kind presented by Dr. Morton, in the treatment of diseases of children, it seemed to him that it was not so much the sensation that is produced as the appearance and the sharp cracking sound which would be disadvantageous. On the whole, he thought the machine would be a rather inconvenient one to use. With regard to regulating the strength of the current, even with the additional electrometer mentioned by Dr. Morton, the effect, through atmospheric changes, etc., upon the patient must vary very considerably.

The effect produced by static electricity in the case of locomotor ataxy reported by Dr. Morton was interesting and remarkable. He should feel some doubt, however, although the case seemed to be one of locomotor ataxy, concerning abolishing the tendon reflex in a genuine case of the disease. So far as controlling pains was concerned, he thought that in the constant current we had a very valuable agent, but the condition of ataxy was seldom relieved to any great extent, and no changes were produced in the tendon reflex.

With regard to improvement in hemiplegics, he had seen some cases improve in which contracture existed, but the improvement was in the relief afforded to the contracture, and there was no increase in the motor power; the patient simply had greater ability to move than previously.

With regard to the general use of the instrument presented by Dr. Morton, it seemed to him that for

practical purposes we had in the dynamic forms of electricity the most valuable agents. Probably in the treatment of hysterical anæsthesia and contracture the static was more valuable than the other forms of electricity.

In closing the discussion, Dr Morton remarked that the machine made a noise, but that the noise was not a necessity. It was inconvenient only because it was too large to carry about, and he thought that perhaps that fact did not do the science of electricity any harm. But it was perfectly easy to have a portable apparatus constructed, and then static electricity could be carried about as were other forms. It was not his intention to claim that static electricity was superior to all other forms, but only that it should be studied as other forms have been. As a simple curative agent he thought it was destined to have its day, as other forms have had. With reference to its value in difficulties other than hysterical anæsthesia and contracture, at the time he was in Charcot's wards all kinds of severe cases were being treated with static electricity, and some of the results had been very remarkable.

SUBSECTION ON MATERIA MEDICA.

Dr. H. G. Piffard offered a resolution making provisions for establishing a sub-section in materia medica, with a thesis qualification for membership.

Dr. Purple offered as an amendment that this question be referred to the Council for report, whereupon Dr. Piffard withdrew his resolution, and the Academy adjourned.

NEW YORK NEUROLOGICAL SOCIETY.

Stated Meeting, March 2, 1881.

Dr. T. A. McBride, President, in the Chair.

Dr. W. R. Birdsall presented several cases of anterior poliomyelitis. Their histories were given, and the cases were subsequently discussed.

Dr. William J. Morton presented several cases illustrating,

MUSCULAR HYPERESTHESIA IN THE MESMERIC STATE.

The speaker said that he had no intention of discussing the general subject of mesmerism. He wished simply to direct attention to a single interesting feature. There were still persons who were inclined to doubt the genuineness of mesmeric phenomena, in some cases at least, and they demanded a crucial test by which it could be demonstrated that particular cases were not dissimulating. A large part of the trance phenomena are subjective, and our belief in them must, to some extent, depend on our faith in the patient's word. Such phenomena as those of anæsthesia, muscular rigidity, disturbance of the special senses, trance-speaking, etc., might, in some cases at least, be simulated. The skeptic will say that he can let the operator cut and burn him if he chooses, and by training he can get so that he will show no reaction. Many of the other phenomena can also be simulated. It is important, therefore, to find a demonstrative test; and this seems to exist in the phenomena of hyperexcitability and artificial contracture, first discovered by Prof. Charcot.

Dr. Morton then illustrated these phenomena. The cases were mesmerized. He then took the dull end of a pencil and pressed upon various well-known motor points of the nerves. Slight pressure upon these points would produce immediate contraction of the muscles which the particular nerve supplied. Thus—pressing over the motor point of the *pronator radii teres* produced immediate pronation of the hand. Pressure over the motor point of the *supinator longus* produced supination of the hand. Pressure over the motor point of the abductor of the little finger caused contraction of that muscle. By the same process the *interossei* could be picked out. Flexion and contraction of single fingers were produced. Pressing upon the different motor points on the face caused contractions of the different facial muscles. These phenomena the speaker produced upon a subject who had not very much education and certainly no anatomical knowledge whatever. The phenomena appeared upon the first trial, when the patient had never seen anything of the kind, and before any suggestions had been made to him. It was impossible to believe, therefore, that these phenomena were not genuine. They cannot be produced in every trance-subject, however.

In further illustration of the same subject, Dr. Morton, having mesmerized the patient again, produced artificial contracture; the fingers and hand were flexed slightly, the forearm flexed upon the arm, and the arm drawn up toward the chest. This contracture—which was very much like the well-known hysterical contracture—was produced by simple rubbing the flexor muscles of the limb. The muscles were made quite rigid. The subject was then awakened, but his contracture remained, and he was unable, by any power of his own, to extend his arm at all. It was necessary, in order to relieve the contracture, to put the patient again into a trance, and then relieve the condition.

The speaker, in conclusion, said that he brought forward this point because he considered it a thoroughly demonstrative one; he hoped that it would be further examined by the numerous experimenters who are now investigating anew the subject of the mesmeric state. The subject was discussed by Drs. Spitzka, Amidon, Birdsall, Gray, and Gibney.

Dr. E. C. Spitzka exhibited an

EMBRYONIC HUMAN BRAIN,

as well as some sections from the pons, intended to illustrate the course and relations of the *stratum intermedium*, a detachment of the cerebral peduncle. He remarked that Meynert, and those who followed that distinguished anatomist, believed the tract through which the conscious sensory impressions reach the cortex extend to from the columns of Goll and Burdach, of the cord and lower oblongata, through the so-called superior or sensory decussation to the anterior pyramids; that thence the tract runs with the anterior pyramids in their outermost third through the pons and pes pedunculi, courses between the thalamus and lenticular nucleus in the posterior third of the internal capsule, and arching back, terminates in the cortex of the occipital lobe. Flechsig showed that what Meynert interpreted as the sensory pyramidal decussation has no connection with the anterior pyramids, but, on the contrary, enters the lemniscus layer on the inner side of the interolivary strand, whose relations to the corpora quadrigemina had been explained by Meynert, although he was befogged as to its lower relations, owing to the aforesaid confounding with the anterior pyramids proper.

Now, Flechsig distinctly states in his work that the explanation he has been able to furnish of the real nature of the superior decussation, demonstrates the non-existence of a direct tract from that decussation to the cortex.

The true tract has, however, been known to exist, although the relations have not been properly interpreted. The lemniscus layer contains not only a detachment from the corpora quadrigemina, but also incorporates a peculiar bundle, described by Henle as a fasciculus from the pes to the tegmentum. This tract continues, in at least a part of the fibres, from the columns of Goll and Burdach to the pes pedunculi, and thence, no doubt, to the cortex of the cerebrum. We are not, however, prepared to state positively whether it reaches the cortex directly or through the intervention of some intercalar ganglion, and whether this ganglionic interruption is, as Meynert claims, the ganglion of Soemmering (*substantia nigra*), or a part of the lenticular nucleus, as is advocated by his pupil Pasternatzki. The circuit for the conscious sensory impressions transmitted by the cord, and proposed by Meynert, therefore, becomes re-established, with a modification, namely, that the sensory tract does not run through the pyramids and pons, but immediately above them.

That there is a close relation between the pyramidal tracts and the by-track from the superior decussation to the *pes pedunculi*, is proven by an interesting observation which he had been able to make on the elephant's brain. In this animal the entire pyramidal tract takes the course of the by-tract, that is, there are no longitudinal fibres in the pons, the crus is continued bodily above the latter (which is exclusively composed of transverse fibres) to take the usual course between the olives and beneath them in lower levels.

Here the *stratum intermedium* clearly vicariates for the pyramidal tract.

In a human embryonic brain of about the third month, this tract appears almost in natural dissection, owing to the absence of the pyramids and the greater part of the pons at this stage of development. It is here seen that the tracts of opposite sides nearly touch in the median line, causing a sharp, ridge-like elevation of the rudimentary pons, and continue upward in the direction of the thalamencephalon in a region which seems to correspond to the point where the most dorsal and external fibres of the pes pedunculi are found in the mature brain.

It was further remarked that the fasciculi of the pes do not proceed to the cerebrum in a direct course, but are slightly twisted in a spiral manner, so that fibres which are basilar at the pons border may become almost dorsal at the internal capsule.

Obituary.

PROF. RICHARD O. COWLING, A.M. M.D.,

LOUISVILLE, KENTUCKY.

Dr. Richard O. Cowling, of Louisville, Kentucky, editor of the *Louisville Medical News*, died April 2, 1881, of rheumatic endocarditis, aged forty-two years. For many weeks past he had been ailing with rheumatism, but continued his work despite the protest of his friends. His last attack was invited by exposure during a professional visit to Cincinnati. Although his friends were anxious as to the result for several days, it was not until half an hour before his death that hope was given up. Then endocarditis developed and the patient rapidly sank.

Every one knew Prof. Cowling as the able founder and editor of the *Louisville Medical News*. As has been truthfully and lovingly said of him by his friends, "he was the very life of that journal," and the profession have reason to echo, also, the sentiments of those who knew him best when they "mourn the loss of a man true, fearless, and tender; of a physician thoughtful, diligent, and studious; of a surgeon skilful, prudent, and daring; of a writer cultivated, brilliant, and profound; of a companion genial, instructive, buoyant; of a friend tried, true, and trusty."

Dr. Cowling was born in Georgetown, S. C., April 9, 1839, graduated from Trinity College, Hartford, Conn., in 1861, from the Jefferson Medical College in 1867, after which he settled in Louisville. In the following year he was created Demonstrator of Anatomy in the University of Louisville, in 1870 he became Adjunct Professor of Surgery, and in 1873 became full Professor of Surgery. As a surgical writer he contributed many valuable articles to the current literature of the day. These contributions were made to the Medical Record, the *American Practitioner*, *Philadelphia Medical and Surgical Reporter*, and other journals. He was also author of "Aphorisms in the Treatment of Fractures," which, although but recently issued, gave him a wide and enviable reputation. As an editor he was fearless, conscientious, and ready. He made the *Louisville News* one of the most sprightly and readable of medical journals, and we have often taken pleasure in telling him of it during his lifetime.

Correspondence.

SHORTENING OF LIMBS AFTER FRACTURE.

To the Editor of The Medical Record.

Sir—Prof. Frank H. Hamilton, in the sixth and last edition of his work on "Fractures and Dislocations," recently issued by Henry C. Lea & Co., of Philadelphia, has made so many misstatements in regard to myself, and has repeated them so frequently in his book, that justice to myself and the profession demands that I should expose them.

From the teachings of Prof. Hamilton and from his published works, the general impression among the profession, and certainly in my own mind was, that in *all* cases of oblique fracture of the thigh in a healthy adult, *shortening* was the *inevitable result;* in other words, that *no* case of oblique fracture, such as I have described, *could* recover with the *normal length* of the limb. To show that this impression was the result of his teaching, and was the only possible interpretation that could be given to his language, I refer to a work entitled "Deformities after Fracture," published in 1857, by Frank Hastings Hamilton, M.D. On page 74 we find the following: "In conclusion, I wish to say briefly, that in view of all the testimony which is now before me, I am convinced, first, that in the case of an oblique fracture of the shaft of the femur occurring in an adult whose muscles are not paralyzed, but offer the ordinary resistance to extension and counter-extension, and where the ends of the broken bone have once been completely displaced, *no means have yet been devised by which an overlapping and consequent shortening can be prevented.*"*

Having seen quite a number of fractured thighs in very vigorous muscular adults, some of which had

* The italics are mine.

united *without* any *shortening*, that could be detected by the most careful measurement, I took the liberty of doubting Dr. Hamilton's law, and in my "Report on Fractures," made to the American Medical Association in Detroit, in 1874, I said among other things: "Fractures of the long bones require that *extension* and *counter-extension under chloroform*, or other anæsthetic, if necessary, should be made in a *proper direction*, until perfect accuracy of adjustment is obtained, and after this, *retention* and *fixation in this normal condition* until *consolidation*. By *accuracy of adjustment* I mean the perfectly normal condition of the bone as to length and position. When the extension and counter-extension have been properly made, the muscles and other tissues surrounding the bones will necessarily and positively force the fractured extremities into their natural position, as above described, unless some foreign body, as a shred of muscle or connective tissue, has got between the fragments.

"All extension beyond this point of perfect accuracy of adjustment is unnecessary and injurious; for, being abnormal, it excites reflex contractions. Hence the objection to continued extension, which keeps up reflex irritation, or else by paralyzing the muscles allows of elongation, and consequently, frequently results in non-union.

"All extension short of that necessary to this perfect adjustment is insufficient, leaving the extremities of the bone as sources of irritation, and causing pain and muscular contractions as well as leaving the vessels in a looped or zig-zag position, causing the œdema heretofore described.

"The nerves also, being in an abnormal position, are additional sources of irritation, If the bone (whatever bone it may be) is thus placed and can be retained in its normal position, the patient is free from pain, and all the functions of the limb (except walking) are as well performed as in cases of simple fracture, and the recovery in a healthy constitution will be as perfect and complete, with normal length, without deformity, as if no fracture had occurred. If the limb has been extended to its normal length, the bones must necessarily be accurately adjusted by the surrounding tissues. *If this position*, therefore, *can be positively maintained*, shortening cannot by any means take place, but rather a lengthening to the extent of the plastic material effused between the bones that joins the fractured extremities."

I concluded my report by saying, "the plan that has been here briefly sketched I believe to be of universal application, and the surgeon *who can most accurately put it into actual practice* will have the best results in the treatment of fractures."

This doctrine I still maintain and most firmly believe; not that we can *always* obtain perfect results, for it is frequently impossible to make a perfect application of the principles above laid down; but the nearer we can approach to their perfect application the better will be our results.

I supplemented my report by adding the statistics of fractures treated by plaster-of-Paris, in Bellevue Hospital, in 1872 and 1873, tabulated and arranged by Dr. G. A. Van Wagenen, in which table there appeared four cases of fracture of the thigh that had recovered *without any shortening*. When the accuracy of the measurements was called in question, I made the following reply, which I copy from the "Transactions of the American Medical Association" for 1874, page 232. "Dr. Sayre was glad that he had provoked this animated discussion. He had been misunderstood. He had made a report showing the results of his treatment in a very favorable light, but he *knew* the statistics to be absolutely and positively true. They had been drawn up chiefly by Dr. Van Wagenen, of Bellevue Hospital, in whose reliability he had the utmost confidence. Many of the measurements were made by Prof. Frank Hamilton, who, until recently at least, did not believe that union of fractured bones could occur without shortening.

"Dr. Hamilton, along with Dr. Sands, had made a personal examination of the cases in his (Sayre's) wards. Dr. Hamilton acknowledged that there were some cases in which he could find no shortening, and had stated that if he could bring seven consecutive cases together he would admit the principle.* Dr. Gregory, of Missouri, had yesterday asserted, and to-day repeats it, that it was impossible for union to occur without shortening. This, and the fact that recently cases had come under his notice, when the bones were not replaced for nine days, had determined him on appearing here, whereas some time ago he had deemed it unnecessary, supposing the matter had been fully brought before the profession by Drs. St. John, Crosby, and Bryant. When he considered that at this day there were some men who still waited for the swelling of the soft parts to subside before adjustment, he thought there were some men in the profession needing instruction in the treatment of fractures."

Let us now see how Dr. Hamilton interprets this reply. On page 437 of his new work he says: "Attention has already been called, in the chapter on General Prognosis, to the published statements of Dr. Sayre relating to this subject; but it will be necessary to note again in this place that he asserts that all fractures of the femur may be made to unite without shortening,† and to add that in proof of the latter assertion, Dr. Sayre, at the meeting of the American Medical Association, in Detroit, Michigan, in 1874, declared, when the accuracy of his measurements was called in question by some of the gentlemen present, that he knew his measurements were correct, that Dr. Frank Hamilton had made the measurements, and that he was a man who was so violently opposed to the theory, that, in his published writings, he had denied the possibility of any oblique fracture being cured without shortening. For this reason he (Dr. S.) had asked him to measure the patients.‡ He said if seven successive cases would be presented, he would agree to give up his opposition to the theory. He found the cases and surrendered." He continues: "I was not present when these statements were made, but in the following number of the same journal in which they first appeared, I called attention to their untruthfulness,§ and I will now repeat that I have never said, in any of my published writings or elsewhere, that it was impossible that any oblique fracture of the femur could be cured without shortening, and I never entertained such an opinion." (I here refer to Hamilton on "Deformities after Fracture," published in

* I was told these facts by some members of the house staff, who said they had asked Dr. Hamilton to make the measurements as I had requested. The subjoined letters will prove conclusively that I was perfectly authorized to make the statement.

† No such assertion can be found in anything I ever wrote, and I never made such an assertion orally.

‡ This statement is absolutely false, as will be seen by reference to the published Transactions of the American Medical Association for 1874, page 232, where it will be seen that I made no such statement as here quoted.

§ I never saw the journal referred to, and cannot be held responsible for what is said in different medical journals. I appeal to the official records of the society, and nothing of the kind will be found recorded there.

1857, page 74, for a complete refutation of this assertion.) "Further, I am obliged to say that no such conversation as that related by him ever occurred between us, *and that I never measured or saw the cases mentioned by him.** It is difficult for me to conceive, therefore, how this gentleman has fallen into these errors; and I confess I would have been very much gratified if—his attention having been repeatedly and publicly, through the medical journals, called to the matter—he had made some such public explanation or denial as would have rendered it unnecessary for me to allude to it in this place."

I never related any such conversation as having occurred between Dr. Hamilton and myself, and I have just carefully read the report of the transactions of the American Medical Association, and find no mention of such a conversation. As to the concluding sentence, "that he never measured or saw the cases mentioned," I refer to the annexed letters of Drs. Van Wagenen, Burchard, St. John, and Bryant, to prove that he did make these measurements in their presence. I never saw in any medical journal any allusion made to me on this subject by Dr. Hamilton, except his letter published in the MEDICAL RECORD, June 1, 1874, page 363, and to which I replied immediately, and which reply was published in the RECORD August 1, 1874, page 414. As some gentlemen may not be so fortunate as to have files of the MEDICAL RECORD to refer to, I here republish them, in order to show that I did make a public explanation as soon as my attention was called to the subject by Dr. Hamilton.

Extract from MEDICAL RECORD June 1, 1874:

"SHORTENING OF LIMBS AFTER FRACTURE.

"To the Editor of The Medical Record.

"SIR—My friend and colleague, Dr. Sayre, in a clinical lecture on 'Un-united Fractures,' is reported in the MEDICAL RECORD of May 1, 1874, as having said, 'The law, however, that shortening must necessarily attend the union of a fractured bone is incorrect, as can be satisfactorily proved by practical demonstration. Now you will see the impotence of the law laid down, that shortening must always take place if union is effected.'

"I am not aware that any one has ever laid down a law of this kind. If any one has, he has rendered himself a proper subject of ridicule. Believing, however, that Dr. Sayre has been reported incorrectly, or that in an oral lecture he has spoken inadvertently, I wish to call his attention to the paragraphs above quoted, and ask him how they are to be understood.

"FRANK H. HAMILTON.

The following reply was published in the RECORD, August 1, 1874, page 414:

"SHORTENING OF LIMBS AFTER FRACTURE.

"To the Editor of The Medical Record.

"SIR—In the RECORD of June 1, 1874, is a letter from my friend and colleague, Dr. Frank H. Hamilton, criticising my remarks on 'Fractures,' as published in the RECORD of May 1, 1874, wherein I said: 'The law, however, that shortening must necessarily attend the union of a fractured bone, is incorrect, as can be satisfactorily proved by practical demonstration.' Dr. Hamilton says in his note of June 1st: 'I am not aware that any one has ever laid down a law of this kind. If any one has, he has rendered himself a proper subject of ridicule. Believing, however, that Dr. Sayre has been incorrectly reported, or that in an oral lecture he has spoken inadvertently, I wish to call his attention to the paragraphs above quoted, and ask him how they are to be understood.'

"In explanation, I would say, first, that I did not speak inadvertently, nor was I incorrectly reported. On the contrary, Dr. Carpenter, who reported my lecture, is one of the most accurate medical reporters I have ever known. I make no pretension to having cured *all* of my cases of fracture without shortening, but know that many of them have been thus cured; and believing that a student will make a better result if he *tries* for perfection (although he may not attain it), than if he commences to treat a case of fracture with the belief that it must recover with shortening, I *tried* to impress them with the importance of trying for perfection.

"That this belief in shortening after fractures is quite general I am confident, from the number of physicians and students who have spoken to me on the subject, and from the discussion on fractures at the recent meeting of the American Medical Association in Detroit, where Drs. Hodgen, Gregory, and others stated that '*reunion of a fractured bone without shortening was impossible*,' and most of these persons referred to Dr. Hamilton as their authority for this belief. I am therefore delighted to know that they cannot quote him in future in order to sustain this erroneous doctrine.

"I presume they have, like myself, inferred that Dr. Hamilton did not believe in the possibility of an oblique fracture of a long bone uniting without shortening, from reading his published works, and that the inference was a correct one. I quote from page 74 of a work entitled, 'Deformities after Fractures,' published in 1857 by Frank Hastings Hamilton, M.D. He says: 'In conclusion I wish to state briefly that, in view of all the testimony which is now before me, I am convinced:

"'*First.*—That in the case of an oblique fracture of the shaft of the femur, occurring in an adult whose muscles are not paralyzed, but offer the ordinary resistance to extension and counter-extension, and where the ends of the broken bones have once been completely displaced, *no means have yet been devised by which an overlapping and consequent shortening can be prevented.**

"'*Second.*—That in a similar fracture occurring in children, or in persons under fifteen years of age, the bones may sometimes be made to unite with so little shortening that it cannot be detected by measurement; but whether in such cases there is in fact no shortening, since, with children especially, it is exceedingly difficult to measure very accurately, I cannot say.

"'*Third.*—That in transverse fractures, or oblique and denticulated, occurring in adults, and in which the broken fragments have become completely displaced, it will be generally found equally impossible to prevent shortening, because it will be found to be generally impossible to bring the broken ends again into such apposition as that they will rest upon and support each other.

"'*Fourth.*—That in all fractures, whether occurring in adults or in children, where the fragments have never been completely or at all displaced, constituting a very small proportion of the whole number of

* The italics are mine.

* The italics are mine.

these fractures, a union without shortening may always be expected.

"'*Fifth.*—That when, in consequence of displacement, an overlapping occurs, the average shortening in simple fractures, where the *best appliances* and the *utmost* skill have been employed, is between one-half and three-quarters of an inch.'

"'From these quotations I think the reader must be satisfied the inference drawn by others as well as myself, that Dr. Hamilton believed in shortening after fracture, was justifiable. I am, however, delighted to know that I did not understand his writings correctly, and that he agrees with me that shortening after fractures is not an absolute necessity, for he says, 'If any one has ever laid down such a law, he is a proper subject of ridicule.'

"LEWIS A. SAYRE.

"July 1, 1874."

It will be thus seen that I did make a proper reply to Dr. Hamilton as soon as my attention was called to the subject by him, and therefore he had no excuse for referring to it in a work professing to be a text-book for students.

On page 439 he says: "Sayre, who formerly used the double or triple inclined plane, or flexed position, has of late adopted the straight position, with plaster-of-Paris, and with both alike claims to have made only *perfect limbs*." On page 437 we find the following: ". . . he (Sayre) asserts that *all fractures of the femur may be made to unite without shortening*."

On page 49 he says: "The statements made by Dr. Sayre, that even simple fractures of the short or long bones *can always be made to unite without shortening*,"* etc. There may be other places in his book where he has referred to me in a similar manner, but these three quotations, almost identical in language, occurring in widely different parts of his book, evince a determination on the part of Dr. Hamilton to misrepresent me before the profession, for he cannot refer to a single line I ever wrote, or any lecture I ever delivered, that would justify any one of the sentences I have here quoted. On the contrary, in the very table of cases which I presented to the Association at Detroit to prove the correctness of my plan of treatment, *only* four were claimed to be perfect out of the whole number of cases presented. On page 49 Dr. Hamilton describes a case brought in his clinic and measured by himself, Dr. Krackowizer and others, and found to be shortened one inch, "but Dr. Sayre thought it was a little lengthened," and then says: "It will not be difficult to understand, from the results of measurement in this case, that Dr. Sayre would meet with examples of perfect restoration of the bone oftener than Dr. Krackowizer or myself." I made no measurement in this case at all, but, as Dr. Hamilton and the other gentlemen who measured the case, differed as to the amount of shortening, and as a measure must always be the same, I merely put the tape on the limb, from the anterior superior spinous process to the malleolus, in the same manner as they did, in order to show them that the *mode of measurement was unreliable*; and for Dr. Hamilton to represent this as an actual measurement on my part, to ascertain the exact length of the limb, is a misrepresentation of the facts as they occurred.

On page 57 he says: "A distinguished English surgeon has recently said that he has given up measuring broken thighs—because of the uncertainty of measurements, I infer." If the measurement is made in the usual way, and as was done by Dr. Hamilton and others in the case referred to, I think the distinguished English surgeon is correct, and I certainly agree with him. The only reliable instrument for exact measurement of the thighs is that of Dr. Thomas Holgate, of this city, and as I did not have it with me at the time, *I made no actual measurement of the case at all*, but merely went through the form of imitating Dr. Hamilton's measurement for the purpose of demonstrating to him and the others present that it was unreliable.

In referring to the tabulated cases of Dr. Van Wagenen, attached to my report, and in which I had stated before the Medical Association that Dr. Hamilton had measured some of them, he says on page 438, "*I never measured or saw the cases mentioned by him.*" *

It is, of course, an exceedingly unpleasant duty to flatly contradict any gentleman who deliberately makes so bold and positive an assertion as this is, but justice to myself demands that it must be done, and I therefore refer to the following letters to show that this statement is positively untrue.

"101 N. SIXTH STREET, NEWARK,
"March 7, 1881.

"DEAR DOCTOR—I regret delay in answering your first letter in reference to the measurement of fractures treated in Bellevue Hospital while I was on the staff.

"In answer to your question, I would say:

"*First.*—Prof. Hamilton did measure some of the fractures recorded in the tables which I prepared, though he was not on service as visiting to my division, the second, except on two or three occasions, when he acted as substitute for other surgeons.

"*Second.*—Remarks which I heard him make certainly made me believe that he did not think a fractured limb was ever restored to its full length I think this idea of his opinion on the subject prevailed among the house staff during my service.

"*Third.*—I do not remember hearing him say that *three* cases would convince him, though such a rumor was prevalent.

"*Fourth.*—I remember asking him to measure a fractured femur in what was then Ward 7. This is especially recalled to my mind because a number of the house staff had measured, and no one had made any shortening. One or two had claimed an eighth-inch lengthening.

"It was suggested that Prof. Hamilton should see this case, as he did not believe in lengthening or even in perfect cure. As I heard him coming through the hall at the time, I asked him to measure the case. When he said he made it from one-eighth to one-fourth of an inch short, I said I could not make it short, when he measured again and held up the measure before the staff. Attention was called to the fact that he had made the *un*-fractured limb short.

"*Fifth.*—The members of house staff at the time were Fluhrer, McBride, Burchard, W. T. Bull, and Bangs, of the City. Bull and Burchard would be most likely to recall it.

"GEO. W. VAN WAGENEN, M.D.,
"House Surgeon, Bellevue, Second Div., 1871-73."

"24 WEST FORTIETH ST, February 27, 1881.

"PROF. LEWIS A. SAYRE:

"My DEAR DOCTOR—In response to your enquiries of the 25th inst., I would state:

* The italics are mine.

* The italics are mine.

"*First.*—That Prof. Hamilton, in my presence and that of other members of the staff, did measure many of the cases of fractured femur treated by the plaster-of-Paris dressing, in the wards of Bellevue Hospital, that are incorporated in Van Wagenen's statistics.

"*Secondly.*—In two instances, to my personal knowledge, of those thus treated, Prof. Hamilton, after repeated measurements, admitted, and with unmistakable reluctance, that 'he could detect no shortening.' One of these cases occured in Van Wagenen's service in old Ward 7, and confirmatory measurements had previously been made by Profs. Sands, Gouley, and others. In commenting on this case, subsequently, Prof. H. spoke of the result as a most exceptional one.

"The other case occurred in Fluhrer's service, I think, in Ward 16. Prof. Hamilton in this instance admitted to Drs. Fluhrer, Griffith, myself, and others, that he could detect no appreciable difference in the length of the limbs. . . ."

"Very truly yours,
"T. Herring Burchard, M.D."

"New York, February 27, 1881.

"Dear Doctor Sayre: I saw Prof. F. Hamilton on several occasions measure thighs that had been fractured.

"In one or two instances he made, after repeated trials, the fractured side longer than the uninjured one. In one case under my own treatment he made the increase nearly one inch.

"Dr. St. John will, I think, be able to give you more facts bearing upon the question than I can, as the contest became warmer after my hospital service expired.

"Very truly yours,
"J. D. Bryant, M.D."

"Hartford, Conn.,
"February 21, 1881.

"Dear Sir—I think Dr. Hamilton's memory is at fault if he does not remember at least two cases which he measured in my presence and found no shortening, for I remember the fact distinctly, and how it was talked over among the staff. I also recall his measuring several other cases and finding the shortening so slight (½ or ¼ of an inch) as to be of no practical account . . . My impression (which is *almost* a conviction) is that I saw him measure four or five and admit no shortening, but I am positive about only two—one in Ward 7 and one in Ward 5."

"Cordially yours,
"S. B. St. John.

"142 West Thirteenth St., March 24, 1881.

"Dear Doctor—Your inquiry if I ever saw Dr. Hamilton measure any case of fracture of the femur that had been treated in plaster-of-Paris, and included in Van Wagenen's report, received. I have a very distinct remembrance of seeing him measure a patient treated by Dr. Lee (house surgeon) for fracture of the femur. The measurements were made just after the plaster splint had been removed. At first Dr. Hamilton made the limb on the side of fracture longer than its fellow; then, upon remeasuring, he found the difference so trivial that he remarked to Dr. Lee that he had no evidence that the bone had ever been broken. To the other interrogatories I am unable to give a definite answer.

"Very truly yours,
"William F. Fluhrer."

I think I have quoted sufficient evidence to prove that Dr. Hamilton has misrepresented me in his book, and also to justify me in laying the matter in this public way before the profession.

I trust that the various medical journals that have reviewed his book, and have referred to these misstatements, will at least do me the justice to republish this refutation.

Lewis A. Sayre, M.D.

285 Fifth Avenue, March 14, 1881.

TURPETH MINERAL IN CROUP.

To the Editor of The Medical Record.

Sir—In your last issue (March 26th) Dr. Horatio Bigelow gives us some novel views on the treatment of croup. He recommends the use of turpeth mineral as an emetic, with aconite or veratrum viride as a febrifuge, and the hypodermic injection of atropine to relax spasm. Dr. Bigelow is doubtless aware that turpeth mineral is a dangerous remedy. Several fatal cases of its use are on record. The emetic action of this preparation is merely the first stage of its poisonous operation. For these and other reasons, would it not be better to produce the necessary emesis with milder remedies?

Aconite and veratrum viride are powerfully depressing even to adults. It would be interesting to know what proportion of a minim of aconite Dr. Bigelow would administer every half-hour to a child of eight months?

The hypodermic injection of atropine for the correction of spasm, or the pain of spasm, is favorably spoken of, but in Dr. Bigelow's case its use appears to have been followed by the ejection of false membrane. As the membrane was so loosely attached to the larynx, would not an ordinary emetic have caused it to be thrown off?

The treatment I follow is that recommended in Dr. Tanner's "Practice of Medicine" (page 883, fourth American edition).

I begin treatment with an emetic dose of wine of ipecac in sweetened water. When the heat of the body is above the normal standard, as ascertained by the thermometer, a warm bath is used to lessen it. I then resort to the use of the iodide of potassium, combined with assafœtida and senega, as in the following prescription.

Prescription for a child about two years old, suffering from croup:

℞ Potass. iodidi.... ℥..... gr. xv.
Tr. asafœtidæ..... f. ʒ jss.
Tr. senegæ ..... f. ʒ iij.
Syrupi mori .....ad. ʒ iij.
M. Ft. mist.

Sig.—One small teaspoonful every two, three, or four hours.

The iodide of potassium restrains nutrition generally, normal as well as abnormal, and it at the same time promotes elimination. The asafœtida diminishes secretion and controls the spasmodic element. The senega is most useful after the inflammatory stage with spasm has passed. Finally, syrup of mulberries is indicated in sore throat. This treatment is not dangerous, and I can safely recommend it as curative. I remain, etc.,

J. J. Cassidy, M.D.

Toronto, Ontario, Canada.

Sir—Referring to the case of pseudomembranous laryngitis, in your issue of March 26th, successfully

treated by Dr. Horatio Bigelow with (in combination with other remedies) turpeth mineral in three-grain doses every two hours, as recommended by Dr. Fordyce Barker and other high authorities, some time ago, in a similar case, I prescribed the same drug, in two-grain doses, for a child of a gentleman who is now publisher of a monthly magazine in this city. The druggist to whom my prescription was taken refused to put it up, alleging that it was a rank poison, to the serious detriment of my reputation, my explanation having shared the proverbial fate of truth lagging behind the lie, which had several hours start of it. On another occasion a druggist objected on similar grounds to put up gr. j doses of santonin. Again, a druggist in Brooklyn—to whom a patient suffering from intermittent fever, for whom I had prescribed quinine in x. or xx. gr. doses (I forget which), sent for the medicine—remarked to a friend in the store, in presence of the messenger, that "a man who would prescribe such a large dose must be a d——d fool."

Fortunately for themselves, those concerned in the last two cases, thinking that my authority might possibly be superior to that of the compounders, refused to be guided by their advice. Comment on above is superfluous. Respectfully,

N. O'D. P.

New York.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from April 3, 1881, to April 9, 1881.

Moffatt, P., Captain and Asst. Surgeon. Relieved from duty at Camp Spokane, W. T., and ordered to Fort Walla Walla, W. T., until further orders, for medical treatment. S. O. 35, Department of the Columbia, March 20, 1881.

Medical Items and News.

Contagious Diseases — Weekly Statement. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending April 9, 1881.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro spinal Meningitis.	Measles.	Diphtheria.	Small pox.	Yellow Fever.
April 2, 1881.	11	12	149	21	67	85	29	0
April 9, 1881.	55	20	137	21	66	85	51	0

Commencement of the Columbia Veterinary College and School of Comparative Medicine.—The fourth annual commencement of this college was held at Chickering Hall on the evening of April 7th. It was a more than usually interesting and successful affair, and reflected much credit on the college. The introductory address by Dr. T. E. Satterthwaite was a brief but very carefully prepared statement of the wide field now open to the veterinarian. Especial reference was made to the enormous commercial interests which veterinary science is in relation to, as well as the great possibilities in scientific achievement which comparative medicine offers.

Dr. E. S. Bates, dean of the college, conferred the degrees, and the award of prizes was made by Professor A. S. Heath, as follows: Anatomical prize, E. I. Peck; pathological prize, George H. Parkinson; silver prize, E. A. MacLellan; gold prize, G. H. Parkinson. The valedictory was pronounced by Mark Louis Frey, D. V. S., and addresses were given by Mr. S. D. Sewards and the Rev. J. H. Rylance. Mr. Bergh was among the interested auditors.

Degrees were conferred upon eight graduates. Junior certificates were conferred on fourteen students. A number of students, however, failed to pass the examinations.

The school is to be congratulated upon its rapidly established success. In thoroughness of instruction and facilities for teaching, it ranks now as one of the leading veterinary colleges in the country.

Punctate Cauterization of the Chest with the thermo-cautery has been successfully tried by Dr. Peter at the Hôpital de la Pitié. The cauterizations were superficial, and were made at first in the dorsal region. They were repeated at first every third day, and then at longer intervals. Six applications were made. Relief was almost immediate.

Trichinous Flesh.—M. Pouchet fed three rats with trichinous meat that had been smoked or salted. At the autopsy of these animals he discovered no trichinæ in the muscles, but found in the intestine a large quantity of the intact cysts. He thought that they were dead. At the Society of Biology, when M. Bert reported this experiment, M. Bert said, in commenting on it, that the first salting did not kill the trichinæ, but that after a time they died. The period before death occurs was, according to experiments made in Denmark, from one to two or three months.

Preservation of Dissecting Material.—The *British Medical Journal* gives an interesting sketch of the methods of the preservation of subjects in the London dissecting-rooms. At Guy's the subjects are injected by the Howse method, with glycerin and arsenic, but are afterward put into a carbolic acid solution. At St. Mary's, the injecting material is composed of vermilion, arsenic, plaster-of-Paris, and size. At Middlesex Hospital, arsenic in a solution of carbonate of potassium was used, the subjects being afterward wrapped in carbolic acid cloths. At University College, carbolic acid in glycerin is the injecting material. In other schools, chloride of zinc, bichloride of mercury, arsenite of sodium, arsenic, creosote and soda, etc., are used in various combinations. Not one of these schools, however, makes use of a solution of chloral, as first used by Dr. Keen, of Philadelphia. This is an economical and perfectly satisfactory method of preservation. Under its influence, subjects not only remain sweet for weeks, even in warm weather, but the muscular tissue retains its normal flexibility and brightness of color.

Regulating the Practice of Pharmacy in Massachusetts.—A bill has been brought before the Massachusetts Legislature for the regulation of the practice of pharmacy. It obliges all present druggists to register, and all prospective ones to pass an examination and get a certificate. The bill receives the endorsement of the medical profession as well as of the druggists.

The Medical Society of the State of Pennsylvania meets at Lancaster, May 11th, 12th, and 13th. The addresses are to be as follows: In Medicine, Dr. J. Solis Cohen; in Surgery, Dr. S. M. Ross; in Obstetrics, Dr. S. T. Davis; in Hygiene, Dr. Benjamin Lee; Mental Disorders, Dr. S. S. Schultz.

Trichinosis.—*Punch* represents two gaunt Israelites discoursing to each other as follows:

Says Aaron to Moses,
"I've got trichinosis;"
Says Moses to Aaron,
"'Tis because you pork fare on."

A New Hospital for Brooklyn.—Mr. George I. Seney has given $200,000 and land worth $70,000, at Seventh street and Seventh avenue, Brooklyn, for the erection of a hospital upon the cottage plan. A board of thirty-two trustees has been appointed, who will superintend the erection of the new building.

Meetings of State Societies in April.—The Tennessee State Medical Society, in Nashville, on Tuesday, April 5th; the Mississippi State Medical Society, at Winona, April 6th, 7th, 8th; the Alabama State Medical Society, at Montgomery, April 12th, 13th, 14th, 15th; the Kentucky State Medical Society, at Covington, April 5th, 6th, 7th; the Georgia State Medical Society, at Thomasville, April 20th, 21st, 22d; California State Medical Society, at San Francisco, April 20th; South Carolina Medical Association, at Newberry, April 19th; Medical and Chirurgical Faculty of Maryland, at Baltimore, April 12th, 13th, 14th.

A Case of Prolonged Fast.—An unmarried lady of Iowa City, Iowa, named Hattie Deuell, has recently starved herself to death. She is said to have gone without food for forty-seven days. The person in question had long suffered from various nervous troubles. Finding life unpleasant, she determined to starve herself to death. No persuasion was able to induce her to take anything but water.

We assume the genuineness of the case, because the Iowa City Medical Society took action upon the subject, and passed a resolution condemning the performance. It is not shown, however, how it could have been prevented.

A Poor Board of Health.—A petition of the residents of the Tenth Senatorial District has been presented in the State Senate. It contains the following curious request:

"The undersigned citizens of your district, in view of the alarming increase of disease, as the statistics of the first quarter of the present year show, and the premonitory symptoms of a fearful epidemic during the summer months staring us in the face, behooves us to make use of every possible influence to ward off disease and death from our homes. Believing, as we do, that an efficient Board of Health would render effectual aid in warding off an epidemic, due largely to gross neglect of sanitary requirements, we therefore respectfully request our honorable representative to use his influence and best efforts to amend section twenty-six of the proposed new charter, under consideration in the Senate, and have a physician of experience and knowledge of sanitary science appointed a Commissioner of the Board of Health."

This is a very unwarranted reflection upon the capacity of our present able Board of Commissioners.

Camphor Chloral in Facial Neuralgia.—Dr. A. B. Farnham, New Rochelle, N. Y., speaks highly of the use of camphor chloral in five-drop doses, frequently repeated, for facial neuralgia.

Hereditary Deficiency of Fingers and Toes.—Dr. E. Krabbe, of Copenhagen, reports the history of a family in Iceland in which a deficiency of the fingers and toes has occurred in increasing degree in three successive generations. The mother was born without a thumb on her right hand. Of her six children two presented no defect, while in the other four, a girl and three boys, three or four fingers of both hands and the same number of toes were lacking. The girl married a well-formed man, but a child just born presents the defects of the mother in a still higher degree. The brothers are not yet married.—*Nord. med. Arkiv*, Bd. xii., No. 20.

Intolerance of Morphia in Rheumatic Fever.—A subscriber writes: "Has observation proved that there is marked intolerance of morphia in rheumatic fever? Do non-eliminated products of the blood render ordinary doses dangerous? Does the present popular use of the salicylates or salicine intensify the effects of opiates? Why are there now more of sudden deaths from acute rheumatism than formerly? I know of three cases of death in twelve hours after hypodermics of morphine in this disease, to one of which I was the unfortunate witness. Dose, $\frac{1}{4}$ morphia and $\frac{1}{100}$ of atropia. Patient had repeatedly taken more without other than desired results. Comatose conditions, preceded or not by delirium, are rapidly fatal, associated with high temperature and apparent meningeal complications. These are rare, while cardiac lesions are not uncommon. If these queries are worthy of your notice and that of your patrons, please let the Record be the medium of communication with a subscriber."

The Salicylates.—Dr. Prosser James gives in the *British Medical Journal* some interesting facts regarding the different value of the various salicylates. *Salicin* he considers likely to maintain its pre-eminence in acute rheumatism, because the system can be quickly brought under it without disagreeable effects. *Salicylate of soda* is at present the favorite salt. *Salicylate of ammonia* does not differ from the soda salt in properties. *Salicylate of potash* is similar in taste, solubility, and anti-rheumatic power to the salicylate of soda. It is only to be preferred when it is desired to get potash into the system, as in certain cases of gouty diathesis, in some forms of dyspepsia, in the various forms of lithiasis, etc. *Salicylate of lithia* is still better than the potash in cases of gout or lithiasis. *Salicylate of lime.*—In consequence of the affinity of salicylic acid for lime the teeth may be acted on, and possibly even the bones after a prolonged use of the remedy. It is suggested that the salicylate of lime may shield the osseous system. *Salicylate of quinia* has been used with success, especially when a tonic as well as anti-rheumatic effect is desired. *Salicylate of cinchonidia* is introduced as a less costly substitute for that of quinia and very useful as a tonic and anti-periodic in neuralgia, rheumatism, sciatica, etc. In such cases five grains may be given every two hours, or ten grains given at once, followed by smaller doses.

Cinchonidia ($C_{20}H_{24}N_2O$) is an isomer of cinchonia, but possesses left polarization, and is rather more soluble. The medical committee which investigated its value for the Government of India estimated that cinchonidia is only less efficacious than quinia in

fever; many consider it of equal value in neuralgia. The salicylate contains about one-third of its weight of acid and is of course incompatible with iron. It may be given in pill, wafer, or solution, but preferably in the solid form. It affects the nearly as soon as quinia does, and in a similar manner. Dr. James has not tried it in acute rheumatism, but in the more chronic cases of neuralgic and rheumatic pain it has acted successfully. It may be given as a tonic and stimulant to the appetite in doses of two to five grains three times a day.

United States Marine Hospital Service—Examination of Applicants.—A board of surgeons for the examination of candidates for appointment in the United States Marine Hospital Service has been appointed to meet in Washington on Monday, April 25, 1881. The detail for the board is as follows: Surgeons P. H. Bailbache, W. H. Long, and George Purviance. The examination is for the purpose of filling three vacancies which exist in the grade of assistant surgeon.

The Filthy Streets of New York—The Medical Profession calls for Prompt Measures.—A large and influential mass meeting of the medical profession of this city was held at Chickering Hall, on Wednesday evening, April 13th, to protest against the present filthy condition of the streets and to insist upon the necessary legislation to have them cleaned without delay.

Prof. Willard Parker was chosen president, after which sixty-eight vice-presidents and eight secretaries were elected.

Dr. Parker, in assuming his office, stated in a forcible and earnest manner the purpose of the meeting, and the necessity for some definite expression of medical opinion regarding the detrimental influences of the accumulated street-garbage upon the health of the citizens. He was followed by Drs. Fordyce Barker, W. H. Draper, and A. L. Loomis, who with one accord maintained that the condition of the streets was one of the prime factors in influencing the malignity of disease and in increasing the rate of mortality. Dr. D. B. St. John Roosa, in a well-timed and eloquent protest against the action of the Assembly on the street-cleaning bill, presented the following resolutions, which were unanimously adopted, after having been seconded by Dr. L. A. Sayre, and earnestly supported by Dr. J. C. Dalton.

The resolutions were in full as follows:

The medical profession of the city of New York, in mass meeting assembled, do resolve and declare:

That the garbage and the filth, the necessary accumulations of traffic and of households in this great metropolis, have not been thoroughly removed from the streets of our city for a number of years.

Resolved, That this condition of things produces disease, renders a simple type of it malignant and dangerous, and acts injuriously in the following ways:

First.—Meat and other food exposed for sale are poisoned by the exhalations from the filth.

Second.—The air-boxes of our houses convey a poisoned atmosphere.

Third.—The heavy rains and snow bring into solution the accumulations at the mouths of obstructed culverts, and aggravate and intensify morbific agencies.

Fourth.—The irritating and poisonous dust from excrementitious substances and filth is of the greatest damage to the eyes and the air-passages.

Fifth.—Malaria is created and fostered by the reeking sewers and gutters.

Sixth.—The difficulties of maintaining cleanliness in the houses and in the persons of our inhabitants are greatly increased.

Seventh.—Persons are so disabled by living in the midst of these injurious influences that many are compelled to seek frequent changes of climate.

Eighth.—The children of the poor, who live in tenement-houses under bad sanitary conditions, and attend school in crowded school-houses, have as their only playground the streets in which these accumulations from dwellings and from animals are producing their injurious effects.

Resolved, That one of the causes of the increased mortality in this city during the last winter—a mortality which places its death-rate, despite our natural advantages of position, among the highest in this country—has been neglect in removing the accumulations aforementioned.

Resolved, That the methods heretofore adopted by the Police Department of the city have been notoriously bad, and even these methods have been inefficiently carried out. Party politics has been made to enter into what should be a purely sanitary duty performed by a responsible officer.

Resolved, That the Health Board of this city, the appointed guardians of the public sanitary condition, in its political environment and composition have been found to be apologists rather than denunciators of the neglect and inefficiency which have produced the frightful condition of our highways and the noxious vapors which have entered our houses during the last few months.

Resolved, That, in view of these facts, and also in view of the fact that a petition signed by more than two hundred and fifty physicians of this city and sent to our representatives, has never been fully placed before the Legislature, and the sacred right to direct the sanitary legislation of our city has been disregarded, we again, in mass meeting assembled, protest against the recent action of the Assembly in refusing to pass the Citizens' bill as it came unanimously from the Senate, and now demand of our representatives from this city that they shall reverse their action and assist in passing this bill, which is demanded by the intelligence and honesty of this metropolis.

Resolved, That we deny the right of politicians to decide matters pertaining to the health of the State by claims upon party fealty, and that we protest against the policy which subjects the health and welfare of our citizens to the behests of party leaders, however exalted their position.

Resolved, That we decline to support at any future election any representative from the city of New York who shall disobey the requests of our citizens upon this subject.

Resolved, That we invoke the aid of our professional brethren throughout the State, by their influence upon their representatives, in securing the reforms we demand.

Resolved, That these resolutions, attested by the president and secretaries of this meeting, be sent to the Governor of the State, the President of the Senate, and the Speaker of the Assembly, by a committee of five, to be appointed by this meeting.

Drs. J. C. Dalton, Willard Parker, jr., Allan McLane Hamilton, F. M. Weld, and W. H. Thomson were appointed the special committee called for in the resolutions, after which the meeting adjourned.

Original Lectures.

TYPHUS FEVER.

By ALFRED L. LOOMIS, M.D.,

PROFESSOR OF PATHOLOGY AND PRACTICE OF MEDICINE IN THE UNIVERSITY OF THE CITY OF NEW YORK.

(Phonographically reported for THE MEDICAL RECORD.)

LECTURE III.

GENTLEMEN: At my last lecture I gave you an outline history of the symptoms of typhus fever; to-day I will speak more in detail of its prominent symptoms, and then pass to its differential diagnosis. The most constant and prominent symptoms of typhus fever are those which are referable to disturbances of the nervous system. I spoke of headache as being an early and constant symptom, one which lasts for four or five days, perhaps a week, and then gives place to delirium. This headache is severe, and increases in severity from hour to hour, until the delirium comes on, usually at the end of the first or the commencement of the second week. Delirium may be present at the commencement of the fever; after it is once developed it continues until convalescence is established. You will remember, also, that I told you it may be of a muttering or active delirium. The *temperature* usually rises rapidly from the onset of the fever, reaching its maximum by the end of the second day, and it continues at about the same range that it reached on the second day until the seventh, when it usually falls a degree or two, and again on the tenth or fourteenth day, or some day between the seventh and fourteenth days, the temperature falls rapidly until it reaches normal. After the temperature has reached its maximum for several days there will be little change. Occasionally an elevation of two or more degrees precedes the fall. The height to which the temperature attains on the second day of the fever, determines the severity of the attack. If the temperature rise to 105° or 106° F. on the second day the fever will be severe, and you will be likely to have active delirium coming on early. Usually in the milder cases the temperature does not rise to above 103° on the second day; in the severer cases it reaches 106°; if a very sudden rise in temperature occurs during the second week, it indicates the occurrence of some complication. The pulse in this fever is usually frequent, soft, easily compressible, and often irregular. During the first week it usually corresponds to the range of the temperature. If the latter be 103° at the end of the second day the pulse will probably be 105, possibly 110; if the temperature is 106° the pulse will probably be about 120, and it will vary during the first week with the slight variations of temperature. During the second week, however, there is no certain relation between the pulse and temperature; the pulse may become more frequent while the temperature gradually decreases. At the time of the crisis, if the disease is to terminate in recovery, the pulse will fall rapidly in harmony with the fall of the temperature. It falls within a short time to more nearly normal than in any other disease that terminates by crisis. The pulse, however, is not always a certain indication of the power of the heart; it may be imperceptible at the wrist while the heart-sounds are distinct and the force of the apex-beat is nearly normal. This inequality between the force of the heart-beat and the radial pulse occurs more frequently in typhus than in any other fever.

The appearance of the countenance varies in different cases during the first few days of the fever; sometimes it is intensely flushed, at other times it is not much changed before the third day of the disease, when it assumes the characteristic appearance of typhus fever: the complexion is of a mahogany hue, the eyes are suffused, the expression dull and stolid. It retains this appearance until the day of crisis, when it very soon becomes natural.

The respirations are at first increased in frequency, perhaps reaching thirty a minute, but as the disease progresses, especially if it tend toward a fatal termination, the patient gradually passes into a state of stupor, and the respirations become slow and labored, often puffing in character. Stupor and somnolence are present in the majority of the severe cases. The stupor is usually preceded by lethargy, but it gradually deepens, the patient becomes less and less conscious, until, finally, he passes into a state of coma, in which the eyes are sometimes wide open, as if he were awake but unconscious. This condition has received the name of coma vigil, and is always an unfavorable symptom. You may expect such cases to terminate fatally.

I told you that there are few if any abdominal symptoms in typhus fever. Constipation is usually present during the whole course of the fever. Nausea and vomiting is not often either an early or a late symptom. Emaciation is not so great as in other infectious diseases; the patient may appear as well nourished at the time of death as at the commencement of the attack. The duration of this disease is shorter than that of almost any other of the infectious fevers.

You will remember I told you that a characteristic eruption appears on the fifth or sixth day of the disease. At first the surface presents a general reddish appearance. Very soon little dark red dots, varying in size from two to three lines in diameter, irregular in shape and slightly elevated, make their appearance over the reddened surface. This flush of redness and these little darkish red dots very soon give place to a mottled surface; the dots become of a darker color. They at first disappear on firm pressure, but as they become darker they are not affected by slight pressure and do not disappear under firm pressure. They assume a more and more mahogany or dark appearance as the disease progresses, and can be seen at the time of convalescence or after death. They may be present only upon the abdomen and chest, or on the arms and legs and most of the body. There is a great variety of eruptions in the infectious fevers, but in no other fever does a distinct eruption occur on a mottled surface as occurs in typhus fever. I told you at my last lecture that in the place of these dark red dots there are sometimes almost black spots, called petechiæ, but these cannot be regarded as characteristic of typhus fever. They are met with in many other diseases, as, not infrequently, in the severer forms of scarlet fever, and, under certain circumstances, in typhoid fever. They are not characteristic of any peculiar type of any of these diseases. They are due to the condition of the patient; to the unhygienic surroundings under which the disease is developed.

These prominent symptoms, if they are all present, will be sufficient to enable you to make a diagnosis. But it is often difficult to differentiate typhus fever from some other diseases before the eruption has

made its appearance. You will remember that the eruption does not usually appear before the fifth day of the fever; therefore, during five days you may not be able to make the diagnosis. The question has been raised whether the presence of the eruption is essential to the diagnosis of typhus fever. My own view is that an eruption is just as important an element in making the diagnosis of typhus fever as it is in making the diagnosis of scarlet fever or of measles. The eruption is present in almost every instance. Statistics show that it occurs in 148 out of 152 cases. It may not be very extensive in some cases, but it is present in some degree.

Before the eruption is present, and sometimes even afterward, typhus fever may be mistaken, first, for typhoid fever; second, for relapsing fever; third, for measles; fourth, for cerebro-spinal meningitis; fifth, for uræmia or acute Bright's disease; and it may be mistaken for pyæmia or septicæmia, or some of the other infectious diseases, but not so likely, however, as for those first named.

It is very important to differentiate between typhus and typhoid fever, for the latter is not to-day regarded as a contagious disease, and cases are now coming to our hospitals every day in which the question is raised, Are they cases of typhus or of typhoid fever? If of the former, they must be removed to tents; if of the latter, they may remain in the wards. It is very difficult, sometimes, to differentiate between them. In order to do it you must be familiar with the prominent symptoms of the two diseases. I will now briefly review the differentiating symptoms between typhus and typhoid fever.

First, typhus fever is ushered in suddenly, usually with a chill; the early symptoms are active. There is intense pain in the head, a rapid rise of temperature, and a great acceleration of the pulse. Typhoid fever comes on slowly, insidiously; there may be a chilly sensation, but not a distinct chill; there may be a pain in the head, but not of a severe character. The temperature does not rise rapidly. A comparison of the range of the temperature in the two fevers is of marked diagnostic value. In typhus fever the temperature rises rapidly, and within the first twenty-four hours, or certainly by the end of the second day, it reaches its maximum height. In typhoid fever the temperature rises gradually, and presents what is termed a typical range during the first week. There is a regular morning and evening exacerbation and remission, but each day during the first week it rises a degree higher than it was on the preceding day. If, therefore, you have an opportunity to see your patient from the first day of the disease you will have little difficulty in making the differential diagnosis between a typical case of typhus and of typhoid fever by the difference in the range of the temperature alone. The countenance in the two diseases differ. It is not flushed and of a mahogany hue in typhoid as in typhus fever. The expression is dull in typhoid fever, and if there be redness of the countenance at all it will be the flush of hectic fever rather than the dull, mahogany color of typhus.

The eruption in the two diseases differs as greatly as in measles and scarlet fever. In typhus fever it makes its appearance by the fifth day, in typhoid fever not until the seventh or eighth day; in typhus it is mottled, and does not disappear on pressure, each point remaining from the time of its appearance until convalescence is established or death occurs; in typhoid each spot is of a bright rose color, disappears on slight pressure, remains three days and disappears, but successive crops may come out and extend the duration of the eruption over ten or twelve days. The eruption in typhus is more abundant than in typhoid, and is distributed over a greater portion of the surface. In typhoid it is limited to the abdomen and chest. In typhus there is no abdominal tenderness, no tympanitis, and, as a rule, there is constipation; in typhoid there are early abdominal symptoms, or ileo-cæcal tenderness and gurgling, tympanitis, and diarrhœa, which, in some instances, is rather characteristic. The duration of the two diseases differs. Convalescence does not begin in typhoid fever until the end of the third week, and is not completed until the end of the fourth; as the accession of typhoid is slow, so is its convalescence; in typhus fever the accession of the disease is rapid, and so is the convalescence; by the fourteenth day of the fever convalescence is established in typhus. Typhoid is an endemic fever; typhus is, strictly speaking, a contagious fever, and epidemic. If it commence in one locality it is almost certain to become epidemic unless measures are used to check its progress. The tendency of typhus fever, therefore, is to an epidemic; the tendency of typhoid fever, on the other hand, is to be restricted as an endemic disease. There is little or no emaciation in typhus; there is rapid and steady emaciation in typhoid fever. Delirium in typhus is more likely to be active than in typhoid fever. In both fevers the tongue may be brown. There may be subsultus tendinum, there may be a slipping down in bed; but these conditions are more likely to exist in typhoid than in typhus fever. The pathological lesions which you will find at the post-mortem examination, should you have an opportunity to make it, will decide the differential diagnosis positively. You will find in typhus none of the characteristic changes in the intestinal glands which mark typhoid fever. There are no intestinal lesions peculiar to typhus; if there be any characteristic lesions at all they will be found in the brain or in the blood. There is no danger of perforation of the intestine or of intestinal hemorrhage in typhus fever, and you will not find at your post-mortem examination any lesion which would lead you to think that such an accident could have taken place. It seems to me, therefore, that when you place the symptoms of these two diseases side by side you will be able to make the differential diagnosis; yet you must remember that it has not been very many years since typhus and typhoid fever were regarded as the same disease; there was no distinguishing line drawn between them, but at the present day all observers, I think, regard them as distinct types of fever.

From cerebro-spinal meningitis typhus fever may be distinguished by the fact, first, that the pain in the head at the onset of cerebro-spinal meningitis is generally more severe than in typhus fever, and it alternates with the delirium. When the headache gives place to the delirium, in typhus fever, the headache does not return again. The pulse is much more rapid at the onset in typhus than in cerebro-spinal meningitis, being at the commencement of the latter disease often slow. In typhus fever there is a rapid rise of temperature; in cerebro-spinal meningitis the rise of temperature is comparatively slow. In both diseases there may be an eruption, but the eruption in cerebro-spinal meningitis follows no law; it has no regular period of development; it may come out on the first, second, or third day, or it may be delayed until the fifth or sixth. At one time it may be petechial, at another herpetic, again roseola, or resemble any one of these varieties more or less closely.

Although on account of an eruption occurring in some cases, cerebro spinal meningitis has received the name of spotted fever; cases often go on to a fatal termination without there having occurred any spots, or any eruption whatever. The eruption in this disease is due to changes which take place in the cerebro-spinal centres and not necessarily to the specific poison of the disease. The rigidity of the muscles which occurs soon after the development of cerebro-spinal meningitis is characteristic of this disease, and distinguishes it from typhus fever, or any other disease, yet, I have seen mistakes in diagnosis between typhus fever and cerebro-spinal meningitis made even in Bellevue Hospital; mistakes which were corrected only at the post mortem.

A mistake in diagnosis between typhus fever and acute tubular nephritis, or acute Bright's disease may occur. There may be a very severe pain in the head in the latter disease, resembling very closely that which occurs in typhus fever; and there may be a flushed face, a fast pulse, and a rapid rise of temperature. Usually, however, there is not a rapid rise of temperature in acute Bright's disease. There may be delirium and a tendency to coma; coma may come on more rapidly than in typhus fever, but there will be with it an œdema of the eyelids and face which will enable you to make the diagnosis. There may be changes in the urine in typhus fever; it may be scanty in amount, and it may contain albumen and casts, but these will occur later in the disease; whereas the presence, early in acute Bright's disease, of casts, especially of blood casts, of smoky urine or entire suppression of urine, together with the other points of differential diagnosis just mentioned, will enable you to make the diagnosis.

The prognosis in typhus fever is always grave, and should not be given until you have carefully considered all the points in each case: such as the age of the patient; the hygienic conditions under which the disease has been developed and under which you will be compelled to treat it; the habits of life of the patient; the character of the epidemic and the tendency to certain complications, and the condition of the patient at the time of the attack. In all epidemics the majority of cases will recover. The rate of mortality, according to the statistics given by different writers and observers, varies from one in five to one in sixteen cases. Sometimes an epidemic will commence mildly and then become severe. Within a few weeks of its commencement an epidemic will have assumed a malignant type, if it is to do so during any portion of its course, and toward its close it will again become less fatal. Consequently, in the cases which occur after the first week or two of the commencement of an epidemic, the prognosis is more unfavorable than at either the very beginning or at its decline. Of all the conditions which influence the prognosis in this disease, the age and the habits of the patient are the most important. Of sixty-two children that I treated for typhus fever, but one died; the death-rate was less than two per cent. Typhus fever is never a very fatal disease among children. It would be far better if all could have the disease when children, if they must have it at all. The rate of mortality increases with the advance in age. After forty years of age the chances of recovery are greatly diminished. Very old people rarely recover.

It is more likely to prove fatal in the intemperate than in the temperate. Indeed, those who are grossly intemperate rarely recover from a severe attack of typhus fever. It is more likely to prove fatal if it be developed and treated under anti-hygienic conditions. The rate of mortality was very much greater when typhus fever was treated within brick walls than when treated in tents. These facts, therefore, must be considered when making a prognosis.

I was told recently, by a physician who had a large experience in the treatment of typhus fever during the early part of his professional career, that when he was in charge of Ward's Island Fever Hospital, he was losing only about one patient in sixteen, while they were in a board house in which the windows could be taken out for free ventilation; but the Legislature came down, and thinking the patients were badly cared for, had them transferred to stone buildings, after which the death-rate, in the same class of patients, was about one in five. He afterward transferred them to the fever shanties again, and the Legislature did not disturb them afterward.

There are certain individual symptoms which will render the prognosis unfavorable; to these I will now briefly call your attention. If the pulse continue to beat as rapidly as 120 per minute for several days, and becomes irregular and intermittent, the prognosis will be very unfavorable. Early and active delirium renders the prognosis unfavorable; likewise great disturbance of the nervous system as indicated by subsultus, by excessive muscular weakness, and by coma vigil. Those patients who have coma vigil and a pin-hole pupil rarely recover. An early passage into a state of coma renders the prognosis unfavorable. A sudden rise of the temperature in the second week renders the prognosis unfavorable. Inability to swallow, caused by extensive swelling of the glands about the neck, and of the tongue, is an unfavorable symptom. An abundant eruption of a dark color, with petechial spots; an imperceptible pulse at the wrist, continuing for an hour or two, and which may occur early or later in the disease; blueness of the finger-ends, and a deep mahogany hue of the face, are, severally, symptoms which render the prognosis unfavorable. But, please to remember this, gentlemen: that a patient with typhus fever may have an intermitting pulse, beating at the rate of 140 per minute; he may have a pin-hole pupil and coma vigil; he may be in a condition from which it is impossible to arouse him, in which the heart-sounds are almost all the time inaudible—a condition in which there seems to be no possible chance of his recovering, and yet recover. The most desperate cases of typhus fever will sometimes astonish you by a rapid recovery.

The symptoms that indicate coming on of convalescence are, first, a fall of the pulse. A fall of the temperature does not always indicate it. In cases which reach convalescence the pulse usually begins to be less frequent by the eighth day, and perhaps continues to diminish in frequency until the tenth or fourteenth day, when suddenly it falls very nearly to normal. If, then, in a case of typhus fever, on or about the eighth day, you find the pulse becoming less frequent, more distinct, and losing any irregularity which it may have had, you may consider the prognosis good. If, about the tenth day, the face begins to become less suffused, the eyes less dull, the tongue more moist, and, as said before, the pulse less frequent, it is indicative of approaching convalescence. The eruption, however, will still remain unchanged; if it were petechial, it will be petechial still, and it will retain its mulberry appearance until later on. After the appearance of the favorable

symptoms just mentioned the patient may pass from a state of delirium, a condition in which it is necessary to restrain him, into a quiet sleep and awake sane. The sleep is a refreshing one, and he awakes from it in full convalescence. There is no other disease in which convalescence is sometimes so sudden and so complete. I have seen patients at my visit on one day in apparently a hopeless condition, and at my visit on the next day in a state of convalescence. Recovery after the crisis is rapid; patients regain their muscular strength fast. Convalescence is not slow, as it is in typhoid fever. You will remember that I told you typhus fever patients emaciate but little.

There are three prominent causes of death in typhus fever:

First.—Coma. Coma may be produced either by an overwhelming of the nervous system with the typhus-poison, or by the effect of the high temperature upon the nerve-centres. In the first case the process is like that which takes place in acute Bright's disease—there is a direct action of the poison upon the nerve-centres; in the second, as stated before, the result is produced by the effect of the high temperature upon the nerve-centres.

Second.—Death may result from heart-failure. Heart-failure, too, may be due primarily and only to the direct action of the poison, for the poison of this fever has the power to make the heart's action irregular, to diminish its force, and to increase its frequency by its influence upon the nervous system. I have seen the pulse become irregular within twenty-four hours after the appearance of the first symptom of typhus fever. Again, heart-failure may result from a high temperature which has existed for a considerable time; and it is true, although it may seem strange, that it produces, if at all, only to a slight degree such parenchymatous changes as occur in typhoid fever. The high temperature may cause coma, and why should it not in the same way disturb the nerve-centres, and thus cause feebleness of heart-power?

Third.—Patients with typhus fever may die from complications. Such complications are numerous: Bright's disease or acute nephritis, meningitis, inflammation of the parotid glands or glands of the neck, pneumonia, capillary bronchitis, etc. Out of a large proportion of patients who die from typhus fever, death is the result of an overwhelming influence of the poison, or to some complication. When death occurs in the second week it is usually due to some complication; when in the first week, to the direct influence of the poison. Such are the principal points of interest connected with the prognosis of typhus fever.

I will say a few words of the treatment to-day, and finish at my next lecture. This subject must be treated of under two heads: the prophylactic treatment and the remedial treatment. You will have, or at least *should* have, more to do, as intelligent physicians, with the prevention of disease than with its cure. The prevention of disease should be a great part of your professional work. Deliver me from a doctor who knows nothing but to write prescriptions. A large proportion of the epidemics of typhus fever are beyond the control of the physician. When, for instance, in years past and at present, typhus fever has occurred in this city, it has been because the quarantine regulations were not strictly enforced. It is not indigenous in New York, and whenever it shall occur here or in any seaport where it is not indigenous, it will be the result of direct importation. It is therefore very important that the quarantine regulations of at least all seaports be rigidly enforced. The power to do this, however, is not usually vested with medical men, but with the State, the county, or the town, and in that case you will not be responsible for the introduction of typhus fever into a place where you may be located, but you will be responsible if you allow it to spread. The first case that may come under your observation should be quarantined; the inhabitants of the house in which it occurs should be quarantined; they should be removed to a locality where they cannot infect others, and the house from which they have been removed should be thoroughly disinfected, not for a few hours, allowing some disinfecting gas to pass through it, but the windows and doors should be opened, the walls cleansed, and fresh air should circulate through it for weeks before it is inhabited again. If it is your good fortune to see the cases that develop, and you adopt such a plan, the first house in which typhus fever shall occur in your locality will, in all probability, be the only one in which it will occur. If the disease be not discovered before it has spread to several houses, the inmates of each house should be treated in the same way. In my search for the origin of the typhus fever which occurred in this city from 1861 to 1864, I found cases in many localities, but I traced its development to one place, from which it had spread. Had the health authorities known of the existence of that first case—and it was their business to have known it—and had they removed the patient and all the tenants of that house outside of the city limits, and quarantined them, and thoroughly disinfected the house and exposed it to fresh air, unquestionably thousands of lives would have been saved to New York City, and some of the most brilliant young physicians that have ever entered our ranks would be living to-day. It matters not whether the disease occur in tenement-houses, where human beings are crowded together, or in the private residences of the wealthy—the restrictions to prevent it from spreading must be just as rigidly enforced in the one case as in the other. It is a disease which has no respect for individuals when they are brought in contact with it. It may spread more rapidly among the poor, the filthy, the badly fed and badly nourished, and the badly clothed, than among the wealthy and the clean; but the latter, if brought in contact with the disease, will just as certainly contract it as those who are filthy and clothed in rags. Filth and other anti-hygienic surroundings favor its development and spread; but, if you wish to stamp it out, you must do so as thoroughly in the habitations of the wealthy as in those of the poor. In speaking of the remedial treatment, I shall tell you that cleanliness and fresh air are the main agents for its cure.

The Plague in the East.—The National Board of Health has received a communication from Constantinople, to the effect that the plague in Irak is of the most virulent character, and, if allowed to pass the military lines drawn around it, will spread far and wide with great rapidity. The "plague," in this case, seems to be typhus fever, and is caused by the decomposition of human bodies. At Ali Meshed there is a holy pit, in which the corpses of believers are placed, because it is thought that they will thus secure a higher place in heaven. The emanations from the remains frequently bring on epidemics of typhus.

Original Communications.

TENOTOMY IN THE TREATMENT OF CONGENITAL CLUB-FOOT;

With a Tabular Report of Fifty-two Cases, and Remarks Illustrating the Management of the Deformity.

By AP MORGAN VANCE, M.D.,

late interne of the hospital for ruptured and crippled, new york.

It is not my purpose to make any remarks on the pathology or etiology of congenital club-foot. The treatment alone will be considered. That adopted in almost every case has been tenotomy, retentive apparatus, and manipulation. For convenience it has been divided into three stages. In the first stage, in infant cases, the straight splint only is used. This being well padded, is applied after the method of Adams, extending from the external condyle of the femur to the ends of the toes. The limb is bound to this by a roller extending from below the knee to the tips of the toes. The splint is reapplied daily, and care taken that no excoriations be produced. After the first few days the mother can be taught to apply the splints properly, and in this way relieve the surgeon from seeing the case so often.

When the varus is sufficiently overcome, the second stage of treatment is begun. This is the division of the tendo Achillis, and occasionally the plantar structures, if any tense bands of fascia stand out prominently; but it is exceptional that this is necessary.

It has been the custom of Dr. Knight, surgeon-in-chief of the hospital, when treatment begins earlier than the sixth month, to wait until that period before the tendon is divided. His reasons for waiting are that, by the time the deformity is overcome, the child will be learning to walk, and, by using the feet, will materially assist in perfecting a cure.

Adams,* however, believes that it is better to operate earlier, even during the second and third month, unless there be some special contraindications.

He says: "The longer the deformity remains uncured, the less will be the ultimate size of the muscles of the leg, and, therefore, on this account, I strongly advise early operation. . . . If the child be in good health, the operation should be performed at about the second month. Delay beyond the second month is unnecessary, and certainly acts prejudicially upon the ultimate result of the case."

So far as my observation goes, it is better to overcome the deformity as soon as possible.

The operation of tenotomy is so familiar to every surgeon that it is not at all necessary for me to go into any details concerning it here. All are familiar with the position in which the patient should be placed—the prone—and with the uselessness of an anæsthetic, unless, perchance, a number of tendons are to be divided. All are familiar with the manner of introducing a tenotome, and the care to be taken to avoid a counter-opening; with the sensation imparted to one's finger as the tendon is severed, and the simple dressing, viz., a slip of isinglass-plaster and a compress of old muslin which has been wet in cold water. These are fully given in all works on club-foot. I shall speak, however, of the management of the case during the two weeks following tenotomy. The apparatus is applied at once, and moderate traction or correcting force used. This is increased daily, with the idea of elongating the tendon before firm union has taken place, which is the second or third week. The patient is kept quiet, and the foot is not used. The apparatus is reapplied daily, and is held in position by the aid of a cross-strap, which goes over the instep and holds the heel down into the cup of the shoe. A roller-bandage is applied, by which the foot is everted and bound firmly to the plate.

The spring of the shoe is brought backward and the band half encircles the calf; the foot is thus held at a right angle. The apparatus used at the hospital is a modification, by Dr. Knight, of Scarpa's club-foot shoe. It is very simple in its construction.

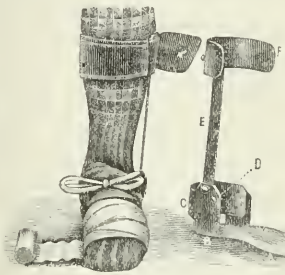

Fig. 1.

A sole-plate (*a*) is cut from sheet-steel, $\frac{1}{16}$ gauge. A second piece (*b*) of the same gauge is cut an inch wide, long enough to reach from malleolus to malleolus; this is riveted to the bottom of the plate and brought up on either side at a right angle with the plate and in the axis of the limb. At a right angle to the upright a heel-cup (*c*) of thin sole-leather is attached to fit the heel accurately. To the outer side of this upright is also riveted a spring (*d*) of bar-steel extending up to the calf and arranged with washer and limited joint (*e*), so that when applied it will allow flexion and resist extension beyond a right angle. To the top of this spring a band (*f*) two inches wide is riveted, which extends half way around the calf (see Fig. 1). It is well padded and neatly covered with leather. With cross-strap and roller the apparatus is complete. It can be worn inside of the ordinary leather shoe after the child begins to walk. The greatest care must be taken in protecting the foot and properly applying the apparatus after tenotomy. If too much pressure be made at any point, excoriations will occur, and the shoe will have to be removed. This is particularly to be regretted, as the removal of the apparatus, for a few days only, at this critical period of treatment, will materially affect the result.

It is especially requisite that the surgeon see the patient daily, to dress the foot, for at least two weeks after the operation. By no means should this be left to the mother or nurse.

The parents should be impressed with the import-

* Adams on Club-foot: Its Causes, Pathology, and Treatment, pp. 53 and 223. 1873.

ance of keeping up the treatment unremittingly at this period, and, if possible, should be prevented from removing the shoe if the child become fretful. As a rule, children make little or no complaint. They cry for a little while after the shoes are applied, but are soon quieted, and usually sleep well. If from any cause they are restless, a mild anodyne should be administered rather than remove the apparatus.

The idea prevalent among the laity, and, unfortunately, among some of the profession, that all surgical appliances are instruments of torture, often causes the surgeon great annoyance. To combat this he should first get the perfect confidence and cooperation of the parents, explaining to them the importance of not interfering with the apparatus. After the first week the feet become accustomed to the shoes, and no further difficulty is experienced. I have paid especial attention to this point in a number of infant cases at the out-door department of the hospital. I usually find the apparatus at each visit just as it was the day previous, the mothers reporting that the babies had rested well and caused very little trouble. If any have been fretful or restless, by a close examination another cause for the disturbance was usually found.

Of course there are a few instances where the feet are very tender, and the least pressure produces pain. The judgment of the surgeon must be exercised in these cases to regulate the force used. When the patients are in the hospital, under the daily observation of the surgeon, no difficulty is experienced. These patients are usually older, and able to make any discomfort known. They are often cases in which the treatment failed in the out-door department, owing to the indulgence of parents, who often express great surprise that we can get them to wear the instruments. This goes to prove that the proper management of the parents is of the greatest importance in all orthopedic practice, and especially in the treatment of club-foot. Intercurrent disease sometimes necessitates the removal of all apparatus in the most critical stage of the treatment; this is always unfortunate, and is, I think, an argument in favor of operating early, when the child is not so liable to be sick. Mr. Adams* says on this point: "The liability to interruption of treatment from infantile complaints is much less to be feared within the first few months than at a later period. . . . . It is of the utmost advantage to complete the treatment of club-foot before the commencement of dentition, when the children are generally fretful, and become liable to so much illness that interruptions from this cause are really to be feared."

As soon as the tendon is firmly united, the third stage of treatment is commenced. The patient, if old enough, is allowed to walk about, and manipulation is practised twice daily. In this process the foot is grasped firmly in the hand and the force used in the direction of flexion and eversion. It is remarkable that so much force is borne in all cases without any evil resulting.

This part of the treatment is very important in obtaining a perfect result, especially in overcoming any varus that may remain. If from any reason the tendon has not been sufficiently elongated by the use of the shoe described above, a lift of cork from one-half to three-quarters of an inch thick may be added to the front part of the plate. In this way the ligaments and tendons can further be put on the stretch. The daily use of faradism is of great benefit at this period of the treatment—not on the theory of a paralytic origin of the deformity, but to give tone and exercise to the muscles, which are always more or less atrophied from disuse. A not inconsiderable portion of the profession believe that a limb is never as perfect after a tenotomy as before. I have never seen any harm result from tenotomy so far as the tendon is concerned. In two cases in which suppuration followed the operation after the inflammation had subsided, the tendon was found strong and well developed. The tendon is always well developed, and, when compared with its fellow which has not been cut, there is found no difference in the size or strength. Mr. Adams discusses the point at length, and gives a number of instances where tendons have been divided subcutaneously by open wound, and that have gone on to repair and become firmly united without loss of strength or function.

Broadhurst* gives the result of an autopsy on an infant three months after tenotomy, where it was found impossible to decide, by the appearance, which tendon had been cut.

I have reported here four cases of non-congenital talipes to illustrate the ease with which this class of cases can be cured, and the perfect condition of the tendons where great separation of the severed ends had taken place.

Those surgeons who treat club-foot by traction alone report remarkable success. I believe that, in cases where the deformity is slight, a cure can be accomplished without tenotomy; but a greater amount of care is required and a very much longer time, taking months to accomplish what could have been done by tenotomy in a few days. This is shown in Case II.

Traction was attempted for some time, with excoriations resulting, and without benefit. The deformity was overcome in a very short time by tenotomy. It has been sufficiently established by experience and experiment that no possible injury is done by the division of tendons simply; and further, that the deformity can be overcome more speedily, and with less pain and inconvenience to the patient, by this means.

Cases XV., LII., XLVI., XXXII., XXI., X., etc., illustrate the value of the plan as to time and to the patient's comfort. Then why continue to treat club-foot by traction alone? In the majority of cases, alone it fails, and tenotomy is ultimately resorted to. Failures, in my belief, are the rule in all except very slight cases. Adams speaks of the utter failure of mechanical means when solely relied on.

The complications which arise in the treatment of club-foot are sometimes troublesome. The most common are excoriations from pressure (found mostly in cases of neglect)—bursæ and callosities. Excoriations can nearly always be avoided by having the apparatus well fitted and the foot well protected with sheet-lint. When there are inflamed bursæ or hard callosities, these should be poulticed and inflammation allayed before active treatment is begun.

In making the report of the following cases the time is taken from the beginning of treatment to the final examination. In a large number of cases the deformity was really overcome long before.

The cases reported in full will be sufficient to illustrate the plan and success of the treatment, while

* Op. cit., p. 273.

* Club-foot. Edition 1856, p. 96.

those reported by table will be, perhaps, of some further interest.

The following cases are numbered as they occur in the table appended.

Cases XL., XLI., XLII.—*A family of three boys, all of whom are the subjects of double talipes equino-varus, with no history of heredity.*—June 19, 1879. Appeared at hospital, aged three years, one and one-half years, and three months, respectively. The deformity in all was complete. Bursal development most marked in the eldest. Tenotomy was performed on the two elder children, and the straight splint applied on the young one a few days later. Apparatus was used from the beginning. They attended very irregularly up to

October 30, 1880.—Very fair result. The youngest child died of intercurrent disease shortly after tenotomy. The deformity was relieved. A few tense bands of plantar fascia are divided to-day in the other cases.

January 8, 1881.—Both appear to-day. The feet have markedly improved, and they walk much better.

The mother has recently given birth to a fourth child, which is free from deformity.

In this connection may be mentioned another family of five children, three of whom had congenital club-foot, with no history of heredity.

The cases noted above are reported more for their peculiar interest than for any marked result of treatment.

Case XV.—*Talipes equino-varus, right foot—Deformity very marked—Treatment began at fourteen months—Tenotomy and apparatus—Cure in five months.*—J. A——, female, aged fourteen months. May 11, 1880. Tendo Achillis divided to-day; no hemorrhage; tendon yielding well. Apparatus applied at once. Varus in this case is very marked, but, by using considerable force, it can be almost overcome. Equinus is extreme, the plantar aspect looks inward and backward; there is no luxation of tarsal bones, though they are prominent on outer border of foot. The child is brought to the office daily for two weeks, and the shoe is carefully reapplied at each visit. At the end of this time the cure is practically complete, *i.e.*, the deformity is entirely overcome. Child walks well, though the foot is inclined to fall into the old position when the shoe is removed. Apparatus continued.

September 21, 1880.—Movements are all perfect. The child walks squarely on the foot without limping. Apparatus continued for a while longer, as a precaution against relapse.

Case L.—*Double talipes equino-varus, complete, in a child of seven weeks—Straight splints four months—Tenotomy, apparatus, and cure in six months.*—W. G——, aged seven weeks. June 10, 1880. Both feet in complete equino-varus, the ball of one riding on dorsum of fellow; tendines Achillis very short and yielding; straight splints applied.

September 30, 1880.—Varus is entirely overcome, and both tendons are divided. Apparatus applied and traction made. Returns daily to the office for two weeks, the condition of the feet being improved at each visit.

October 10, 1880.—The feet are now easily held at a right angle in the shoes. No excoriations have occurred.

December 6, 1880.—The deformity is completely overcome; all motions are voluntarily made to a normal degree. There is marked rotation of limbs, causing the feet to turn in when the child is made to stand. The apparatus is continued until the child begins to walk.

Case XLVII.—*Double talipes equino-varus, very marked in a child of one week—Splints—Tenotomy, apparatus, and cure in seven months.*—C. McG——, male, aged one week. June 21, 1880. Deformity in this baby is very marked. Soles of the feet looking upward and backward. The mother is directed to manipulate the feet for two weeks, and then return for straight splints. Splints are applied, and worn until November 30, 1880—the varus being completely overcome at this time; both tendines Achillis are divided and shoes are applied. Operation was absolutely bloodless and the tendons yielded very well. Quite a great deal of force was used in this case from the first, the feet being well protected with lint.

December 3, 1880.—Feet are easily held at a right angle in shoes. No excoriation or even redness of skin has been produced. Passive flexion easily made to normal degree. The mother has been very faithful and followed directions minutely, tending to facilitate the cure.

Case XLIV.—*Double talipes equino-varus, extreme in a child of seven weeks—Straight splints four months—Tenotomy, apparatus, and cure in six months.*—J. D——, female, aged seven weeks. May 27, 1880. Deformity extreme; child very fat. A sister was the subject of congenital club-foot, and was treated by traction from three weeks of age until its death at three and a half years without any marked improvement.

Straight splints applied, which were worn until October 1, 1880. On that date, the varus being completely overcome, the tendines Achillis were divided, considerable venous hemorrhage taking place. The child was still very fat and the tendons deep. The ordinary club-foot shoes were applied and traction made, the feet being well protected with lint.

October 13th.—Has attended regularly since operation, and the greatest improvement has taken place. Flexion is allowed to a right angle, and no excoriations have occurred.

November 26th.—Feet are about cured. All motions allowed to full extent. Shoes are continued until child begins to walk.

Case XXXI.—*Talipes equinus, right foot—Complete—Tenotomy at six months—Apparatus—Cure in a short time.*—M. M.——, male, aged two months. July 22, 1878. It is questionable if any varus existed in this case at all. The equinus was quite extreme. Mother was directed to bring the child for tenotomy when six months old.

November 2d.—Tenotomy performed and the ordinary club-foot shoe applied.

December 22d.—The foot is almost perfectly cured.

February 26, 1879.—Foot is now perfect, all motions normal.

October 6, 1880.—Final examination was obtained to-day, and it was found that he had worn the apparatus at intervals for six months after last note was made, but had discontinued it altogether for more than a year. It is almost impossible to say, by observing the boy walk, which foot was the affected one. There is no limp and the calf is well developed.

It is very rare to meet a case of pure congenital equinus. Mr. Adams has seen but three cases. Others doubt its existence.

Case XXXII.—*Double talipes equino-varus, very marked—Straight splints, two months—Tenotomy at four months—Cure in eighteen months.*—E. D——, male, aged two months. March 11, 1878. The deformity in this case was very marked. Straight splints were applied at first visit and continued until Jan-

uary 23, 1879. The varus was then about overcome, and both tendons were divided without any hemorrhage. The club-foot shoes were applied immediately and worn for a year, the patient visiting the office at intervals of three and four weeks.

In January, 1880, the feet were practically cured, *i.e.*, voluntary flexion was allowed to a right angle. There is a little inversion of feet from rotation of bones of legs. Faradic responses are good and the calves are well developed.

September 4, 1880.—The patient is examined, and it is difficult to detect that he ever had club-foot. On close examination the right foot was found perfect, the left almost so. The mother was advised to keep up manipulation to prevent any chance of relapse.

Case XXI.—*Double talipes equino-varus, almost extreme—Splints three months—Tenotomy at six months—Cure in six months.*—I. T——, female, aged three months. December 6, 1879. The varus was the more marked in this case, being quite complete; equinus quite marked. The straight splints were applied at once, and worn until February 5, 1880. The varus was overcome then, and double tenotomy was performed. No hemorrhage on the right side; a little on the left. The case progressed well from the first, the heels remaining in the cups of shoes without much trouble.

February 21st.—No excoriations. The right tendon is of normal length; the left a little short.

March 23d.—Final examination shows a very good result. Feet are about perfect, except that voluntary flexion of left is not quite complete; manipulation to be kept up and shoes to be worn at night only.

Case XI.—*Double talipes equino-varus—Deformity very marked—Straight splints for six weeks—Tenotomy at five and one half months—Cure.*—John McM——, aged four months. January 27, 1879. This is a typical case of congenital club-foot. Splints applied this visit. Patient comes to office once a week.

March 16th.—Both tendines Achillis were divided this morning, both yielding well. The case progressed very favorably, and in the course of two weeks the feet could easily be held at a right angle in shoes. The apparatus was continued, and the patient was seen at intervals until March 22, 1880. The feet, on examination, are found about cured. All movements nearly normal. He stands squarely on floor. Is not able to walk yet without assistance.

May 29th.—Child walks with slight inversion of both limbs.

October 4th.—The result is perfect. The shoes are removed to-day; to be worn at night only to guard against relapse.

Case II.—*Talipes equino-varus, right foot—Deformity almost complete—Splints, two months—Traction, followed by excoriations and removal of apparatus—Tenotomy, and cure in a short time.*—J. O —, male, six weeks. March 20, 1879. Straight splints worn in this case for two months. The varus was relieved, and it was decided to try traction alone in overcoming the equinus, and if possible to do without tenotomy. To effect this the ordinary club-foot shoe was used.

June 26th.—The child is quite fretful and ill. An excoriation is formed over the dorsum of foot, which necessitated the removal of shoe.

July 3d.—A violent cellulitis of left thigh, now resolving, has prevented the application of the apparatus.

August 5th.—The tendo Achillis was divided this morning, no hemorrhage taking place. Apparatus at once applied, and moderate traction made; this increased a little daily.

August 20th.—Foot is about cured.

October 10, 1880.—Is found to-day at home. The foot is as perfect as its fellow, all motions being made to a normal degree.

Case X.—*Double talipes equino-varus, complete, in a girl two and a half years—Wore plaster-of-Paris splint at one year—Tenotomy, apparatus, and cure in three months.*—L. F——, aged two and a half years. June 1, 1880.—Was admitted to hospital on this date. The child was a twin, the other being free from deformity. The mother is the subject of congenital club-foot, right side. Has never been treated, and now walks on outer side of foot.

The feet were treated with plaster-of-Paris splints when the child was a year old, and the mother has used manipulation since, little or no improvement taking place. The feet are now in marked equino-varus, heels drawn up, and tendines Achillis very short. Both tendons are divided, and the club-foot shoes are applied.

June 14th.—Discharged, to be under observation as an out-patient. The feet have improved greatly in two weeks.

October 10th.—Has called only once in July, but mother has been very faithful in manipulating the feet and in applying the shoes. Cure is now about complete; voluntary flexion; beyond a right angle there is no varus, and she walks with toes well out.

Case LII.—*Talipes equino-varus, right foot, extreme—Tenotomy—Apparatus—Manipulation—Cure in two years.*—J. S ——, male, aged seven years, admitted to hospital October 24, 1878. Stands with right foot resting on outer border, the sole looking directly backward; walks with foot in same position (a large bursa has been thus produced); the foot cannot be restored to natural position by the use of great force. The tendo Achillis and plantar fascia are very short, and the tarsal bones seem to be subluxated, adding much to the deformity. The knee is in genu-valgum, with a marked degree of genu-recurvatum. The straight splint was applied and used several weeks. The tendo Achillis was then divided, and the ordinary club-foot shoe applied. The foot improved rapidly after the tenotomy, and when two weeks had passed manipulation was practised twice daily.

August 3, 1879.—Walks very well, and the cure is about complete, with the exception of slight inversion caused by shortening of the plantar tissues. There are no well-defined bands of fascia, and it is decided to keep up the manipulation. This was done twice daily with great force, the boy never complaining, nor does he have any inconvenience afterward. There is marked improvement observed in the course of the last few months. Faradism was used in this case and was continued after the deformity had been overcome.

October 25, 1880.—Examination before discharge shows an excellent result considering the degree of the deformity and the age of the patient. He stands squarely on both feet, and all motions are voluntarily made to a normal degree. Responses to a faradic current are good in all muscles. He walks a little awkwardly, caused apparently by a slight spurious valgus of left foot, which has existed all along.

Case XLIII.—*Talipes equino-varus, right, extreme, in a boy of eleven years—Tenotomy, apparatus, and*

manipulation, with a complication—Cure in fourteen months.—J. W——, aged eleven years, admitted to the hospital, July 11, 1879. This boy's mother was the subject of congenital club-foot in an exaggerated form, never having received any treatment, the deformity being reported very common in the European village from which the parents came.

The boy has had no treatment, but has always worn a shoe made to fit the deformity. He stands on left foot, the sole of the right looking upward and backward; the heel is raised about an inch from the floor. His foot is rotated outward at medio-tarsal joint, so that the toes looked directly inward, as shown in Fig. 2. The lower border of internal malleolus is just within the concavity of

Fig. 2.

the foot. Tendo Achillis is very short and unyielding. Plantar fascia short, and can be felt in two or three tense bands. There is a longitudinal fissure up the middle of plantar surface, terminating bifid at the base of second toe. Over the cuboid bone is a large bursa. The skin is much thickened, and the bones seem to be subluxated. The use of the greatest force cannot restore the foot to its natural position. A plaster cast is taken.

July 13th.—The tendo Achillis and bands of fascia are divided this morning, and the ordinary shoe applied. The great deformity interfered with a satisfactory use of the shoe. After two weeks, manipulation was begun, the shoe being reapplied immediately.

September 25th.—Was confined to bed by a rise in temperature, and the bursa on the outer side of the foot was found inflamed, the area of redness extending over the whole of the foot. Cold-water dressings are ordered and the apparatus removed.

September 30th.—Fluctuation was discovered and an incision was made, about an ounce of pus being evacuated. Poultices applied.

October 17th.—Hot applications have been used up to date. Sac is still suppurating.

October 25th.—Bursa is still much inflamed, and the parts are boggy and filled with pus, which is evacuated only by deep pressure.

November 10th.—Since the date of the last note the inflammation has been of a low grade, more or less painful, and the discharge has not been free. A large opening is made and the sac well evacuated.

November 23d.—Inflammation has subsided and the shoe is reapplied.

April 9, 1880.—Since the last note the shape of the foot has materially changed; with slight effort he can now walk with the foot squarely on the floor, and the varus is comparatively slight. He has been wearing the ordinary club-foot shoe with a leather shoe over it, and manipulation has been kept up twice daily. A cork lift is now added to the front of the plate, and faradism is being employed.

August 28th.—Can walk very well. Flexion to a right angle; eversion is good, though not complete. The cork-toed shoe is removed, and the ordinary apparatus reapplied.

September 15, 1880.—He is discharged this date, to continue as an out-patient. It is hard to tell from his present condition that he has ever had club-foot. There is hardly a halt in his gait. The apparatus is continued as a precaution. Photographs are obtained. See Fig. 2 for the condition of foot at the date of discharge.

Did the extensive inflammation tend to assist in the rapidity of the cure?

NON-CONGENITAL CURES SUPPLEMENTARY.

Case A.—*Talipes equino-varus, paralytic, in a youth of sixteen years—Tenotomy and cure in eight months.*—M. M——, aged sixteen years. December 6, 1879. The right foot is found in equino-varus, the equinus being the more marked. The deformity is the result of paralysis from an old cerebral hemorrhage, the right arm being also affected. There is two and one-fourth inches atrophy of calf. He is unable to flex foot at all—in fact, can make only little movement in any direction.

The tendo Achillis was divided at his home, no hemorrhage taking place. The ordinary club foot shoe was applied, and the best possible position for the foot was obtained, the severed ends of the tendon being widely separated.

There was much improvement in the condition of the foot in a few days, and no complications occurred.

January 12, 1880.—Boy now walks squarely on his foot, though he cannot flex it beyond a right angle. Faradism ordered tri-weekly.

March 20th.—Frequently walks from the hospital to his home, a distance of three miles.

The use of electricity seems to have increased the muscular power, as he can easily flex his foot to a right angle and extend it to 135°.

August 31st.—The right foot is now the better of the two, as the left is in spurious valgus. The use of a spring to support the foot relieves this in a great degree. All apparatus removed to-day and foot relieved as far as possible.

Case B.—*Talipes equinus, extreme, from infantile paralysis—Tenotomy and cure in four months.*—E. D——, male, aged nine years, admitted June 25, 1879. Stands with most of his weight on the right limb, the left being advanced and only touching the floor with the toes, the foot being in complete equinus. He walks with foot in same position, rolling it from side to side quite awkwardly. Tendo Achillis is so short that the foot cannot be flexed at all. Plantar fascia is tense, but no varus exists. Two inches atrophy at calf.

The tendo Achillis is divided and all the correcting force used that the patient can endure. No danger of too much separation of the tendon is apprehended.

August 9th.—Equinus is about overcome, but the

plantar tissues are yet quite tense, resisting all efforts at stretching. They are divided this morning, and a better position of foot obtained immediately.

October 22d.—With all apparatus removed, he walks with scarcely a limp.

October 31st.—Discharged to-day. Calf of affected side has increased a little in size. Has received faradism tri-weekly since his admission. All motions of the foot are very good.

October 20, 1880.—Has had no relapse, and a photograph is obtained to-day. The appearance of foot at beginning of treatment and at date of last note is shown in Fig. 3.

Fig. 3.

Case C.—*Talipes equino-varus, left foot, traumatic, in a woman of forty-one years—Tenotomy and cure in three months.*—W. K——, aged forty-one, August 11, 1880, came to out-door department to have varicose veins of left leg treated. On examination the deformed position of foot was noted. Varus was about one-half complete; equinus was quite marked. The foot had been in this condition for several years. She had suffered from a varicose ulcer on inner aspect of leg—just above internal malleolus—for ten or twelve years. Some years ago she was unable to walk for five or six months, owing to the painful condition of ulcer. When the inflammation had subsided the foot was found in its present condition. Considerable force will not restore the foot to its natural position. A hard and tender callosity is found on outer side of little toe, caused by walking thereon. The tendo Achillis is divided, yielding much less than was expected. The club-foot shoe was applied, and a great deal of force used toward correcting the deformity. On the following day it was found that the equinus had been considerably overcome, and that the severed ends of the tendon had separated in the meantime.

August 23d.—Foot can now be voluntarily held at a right angle, and everted to a straight line. A thick pad is placed under the ball of the foot, to still further shield the tendon and the old cicatrix.

November 2d.—Walks now with hardly a perceptible limp. Flexion voluntarily made to normal; eversion nearly perfect. Ulcer is completely cicatrized, having been treated by bandage from the first.

Case D.—*Talipes equino-varus with cavus, left—Talipes equino-varus, right, of cerebral (?) origin—Tendo Achillis of left foot and plantar structures of both divided, and cure in five months.*—F. N——, male, aged ten years, admitted to hospital, June 7, 1880. Stands resting nearly all of his weight on right foot, with left completely extended so that he rests this on distal ends of metatarsal bones, toes being hyper-extended; walks with feet in about the same position. The right foot, when the limb is supported, is in equino-varus, with cavus. This foot cannot be flexed to a right angle. Plantar fascia is very tense and short; toes appear short and stubby. The left foot presents very marked contraction of tendo Achillis and plantar fascia, the extensors of toes being also contracted. There is great deformity of tarsus, though the bones are not displaced. Electrical reactions to faradism are good on both sides. The tendo Achillis and plantar fascia of left foot are both divided, and also the plantar fascia and deeper structures of right club-foot. Shoes are applied.

June 14th.—The boy walks with heels squarely on the floor. No suppuration at any of the wounds.

August 17th.—Extensor tendons of both great and little toes are divided to-day, under an anæsthetic; they were at once straightened, and leather splints applied to dorsum.

November 5, 1880.—Discharged to-day; to be seen occasionally in out-door department. He can flex and extend feet to normal degree. Walks well and for a long distance without difficulty. The braces

Fig. 4.

are continued for a while. The appearance on admission, and on date of last note, is shown in Fig. 4.

Louisville, Ky.

Number.	Name, sex, and age.	Variety and degree of deformity.	Duration of first stage.	Time of tenotomy.	Time from beginning of treatment to final examination.	Result.	Remarks.
1	B. H., f., 22 mos.	L. tal. eq.-var. well marked.	.....	22 mos.	13 mos.	Flexion normal; other movements same; walks without limp.	Tendo Achillis well developed; directions well carried out.
2	I. O., m., 6 weeks.	L. tal. eq.-var. almost complete.	3½ mos.	5 mos.	18 mos.	All movements perfect; no limp.	Had excoriations from pressure during the early part of treatment.
3	J. H., m., 3 mos.	D. tal. eq.-var. extreme.	2 mos.	5 mos.	9 mos.	Flexion almost normal; other movements same.	
4	A. R., f., 2 mos.	L. tal. eq.-var. very marked.	5 mos.	7 mos.	1 yr.	All movements perfect; no atrophy of calf; no limp.	Seen eighteen months after removal of apparatus.
5	S. K., m., 3 weeks.	D. tal. eq.-var. very marked.	5 mos.	6 mos.	1 yr.	All movements perfect; calves well developed; walks well.	Seen two years after removal of apparatus.
6	B. L., f., 4 yrs.	D. tal. eq.-var. extreme.	.....	4 yrs. and 6 yrs.	2 yrs.	Flexion to 90°; can evert to a straight line.	Walks with both feet inverted from rotation of limb; still under treatment.
7	M. G., m., 8 yrs.	R. eq.-var. not very marked.	.....	4 mos. (?).	1½ yr.	A perfect result in every way.	Was tenotomized elsewhere when an infant.
8	C. R., m., 6 yrs.	L. tal. eq.-var. quite marked.	.....	4 yrs.	1 yr.	All movements normal; no limp.	Was tenotomized elsewhere at 4 years; suppuration followed; no improvement.
9	L. C., f., 8 yrs.	L. eq.-var. very marked.	.....	Infancy.	2 yrs.	Perfect as to movements; foot short.	Treated by apparatus and manipulation only at this time.
10	L. F., f., 2½ yrs.	D. tal. eq.-var. complete.	.....	2½ yrs.	4 mos.	Flexion nearly normal; other movements quite so.	Treated before with plaster-of-Paris, at 1 year, without benefit.
11	J. McM., m., 4 mos.	D. tal. eq.-var. very extreme.	2 mos.	6 mos.	1 yr.	Feet quite perfect in all movements; walks well.	
12	P. D., m., 2 mos.	D. tal. eq.-var. very extreme.	2 mos.	4 mos.	1½ yr.	Flexion past 90°; other movements normal.	Still wears apparatus at night, to prevent relapse.
13	A. B., f., 8 mos.	D. tal. eq.-var marked.	.....	8 mos.	6 mos.	Perfect in every respect.	
14	H. P., m., 2 yrs.	L. tal. eq.-var. marked.	.....	1 yr.	2 yrs.	Flexion beyond 90°; other movements good.	Was tenotomized elsewhere before coming under treatment.
15	J. A., f., 14 mos.	R. tal. eq.-var. very marked.	.....	14 mos.	6 mos.	Flexion normal; other movements same.	
16	E. V., f., 8 mos.	D. tal. eq.-var. very extreme.	.....	8 mos.	1 yr.	Flexion past 90°; other movements good; walks well.	Excoriations are produced.
17	M. D., f., 2 weeks.	L. tal. eq.-var. slight.	1 mo.	.....	3 mos.	Flexion almost normal; in- and eversion complete.	Never tenotomized: cured by traction.
18	A. T., f., 7 mos.	L. tal. eq.-var. quite marked.	.....	18 mos.	1 yr.	Flexion to almost normal; other movements same.	Treated by family physician, with plaster splint and tenotomy, at 4 months.
19	J. F., m., 1 mo.	D. tal. eq.-var. slight.	.....	.....	6 mos.	All movements perfect.	Treated by apparatus alone.
20	T. F., m., 4 yrs.	D. tal. eq.-var. quite marked.	.....	4 yrs.	3 mos.	Flexion past 90°; other movements good.	After tenotomy, treated by nail.
21	J. T., f., 3 mos.	D. tal. eq.-var. marked.	2 mos.	5 mos.	4 mos.	Flexion nearly normal; other movements good.	
22	S. H., f., 20 mos.	R. tal. eq.-var.; eq. marked; var. slight.	.....	20 mos.	4 mos.	Flexion normal; in- and eversion very good.	
23	F. P., m., 10 mos.	D. tal eq.-var. slight.	.....	.....	1 yr.	Flexion past 90°; in- and eversion good.	Tenotomized at 6 months, by family physician.
24	F. M., m., 6 mos.	D. tal. eq.-var. marked.	.....	6 mos.	9 mos.	All movements perfect.	
25	L. B., m., 14 mos.	D. tal. eq.-var. marked.	.....	.....	1 yr.	Flexion past 90°; in- and eversion good.	Tenotomized elsewhere at 6 months.
26	J. A., f., 2¼ yrs.	R. tal. eq.-var. very marked.	.....	.....	1 yr.	All movements perfect.	Treated by apparatus and manipulation, having been tenotomized elsewhere at 6 months.
27	D. O. B., m., 9 mos.	R. tal. eq.-var. marked.	.....	9 mos.	2 yrs.	Flexion perfect; in- and eversion good.	
28	K. E., f., 2 yrs.	R. tal. eq.-var. quite marked.	.....	2 yrs.	1½ yr.	Flexion past 90°; other movements perfect.	Has hip disease, left side.
29	J. T., m., 8 mos.	L. tal. eq.-var. almost extreme.	.....	8 mos.	1½ yr.	All movements normal.	
30	N. G., f., 16 mos.	D. tal. eq.-var. very extreme.	1 mo.	17 mos.	3 yrs.	Flexion past 90°; other movements perfect.	
31	M. M., m., 2 mos.	R. tal. equinus complete.	.....	6 mos.	1½ yr.	Flexion perfect; other movements very good.	Was practically cured in 6 months.
32	E. D., m., 2 mos.	D. tal. eq.-var. quite marked.	3 mos.	5 mos.	3 yrs.	All movements perfect.	Could not tell that he had ever had club foot.
33	B. M., m., 3 mos.	D. tal. eq.-var. marked.	.....	.....	1½ yr.	Flexion perfect; in- and eversion very good.	No note of tenotomy; apparatus and manipulation used.
34	F. H., m., 11 weeks.	R. tal. eq.-var. slight.	.....	.....	1 yr.	Flexion perfect; in- and eversion good.	
35	J. C., m., 2¾ yrs.	L. tal. eq.-var. marked.	.....	2¾ yrs.	2 yrs.	Flexion perfect; other movements good.	Walks a little pigeon-toed from rotation of bones of leg.
36	H. M., m., 1 mo.	D. tal. eq. var. very marked.	5 mos.	6 mos.	1½ yr.	Flexion to 90°; other movements good.	
37	J. D., m., 4 mos.	D. tal. eq.-var. complete.	7 mos.	11 mos.	2 yrs.	Flexion to 90°; other movements good.	A case of positive neglect on the part of the parents.
38	C. G., m., 2 mos.	L. tal. eq. var. not marked.	4 mos.	6 mos.	1 yr.	Flexion perfect; other movements good.	
39	S. L., m., 1 mo.	D. tal. eq.-var. complete.	6 mos.	7 mos.	1 yr.	Flexion perfect; in- and eversion very good.	
40	A. G., m., 3 yrs.	D. tal. eq.-var. complete.	.....	3 yrs.	20 mos.	Flexion to 90°; other movements good, slight cavus remains on left side.	

Number.	Name, sex, and age.	Variety and degree of deformity.	Duration of first stage.	Time of tenotomy.	Time from beginning of treatment to final examination.	Result.	Remarks.
41	B. G., m., 2 yrs.	D. tal. eq.-var. complete.	.....	2 yrs.	20 mos.	Flexion to 90°; other movements good.	
42	J. G., m., 3 mos.	D. tal. eq.-var. complete.	2 mos.	6 mos.	.....	Reported good.	Died of intercurrent disease, at 8 months.
43	J. W., m., 11 yrs.	R. tal. eq.-var. extreme.	...	11 yrs.	14 mos.	Flexion beyond 90°; eversion to a straight line.	Complicated by abscess.
44	J. D., f., 7 weeks	D. tal. eq.-var. extreme.	4 mos.	6 mos.	6 mos.	Flexion to normal; other movements same.	No excoriations; child very fat.
45	J. B., f., 3 yrs.	L. tal. eq.-var. very marked.	.....	3 yrs.	6 mos.	Flexion past 90°; in- and eversion good.	Tendon yielded badly; excoriations from cross-strap.
46	A. M., m., 5 weeks.	D. tal. eq.-var. extreme.	4 mos.	5 mos.	6 mos.	Flexion past 90°; other movements very good.	
47	J. M., m., 7 weeks.	D. tal. eq.-var. complete.	5 mos.	6 mos.	8 mos.	Flexion almost normal; passive to normal; no varus.	
48	B. M., m., 3 mos.	L. tal. eq.-var.; eq. extreme; var. slight.	3 mos.	6 mos.	5 mos.	Flexion to 90°; no varus.	
49	A. G., f., 2½ yrs.	L. tal. eq.-var. quite marked.	.....	2½ yrs.	4 mos.	Flexion past 90°; other movements normal.	Small excoriation on instep.
50	W. G., m., 7 weeks.	D. tal. eq.-var. extreme.	3 mos.	5 mos.	6 mos.	Flexion perfect; in- and eversion complete.	Child does not walk yet, and shoes continued to prevent relapse.
51	J. McG., m., 13 mos.	D. tal. eq.-var. complete.	1 mo.	14 mos.	8 mos.	Flexion to almost normal; slight varus; walks with marked inversion, from rotation of bones of leg.	
52	J. S., m., 7 yrs.	R. tal. eq.-var. extreme.	6 weeks.	7 yrs.	2 yrs.	Flexion normal; no varus.	

CHLORAL HYDRATE.

By H. H. KANE, M.D.,

NEW YORK.

Part IV.

SOME PECULIAR EFFECTS OF CHLORAL HYDRATE ON THE EYES.

In certain individuals chloral seems always to have some peculiar and unusual effect; in others it is only at times that this peculiarity is developed. In the one class it is probably an inherited or acquired and permanent idiosyncrasy; in the other a temporary acquired idiosyncrasy. The effect on the eyes and evesight is, undoubtedly, the most common of these peculiar drug actions. Both effects have been denied by some authors, that upon the sight especially.

Prof. Henry M. Lyman, of Chicago, writes: "One gentleman always complained of temporary, disagreeable, and ill-defined sensations about the eyes after each dose."

Dr. R. A. Cleeman[1] relates a case where a single dose of chloral always produces conjunctivitis.

Dr. Lawrence Turnbull[2] says: "In affections of the eyes it requires care to use it, as it is apt to cause swelling, redness, and excessive flow of watery secretions, with obscuration of vision."

Dr. Wm. Badger,[3] of Flushing, L. I., had a patient who objected to taking chloral, she asserting that it always produced inflammation of the eyes.

Dr. G. W. Holmes,[4] of New York, says: "I would state that during December last I had under my care a very intelligent gentleman, from Alabama (cotton dealer), who occasionally took enough champagne at dinner to produce nervousness and loss of sleep. He stated his doctor frequently gave him chloral under similar circumstances, which acted nicely, except making his eyes very weak for several days, and requested me not to give it to him. After trying the bromides, the following night I gave him grs. xv. of hydrate of chloral (carefully disguising the taste) every two hours for three successive times, which had the desired effect of producing sleep; then followed the same painful eyes as on former occasions after taking the drug. He stated to me the next morning that there certainly must have been chloral in the medicine I gave him, as his eyes were very sore."

And Dr. L. Austine Brown,[5] United States Navy, Pensacola, writes: "I have to state that last year there came under my care a naval officer in the later stage of consumption, who, from excessive coughing, was unable to sleep at night. I found that opiates produced in his case great irritability of the stomach. On one occasion I gave him, on his retiring to bed, ten grains of chloral, to be once repeated during the night. The effect was magical. The cough was relieved greatly, and patient slept very well. Of course, I pursued the treatment. On the second morning patient complained that the chloral was affecting his eyes, which, he said was always the case when he took it. There was some injection of the conjunctiva and a little swelling of the eyelids. I repeated the medicine again that night; but next morning the engorgement of the conjunctiva was so great that I discontinued it. The trouble with the eyes immediately passed away.

"On several subsequent occasions I was obliged to repeat the remedy, and always with a similar effect. There was never any sign of impairment of vision."

Dr. W. C. Trotter, of Dangerfield, Texas, writes me that he has known chloral to cause temporary conjunctivitis.

Dr. F. P. Stevens,[6] of New York City, in a case of periodical cephalalgia in which chloral was used during the paroxysms, noted severe pain in the eyes, with congestion of the conjunctivæ and considerable swelling of the lids. Another patient of his objected to taking chloral because it "caused pain in the eyes."

[1] Medical and Surgical Reporter, November 9, 1878.
[2] Philadelphia Medical and Surgical Reporter, August 31, 1872.
[3] New York MEDICAL RECORD, vol. xvii., 1880, p. 163.
[4] Ibid., p. 89.
[5] New York MEDICAL RECORD, March 27, 1880.
[6] Ibid., vol. xvii., p. 415.

Dr. J. W. Parsons, of Portsmouth, N. H., writes that he has heard one or two patients claim that it "made the eyes smart."

Dr. George W. Balfour[7] found that conjunctivitis almost always followed the use of this drug for any length of time. The condition produced was best treated by applications of warm tea or warm water, the usual astringents seeming to increase the difficulty.

Dr. A. P. Hayne,[8] Medical Superintendent of the Home for Inebriates, San Francisco, Cal., has used this drug in from two thousand to three thousand cases. He never found it to affect the sight, but conjunctivitis occurred in the majority of cases.

Dr. Virgil O. Hardon,[8] of Providence, R. I., has never known it to affect the sight, but has seen it cause intense itching and burning sensations in the conjunctivæ, sometimes accompanied by congestion, usually after large doses.

Conjunctivitis in persons taking chloral was noted by Ludwig Kirn[9] in a number of instances. He refers to the possibility of its being caused in some cases by direct contact of the drug, but in the majority lays the mischief at the door of vaso-motor paralysis.

Dr. C. W. Earle,[10] Physician to the Washington Home, Chicago, Ill., has never known it to affect vision to any considerable degree, but in many cases has seen a slight watery discharge for a few days, with slight pain and weakness of vision. Dr. J. H. Nordlin,[10] of Rome, Ga., has also seen conjunctivitis from its use. This in some cases became so severe as to necessitate discontinuance of the use of the drug.

Dr. O. F. Ham, of North Barnstead, N. H., writes me that while attending lectures at Harvard Medical School took about ʒ iss. in divided doses. He says: "I soon began to feel sleepy, and had a hard time to get to bed before losing myself entirely. I slept very soundly through the night, and did not awake until late the next morning. When I awoke I felt conscious of a peculiar feeling about the eyes, and on looking in the mirror saw a fine example of chemosis. The swelling of the conjunctivæ did not all disappear until two days had passed. I did not notice any alteration in the size of the pupil, and do not think there was any, for had there been some one of the one hundred students and practitioners who saw me and discussed my case would have remarked it; nor was there any impairment of the vision other than that which would be induced by anything which would cause the same amount of photophobia present. So that the drug had no special effect to impair my vision."

Many more of my correspondents have noted the power of this drug, when taken internally, to cause itching, smarting, pain and acute inflammation of the conjunctiva.

As to the effect on vision, the following opinions are of value:

Dr. R. V. Davies,[10] of Roxton, Texas, noted dimness of sight for a short time in one case.

Dr. Geo. W. Avery,[10] of Hartford, Ct., noted temporary disturbance of vision in a few cases. Dr. Joseph Parrish[10] has seen a few cases where there resulted slight congestion of the conjunctivæ, without pain, but accompanied by temporarily impaired vision.

Dr. H. C. Bigelow,[10] of Washington, D. C., relates the case of a patient who took thirty grains of chloral in three equally divided doses, within twenty-four hours. There resulted conjunctivitis with transient corneal opacity. Discontinuance of the drug resulted in the disappearance of the eye-trouble. In two other cases the doctor noticed dimness of vision from ten-grain doses.

Dr. Lawrence Turnbull[12] says that this drug sometimes acts upon the retina, diminishing vision, and that it may be obviated by combining some salt of potassa with the chloral.

Dr. N. C. Husted,[11] of Tarrytown, N. Y., refers to the case of a chloral habitue for about one and a half years. General health fair. Partial amaurosis with excessive lachrymation.

Dr. C. H. Hughes,[11] of St. Louis, Mo., writes: "Have never known it to permanently affect the sight. Have had hysterical cases complain, after the abortive treatment of a paroxysm by this agent, of dimness and perversion of vision."

Dr. Keyser,[13] of Philadelphia, reported the case of a gentleman accustomed to sixty and eighty grain doses of chloral, who suddenly became blind. Ophthalmoscopic examination revealed great retinal anæmia. The drug was discontinued and in a few days sight was restored.

Dr. Burke Haywood,[14] of North Carolina, observed an elderly gentleman, who, after some weeks' use of chloral, began to complain of dimmed vision, which persisted and increased till the drug was withdrawn, when it gradually disappeared.

Dr. G. H. Felton,[15] of Haverhill, Mass., reports the case of two sisters to whom chloral was given in moderate doses for a short time. Conjunctivitis with extreme pain and photophobia ensued, necessitating confinement for several days in a dark room. The eyes have remained weak for the past two years, greatly impairing their power. It is often necessary to wear blue glasses.

Referring to this case, Dr. Charles J. Kipp,[16] of Newark, N. J., says: "In answer to this, I would state that some years ago I saw several persons suffering from affections of the cornea, who assured me that their eye-troubles came on shortly after taking chloral. Thinking that there might possibly be some causative relation between the eye-disease and the drug, I examined a large number of individuals —inmates of lunatic asylums and others—who were habitually taking chloral in pretty large doses, but found no more eye-trouble amongst these persons than is found amongst people taking other medicines, or none at all. The conclusion I arrived at, at the time, was, that there was no good reason to assume that chloral produced eye-disease of any kind, and I have had no cause to change my opinion since then. With regard to the cases related by Dr. F., I may be permitted to remark that he has failed to furnish any evidence whatever in support of his opinion."

Dr. Kipp's examinations are by no means conclusive, for it is not claimed that impairment of vision occurs in one out of a thousand cases where chloral has been given. Had he had the opportunity of examining a patient who presented this peculiar susceptibility of the eye to chloral the result would have been more satisfactory. Still, the observations he

[7] Edinburgh Medical Journal, June, 1870.
[8] By letter.
[9] (Allgem. Zeitsch. für Psychiatrie) Practitioner, 1873.
[10] By letter.
[11] By letter.
[12] Medical and Surgical Reporter, November 9, 1875.
[13] Quoted by J. B. Mattison, "Chloral Inebriety," read before King's County Medical Society, April 15, 1879.
[14] (Richmond and Louisville Medical Journal), New York Medical Record, 1872, p. 514.
[15] New York Medical Record, vol. xvii., 1880, p. 2.
[16] Ibid., p. 717.

has made, aside from their bearing on the question in point, are of great scientific value.

A correspondent, whose name I unfortunately failed to attach to the slip bearing the following, writes me that in one case of chloral habit there occurred ptosis of the right eyelid, and commencing iritis with photophobia.

Dr. S. Barruch, of Camden, S. C., says[17] that he has had a case of cataract with impairment of vision from excessive use of a combination of potass. bromid. and chloral hydrate. Patient took thirty grains of the former and twenty grains of the latter (for tetanus) every three hours, night and day, for two weeks, and recovered. At the present time, some five or six years having elapsed, he can see better, but the opacity is discernible. Patient is a coal-black negro, and is now in perfect health.

Dr. J. M. Pace,[17] of Dallas, Texas, writes that he has had two cases where chloral hydrate decidedly affected the sight. One of the parties could scarcely read Jaeger's test-types No. 6, and then only for a short time. This condition slowly passed away in eight days after suspension of the drug. In answer to a letter of inquiry which I wrote him, he further states: "I have but one case under observation. The subject is a female, aged thirty-five years, married, the mother of four children, and in impaired health. Chloral produces muscular asthenopia, associated with hyperæsthesia of the retina and slight reddening of the conjunctiva. No œdema of the latter. This passes off in the course of three or four days."

Dr. George M. Beard[18] says: "One of the evil effects of chloral, concerning which but little seems to be known, is an irritable condition of the eyes. A lady that I know, and who has been accustomed to use considerable chloral, at times is very likely to have an attack of weak eyes, with choreic movements of the lids, and profuse watering with sensitiveness to light and a smarting and stinging sensation. A number of cases of like character have been brought to my attention."

Dr. F. L. Forsyth, of Providence, R. I., writes me: "I have known of two hysterical women who complained of disturbed vision after the use of this drug, but could not definitely determine that it was due to the chloral, and, in fact, think it was not." The same gentleman believes that it is possible to account for most of the cases of irritation and conjunctivitis on the hypothesis that it is introduced into the eyes of the patient by means of the hands, after using the bottle containing it, although the patient may not have been aware of it.

Dr. Dixwell, of Boston, Mass., writes me that he has seen cases where, from the use of this drug, the sight was slightly dimmed and black spots obstructed vision.

Dr. Edward Bradley, of this city, writes me of the case of a lady who took the drug almost continuously, in varied doses, for two years. It weakened the sight and compelled her to wear glasses. On stopping the chloral the eye-trouble disappeared.

Dr. Malcolm McLane, of this city, writes me that, in some instances, patients after taking chloral have complained of "seeing double, and feeling as though they were looking cross-eyed."

Dr. N. Jasper Jones, of Blairstown, Iowa, writes me that he has known the use of this drug to impair the sight very decidedly.

[17] By letter.

[18] A Practical Treatise on Nervous Exhaustion, etc., p. 155. New York, 1880.

Dr. William M. Cornell, of Boston, Mass., writes me of a case where chloral caused sparks and flashes of fire to appear before the eyes.

Dr. D. C. Davies, of Columbus, Wis., writes me that he has seen temporary disturbance of vision from the use of this drug.

Dr. George G. Tarbell,[19] of Boston, Mass., has seen temporary indistinctness of vision after large doses of chloral in three or four cases. Dr. De Forest Willard,[19] of Philadelphia, Pa., relates a case where twenty grains of chloral, given for sleeplessness and headache following mental worriment, produced delirium lasting all night and part of the next day. There was general haziness of vision and inability to distinguish faces. All symptoms were relieved as soon as medicine was stopped.

In a case of puerperal convulsions, in which ninety grains of chloral were given with good result, Mr. Hay states that on the following day everything "appeared large" to the patient.[20]

Dr. G. W. Chamberlain,[21] of Hartford, Conn., sends me the following interesting and peculiar case history:

"1st, J. W——, patient, a young girl nineteen years of age, nervous temperament, but never hysterical. Father died of phthisis when about thirty-five years of age; other relatives on father's side had died from consumption; lungs easily congested during the winter. She had been under prophylactic treatment, cod-liver oil, with hypophosphites, tonics, and a good, generous diet. There was incomplete expansion of apex of left lung, prolonged expiration, slight dulness on percussion. Figure slender, but no emaciation; dry cough. She took a severe cold, with symptoms of congestion of the lungs. As the breathing was quite oppressed, cough irritative, headache severe, and she could not sleep, I ordered a dose of chloral with bromide of potash. By mistake she took a half drachm of chloral with the same quantity of bromide of potash. I was soon sent for, the friends, in great alarm, stating that she could not see and was delirious. I found her sitting up in bed, gesticulating and talking wildly, with marked hallucinations, one that they were all in a league to kill her, and had at first made her blind to aid the process. The delirium was of the busy, active sort, constantly turning from one subject to another. After speaking decidedly to her several times, she became comparatively quiet and somewhat rational, so that I was enabled to calm her excitement about her blindness. The pupils were tremulous to light at first, but sight returned after about two hours—that is, was established. As soon as you lost her attention, delirium returned. As the pulse was slowed to 68, hands and feet cold, a tablespoonful of brandy was given, in hot water, hot bottles placed at her feet and around the body; with the induction of perspiration, the symptoms began to improve, and the recovery was steady. An erythematous rash appeared over the neck and upper portions of the chest and arms, lasting four or five days."

A very similar case, by Dr. J. A. Ingles, of Morea, Ill., when delirium and temporary blindness occurred, is given in my next article.

A physician, who objects to the use of his name, writes me of a patient in whom chloral hydrate causes a film or veil like cobwebs to obstruct vision. Dilatation of the pupil and partial obliteration of the accommodative power sometimes occurs in her

[19] Letter to author.

[20] Practitioner. 1870. p. 191.

[21] Letter to author.

case. "Another lady tells me it causes temporary blindness with her when it first begins to act on the brain, but this is avoided by maintaining the recumbent position, and in any event is of but a few moments' duration." The doctor attributes this effect to retino-optic anæmia, and says that it reminds him forcibly of the effect produced on the eye by gelseminum.

Dr. J. P. Anthony, of Sterling, Ill., writes me of two cases where the visual power was temporarily diminished by the use of this drug; in one case not unless over thirty grains were given in the twenty-four hours.

Bouchut[22] examined the eyes of a child during the chloral sleep, and found the retinal vessels narrowed and choked with dark blood.

Schüle[23] demonstrated, by means of the ophthalmoscope, the fact that congestion of the brain existed in the brain of chloralized patients, and that it was greatly increased and lasted for several days when alcohol was taken.

I think that we are justified, from the evidence here offered, in concluding that chloral hydrate does exercise a decided effect *in some cases*, both upon the retina and the external portions of the ocular apparatus.

(To be continued.)

Progress of Medical Science.

The Diagnosis of Chronic Endometritis.—Dr. B S. Schultze, of Jena (*Centralblatt für Gynækologie*) has proposed a new method for the diagnosis of chronic endometritis. He employs a tampon of cotton dipped in a twenty-five per cent. solution of tannin in glycerine, and applies it directly to the cervix. When, after twenty-four hours, the tampon is removed, we will usually find on the spot corresponding to the external os, a small lump of pus, not transparent, and of a more or less greenish color, which serves to distinguish it from the ordinary mucous secretion of the neck. When the endometritis is accompanied by catarrh of the cervix, pus is found in intimate admixture with the tenacious mucus of the latter, while when confined to the corpus uteri the pus produced remains separate.—*Memorabilien*, February 15, 1881.

Cure of Sciatica by the Use of the Actual Cautery.—In the *Journal de Médecine et de Chirurgie*, February 19, 1881, Dr. Comin relates two very striking cases of almost instantaneous cure of sciatica of long standing. The pains had resisted all other modes of treatment. In both instances he applied a red-hot iron to the spot where the external saphenous nerve passes under the malleolus. This method, he states, has been tried in a large number of cases, rarely failing, and always affording great relief.

Treatment of Bronchitis by the Application to the Chest of the Actual Cautery.—Dr. H. Barth, of the Hôpital de la Pitié (*La France Médicale*, February 19, 1881) reports the cure of a severe case of chronic bronchitis of three years' standing. All the ordinary means of treatment having failed, he successfully applied the actual cautery to the chest-walls. The patient, twenty years old, a seamstress, entered the hospital with the following symptoms: Very pronounced habitual dyspnœa, preventing her from walking and the performance of all work; frequent attacks of coughing, accompanied by asphyxia; profuse muco-purulent expectoration. An examination revealed increased resonance on percussion; emphysema, feeble respiratory sounds, sibilant and sonorous râles, and moist râles over both sides of the chest; heart normal, no fever at nights, profuse perspiration following asphyctic attacks. All attempts at successful treatment having failed, the patient meanwhile getting steadily worse, the use of the thermo-cautery was resolved upon, and a large number of small superficial burns were scattered over the thorax, especially posteriorly. On the following day there was marked abatement of all symptoms, less cough, and less dyspnœa. Auscultation showed the moist râles to be less numerous. Three days later a second application was made, followed by still greater improvements, the attacks of dyspnœa disappearing altogether. Four more applications were then made at intervals of one week, to prevent a return of the disease, and the patient was discharged cured soon after the last application.

The Topical Use of Iodoform in Gonorrhœal Orchitis.—Dr. Sabadini, of Constantinople (*Gazette des Hôpitaux*, February 12, 1881), reports the cure of a case of gonorrhœal orchitis occurring in a waiter, who was obliged to follow his calling during the attack. There was enormous swelling and intense pain, both of which disappeared within a few days, the patient walking about all the time, upon the topical application of an ointment of iodoform composed of one part of the drug to four parts of vaseline.

New Method of Performing Supra-Pubic Lithotomy.—Prof. Peterson, in an article on the above subject (*Arch. für klin. chir.*, vol. xxv., 24), proposes the following, with a view to diminish the danger of injury to the peritoneum. He introduces a colpeurynter into the rectum, and by distending it he lifts the well-filled bladder out of the pelvis. Measurements on the cadaver have shown that the line of reduplication of the peritoneum is thus displaced upward to the distance of about five and a half centimetres, and will always be above the symphysis. He claims as advantages of the suprapubic operation: 1, ready access to parts; 2, slight hemorrhage; 3, facility of removal of stone; and, 4, possibility of dressing the wound according to Lister. The operation is indicated whenever there is a large and hard stone, when it is inclosed in a sac, when it lies in a diverticulum behind the prostate; also, in cases of hypertrophied prostate, tumors of bladder, and impermeable stricture.—*St. Petersburger med. Woch.*, January 31, 1881.

The Cure of Phthisis.—With a view of determining the occurrence of spontaneous cure in pulmonary phthisis, Dr. Heitler, of Vienna, has carefully examined 16,252 cadavers. He found in 780 who had died of other diseases, cicatrices resulting from the healing of caseous foci. Of these 530 were males, 277 females, distributed equally between the ages of 20 and 60 years. One had attained the age of 101, another of 103 years. All belonged to the working classes. The lesions consisted of deeply pigmented cicatricial indurations. He found remnants of cavities of various sizes, from that of a hazel-nut to that of a hen's egg. Their most frequent situation was at the apex. The author maintains that cicatrization is more likely to occur in chronic than in acute cases, and only as long as the tubercular deposits are confined to the upper lobes. —*Moniteur de la Policlinique*, February 20, 1881.

[22] Quoted by Labbee: Du Chloral, Bull. gen. de thérap. 1870, T. 2, p. 330.

[23] Allgemeine Zeitschrift für Psychiatrie, Bd. 28 heft i. Edinburgh Medical Journal, September, 1877.

THE MEDICAL RECORD:

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GEORGE F. SHRADY, A.M., M.D., Editor.

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THE NEXT MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

THE thirty-second annual meeting of the American Medical Association will be held in Richmond, Va., commencing Tuesday, May 3d. There is no risk in saying that the attendance will be large, and that the widely representative character of the association will be duly maintained. The general success of the meeting may be assured beforehand.

The organization of the association, at least so far as its general sessions are concerned, is now as perfect as could be desired. In view of this fact, it becomes a question whether the association, either in its general sessions, or through its sections, is enabled fully to develop its opportunities for scientific work. There is no doubt that the machinery is in the association, but that it is not properly handled hardly admits of doubt. This was proven at the meeting held last year in New York. The various addresses by the chairmen of the sections fell far short of what they should have been, while the papers before the sessions of the sections were, with a few exceptions, much below the par of second-rate society material. In several instances papers were presented which had been read and re-read before different medical societies in this city and elsewhere.

This state of things is, in part, due to the plan of managing the sections. A chairman and secretary are appointed a year previous to the time they are to serve; generally they are from different parts of the country, and meet for the first time when the first session of their section is called to order. Their only guide is the programme of the Committee of Arrangements, and the consequence is that no selection as to the character of the paper or the time for reading it can be made by them. It seems sufficient that a member shall merely offer a paper, when it must be presented, as a matter of course, and whether good or bad, it must be referred to the Committee on Publications, which is equivalent to ordering it in the succeeding volume of Transactions. In view of past experiences, the officers of sections owe it to themselves to devise some means of preventing these abuses of privilege. An easy way of doing this would be the appointment of a committee of selection for each section, whose duty it should be not only to examine all papers or abstracts sent to them before the meeting, but to do the same to all such communications as are delayed to the actual time of the meeting. By such means, and with comparatively little trouble, it could be ascertained not only whether any paper was worthy of being presented, but whether it had ever been read or published before. This plan of selection is very satisfactorily carried out by the business committees of the different state societies, who manage to do all their work during the actual sessions. Another good reason for these preliminary examinations of papers is the possible prevention of their ultimate appearance in the yearly volume of Transactions. The efficiency of the sections could be still further increased by the appointment of a permanent secretary for each, with a salary sufficient to pay his travelling expenses to each annual meeting. Such a plan would at least preserve some of the traditions of government of the section, and keep it in the rut of legitimate business.

The question of publication of the Transactions is one which may come up for discussion at the next meeting. The yearly issue in the form of a volume is not popular with the profession. In fact some influential members of the association have advised its discontinuance, and in place of a volume have suggested that the association have a journal of its own which shall be the medium of all its publications. The matter was referred last year to a committee to report at the coming meeting. It is not probable that a practical solution of the question can be offered at present. To start a new periodical for the sole purpose of being an organ of the association would be exceedingly difficult, and its circulation would hardly be much more than the present volume of Transactions. There would be no guarantee that it would even be taken by the majority of the members merely because of the official transactions which it might contain. Except for that feature it would have no other claim upon the members than any ordinary medical journal. It would be quite impossible to select any established journal as the official organ of the association, inasmuch as no such periodical would be ready and willing to sacrifice its independence for the mere privilege of publishing an official report, or for the opportunity of using the different papers read at the meetings. These papers, at least such as any conscientious editor would admit to his journal, would occupy but

a few numbers, and the exclusive right of their publication would not weigh against the disadvantages of being under the control of a publication committee as to time and place of appearance. The better way appears to be to leave the selection of the journals to the authors, and the publication of the Transactions to such periodicals as choose to report them. This is a perfectly easy and natural way out of the difficulty, and one that can hardly fail to give general satisfaction. In this connection we confidently assert that no means would be better calculated to increase the usefulness of the association, secure the best papers for its meetings, than the free privilege to each author of publishing his paper where he pleases.

RELIGION AND THE CARE OF THE SICK.

From our foreign exchanges we learn that a movement has been started in France with a view of establishing nursing on a purely secular basis. The services of the sisters of various religious denominations are to be entirely dispensed with. Of course, a strong counter-agitation, directed against giving legal sanction to the proposed scheme, has also arisen. This contest has called forth the opinions pro and con of many distinguished gentlemen both within and without the profession. The advocates of the new system claim that it is a necessary reform. Those who oppose it do so on the ground that it is an utterly superfluous innovation, prompted by a reprehensible spirit of political manœuvring. The last phase of this strife has produced the publication of a document which is really a petition in favor of retaining the sisters in the position which they have held so long. This substantial document is signed by many influential physicians; but, on the other hand, the would-be reformers point with firm assurance to a counter-list containing names equally distinguished in the profession. This second list gives the names of those who could not be induced to sign the above petition, and may therefore be supposed to look with disfavor upon its object. Numerically the party of opposition to the proposed change is certainly weaker, and this circumstance may have a decisive influence over the action of the law-makers.

For our own part, we can see no good reason why the State should thus be made to interfere in the management of hospitals and similar institutions. If the medical board or other managers of such establishments find that the avowed possession of certain religious principles on the part of those who nurse the patients interferes with a proper discharge of duties, let them themselves introduce the necessary measures of reform. Perhaps we do not see things in their natural light from this distance, but it certainly does seem as if the whole movement had been conceived in a mistaken spirit of necessary reformation. France differs strangely and widely from Great Britain in this respect. In the latter country there has but lately been witnessed the attempted elevation of genteel nursedom over and above the heads of the medical staff. The nurse question at Guy's Hospital is still fresh in the memories of an astonished profession. Fortunately matters have been at length so readjusted as to give at least some satisfaction to the wronged physicians, and establish nursing on the more equitable basis of a subservient, even if needful, adjuvant to medical superintendence. But if England was in danger of disturbing the equilibrium of hospital management, by attempting to place the nurse above her level, France now seems to us to show a tendency toward falling into the other extreme. At least the reform wing of the profession appear, to an unbiassed judgment, to take too slight and superficial a view of the onerous, self-imposed duties of the Sisters of Charity, who faithfully strive to perform the functions of an ever-willing and ever-obliging nurse. Those who have been in positions which enabled them to test the difference between the voluntary nursing which springs from an inner motive, be that religious or not, and the paid performance of a similar kind, will scarcely hesitate in expressing their preference of the former mode of managing patients.

The schooled and skilful nurse is doubtless a great blessing, and may prove himself a valuable aid to the physician. But does that imply incompetence, lack of zeal, or unfitness in other respects on the part of those who, with perhaps less schooling, have nevertheless much of the intuition of right-doing? And, moreover, does not the mixture of half-ignorance and half-knowledge of the trained and experienced nurse expose him to promptings of self-action which may lead to disastrous consequences? This is not a glittering generality, but intimates what has actually taken place within the experience of many who are connected with hospitals, or, in other words, have had occasion to see much of paid nursing. Religion certainly has ends of her own, which may be totally distinct from the designs of the physician; but the entertaining of theological beliefs, together with the unobtrusive practice of such rites and ceremonies as may be connected therewith, should not be made the pretext of excluding a whole class of faithful workers from a useful field of labor. On this account, we hope to see the present crisis in the hospital affairs of France regulate itself by a discriminating action on the part of the profession, and without State interference; for at present the whole agitation bears too much the aspect of a partisan attempt to make political capital out of a matter which should ever remain free from the danger of any such contamination.

LORD BEACONSFIELD AND HOMŒOPATHY.

During the sickness of the late Lord Beaconsfield a question of medical ethics was brought up which will appear amusing or important, according to the point of view of the observer. The regular medical adviser of Lord Beaconsfield was a reputed homœopath, Dr. Kidd. This gentleman was a person of good medical education, and of more than ordinary ability and force of mind. Not caring to take the sole responsibility in the case, he asked for a consultation with Dr. Quain. This was at first distinctly refused, on the ground that Dr. Kidd was a homœopath. Being assured, however, that the treatment which Beaconsfield had received was not homœopathic at all, Dr. Quain, after much painful cogitation and after consultation with distinguished friends well versed in the more recondite phases of medical ethics, consented to the consultation, and acted with Dr. Kidd as medical adviser.

It must be confessed that the affair puts medical ethics, as far as it relates to homœopaths, in a very curious light. It was no doubt Dr. Quain's right and duty to assist Dr. Kidd when asked to do so. But the excuse which was offered, that Dr. Kidd did not practise homœopathy in this case, was a ridiculous one, and unworthy of being put forward in justification of the action. If the "Code" were altered so as to allow regular practitioners to consult with homœopaths in those particular instances when the said homœopaths practise scientific medicine there would indeed be wide confusion. Dr. Quain had a right to consult with Dr. Kidd, because the latter gentleman did not claim to practise medicine according to any exclusive dogma; because, furthermore, he did not advertise himself, and was a man whose moral character could not be impeached. These are the true tests which should regulate medical conduct in such emergencies.

Homœopathy, so-called, is an unutterable humbug, and is to be consigned to the eternal Limbos of the Unblessed—where, indeed, it is already for the most part gone. But we need not ostracize a man because he thinks there are some useful remedies in the so-called homœopathic therapeutics which can be prescribed in very small doses with good effect, or even because he thinks that the *similia similibus* principle is a suggestive guide in the use of remedies. Such a man may be mistaken, but he need not necessarily be either dull or dishonest.

THE NEW YORK AMBULANCE SERVICE.

The question of improving the present system of ambulance service in this city is just now being agitated. According to reports given in the daily papers, the police and health board authorities are in favor of some change, and consider improvement practicable and necessary. At present, when any accident occurs, or when a case of disease is to be removed to the hospital, a policeman is notified. This official goes to the station-house and a message is telegraphed to the hospital in that district. There may, of course, be some delay if a policeman cannot be immediately found, or if the station-house is a long distance away. There are, it is said, in Boston and Chicago, electrical alarm-boxes distributed throughout the city, similar in kind to the fire-alarm boxes here. In case of an accident or other emergency, the policeman can at once telegraph to his station-house, from which point the telegram can be sent on at once to the hospital. By this plan all delay is prevented, and it is such a plan which is proposed for New York.

We do not think that there is any pressing necessity for a change in our present ambulance system. It has already a well-deserved reputation for efficiency, and there are many other things connected with our medical charities that are in greater need of reform. Our officials had, therefore, better wait till it is learned exactly how much better Boston and Chicago systems are, before attempting any improvement here.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, March 23, 1881.

Dr. T. E. Satterthwaite, President, in the Chair.

DILATED STOMACH—CHRONIC HEART DISEASE.

Dr. R. T. Bang presented the stomach and heart of a man who died in St. Luke's Hospital, with the following history:

Bernhard St. M——, forty-five years of age, gardener, Germany, admitted March 7, 1881. Dr. G. G. Wheelock, attending physician. Family history good. Eighteen years ago the patient had an attack of rheumatism, but none since. A winter cough has annoyed him more or less for many years. During the last twelve months, however, this cough has been continuous. Four months ago he first began to suffer from dyspnœa, and since then has had frequent attacks of it. Seven weeks ago his feet began to swell, and the œdema has been gradually extending upward since. For the past two weeks he has had occasional pains over the heart. His expectoration is quite profuse. At first his sputa were white, now they are brownish and streaked with blood. Within the last three weeks the patient thinks he has been passing less water than normal. Urinates three or four times every night. Has no headache. Complains of flatulency and pain over the stomach and bowels; worse after eating. His appetite is good, but he vomits almost everything he takes. Bowels are constipated. Has marked orthopnœa and insomnia.

On admission the patient was fairly well nourished. His face and hands, by their dusky appearance, gave evidence of an impeded circulation. Dyspnœa and orthopnœa were both present. The lower extremities were markedly œdematous, and large ecchy-

motic patches were visible on the calves. There was a reducible, oblique inguinal hernia on the right side. Physical examination disclosed the presence of a double aortic murmur and of pulmonary œdema.

He was cupped, and his legs were pricked with a large round needle. Pulvis purgans and infusion of digitalis were administered, and a light and most nourishing diet was given him.

March 8th.—Patient passed the night in a chair, sitting up alongside his bed. His bowels moved freely several times. A considerable quantity of fluid escaped from the pricks in his legs. A sphygmographic tracing of the radial pulse was taken, which shows marked dicrotism.

March 9th.—Condition of patient unchanged, except that the œdema of the lower extremities has gone down considerably, owing to the escape of serum from the needle-pricks.

Examination of urine.—Specific gravity, 1,038; reaction acid. Albumen, twenty-five per cent. by bulk. No casts, no sugar. Urine is very high-colored.

March 10th.—Patient's dyspnœa, cyanosis, and orthopnœa are steadily increasing in severity. The lungs are becoming more waterlogged.

March 11th.—Died at 7 A.M., of asphyxia due to œdema of the lungs. A urine record was kept, and patient passed between twenty and thirty ounces of water daily.

March 12th, 9 A.M.—Autopsy twenty-six hours after death: Rigor mortis marked. Œdema of lower extremities extending upward as far as the groins. An inguinal hernia on right side.

On opening the body, the first disclosure made was the presence of a dilated stomach, shaped like a goose-necked squash. Its transverse diameter measured twelve and a half inches, and its vertical diameter at the cardiac end, six inches. Its pyloric end was depressed and reached downward into the right inguinal region on a level with a line drawn two inches below the iliac anterior superior spinous processes. The pylorus lay in the longitudinal fissure of the liver. The upper margin of its cardiac end reached up to the lower border of the fifth rib along the left mammillary line. Its capacity, on measurement, was found to be seven pints. There was no stenosis of the pylorus, and the gastric wall was very much thinned at the cardiac extremity. Neither the stomach nor the intestines were over-distended with gas.

The *pericardium* contained four ounces of turbid fluid, in which floated flocculi of lymph.

The *heart* was large, and its left ventricle hypertrophied. Full of blood, it weighed twenty-five ounces; empty, eighteen and a half ounces. By the water-test there was aortic insufficiency. The aortic cusps were contracted and thickened and their free borders fringed with fibrinous vegetations, most of which were attached by pedicles. A patch of atheroma was seen in the aorta. The mitral valve was somewhat thickened. The other valves were normal.

The *left lung* was found to be adherent posteriorly and to the diaphragm. Adhesions were old and firm. Between the lobes there were cobweb adhesions. There was no fluid in the pleural cavity. The lung was found to be the seat of emphysema, hypostatic congestion and œdema.

The *right lung* was much more congested than the left; otherwise its condition was the same. The abdomen contained no fluid.

The *liver* weighed three pounds thirteen ounces, and was of the nutmeg variety.

The *kidneys* weighed seven ounces each. They were of the large white kind. Their capsules were adherent, and their cortices were thickened. The pyramids were red and enlarged. The *spleen* weighed six ounces, and its consistency was firm. No other organs were examined.

ADHESIVE PERICARDITIS—TUBERCULOSIS.

Dr. W. H. Porter presented the heart and pericardial sac from a patient who was admitted to the Presbyterian Hospital, January 23, 1881. The history was furnished by Dr. John A. Wells, House Physician. C. B——, aged seventy-two years, German, married, intemperate, denied that he had ever suffered from scarlet fever, rheumatism, or any venereal disease, and referred his first serious ailment to a renal trouble that he experienced several years previous to admission to the hospital. Frequent and painful micturition, partial retention at times, headache, œdema of the eyelids and feet, with a certain amount of cough, were the most prominent symptoms that he gave. In December of 1880 he suffered from an attack of pneumonia, from which he never fully recovered. Following that attack he had constant dyspnœa, pain, occasional rigors, fever and sweating. The cough was accompanied by a muco-purulent expectoration. On admission the temperature was found normal; pulse, 112; respirations, 40 per minute and labored.

Physical examination showed that the left pleural cavity contained a large quantity of fluid. The height of the fluid in the pleural sac in the upright position corresponded with the superior border of the fourth rib. Bronchial breathing was heard above the level of the fluid, with a prolonged expiratory murmur at both apices. A small collection of fluid appeared to be sacculated posteriorly on the right side. The right lung appeared not to be displaced. The apex-beat was to the right of the sternum. No heart-murmurs could be detected, but the sounds were feeble, though distinct. There was œdema of the feet and a scanty flow of urine, with traces of albumen; the urine contained large hyaline and granular casts.

Treatment.—Diuretics, cathartics, and stimulants.

January 26th.—No improvement. Dry cups were applied to the loins and followed by warm applications, but this did not increase the flow of urine, which averaged daily only eighteen ounces. Cupping of the chest was followed by temporary relief from the dyspnœa. Serous fluid containing a small number of pus-corpuscles was drawn from the left pleural cavity with a hypodermic syringe; also from the right sac posteriorly.

February 1st.—During the last twenty-four hours the patient has been in a stupor, and only passed two ounces of urine. The loins were cupped, and hot poultices applied. He was placed in a hot-air bath, and elaterium and pilocarpine were administered, without avail, and he died February 1, 1881, at 3 o'clock P.M. Necropsy by Dr. Duffield, Assistant Physician, fifty hours after death. Body emaciated.

Thoracic cavity.—The left pleural sac contained one hundred ounces of straw colored serous fluid, with a slight tendency to turbidity, as if about to become purulent. In the right pleural sac there was a circumscribed collection of fifteen ounces of sero-purulent fluid.

Pericardium and heart.—Doubtless there had been an extensive pericarditis at some past date, which had resulted in an almost universal adhesion between the visceral and parietal layers, for the pericardial

sac was entirely obliterated, and both layers were covered and thickened by inflammatory products to such an extent that together they were fully one-half inch thick. About the middle of the new material there was an apparent line of separation which could be increased by a little force, and evidently represented what was the original pericardial sac. The valves of the left side of the heart were thickened and atheromatous, especially the bases of the aortic, which were the seat of large calcareous masses. The weight of the heart, with its attached and thickened pericardium, was twenty-six ounces. The internal surface of the aorta was extensively atheromatous. On the outer surface of the heart-sac, covering the base of the right auricle and extending over the large vessels, numerous miliary bodies resembling tubercles were seen. These miliary bodies, when flattened out on a slide and examined under the microscope, showed a fine reticulated net-work and large irregular masses of protoplasm containing large nuclei and nucleoli.

Pleuræ and lungs.—The left lung was compressed by the fluid and slightly adherent at the upper portion; at the apex there was some fibrous thickening; weight of left lung twelve ounces.

The right lung was firmly adherent to the chest-wall and diaphragm, and could only be removed at the expense of the lung-tissue. At its apex there was a calcareous nodule the size of a marble. This lung was in lurated and contained a few miliary bodies, identical with those found on the pericardium. The weight of the right lung was twenty-four ounces.

The *spleen* was firm, but not waxy; weight eight ounces.

The *kidneys* weighed six ounces each. The capsule was thickened and slightly adherent. There was a great number of small cysts on the surface of both kidneys, and on section, they were abundant within. Every evidence of a diffuse trouble existed.

The *liver* weighed fifty-nine ounces, was deeply pigmented and fatty (so-called "nutmeg liver").

Dr. Ripley suggested that some of the fluid could have been removed from the pleural cavities, and thereby great relief afforded to the patient.

He also referred to a case of pyopneumothorax, in which the patient was as near dead as he could be and live, when he made a free incision, removed sixty ounces of pus, and the man is yet alive. The operation was performed two years ago. Of course it was a rare case.

The President said we should realize that a number of cases of sudden death were on record, supposed to be due to the rapid removal of a large quantity of fluid from the pleural cavities, and, therefore, the operation was not entirely unattended by danger.

Dr. Briddon thought that the operation was ordinarily safe. He had seen patients die suddenly where the fluid was not drawn off, and he had also seen them die while emptying the pleural cavity.

Dr. Dougherty referred to a case in which he aspirated the pleural cavity *seven* times, removing from three to five pints of pus at each sitting, and the patient recovered.

CEREBRO-SPINAL MENINGITIS.

Dr. G. L. Peabody presented the brain and part of the spinal cord from a man who died thirty-six hours previously, of cerebro-spinal meningitis. He was nineteen years of age, and gave a well marked history of the disease, which had continued for ten days, when he died with a high temperature. The lesion was more marked than usual, consisting of a layer of pus, not only in the meshes of the pia mater, but upon its surface, and in places one-eighth of an inch thick. It began on the base of the brain, extended backward over both lobes of the cerebellum, and then down the cord all the way to the cauda equina. The exudation was more abundant upon the posterior than upon the anterior surface of the cord, but was present in large quantity upon the latter.

Dr. Peabody also presented the heart removed from the body of a man fifty one years of age, which showed

FIBROID DEGENERATION, WITH BEGINNING CARDIAC ANEURISM.

The aneurism was situated at the apex of the left ventricle, and involved chiefly the ventricular septum, but extended somewhat into the anterior wall of the ventricle. It was filled with old laminated fibrin, and continuous with that was a recent clot, which extended into the aortic opening. There was no valvular lesion. The muscular tissue was very fatty. The left ventricle was very much dilated. The lungs contained numerous hemorrhagic infarctions, some of them of large size. There were no other hemorrhagic infarctions in any part of the body. The man was a sea-captain. He gave no history of syphilis, though he confessed to having had a sore upon his penis, without secondary symptoms. He had suffered for several months from pain, beginning in the precordial region and extending into both arms, and this, with a gradually increasing weakness and dyspnœa, were all the symptoms of which he complained. Both lower extremities were markedly œdematous, and his urine contained albumen and granular casts. He also had hydrothorax, and the fluid was removed from the chest several times, but it returned. At the autopsy nearly two quarts of fluid were found in the pleural cavities.

The kidneys were intensely congested, and the epithelium of the convoluted tubes was granular in some places, and in others distinctly fatty. A large number of hyaline casts were within the tubules near the apices of the pyramids.

The central vessels of the liver were dilated, and there were hemorrhages in their immediate neighborhood. The man died with all the symptoms of hemorrhagic infarctions of the lungs—pain, dyspnœa, and spitting of blood, and also an attack of acute pleurisy.

SPECIMENS PRESERVED IN THE VAPOR OF WICKERSHEIMER'S FLUID.

Dr. Peabody also presented two hearts removed more than two months previously, and placed in Wickersheimer's fluid for two weeks, and then the fluid was removed and the specimens left suspended in the vapor of the fluid. The muscular tissue was darker than normal, and the fat had lost its brilliant lustre, but the different colors of the aorta, the valves, the muscular tissue, and the fat, together with the thickened endocardium, had been very well preserved. He had one specimen which had been simply suspended in the vapor of the fluid for three and a half months and still remained in good condition.

CENTRAL MIXED SARCOMA OF HEAD OF TIBIA—EARLY METASTATIC DEPOSIT IN LOWER EPIPHYSIS OF FEMUR.

Dr. E. C. Wendt presented a specimen which, together with the following history, was obtained through the courtesy of Dr. F. Lange, under whose professional care the patient had been, and who re-

moved the thigh by amputation. Mrs. R——, fifty-four years of age, married, native of Germany. Her father was stated to have died of malignant disease involving the frontal bone when sixty-four years old. The patient herself had enjoyed good health for many years. About seventeen years ago, however, she began to suffer occasional rheumatoid pains about the right knee-joint. Four years since she first noticed a temporary swelling there, and shortly afterward a slight tumefaction became permanently established. She was then placed under treatment for arthritis, the disease being supposed to belong to that variety of joint affection described by the German writers as *arthritis deformans*. The patient remembered having had a painful spot at the external aspect of the knee several years back. But the skin was not known to have presented any peculiarity, nor did any formidable swelling make its appearance there at that time.

Last May she fell from a carriage, strking her right knee upon the ground. Considerable ecchymosis was soon seen about the joint, and the leg also showed much discoloration. The latter remained in the vicinity of the painful spot, and the patient stated that after a little while a distinct tumor appeared. Within the past few months this rapidly increased in bulk, occasioning almost constant gnawing pains and much discomfort. Latterly, even walking became a nearly impossible exertion. Simultaneously with the evolution of the new formation the patient lost flesh and her general health became impaired.

A surgeon of this city had practised an exploratory puncture, which was followed by the spurting of a stream of blood. Since the swelling also appeared to be pulsating, he concluded that he was dealing with an aneurismal tumor.

When Dr. Wendt saw the woman, with Dr. Lange, immediately before the operation, a blowing murmur was not audible over the tumor. The growth itself was spherical in form and about as large as a good-sized man's fist. Its surface was smooth, excepting a few larger rounded protuberances which bulged forth here and there. The feel of the growth was moderately soft and elastic, but not uniformly so, since in some places it was much more yielding than in others. Stretching of the attenuated skin was visible over the neoplasm, but though the integument had a dull hue, there was now no very marked discoloration to be seen. The glands in the popliteal and inguinal regions were not found to be enlarged. Mobility of the knee-joint, though not perfect, and, as regarded spontaneous movements, much impaired, was made passively with no great difficulty.

Amputation was practised after Esmarch's improved method. The constricting ring remained tightly secured for fully three hours. About fifty ligatures were applied before it was slowly removed. Manual compression of the flaps was performed for about ten minutes more, the stump being held vertically elevated. A sufficient number of absorbable drainage-tubes were inserted and secured by safety-pins. A permanent antiseptic dressing was applied over the wound, and a rubber bandage rather firmly secured over the whole. This latter remained in situ two days. When the entire dressing was removed on the twelfth day, in Dr. Wendt's presence, the wound was completely healed by primary intention. Of the drainage-tubes, only the safety-pins remained in the dressing. Some dried blood was also found in the gauze. There had been, apparently, no secretion from the wound. The patient's temperature had been nearly normal throughout.

An examination of the amputated thigh was then made. The knee-joint was first opened, and the cartilages found to look healthy, excepting a slight yellowish tinge at the surface and a marked thickening over the patella. The cut surface of the tumor, which had evidently grown from the head of the tibia, was nearly smooth, and quite succulent, but an undue vascularity was not discernible with the naked eye. The color was a mottled grayish pink, but even this was not uniformly distributed. Paler areas, always of rounded outline, alternated with portions of a darker, duskier hue. Here and there glistening bands traversed the growth, but they did not seem to start from a common centre, passing irregularly through the substance of the neoplasm. A few yellowish streaks were likewise seen, and an occasional brownish patch indicated a point of probable accumulation of blood-pigment. The capsule surrounding the entire new-formation was not very thick, but firm, rather tense, and fibrous. Portions of the tumors were of gelatinous consistence, and had an encephaloid appearance; others were of more solid consistence, but the soft tissue preponderated over the harder variety. The skin over the tumor was variously thinned, and in some places adherent.

The fibula was not invaded by the malignant disease. On sawing through the femur, there was found in the intercondyloid space a circumscribed rounded mass resembling the original neoplasm. There was a pretty sharp line of demarcation between the apparently healthy cancellous tissue and this metastatic tumor, for as such it must undoubtedly be regarded. This secondary deposit was, however, quite uniformly soft and gelatinous. It had a mottled appearance, in which a reddish brown was the prevailing color.. Everywhere it was surrounded by bony tissue, which completely shut it off from all direct communication with the primary growth of the tibia.

A microscopical examination of the neoplasm elicited the fact that it was a mixed sarcoma, with a preponderance of the small spindle-celled over the small round-celled variety. It was undoubtedly of central origin, having sprung from the tibial epiphysis. Its component elements were short or long oat-shaped corpuscles, most of which had one or even two nuclei. These were either round, oval, or spindle-shaped. Between these spindle-cells, although they were closely crowded, a fibrillated connective-tissue matrix could be distinctly seen. In some places there were broader or narrower wavy bands of connective tissue, which were variously interwoven, and often inclosed what appeared as aggregations of round cells, but were in reality only transverse sections of the spindle-shaped corpuscles. Nevertheless, spherical nucleated elements, resembling in their grouping ordinary granulation tissue, were also encountered in variously large areas. These round corpuscles likewise showed a fibrillated matrix tissue, but it was more delicate, and, therefore, less prominent than that found around the spindle-cells.

As regards the blood-vessels of this tumor, although its microscopical appearance might be taken to suggest a highly vascular condition, and although in its clinical behavior it induced one surgeon to pronounce it an aneurism, yet the microscope failed to reveal any inordinate supply of them. There were, indeed, in many places smaller and larger vessels with scarcely any walls save a simple layer of endothelial cells, but these appearances are by no means uncommon in ordinary sarcomatous tumors.

It may be that the delicacy of the vascular walls predisposes such tumors to punctate extravasations of blood here noticed. On the other hand, it must be remembered that such hemorrhages have also been observed where the blood-vessels were of normal thickness.

With reference to the deposit found in the lower epiphysis of the femur, it may be said that this constitutes a rather exceptional occurrence, for ordinarily the osteo-sarcomas of central origin, barring the pure round-celled growths, manifest but little tendency to infect neighboring structures, or form secondary metastatic deposits.

Finally, mention may be made of a cyst without distinct walls, situated superficially in the tumor, and containing what appeared like a recent blood-clot partly softened. Mixed sarcomas are less frequently seen in connection with bones than with many other structures. As regards their degree of malignancy, it probably exceeds that of the purely round celled growths. Still, reliable data are lacking to establish the truth of this proposition. It is not impossible that the rapidly growing round-celled tissue may replace the more stable spindle-celled structures, and thus a mixed tumor may eventually become a uniformly round-celled neoplasm.

Dr. C. K. Briddon presented a carcinomatous rectum and prostate gland removed from a patient sixty-nine years of age.

TRICUSPID REGURGITATION.

Dr. Beverley Robinson presented the heart removed from the body of a man in whom, during life, *only* a tricuspid regurgitant murmur was heard. The left radial artery was weaker than the right. The tricuspid orifice permitted the introduction of *five* fingers. The right ventricle was considerably dilated; the left very slightly. The murmur was heard with its greatest intensity in the epigastric region. The other valves of the heart were apparently normal. The heart weighed twenty-one ounces. The spleen was much enlarged, and contained old yellow infarctions. Kidneys of the large white variety.

FIBRO-CHONDROMA (?) OVER THE TUBER ISCHII.

Dr. Lewis H. Sayre presented two hard tumors removed from directly over the tuber ischii of a coachman, who gave no history of either syphilis or malignant disease. The patient first noticed their existence four years ago, and they had since increased in size so as to interfere with his occupation. They were not attached to either bone or bursa. One was attached to the skin, the other was not. They were non-sacculated, and dissection was necessary for their removal. They were referred to the committee on microscopy.

Dr. W. R. Birdsall then presented specimens of the

FILARIA LOA AND PULEX PENETRANS,

received from Dr. H. M. Bachelor, who is stationed at Kangwé Hill Mission, Ogone River, about two hundred miles from Gaboon, on the West Coast of Africa. The following is an abstract of Dr. Bachelor's letter: "A white lady missionary stationed here with me returned to America some eighteen months ago. While on her journey out I met her at Liverpool. At this time she remarked that an eye-worm was 'in her head' somewhere, and that it frequently came near to the surface of the skin, so that its contortions could be plainly seen. It caused her great anxiety and at times much pain, possessing an extraordinary capability of crossing from one eye to the other. It would appear in one situation to-day and another to-morrow, always, however, in some part of the eye or its appendages. She sailed for America, and I for Gaboon. Soon after arriving here I extracted one from the eyeball of a native. Its situation was directly under the sclera and over the iris and pupil, so that vision was obstructed. It was coiled up in many convolutions, and was constantly moving in a peculiar vermicular manner. At that place it is a very common thing, and the natives extract them from each other's eyes by means of a crooked thorn. It was this specimen I described in the Medical Record, and which I afterward sent to my former teacher, Prof. D. B. St. John Roosa, of New York. When I subsequently came to this place, I found the filaria loa as common as at 'Gaboon. It is not considered a rarity or curiosity. One day, while visiting the English trading-house near here, I took one from the eye of one of the natives and threw it away, not knowing that any one would like to see it. Dr. Nassau, my predecessor, was frequently affected with them, and at one time had one in the areolar tissue between the thumb and index finger. The pathological symptoms attending its presence are heat, swelling, and inflammation. Sometimes the swelling is so great that the eye is entirely closed. There is little rest for the sufferer during the three or four days of inflammation, but without treatment this always subsides, and, according to Dr. Nassau's impression, the parasite either dies or migrates, and is never seen again. I doubt it very much. In the course of time Mrs. —— returned to the mission and came to this station. She informed me that she was not rid of the worm; it was a constant source of annoyance to her while in America. It seems she must have had two or more worms, for a missionary removed one from her eye, and a physician endeavored to extract one, but only succeeded in cutting it in two. I made an effort to capture the worm while it was on the eyeball, but could not do so on account of the involuntary turning of that organ at the instant the knife came in contact with it. Next day it appeared near the surface of the outside of the lid, and from that situation was easily removed. It measured two and one-fourth inches. Fourteen days after another made its appearance, which I took out of the lid without difficulty."

"I am quite unable to venture an opinion as to the manner in which they are introduced into the system, but I can relate facts which may throw some light on the subject. Dr. Nassau, in his boat, journeys, always drank of the water of the river, just as the natives do. It is by no means clear or desirable for use, as it contains the 'wash' of all the hills and mountains, much decayed animal and vegetable matter common to the tropics, and sand; not infrequently putrid human bodies are seen floating in it. On the contrary, I have never, unless driven by extremity, drank any water that had not been previously filtered. To be sure, I have been in Africa only fourteen months, and perhaps the water has nothing to do with the matter. But the fact is, the doctor was frequently troubled with the filaria, and I have never had one. The natives also, as I have said, are very frequently infested with it. Mrs. —— states that, up to a certain time of her residence in Africa, she had not experienced any trouble, but on one occasion, while at a certain station of the mission, the water during the dry season became very scarce, and she was obliged to drink impure and unfiltered water

from a swamp. I must be candid, however, and state that many travellers and others have drank all kinds of water and yet escaped without infection.

"I am quite certain the specimen I sent to Prof. Roosa was the second ever sent to America, the first having been sent by Dr. Nassau to a Philadelphia physician. It was not a perfect specimen. A certain amount of dexterity is required in order to remove them entire."

Dr. Bachelor also sent specimens of the *pulex penetrans*, or *chigo*, at different stages of development. They are very common there. He gives the following history of the introduction of the parasite into West Africa:

"In 1874 a Brazilian vessel touched at St. Paul de Loanda, in the country of Angola, some three hundred miles south of the equator. The feet of the sailors were infested with these insects, and as they are capable of propagating themselves indefinitely, when they are removed on shore, the land was soon literally sown with them. It was a bad time for the natives. They had never been known before, and were allowed to remain in the feet. I have seen probably a hundred natives who have lost one or more toes on account of them."

GANGRENOUS DYSENTERY—PERFORATION OF THE DESCENDING COLON—PERITONITIS.

THE PRESIDENT then presented specimens with the following history:

C. B——, fifty-nine years of age, was admitted into the Presbyterian Hospital, December 15, 1880, suffering from a broken leg. On January 2, 1881, while still in the hospital, she was taken with the symptoms of dysentery. On January 16th the number of discharges had lessened, though they still contained blood and mucus. The tenesmus also had moderated, but there was now some tympanitis. On the 20th the symptoms had still further improved, and the number of discharges was reduced to six, and these contained no blood or mucus. Further improvement, however, seemed to be arrested here, and there was decided pain in the hypogastric region, and inability to control the sphincters, so that foul fecal matter poured from the rectum. On February 12th a dark brown spot was noticed on the anterior surface of the left thigh, just below Poupart's ligament. This spot finally became as large as a man's hand, and sloughing in the centre. The discharges from the bowel were now fluid and fecal, but very numerous. On the 20th collapse set in, and the patient died the next day.

At the post-mortem examination it was observed that the heart was hypertrophied and the liver large and fatty, weighing seventy-six ounces. The peritoneal cavity also contained a small amount of purulent matter, and there were some flocculi of lymph in Douglas's sac. The chief seat of the disease, however, was located in the colon. Its descending portion was covered with ulcers from the sigmoid flexure upward. Many of them were gangrenous, and several had opened into the peritoneal cavity. The rectum was but little affected.

DYSENTERY—PERFORATION OF THE COLON—PERITONITIS—BONE ENCYSTED IN THE LUNG.

The President also presented specimens with the following history:

A. M——, aged thirty-seven, domestic, was admitted to the Presbyterian Hospital, August 30, 1878, in the service of Dr. Hubbard. Her recent illness commenced three weeks before admission. The initial symptoms were, a chill, followed by fever, some abdominal pain, and a profuse diarrhœa. The latter continuing, the passages began to show an admixture of blood. When first examined, the pulse was 120; the temperature 102° F. These symptoms were found to be complicated by the signs of advanced phthisis, with cavities in both lungs. Notwithstanding very active treatment her condition did not improve, and she died with symptoms of collapse, September 11th.

At the post-mortem examination it was observed that the body was greatly emaciated. On the left side of the chest, over the sixth and seventh ribs, there were four cicatricial depressions in the skin. On attempting to remove the right lung it was found firmly bound down to the chest-walls over nearly all its surface, and contained several small cavities in the upper lobe. In the middle lobe was found a long piece of dead bone, which had completely encysted in the lung. It was located immediately opposite the cicatrices already mentioned, which in turn corresponded to bared portions of the sixth and seventh ribs. The left lung also contained cavities. In the peritoneal cavity were found flocculi of lymph at various points. The chest-lesions in the intestinal tract were in this case also in the colon. Ulcers were found in greatest quantity in the caput coli and transverse colon. The descending colon was much thickened, but not ulcerated. Some of the ulcers in the caput coli had perforated the gut, causing the peritonitis. The rectum was also similarly involved. The liver was not affected. The other organs were not notably diseased.

OBSCURE CEREBRAL SYMPTOMS—OSTEO-CHOLESTEATOMA OF THE SYLVIAN FISSURE.

The President further presented a specimen with the following history:

W. M——, aged fifty-seven, German, was admitted to St. Luke's Hospital March 8, 1881. His history was unsatisfactory, and briefly was as follows: A year previously the first symptoms set in, and they were mainly those of coldness and weakness in the lower extremities, with progressive failure of health and strength. Two weeks before admission he began to have cardiac pain and palpitation, and soon had swollen feet.

On examination he was found to be emaciated, and had a marked cachectic appearance. He was listless, and could only be induced to speak after long continued questioning. Pupils normal; patient very somnolent; examination of urine negative.

On March 9th, after a long and uninterrupted sleep, he manifested delusions, but required no restraint. In the afternoon, while being raised into the half-sitting position, he vomited about a pint of bile-stained fluid. At 7.30 pulmonary œdema set in, and he died in a few hours. Autopsy March 11th, thirty-two hours after death.

Pericardial sac contained one ounce of clear serum.

Heart small and fatty; weight, six ounces; valves normal by water-test; attached borders of aortic valve somewhat stiffened; free border of mitral the seat of cadaveric injection.

Right lung bound down by old pleuritic adhesions, and the seat of emphysema, œdema, and hypostatic congestion. In the apex was a calcareous nodule the size of a pea.

The *left lung* was in a similar condition, except only that a larger nodule was found in the apex. The other organs showed no noticeable indications of disease.

Brain.—The pia mater was found thickened, and

the brain-substance unusually pale. Vessels at the base were found free. No abnormal quantity of fluid in the ventricular cavities. In the right Sylvian fissure, however, there was found a small hard tumor, which on section was found to contain cholesterine, and was held in a rough osseous shell, from which trabecula penetrated toward the centre.

The tumor measured 3½ ctm. in greatest length, by 3 ctm. in greatest breadth. Its surface was rounded but rough; the base was flat, and pressed about one centimetre into the floor of the fissure. It encroached upon both the frontal and parietal lobes, chiefly upon the former, but was not seen until the fissure was exposed by the knife.

The society then went into executive session.

Correspondence.

SIZE AND KIND OF HOLTZ MACHINES ADAPTED TO MEDICAL USES.

To the Editor of The Medical Record.

Dear Sir—As the time at my disposal will hardly allow me the pleasure of answering separately nearly two hundred letters from your subscribers or readers in all parts of the Union, asking, in the main, pretty much the same questions concerning details on the subject of electro-statical therapeutics suggested by my paper on the subject, published in the Record of April 2d and 9th, will you kindly allow me brief space to respond simply to the main points, viz., what size and kind of improved Holtz machine to to get?

Two main considerations at once arise:

First.—That the machine shall be large, powerful, and complete.

Second.—That it will work in all weathers, wet or dry.

The tenor of the letters received indicates a desire to make small machines (one foot diameter, single plate) answer medical purposes. I am confident that this would end only in disappointment to their possessors and detriment to the subject in general. A two-cell galvanic battery will not answer where forty cells may or should be used. Both tension and quantity should be great in modern statical electrization. Simple length of spark between the discharging rods is not a fair criterion, for this spark, in a machine giving electricity of a very high tension, may at the same time be thin, wavering, and infrequent. It should be strong, thick, straight, and frequent, *i. e.*, denoting quantity, as well as tension. With the patient simply sitting in a chair on the insulating platform—the latter, and not the body of the patient, being connected to the machine by a polished brass rod—the operator should be able to draw, by aid of a "ground connection," sparks from one and a half to six inches in length, each spark distinct and clearly defined. The thin, divided, "sputtering" sparks derived from small machines, are stinging and painful, and, I believe, comparatively ineffective.

Static electricity is probably seldom tested at its full worth, for the reason that it has not been given strong enough, though here, as in all electrization, the operator should first test the strength upon himself in order to determine what can be properly borne by patients. But, by "strength" of administration we do not refer to the shock from Leyden jars. The latter is seldom indicated.

It is better, then, to get a large Holtz machine, or not get one at all. And by a large machine, from a medical standpoint, is meant a double Holtz of from twenty- to thirty-inch revolving plates, or a quadruple Holtz with fifteen-inch or larger plates. My own machines are double Holtz (two revolving and two stationary glass plates), constructed by Andriveau, 5 Rue Campagne, Paris, on the exact model of Dr. Vigouroux's machines, used at Prof. Charcot's clinic. From careful examination of their work, I think that equally as good machines may be found at J. & H. Berge's, formerly Hall & Benjamin, scientific instrument makers, 191 Greenwich street, though beyond this opinion I have no interest or responsibility in the matter, as some of my correspondents have apparently supposed. A four-plate fifteen-inch Holtz, or a twenty-inch double Holtz is then, I venture to suggest, the *smallest* machine that should be bought.

With regard to the second point, viz., that the machine shall work in all weathers, there seems to be at present but one solution, and that is the one proposed by Dr. Vigeroux, of enclosing it in a comparatively speaking air-tight glass case, together with a basin of sulphuric acid or some other "drying" substance, like chloride of lime. Without this precaution, as far as I know, the operator is liable to the most trying experience of having his electricity fail him at moments when he wants it most. It would be a great advance if a machine should be invented which would run unenclosed in all weathers and give sufficient electricity.

Feeling assured, finally, that if a large and unfailing machine be procured, that in other details it will give a good account of itself, I close with the hope that my correspondents will accept this brief note as a general answer.

Very truly yours,

William J. Morton, M.D.

15 East Forty-Fifth Street,
April 16, 1881.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from April 10, 1881, to April 16, 1881.

Birmingham, H. P., First Lieut. and Asst. Surgeon. So much of part 1, S. O. 62, March 17, 1881, from A. G. O., as relates to him, is suspended until May 1, 1881. S. O. 85, A. G. O., April 14, 1881.

Cooper, George E., Lieut.-Colonel and Asst. Medical Purveyor. Died at San Francisco, Cal., April 13, 1881.

Medical Items and News.

Contagious Diseases — Weekly Statement. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending April 16, 1881.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
April 9, 1881.	55	20	137	21	66	85	51	0
April 16, 1881.	68	24	170	26	61	91	31	0

A Novel Cause of Death.—In a recent issue of the Canton (Ohio) *Democrat* we notice an account of the curious death of a young man during a debauch. An autopsy was made under the direction of the coroner, and the stomach was found filled with beer and undigested food. The gentlemen who made the autopsy declared that, first, the beer fermented in the stomach, "giving rise to that subtle poison, carbonic acid gas. The gas so formed greatly distended the stomach and intestines, and gradually overpowered the lungs, heart, and brain, ending in a complete paralyzation of the nervous system." The following verdict was accordingly rendered by the coroner: "That the deceased came to his death by reason of paralysis of the heart and brain, caused by carbonic acid gas, which was generated by the fermentation of the beer and wine in deceased's stomach." Any one who discovers a new cause of death from drink is a public benefactor. This case, if properly worked up, could be very useful also in demonstrating a new source of irrespirable air, and a new danger for persons with foul stomachs. If the theory is true, any person who has not a stomach properly trapped is always in danger.

The Present High Rate of Mortality in New York.—The following table shows that the cry in regard to the increased mortality in this city is not without foundation. It shows the number of deaths during the first three months of each of the last eleven years:

Year.	Total deaths for the three months.	The death-rate per 1,000.
1871	6,555	26.57
1872	7,810	31.06
1873	6,967	28.44
1874	6,552	26.40
1875	7,812	30.11
1876	7,633	28.92
1877	6,002	22.45
1878	6,663	24 69
1879	7,576	27.61
1880	6,814	22.50
1881	9,129	29.56

The number of deaths has also been increasing weekly since January. For the week ending April 9th it was greater than in any other week, except one, since January 8th.

Dr. Max Herzog died in this city on April 5th, at the age of fifty-one. He studied medicine at Munich and Würzburg, and came to this city in 1856, where he has since lived. He was one of the founders of the German Hospital, was attending physician to this and Mt. Sinai Hospital, and was a member of many medical societies in the city.

Virginia Medical Monthly.—During the coming meeting of the American Medical Association the *Virginia Medical Monthly* will issue daily editions of the proceedings.

Dr. Isaac Ray, the distinguished alienist, died at his residence in Philadelphia, on March 31st, in the seventy-fourth year of his age.

Results of the International Sanitary Conference.—After much and long deliberation the International Sanitary Conference has finished its work. The proceedings have been printed in full. The following resolutions have been agreed upon, and are to be submitted to the various governments for favorable consideration:

First.—Each government shall have such an organized internal service as will enable it to be regularly informed of the state of the public health throughout the whole of its territory.

Second.—Each government shall publish a weekly bulletin of the statistics of mortality in its principal cities and ports, and shall give such bulletins the largest possible publicity.

Third.—In the interest of the public health, the sanitary authorities of the countries represented in this conference are authorized to communicate directly with each other in order to keep themselves informed of all important facts which may come to their knowledge, but nothing herein contained shall relieve them from the duty of furnishing at the same time, to the consuls in their respective jurisdictions, the information they are requested to give them.

Fourth.—This paragraph provides for the establishment, in Vienna and Havana, of a permanent international sanitary agency of notification, and states that a third agency may be established in Asia if deemed advisable, the expenses of maintaining these several posts to be divided pro rata between the contracting governments.

Fifth.—This paragraph submits in detail a form for a bill of health.

Sixth.—Bills of health shall be delivered at the port of departure by the responsible sanitary agent of the central government. The consul of the country of destination shall have the right to be present at the examination of ships made by the representative of the territorial government, under such rules as may be laid down by international agreement or treaty.

Seventh.—Bills of health granted in compliance with international rules shall be issued gratis.

Eighth.—A temporary and scientific commission shall be created by the nations most directly interested in protecting themselves against yellow fever, and by such others as may wish to take part in this arrangement, to be charged with the duty of studying all matters pertaining to the origin, development, and propagation of that disease.

Stopping the Hunter's Point Odors.—A special meeting of the State Board of Health was held on the 16th inst., to receive reports from the committee which has been investigating the nuisances at Hunter's Point, and on the Jersey Shore of the Kill von Kull opposite New Brighton, S. I. It was shown that the odors were due to the making of superphosphates, refining petroleum, manufacturing cream of tartar, rendering fat, boiling bones, preparing ammonia from waste products, and the storage of manure. It was believed by the committee that these offensive odors imperilled the health of the community, and it was shown that they could, in large measure, be abated by more careful attention, or the use of special means by the manufacturing companies.

The report, which was adopted, concluded by recommending the removal of the worst of the nuisance-breeding establishments, and the correction of the odors arising from others. A resolution was passed requesting Gov. Cornell to call the attention of the Governor of New Jersey to the nuisances on the Jersey shore of the Kill von Kull.

Distribution of the Excise Money to Medical Institutions.—The excise money, amounting this year to $141,517.15, has been distributed as follows: To homes and asylums, $52,769; to charitable societies and missions, $40,326; to hospitals and dispensaries, $42,319. A record of the special sums distributed will show how rich New York is in medical charities. The list does not include any of the well-endowed hospitals, nor any of the hospitals or dispensaries supported by the city.

Hospitals, Dispensaries, and Infirmaries.—St. Luke's Hospital, $4,716; St. Francis Hospital, $6,300; Mount Sinai Hospital and Dispensary, $4,936; German Hospital and Dispensary, $3,084; St. Vincent's Hospital, $3,350; New York Infirmary for Women and Children, $796; St. Mary's Free Hospital for Children, $1,080; St. Elizabeth's Hospital and Dispensary, $460; the Hahnemann Hospital, $288; the Women's Hospital of the State of New York, $1,840; New York Orthopedic Dispensary, $2,065; New York Eye and Ear Infirmary, $2,280; New York Ophthalmic Hospital, $1,266; Manhattan Eye and Ear Hospital, $671; Metropolitan Throat Hospital, $72; New York Dispensary, $1,000; Demilt Dispensary, $1,000; Northern Dispensary, $1,000; Eastern Dispensary, $1,000; Northwestern Dispensary, $1,000; Northeastern Dispensary, $1,000; Harlem Dispensary, $525; New York Free Dispensary for Sick Children, $300; the Western Dispensary, $200; Tompkins Square Homœopathic Dispensary, $300; West Side German Dispensary, $240; Yorkville Homœopathic Dispensary, $140; New York Homœopathic Medical College Dispensary, $200; the Manhattan Hospital, $440; Bureau of Medical and Surgical Relief, Twenty-third and Twenty-fourth Wards, $300; New York Ophthalmic and Aural Institute, $468. Total, $42,319.

A Case of Purpura Hæmorrhagica.—Dr. Alvah C. Van Syckle, of Hackettstown, N. J., sends us an account of a case of purpura hæmorrhagica, a disease not often observed in this region. The patient, a boy, eighteen years of age, who had always been healthy, was suddenly taken down with severe colicky pains near the umbilicus. In a few hours he passed bloody urine. Following this, purpuric spots were observed upon the ankles, which soon united and formed ecchymoses. The knee-joints were flexed and stiffened, the patient would shriek out when an attempt was made to extend the joints; they were swollen and extremely painful. The joints of the limbs and arms presented this ecchymotic eruption; it also appeared on the cheeks, eyelids, lower part of the nose, upper and lower lip, and ears; the tongue was black, the patient unable to swallow either solids or liquids; a very high fever accompanied the disease, pulse fluctuating from 120 to 134 per minute, sleep restless, with delirium. As the disease continued, the petechiæ became more extensively developed. There were bloody casts in the urine, and there was blood in the passages. The high fever and pulse continued, the fever exacerbating at first in the morning, afterward in the afternoon. Dr. Van Syckle diagnosed the disease as purpura due to rheumatic diathesis. The treatment, aside from quinine, was not stated, but the patient was, at date of writing, in a convalescent condition.

Diphtheria Treated by Pilocarpin.—Dr. A. Ady, of West Liberty, Ia., writes: "I have treated four cases of diphtheria with pilocarpin; two were severe cases, the others light. The first case was a man twenty-one years old; his throat and tongue were so swollen when I was called to him, that articulation was impossible, respiration and deglutition difficult. He was taking quinine, iron, and whiskey, prescribed by a neighboring practitioner. One-third of a grain of pilocarpin was given hypodermically and former treatment continued. The sialagogue action of the remedy seemed to be very soothing to the throat. The swelling was reduced within two days and patient convalesced rapidly. Two other cases were taken in the same family—both males—one an adult, the other sixteen years old. One-third of a grain of pilocarpin was injected into the arm of each, giving immediate relief in each case, they needing no further treatment. The fourth case was a girl fourteen years old. I was called to see her the 6th of February. She was given one-third of a grain at once, hypodermically. No other treatment but the weak solution of tincture of iron and spraying of throat, as recommended by Billington. The diphtheritic membrane covered the tonsils, extended into the pharynx, the soft palate red and swollen. Upon visiting her the morning of the seventh found her throat clear of membranes but still red and swollen. Continued the iron mixture and spraying. On the morning of the 8th I found that membranes had re-formed almost as heavy as at first. I then gave her pilocarpin, pepsin, and muriatic acid, followed by a tablespoonful of wine, as recommended by Guttman; stopping all other treatment. It produced profuse salivation, and by the next morning all traces of diphtheritic membrane were gone and patient fairly convalescent. I have been treating diphtheria at various times for twenty-five years, and have had the usual bad luck that has attended all practitioners who have had it to treat in its worst forms. I had been forced to believe that there was no established treatment for it. Consequently was ready to try anything that was recommended by good authority. Am also aware that so few cases are not to be greatly relied upon, but shall certainly try it again if opportunity presents."

Inhalation of Chloride of Ammonium and Hemorrhage.—Dr. Frederick Fuller, of Brooklyn, writes: "A gentleman about fifty-five years of age, inhaled the fumes of chloride of ammonium from some patent inhaler several times a week (about twenty minutes each time) for two or three weeks. This was followed by a profuse arterial hemorrhage, said by the patient to have been a pint of blood. Two physicians, independently of each other, decided, after a careful examination, that the flow of blood had its origin from a given point on the pharyngeal wall. The inhalation was abandoned, but again resumed in a few days, and another hemorrhage followed. The use of the inhaler was therefore abandoned about eight weeks ago, and no further trouble has occurred. I have since heard of two similar cases, and I wish to inquire if the same occurrence has happened in the practice of others. The testimony of those whom I have heard speak on the subject is that the fumes of the chloride of ammonia in contact with hydrochloric acid influence the course of nasal catarrh most favorably. It is, therefore, of some importance to determine whether it can be used with safety."

Carlyle's Opinion on the Advisability of Women Studying Medicine.—A letter has just been published for the first time, written nine years ago by Carlyle to a medical student in Edinburgh University. It was in answer to an inquiry regarding Carlyle's opinion as to the entrance of women into the medical profession. We quote the last half of it only. After saying that the true and noble function of woman is that of being wife and mother, he says:

"It seems, furthermore, indubitable that if a woman miss this destiny [of marriage], or have renounced it, she has every right, before God and man, to take up whatever honest employment she can find open to her in the world. Probably there are several or many employments, now exclusively in the hands of men, for which women might be more or less fit

—printing, tailoring, weaving, clerking, etc. That medicine is intrinsically not unfit for them is proved from the fact that in much more sound and earnest ages than ours, before the medical profession rose into being, they were virtually the physicians and surgeons as well as sick nurses—all that the world had. Their form of intellect, their sympathy, their wonderful acuteness of observation, etc., seem to indicate in them peculiar qualities for dealing with disease, and evidently in certain departments (that of female disease) they have quite peculiar opportunities of being useful. My answer to your question, then, may be that two things are not doubtful to me in this matter.

"1. That women—any woman who deliberately so determines—have a right to study medicine, and that it might be profitable and serviceable to have facilities, or at least possibilities offered them for so doing. But—

"2. That, for obvious reasons, female students of medicine ought to have, if possible, female teachers, or else an extremely select kind of men, and, in particular, that to have young women present among young men in anatomical classes, clinical lectures, or generally studying medicine in concert, is an incongruity of the first magnitude, and shocking to think of to every pure and modest mind.

"This is all I have to say, and I send it to you, under the condition above mentioned, as a friend for the use of friends. "Yours sincerely,

"T. Carlyle."

Dr. George Johnson's Diet for Excess of Fat.—The patient *may eat:* lean mutton and beef; veal; lamb; tongue; sweetbread; soups, not thickened; beef-tea and broths; poultry; game; fish; cheese; eggs; bread, *in moderation;* greens; spinach; watercress; mustard and cress; lettuce; asparagus; celery; radishes; French beans; green peas; Brussels sprouts; cabbage; cauliflower; onions; broccoli; sea-kale; jellies, flavored but not sweetened; fresh fruit in moderation, without sugar or cream; pickles.

May not eat: Fat bacon and ham, fat of meat; butter; cream; sugar; potatoes; carrots; parsnips; beet-root; rice; arrow-root; sago; tapioca; macaroni; vermicelli; semolina; custard; pastry and pudding of all kinds; sweet cakes.

May drink: Tea; coffee; cocoa from nibs, with milk, but without cream or sugar; dry wines of any kind, in moderation; brandy, whiskey, or gin, in moderation, without sugar; light bitter beer; Apollinaris water; soda-water; seltzer-water.

May not drink: Milk, except sparingly; porter and stout; sweet ales; sweet wines. As a rule, alcoholic liquors should be taken very sparingly, and never without food.

The Beef-Juice Furor.—In the present *furor* for fluid beef-juice, says Dr. Fothergill, the necessity for starchy matters is being quite overlooked, or, to be very safe, underestimated. These meat-products furnish—the best of them—little glycogen or animal starch, and yet that is the fuel-food of the body, *par excellence.* We must be guided by rational knowledge, by physiology and not by fashion, in our dietetics. When there is very feeble digestion, then the digested milk and milk-gruel advocated by Dr. Roberts is to be employed.—*The Practitioner.*

The Drainage of Wounds.—In a clinical lecture on this subject, by Dr. William MacEwen, of Glasgow (*British Medical Journal*), the various methods of draining wounds are enumerated. Objections are found to all methods except those by horse-hairs and chicken-bones. Horse-hairs form an excellent means of draining away blood and serum, but are not so good for pus. For this latter the tibiæ and femora of the chicken furnish the best materials. The bones are not injured by cooking. They are taken, scraped, and put in a solution of hydrochloric acid and water (1 to 5) until soft. Their articular extremities are then snipped off with a pair of scissors; the endosteum is raised at one end and pushed through to the other extremity, along with its contents. The bones are then reintroduced into the acid solution until they are rendered a little more pliable and softer than what is ultimately required (as they afterward harden a little by steeping in the carbolized solution). When thus prepared they are placed in a solution of carbolic acid and glycerine (1 to 10). At the end of a fortnight they are ready for use. Before introduction into the wound they are threaded with horse-hairs, which are pulled out in a few days, leaving the tubes perfectly open. The bones gradually become absorbed in the tissues, the average time required being eight days.

Hepatotomy.—Mr. Lawson Tait, of Birmingham, Eng., has performed hepatotomy three times recently, with perfect success. In one case there was a large cyst of the liver of unknown origin, and the other two cases were hydatid cysts. He operated just as in the gall-stone case recently reported, there being no adhesion of the liver to the walls in any of the cases, and the two wounds were stitched together.

A New Departure in the Regulation of Prostitution.—As the question of the legal regulation of prostitution is now coming in different ways before the medical profession, the recent action of the Municipal Council of Paris in reference to it may be of interest.

In all countries where government regulation exists, it has been found necessary to establish a special police for the enforcement of its regulations, and tribunals, consisting of magistrates, or officials specially designated, before whom women arrested under them are brought for the more speedy and private settlement of points growing out of the regulations, so as to avoid the slow proceedings and public scandal of such proceedings in ordinary court-rooms. This private and arbitrary mode of dealing with these women has always been one of the points most strongly objected to by the opponents of the system, and has been equally warmly upheld by its supporters, and has been adopted even in England.

At a meeting of the Municipal Council of Paris, held December 28, 1880, it was resolved, by a majority of 33 to 12, to abolish this police and their private tribunals.

The following are the resolutions, as given by the *Bulletin Continental* of January 15th:

"The Council, considering that the existing institution of the 'Police of Morals' violates individual liberty without accomplishing the results expected from it in its two objects—the diminution of syphilis and the repression of offences against public order and morals, *Resolved:*

First.—That the municipal administration is requested to prepare, as speedily as possible, a plan for the establishment of gratuitous medical and pharmaceutical service for the treatment of syphilitic disease.

Second.—The municipal administration is requested to prepare a system of organization which will substitute the ordinary police for the present

agents of the police of morals, in everything concerning the preserving of public order in reference to prostitutes.

Third.—Violations of public order and morals shall no longer be referred to arbitrary, special administration, but to the regular course of justice.

Fourth.—The result of this reorganization shall be the suppression of the police of morals, to take effect on January 1, 1882."

The same change has been made, it is said, at Brussels. The fact is of especial interest, because Ricord, in a recent editorial on the subject of regulating prostitution, declares that the Bureau des Mœurs is an essential part of it. If one goes, so must the other. This remains to be seen, however.

Death of Dr. Joseph S. Monell.—At a meeting of the Board of Trustees of the New York Physicians' Mutual Aid Association, held April 5, 1881, the following preamble and resolutions were unanimously adopted:

It having pleased the Divine Creator and disposer of all things to take from this existence (on March 8, 1881), after an illness of several months, our brother in the profession, and associate for several years in the Board of Trustees of this association, Dr. Joseph S. Monell, it becomes us to express in this manner the sentiments of regard and attachment we have always entertained for him, and our appreciation of his moral worth, manly character, and professional qualifications, and to place on our minutes the following resolutions:

Resolved, That, in all our many years of intercourse with Dr. Monell, we found him social and unassuming in disposition, honorable in character, prompt to duty, and intelligent and prudent in business transactions.

Resolved, That, appreciating their great personal loss, we hereby tender to Mrs. Monell and her children our sincere sympathy and condolence in their bereavement, and commend them to Him who doeth all things well, and whose mercy endureth forever.

Resolved, That these resolutions be officially signed by the president and secretary, and a copy be presented to Mrs. Monell, and that a copy be also furnished the medical journals of this city for publication.

R. A. Barry, }
William W. Reese, } *Committee.*

The Citizens' Street Cleaning Bill.—The citizens' street cleaning bill has been defeated in the Assembly, and what is known as Carpenter's substitute has been passed. The latter will go to the Senate, and the probabilities are, as we go to press, that the Senate will call for a committee of conference.

Experience thus far has proven that machine politics and attendant political patronage are more to be considered than popular opinion or the health of the people.

American Medical Association.—The Thirty-second Annual Session will be held in Richmond, Va., on Tuesday, Wednesday, Thursday, and Friday, May 3, 4, 5, 6, 1881, commencing on Tuesday at 11 A.M.

"The delegates shall receive their appointment from permanently organized State medical societies, and such county and district medical societies as are recognized by *representation in their respective State societies*, and from the Medical Department of the Army and Navy, and the Marine Hospital Service of the United States.

"Each State, county, and district medical society entitled to representation shall have the privilege of sending to the association one delegate for every ten of its regular resident members, and one for every additional fraction of more than half that number; *Provided*, however, that the number of delegates for any particular State, territory, county, city, or town, shall not exceed the ratio of one in ten of the resident physicians who may have signed the Code of Ethics of the Association."

Secretaries of medical societies as above designated are earnestly requested to forward, *at once*, lists of their delegates.

Sections.—"The chairmen of the several sections shall prepare and read, in the general sessions of the association, papers on the advances and discoveries of the past year in the branches of science included in their respective sections. . . ."—By-Laws, Art. II., Sect. 4.

Practice of Medicine, Materia Medica, and Physiology: Dr. William Pepper, 1811 Spruce street, Philadelphia, Pa., Chairman; Dr. T. A. Ashby, Baltimore, Md., Secretary. Obstetrics and Diseases of Women and Children: Dr. James R. Chadwick, corner Marlborough and Clarendon streets, Boston, Mass., Chairman; Dr. Joseph Taber Johnson, Washington, D. C., Secretary. Surgery and Anatomy: Dr. Hunter McGuire, Richmond, Va., Chairman; Dr. Duncan Eve, Nashville, Tenn., Secretary. State Medicine: Dr. James T. Reeve, Appleton, Wis., Chairman; Dr. R. G. Jennings, Little Rock, Ark., Secretary. Ophthalmology, Otology, and Laryngology: Dr. Dudley S. Reynolds, Louisville Ky., Chairman; Dr. Swan M. Burnett, Washington. D. C., Secretary. Diseases of Children: Dr. A. Jacobi, 110 West Thirty-fourth street, New York, Chairman; Dr. T. M. Rotch, 77 Marlborough street, Boston, Mass., Secretary.

A member desiring to read a paper before any section, should forward the paper, or its *title* and *length* (not to exceed twenty minutes in reading), to the Chairman of the Committee of Arrangements, at least one month before the meeting.—*By-Laws.*

Committee of Arrangements: Dr. F. D. Cuningham, Richmond, Va., Chairman.

Amendment to the by-laws, offered by Dr. J. M. Keller, Arkansas: In the election of officers and the appointment of committees by this association and its president, they shall be confined to members and delegates present at the meeting, except in the Committees of Arrangements, Climatology, and Credentials.

W. B. Atkinson, *Permanent Secretary.*

Health of New York.—There were 68 cases of typhus fever and 31 of small-pox reported during the week. The Riverside Hospital is crowded with 250 patients, of whom 110 are suffering from typhus fever and 140 from small-pox.

Sanitary Superintendent Day submitted a report which he had prepared by the direction of the board, with reference to the deficiency of the water supply in the upper stories of dwelling-houses in the city and its relation to the spread of fever and disease. He also handed in a document prepared by himself, suggesting that the house physicians of the various hospitals which receive temporarily cases of typhus fever should ascertain, if possible, in every case, whence the patient came and where the disease was contracted, and transmit the information to the Sanitary Bureau.

No Cholera in New York.—There is no foundation for the report that cases of cholera have occurred in the city during the past few days.

Original Lectures.

REMARKS ON THE USE OF URETHRAL INSTRUMENTS.

By FESSENDEN N. OTIS, M.D.,

CLINICAL PROFESSOR OF VENEREAL DISEASES IN THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK.

GENTLEMEN: I have been trying for several weeks to find an opportunity to speak to you especially of urethral instruments, but one thing and another has arisen to prevent it. To-day there are one or two cases presenting which we will first consider, and then devote the remainder of the hour to a consideration of urethral instruments and the manner of using them. This patient has inflammatory phimosis. He has come here to see what we can do for him. Last week phimosis was spoken of as being one of the complications of gonorrhœa. It may be a complication of any inflammatory trouble of the penis, it may be the result of a balanitis which has been caused by the accumulation of smegma.

You would hardly know what to make of the deformity which presents in this case, if you did not know how phimosis sometimes distorts the penis; it looks here as though the prepuce was completely closed. But it is simply introverted and the orifice concealed by the swelling. Our object is to find out the cause of this phimosis, and of the inflammation. On examining the meatus there is no evidence of gonorrhœa. Phimosis is often the result of inflammation due to a chancroid; it is sometimes the result of inflammation arising from the initial lesion of syphilis, but more commonly from chancroid, which, as you know, is always accompanied by inflammatory action, while the initial lesion of syphilis very frequently is not. Let us endeavor to get at the history of this case. How long have you had this trouble? "Two days." Did you not have connection before that? "I had, a week ago." It was then about four days after connection. Did you notice any sore on your penis before this swelling came? "No, sir." Sometimes the first thing a patient who has a sore prepuce notices is that it is swollen and he cannot uncover the glans. Now, if we can reduce the phimosis by careful, steady traction, thus, perhaps we can discover the cause of his trouble. Here you notice some pus exuding. Having drawn the foreskin gently back and uncovered the glans penis, we find here, first of all, an ulceration which has burrowed under the frænum and apparently extended from that point as a superficial inflammation, a general balanitis, with here and there a little point of ulceration. Here is a sharply cut loss of tissue in several places. It is possible that something more than a simple inflammatory cause has excited the balanitis in this instance, viz.: a chancroidal secretion, and this produces destructive action as soon as it comes in contact with healthy tissue. A few minutes since, this was a case of phimosis; now, after having reduced the phimosis by retracting the prepuce, we have a paraphimosis. Phimosis, you will remember, is that condition of the prepuce where, from any cause it is forward of the glans, and can only be retracted with difficulty; paraphimosis, when it is behind the glans and cannot readily be brought forward, and if we are not careful to reduce the paraphimosis promptly it will give us more trouble than the phimosis. In order to effect this, in the first place, the parts should be well lubricated with sweet oil, or better, with vaseline, then while you encircle the organ with the forefinger and thumb of your left hand compress the glans penis with the finger and thumb of the right, force it gently back through the constricting preputial orifice, thus. Sometimes it is necessary to incise the preputial border before reduction is possible. In this case, however, as you have seen, we reduce it with but little difficulty. The proper course to pursue in this case at present, is simply to wash the parts, to syringe out the prepuce with a solution of carbolic acid, say five grains to the ounce of water, and wait to see whether it be anything more than the result of a simple balanitis. If the trouble prove to be chancroidal, it may become necessary to use some other means, it is not desirable at present to make an incision, for the relief of the phimosis, for if we did so and ulcerative lesions should prove to be chancroidal, the result would probably be a very large, ugly ulcer from inoculation of the cut surface. For the same reason, we should not circumcise for relief of such a constriction. At present, then, we can only palliate the patient's condition by keeping the parts well cleansed with weak solution of carbolic acid.

You will remember that about three weeks ago, a gentleman was at our clinic who complained of trouble in the region of the prostatic urethra, and who, it was thought, on account of this irritation and a frequent desire to urinate (once every hour or half hour), might have stone in the bladder. He had been treated by the introduction of sounds for the purpose of relieving a stricture which was supposed to be present in the deeper portion of the canal. The subject of reflex irritation was brought up in connection with this case, after we had examined and found that there was nothing the matter with the prostate, after we had examined the bladder and found that there was no stone, after we had examined the urethra and found that there was no stricture; but we did find a contraction, which was practically a stricture, at the urethral orifice. In the absence of all other causes to which this could be attributed, it was claimed at that time that this was sufficient cause for his urinary trouble. The advice was to restore the orifice to the size of the canal behind it, in order to remove the obstruction to urination which was believed to set up a reflex irritation, causing frequent micturition. Subsequent to the operation a diphtheritic exudation occurred on the wound. This was shown to you as a complication, a very interesting and rare one of this operation. Diphtheritic exudation occurring in such a case becomes a source of embarrassment, because on account of the irritation and pain caused, it prevents us from using instruments to keep open the wound, we are obliged then to wait until the diphtheric membrane has become detached and the inflammation subsides. In this case the patient was instructed to drop into the orifice a little bismuth and pepsine. Under this treatment, in the course of a very few days, the membrane disappeared entirely and left a healthy granular surface. In the meantime, however, some recontraction of the orifice had taken place, and I divided it again at my office. I divided it back to the extent of half an inch, so that it would admit a No. 38 sound (38 mm. in circumference), having been previously ascertained by use of the urethrometer that the normal calibre of the urethra behind the stricture was 38.

He comes here to-day with the improvement we had hoped for. We can never be quite certain of the re-

sults of operation in these cases, whether the relief sought for will be immediate and complete, or only partial. But here it has been all we anticipated. To-day the patient has to pass his water not oftener than once in three or four hours, instead of every hour or half hour, as he had to do before the operation. The wound has not yet quite healed; there is still a little irritation, but the burning in the deep urethra and the irritation of which he complained have almost entirely gone. The relief from the frequent desire to urinate proves this. He still has a little irritation referred to the deep urethra, and probably will have until the healing shall be perfect.

Now, if he will lie down I will show you what takes place after such a wound as this. In the first place, as a rule, we have no disturbance of the function of urination causing discomfort. The stream is still free, and passes readily and smoothly after the wound has healed. This orifice may appear large, but it is not larger than it should be; it is not larger than the urethra behind it. From the diagram I now make of the previous and present condition, you can judge of the mechanical improvement which has been made in his urethral canal. It is interesting to watch a wound in this locality and see how admirably nature accepts the amendment. It has been at any rate not more than three weeks since the operation was performed, and yet a new mucous membrane has formed on the cut surfaces, and any one seeing this orifice now for the first time would scarcely suppose that anything had been done to it. After a little time you will not be able to detect even the line of union between the old and the new mucous membrane. This is probably what occurs when we operate more deeply in the urethra. We add new mucous membrane when we divide the strictured tissues thoroughly, and we may claim that in this way the urethra is restored to its normal condition. In confirmation of this view I may cite a case furnished by Dr. Eldridge (formerly Professor of Anatomy in the Georgetown Medical College, now Surgeon-in-chief of the General Hospital at Yokohama, Japan), and reported in the last edition of my book on "Stricture of the Male Urethra." The post mortem specimen connected with this case was sent to me, accompanied by a history, which stated that the patient was the subject of a close stricture extending from one end of the urethra to the other. It was so close that a filiform bougie was with difficulty passed. Efforts were made when he first entered the hospital to dilate the stricture, but every time it was attempted the patient had a suppression of urine, and very nearly lost his life from that cause. It was then concluded that it would probably be better to take the risk of a single operation to restore the urethra as nearly as possible to its natural size, taking the chances of suppression. In the first place, the urethra was divided up to a point that would allow of the introduction of a dilating urethrotome. I now show you the dilating urethrotome, and will explain the manner in which it was used. First passing it down into the urethra to a point just beyond the stricture; then by moving the screw at the handle, thus, the bars of the instrument are separated, dilating the urethra to its full normal calibre, as previously determined. And let me say in passing, that when you use this instrument in such cases you should remember it is not a divulsor; the object of it is not to make divulsion, but simply to dilate. We do not want to divulse a stricture with this instrument. If the stricture be so dense as to make it difficult of dilatation, the knife which is in the upper bar of the instrument is drawn out of its concealment and passed through the stricture, dilatation is again made, and the knife again passed until the natural size of the urethra is reached. This instrument was used in the case just referred to, turned up to the normal size of the urethra, and then the knife was drawn through the strictures. After that a full-sized steel sound, No. 32, was passed through the urethra and into the bladder. This was done on two or three subsequent occasions, but as suppression threatened at each time it was thought best not to continue it. The patient left the hospital soon after, and at that time he was suffering also from syphilis. Three years afterward he returned with tertiary syphilitic laryngitis, from which he died. The urethra which had been operated upon three years before was then examined, and it was found that the urethra in which close strictures had been divided thoroughly from one end to the other was apparently restored to its normal condition. There was no evidence of any cicatricial tissue at any point. Now, this case is probably as thoroughly authenticated as any surgical case on record. The condition of the urethra was very carefully represented by a drawing which accompanied the history of the case. Dr. Eldridge, whom I have not had yet the pleasure of meeting personally, obtained his knowledge of this operation from the current medical journals, and after an experience of several hundred operations by the same method, has put the history of this case on record as a matter of scientific interest to the profession at large. Let me say, then, that divided strictures do not of necessity recontract. On the contrary, when the division is complete they not only do not recontract, but the cut surfaces, if kept open, become covered with a new mucous membrane, which soon becomes as healthy and, apparently, as serviceable as the old had been.

Some of you will remember our next patient as the man who lay on a bed in the corner of Ward 13, at Charity Hospital, in the earlier part of the present session. He was suffering from close stricture. He now says that he suffered for seven years with difficulty in urination, but it was not until eighteen months ago that he was compelled to pass his urine by drops. He states that he had a gonorrhœa which did not get well, that his gonorrhœa led to a stricture, this to another stricture, and so on. This is probably true, for one stricture is the breeder of others, because it keeps up an inflammatory action in the urethra, and every time the inflammation dips down beneath the mucous membrane, involving the submucous tissues, plastic material is drawn to this point, and when it encircles the urethra it is in position to make a stricture.

Strictures have been incorrectly described by some writers as occasionally on one side of the urethra, while the rest of the circumference at such point is free. A stricture—literally a *constriction*—must always surround the thing or space constricted. This is quite different from an impediment or an obstacle. Obstacles in the urethra may be of various kinds, and even may be composed of the same cicatricial material which forms a stricture. These may be and often are mistaken for true stricture and described as such. True stricture must necessarily surround the urethra. It sometimes occurs that the urethral calibre is diminished by transverse bands of connective tissue which encroach upon the lumen of the urethra, but which may be quite below and separated from the mucous membrane, or which may be more or less adherent to it. It also sometimes

happens that localized adhesions of mucous membrane occur at one side or the other of the urethra, forming valve-like projections which catch the bulbous sound during explorations of that canal.

To include such obstructions or impediments in the same definition with cicatricial constrictions due to the plastic exudation from an acute urethritis, which, of necessity involves the entire circumference of the canal, is evidently irrational, and tends to confusion in the study and treatment of true urethral stricture. Plastic material is aggregated beneath the urethral mucous membrane as a result of inflammatory action. It is from this that cicatricial tissue, constituting true organic stricture, is developed. The tendency of all such tissue is to contract—chiefly through the condensation which naturally takes place as time passes. If the cicatricial deposit is only on one side of the urethra, in contracting through the absorption which finally occurs, it becomes necessarily smaller and smaller until it may no longer exist as an obstacle. If, however, it completely surrounds the canal, its contraction produces *constriction* of the urethral canal, *i. e.*, organic stricture.

In addition, now, to the contractile property of organic stricture, we have another element tending to hasten the urethral narrowing at the point of constriction, and this is the irritation caused by mechanical interference with urination, and the lodgment of irritating urethral secretions, and the crystalline elements of the urine behind such constriction. New plastic material is thus attracted to and reinforces the old, and the urethra in certain cases—for instance, like the one under present consideration—is thus almost completely occluded throughout a considerable part of its course. Bearing in mind, then, the causes which originate and which aggravate true urethral stricture, we can understand how it is that a thorough division of true stricture at any point in its circumference, and a restoration of the normal calibre of the urethra at that point, should result in prompt relief to the irritation caused previously by the obstruction, and how the cicatricial material, having no longer any hold around the urethra, should become finally and completely absorbed.

The case of Dr. Eldridge is a representative case of permanent relief of stricture of the urethra by thorough division of the cicatricial tissue. Three years had passed after division of the cicatricial tissue, and recontraction had not taken place. There was, besides, a disappearance of stricture material and return of suppleness in the parts. But there are other cases which illustrate this fact. It is, indeed, the natural course when a stricture is divided thoroughly. There are cases where the cicatricial tissue extends down so deeply that we cannot cut entirely through it, in which case recontraction is likely to occur, but fortunately such cases are exceptional. The rule is, that we can divide strictures thoroughly; we can cut entirely through them.

Now, this patient from Charity Hospital had so close a stricture that, after many attempts, we were unable to gain entrance into the bladder, until one day, while making an examination before the class, I managed to insinuate this fine filiform bougie into the bladder, the smallest instrument in use for such purposes. As a result, he had a chill, quite like an attack of chills and fever. Every time that we subsequently tried to make dilatation he would have a chill, but we managed to carry dilatation up to two or three sizes. We then decided to operate. We found that the strictures extended so deeply that it was not probable that they could be divided with the dilating urethrotome without going beyond the point where we could control the hemorrhage readily—down to the junction of the membranous with the bulbous portion; therefore, external section was performed. I made perineal section, and at the same time performed the operation of dilating urethrotomy, which was done in Dr. Eldridge's case. First, a fine filiform bougie was passed into the bladder. This was then screwed to the staff of Maisonneuve's urethrotome, which is traversed by a groove in which a small knife runs. This staff was then passed down into the bladder, following the filiform bougie. When we felt that the instrument had entered the bladder, and was freely movable in it, the knife was passed down and the instrument withdrawn. In that way room was made for larger instruments. The dilating urethrotome was then passed down and turned up in the way before mentioned, and the knife passed up and down two or three times, in order to make the dilatation easier, until we got it up to the highest point, about 32, corresponding to the size of the penis, which was about three and one-fourth inches in circumference, when the knife was finally drawn through, and a 32 solid sound was subsequently passed into the bladder. The divided strictures were then kept open for a time with instruments, and the wound in the perineum was left to heal. You will remember there was no bandaging, no stuffing with lint—simply a sponge was placed under the patient and the parts bathed freely several days with a weak solution of carbolic acid, and the cut surfaces were allowed to granulate, you might say, in the open air, until the healing was complete. Instruments were passed from time to time until latterly. After I left the service he in some way escaped the observation of the medical attendants, and several weeks passed by without the passage of any instruments. He left the hospital, and a few days ago came to my office apparently entirely well.

I propose now to pass an instrument through the urethral canal and demonstrate to you its present condition, and see if there has been any recontraction going on. I always take the precaution to warm an instrument before passing it into the urethra, so as to avoid bringing on a chill. Now you will remember, gentlemen, that this man's urethra, before operation, was of filiform size from one end to the other nearly the whole length of the urethra. We demonstrated the presence of no fewer than six or eight strictures that were fully down to 8 of the French scale. I am not using any force in introducing this instrument; just waiting and letting it follow its own way down the urethra. I will say that from the date of the operation until about a week ago a No. 28 instrument was the largest that had been introduced. You see that this instrument, No. 31, has passed in slowly but without difficulty, through the entire urethra, and comes out with perfect ease. Had we performed dilatation or division in this case, instead of division of the stricture, you can readily conceive what would have been his condition now: more or less recontraction would have been certain. When we began the treatment, the passage of the smallest instrument in the most gentle manner would bring on a chill, and every time an attempt was made to increase the size of the urethra in the least degree he would have a chill, which sometimes would return every day for some time after. He came to the hospital on account of chills, and it was supposed that they were of malarial origin and that this was his chief difficulty. Such is the case with

many a man who comes to the doctor with stricture. He comes, not to be relieved of stricture—that is a secondary affair; but he is suffering from chills and fever. Ordinary chills and fever are so like those accompanying irritation from urethral stricture that any one not on his guard is liable to be deceived. There is absolutely no difference either in the manner of its development or in the manner in which it is controlled by quinine.

Some authorities say there is no use of giving quinine in cases of chills and fever arising from urethral irritation. I can only say of such authorities that I am very certain they have not had an *average* experience with the judicious use of quinine. I have had a number of cases, in which, after the introduction of an instrument, a chill followed if quinine were not given, but if quinine were given no chill would follow. I have asked patients a few days after the introduction of an instrument, and have been answered: "I forgot to take my quinine, and had a chill." They take it as a matter of course, from personal experience, that quinine will prevent a chill. You will find that in the majority of cases where a chill threatens after the introduction of an instrument, it can be prevented by giving ten grains of quinine, either as a suppository or by the mouth, before introducing the instrument. This I invariably do when exploring a sensitive urethra, and also where for the first time an instrument is to be passed into the bladder. In many cases, however, in which I explore the urethra, I do not pass the instrument into the bladder, for the reason that stricture is very seldom situated near the bladder. I cannot be too emphatic in warning you to keep out of your patient's bladder. Do not enter it even for exploratory purposes, unless you think it absolutely necessary to do so. First, explore the anterior urethra and relieve as far as practicable any abnormal condition that may exist there. Keep out of the bladder if possible. It is the disposition of the profession all over the world, when exploring a urethra or dilating a stricture, to pass the instrument on into the bladder. Now, there is absolutely no danger in passing an instrument down to the membranous junction, but there is always danger in passing an instrument beyond that point on into the bladder. Death has occurred in more than one instance, from suppression of urine, caused by simply and gently passing a bougie into the bladder, where disease of the kidneys and bladder were present. I have known many cases of swelled testicle that occurred from this cause. I have known of at least one case where the loss of a testicle was directly due to introduction of bougies for dilatation of stricture, thus setting up an orchitis which finally ended in an abscess, which destroyed that organ. I think, therefore, that I am justified in saying you should keep out of the region of the bladder, whenever this is possible. I will now show you how an instrument, when necessary, should be passed down to this point and beyond. I will first demonstrate to you the principles on which instruments are constructed for the purpose of easy passage through the urethra. This manikin which I now show you is one of the admirable anatomical preparations of Auzeaux, of Paris. Here you see the way the bladder lies. Here we have the pubes, here the deeper portion of the urethral canal, the prostatic portion, and between the two layers of the triangular ligament we have the membranous urethra; here the bulbous urethra, then the spongy urethra; and down here at this point is the bulbo-membranous junction. Now, practically, from the urethral orifice to the bulbo-membranous junction, we may term the straight urethra, and from that point on we have the natural curved, fixed portion of the canal, where it is attached to the pubes and likewise to the perineum, and this curve is recognized in works on this subject (first spoken of, I believe, by Sir Henry Thompson) as the sub-pubic curve. This sub-pubic curve is found in the well-formed human subject to correspond to the arc of a circle, three and one-fourth inches in diameter, the chord of the arc being two inches and three-fourths, and coincides with the course of the urethra from its junction with the bladder to a point an inch and a half anterior to the bulb, as I show you in this diagram. The lowest point of the curve is, as you see, just about opposite the anterior layer of the triangular ligament when the body is upright. In children from the greater elevation of the bladder above the pubes this curve is more acute, and in old men with enlarged prostate it is more obtuse, but in the normal well-formed adult it is as here shown. The curve of all solid instruments which are intended for easy introduction through the urethra, or into the bladder, are made to correspond with this sub-pubic curve. They usually consist of a straight portion, from six and a half to eight inches in length, and a curved portion, corresponding with the sub-pubic curve, which may be three and one-fourth inches in length on its convexity, like the sounds of Sir Henry Thompson and Prof. Van Buren, which I now show you; or, following the same curve, they may be much shorter, like this, which I prefer, which is no more than two and a half inches on its convexity. The length of this curve is not of importance; the one, as a rule, easiest of introduction is that to which you are most accustomed. The short curve seems to me more easy to direct, and enables the operator to be more sure of the exact locality of its point than one with the longer curve.

All your solid urethral instruments should be based on the sub-pubic curve, which you should always keep in your mind when passing them, and should also keep in mind the obstacles to be met in the deeper portions of the canal.

In the anterior or movable portion, if there is no stricture we need have no trouble. It can be moved about with the instrument in it without producing pain. No particular obstruction will be met here in passing a large instrument if the passage is normal. Just back of the glans is a little sinus, called the lacuna magna, which may or may not be present, but it is a matter of no consequence when you are passing a large instrument. We often meet with no trouble until we get down to the bulbous urethra, and here we begin to come to the deeper urethra. This is the muscular portion of the canal *par excellence*, and is known as the membranous urethra; and here, half an inch anterior to it, we begin to feel the influence of the accelerator urinæ, which surrounds the bulb, and may obstruct the progress of the instrument. When you think you have reached this point, you should pass your instrument very gently and carefully. Imagine you are passing it upon yourself, and pass it with equal care. Young men in dispensaries and hospitals often like to demonstrate their skill by passing the instrument quickly, urging it down, instead of letting it go slowly. I had a personal experience of this sort once, and received a rebuke which I have not forgotten. It was on board a ship of which I was the surgeon. An old medical gentleman from one of the Southern States, a very excellent and intelligent man, was present. I was fresh

from Blackwell's Island hospital. A patient called, upon whom it was thought necessary to pass a urethral sound, and I took one, made a rapid introduction, gave the *tour de maître*, and passed the instrument into the bladder, but the patient did not enjoy it; he complained. I said, "Oh, it has not hurt you." The doctor looked quietly on, and, after the patient had left, said it was nicely done. "But," he said, "my dear boy, did you ever have an instrument passed into your own bladder?" "No." "Now, take my advice; the first chance you get, just pass an instrument on yourself." I said I would. I did, and I never attempted the *tour de maître* after that fashion again; never from that day to this. The "*tour de maître*" means to pass an instrument reversed, like this, between the thighs, and down to the bulb; turn the handle with a single sweep to the vertical position, quickly depress, and pass it into the bladder. Of course, it must go into the bladder—or somewhere else. The leverage, with the end of the instrument under the pubes and your hand on the handle, is very great, and a slight force thus applied may make a false passage. I do not want any of you to attempt the *tour de maître*, for there is a safer and a better way, and this is to hold your instrument lightly between your thumb and forefinger, let it feel its way slowly down the pendulous portion of the urethra. It doesn't matter whether you are on the right or left side of the bed, but let your instrument pass down gently to the membranous junction, and be careful to use no violence. When you begin to feel a little resistance at the membranous portion, wait a moment; see now that the curved portion of your instrument is in position to adapt itself to the sub-pubic curve—the concavity corresponding to the pubis and the handle nearly perpendicular to the axis of the body; don't be in a hurry, and if there be no stricture there you will feel the resistance subsiding before the simple weight of the instrument, the urethra acting like an intelligent being, its muscular contraction giving way because no force excites its antagonism, and your instrument will pass along quietly into the membranous urethra, as you gently depress the handle of the sound, and the first thing you know your instrument is in the bladder.

Much skill may be exercised in passing an instrument into the bladder, but the skill consists, first, in knowing accurately the anatomical course of the canal, and then in waiting, being gentle, and letting the instrument *follow* the course of the urethra, and not lead it, holding it back, rather than urging it, when resistance is met. When you reach the triangular ligament the instrument should be tilted up a little, and at the membranous urethra it is liable to be grasped, and should you make efforts to push it in it will resist, and you will have to wait a moment or so, and handle it very gently. After it reaches the prostatic urethra no more difficulty will be encountered; and as you now gently depress the handle of the instrument it will pass on into the bladder, for there is plenty of room in the prostatic urethra. The membranous urethra is the *habitat* of spasmodic stricture, and that is the kind of stricture which receives most treatment, and it is produced oftener by being urged against the anterior wall of the triangular ligament than by any other cause. Pass an instrument down a healthy urethra to that point and do a little violence and you will not be able to pass it any farther, because the muscle will close the urethra, and behave often exactly like an organic stricture. Even ether or chloroform will not make it give way—will not relax the spasm. Thus, we have spasmodic stricture, which simulates organic stricture in every respect for the time being. Therefore, when we have been able to pass an instrument down as far as the membranous junction and there meet with resistance, we should hesitate some time before concluding there is organic stricture. The trouble is that many, on meeting with an obstruction at this point, take a smaller and a smaller instrument, until finally they get one so small that the urethra thinks it is not worthy of its notice, and allows it to pass, and then a very small bulbous sound is forced into the membranous urethra, and is held by the spasm. This is considered proof that there is an organic stricture, and the patient is a lucky man if he does not get operated upon. Many a man has not been so lucky, when an obstruction of that sort has been found. At the time of examining the patient it has been concluded he had a filiform stricture at that point, and he has been operated upon. We do not have to go far for proof of this statement; but it also comes from abroad.

This question of spasmodic stricture was very lightly treated many years ago, but to-day the profession is much more respectful in regard to it, and perhaps it will yet become more so when it becomes familiar with the recent teachings of men like Verneuil, Esmarch, and other distinguished foreign authorities, who have recently expressed their opinions regarding this matter very positively. Esmarch, I think, has claimed quite as much, if not more, for spasmodic stricture than I have ever done.

Let us bear in mind, then, when introducing instruments into the urethra, the point of greatest importance. In the first place, it is the best surgery to treat your patient, when he is supposed to have stricture, without entering the bladder. In the larger proportion of cases the stricture is located in the anterior portion of the urethra, and this proportion apparently increasing from year to year, because strictures in this region are more generally recognized. The consequence of this will be better results in the treatment of stricture, for the division of a stricture in this portion of the urethra is attended by absolutely no danger other than attends any trifling surgical operation. But it is from the fixed portion of the urethra included in the subpubic curve where danger from operating or passing instruments is to be apprehended.

Napoleon's Physiological Views.—In the recently published memoirs of Prince Metternich, we find the following interesting anecdote: "I will here mention an anecdote which shows to what an extent he relied on his innate energy and vigor of mind. Among the paradoxes which he liked to maintain on questions of medicine and physiology (subjects for which he had a natural predilection), he asserted that death is often only the effect of an absence of energetic will in the individual. One day at St. Cloud, he had had a dangerous fall (he had been thrown out of a carriage on to a great block of stone, narrowly escaping severe injury to his stomach); the next day, when I inquired how he was, he replied very gravely: 'I yesterday completed my experiences on the power of the will. When I was struck in the stomach I felt my life going; I had only just time to say to myself that I did not wish to die, and I live! Any one else in my place would have died.' If this is to be called superstition, it must, at any rate, be granted that it is very different from that which had been attributed to him."

Original Communications.

CHLORAL HYDRATE.

By H. H. KANE, M.D.,
NEW YORK.

PART IV.—CONTINUED.

EFFECTS ON THE SKIN.

The skin.—Chloral also exercises a peculiar effect on the skin; as peculiar and unusual as the effect on the eyes. This is not the only drug that has the peculiarity of sometimes affecting the skin, as will be seen by the following summary by Dr. Farquharson:[24]

"Arsenic in medicinal doses has been observed to produce herpes, and in larger doses an eczematous eruption. Phosphorus sometimes produces purpura. Iodide of potassium sometimes produces papules, which quickly become pustular. These may develop into ecthyma or bullæ. Bromide of potassium more frequently produces an acne. Nitrate of silver produces an indelible, dull, leaden color. Mercury brings out an eczematous eruption of the skin. Chloral hydrate causes an erythema, scarlet-fever-like eruption, hemorrhagic purpura. Aconite is occasionally attended by an irritable vesicular eruption. Copaiba often produces a sort of urtica. Quinine occasionally causes two kinds of eruptions: The first are erythematous in character, attended by most distressing itching and tingling, resembling scarlet fever both in the appearance of the rash and the free desquamation which follows; the second assumes a more measly aspect, being occasionally papular, but more generally suggestive of urticaria that occurs in discrete rose-red patches, spreading universally over the skin, and occasionally attended with marked gastric disturbance. Strychnia has produced a rash resembling that from quinine. Belladonna may produce a bright red rash, very like scarlet fever. Cod liver oil occasionally causes acne. Salicylic acid has produced a peculiar, bright punctate rash with erythematous patches, eventually surmounted by vesicles, with sore throat and constitutional disturbance resembling scarlet fever."

Martinet, Thése de Paris, 1879, notices the erythema from chloral which appears in certain individuals, especially after eating or the use of alcoholic liquors. He finds that it occurs only in certain individuals predisposed to its influence, that it is accompanied by palpitation and dyspnœa, often severe, but that there is frequently no fever and the duration is often brief. Witkowski, in a recent paper in the *Deutsch Med. Wochenschrift*, goes farther, and makes the practical point that those persons in whom the chloral rash appears, after the ingestion of medium or moderately large doses (2 to 6 grammes = 30 to 90 grains), are just the ones most liable to the fatal accidents that sometimes attend the use of the drug. It may therefore serve as a useful warning symptom in some cases indicating a weak and irritable condition of the vaso-motor system, contra-indicating the further use of chloral. In such cases he says morphine, which first affects the respiration, and as a rule does not disturb the circulation, may be preferably employed for the same purposes. The question whether we have anything to fear on the side of the circulation must always be considered in choosing which one of these two agents is to be employed.

Similar eruptions have been observed by Schüle in Germany, Crichton Browne and Winter Fisher in England, and Mayor in France.[25]

Dr. D. C. Davies, of Columbus, Wis., has seen eruptions follow the use of this drug, in the form of maculæ and rose spots.

Dr. F. L. Forsyth,[26] of Providence, R. I., says that in one case urticaria might have been due to it. It disappeared on stopping the drug.

Mr. Thomas Bryant[26] gave chloral to a boy aged nineteen, suffering from tetanus. In seven days a rubeoloid eruption made its appearance. The chloral was stopped and the rash disappeared. Chloral given again and the rash reappeared.

Dr. White,[27] of Boston, noticed an eczematous eruption from the use of chloral. It disappeared when the drug was stopped.

Dr. G. A. Shurtleff,[28] Medical Superintendent State Insane Asylum, Stockton, Cal., has seen erythematous and eczematous eruptions produced by chloral.

The following clipping was kindly sent me by Dr. Allison Maxwell, of Indianapolis, Ind.:

"In *La France Medical*, Dr. Mayer records five cases in which the administration of chloral in affections of various nature was followed by definite symptoms in uniform order. These came on after eating, beginning with redness of the face, excited action of the heart, and dyspnœa. The redness spreads to the neck; the palms, and sometimes the soles, being also affected. The eruption then appears on other parts of the body, and especially on the dorsal surface of the hands and wrists, the superior and anterior part of the thorax, the extensor surfaces of the knees and elbows, and the dorsum of the foot. It lasts from half an hour to a few hours, with itchiness of the part affected, and is followed the next day by slight desquamation. The spots are of a deep rose color, are sometimes slightly elevated, and have sometimes a sinuous border.—*Medical and Surgical Reporter.*"

Dr. William Ingalls,[29] at a meeting of the Suffolk District Medical Society, reported the case of a girl eleven years old, suffering from general debility. Six grains of chloral were given for insomnia. Nothing unusual first night; second night same dose; next morning spots of a red color, deeper in hue than erythema, appeared successively on the cheeks, around the mouth, and behind one ear. Disappeared after eight hours.

Dr. Damon thought it might be classed as *erythema fugax*, a neurosis of the skin, dependent on some such irritation of the stomach as chloral would produce.

Dr. J. Foster Burt,[28] of Boston, Mass., has known numbness and itching of the skin follow its internal use.

Prof. Henry M. Lyman, of Chicago, Ill., saw chloral produce an erythematous eruption in a lady after confinement; also in the case of a two year old child of an excessively neurotic temperament.

Dr. W. P. Bolles,[28] of Dorchester, Mass., saw, in

[24] British Medical Journal, Southern Medical Record, November 20, 1879.

[25] Practitioner, March, 1880.
[26] Lancet, November 2, 1872.
[27] Boston Medical and Surgical Journal, 1871, p. 185.
[28] By letter.
[29] New York MEDICAL RECORD, 1872, p. 416.

one case, an erythema about the eyes, accompanied by intolerable itching, following the use of chloral.

Dr. J. Wilkie Burman[30] records two cases of eruption from chloral. Female, aged thirty years; acute melancholia. After taking gr. xx. t.i.d. for ten days a scarlet rash came out over the whole body, resembling scarlatina. Fever and sore throat. Tonsils enlarged. No "strawberry" tongue. Desquamation on the fifth day after chloral was stopped, with recedence of rash. Again ordered chloral. Another attack in fourteen days. Again disappeared on stopping chloral. No albuminuria throughout. Desquamation more marked than first time. Fever high.

No. II.—Female, aged twenty years; imbecile, of rheumatic diathesis. Had been in the asylum several years. On December 2, 1879, for choreic symptoms was given chloral gr. xx. t.i.d. In a few days raised to gr. lxxx. in twenty-four hours. Improvement.

December 19th.—Only dose two scruples at night.

December 28th.—Covered with scarlet eruption; fever; sore throat; no strawberry tongue.

January 2, 1880.—Eruption fading; desquamation on face and neck.

January 16th.—Completed.

January 17th.—Complete relapse.

Dr. Oliver C. Wiggin,[31] of Providence, R. I., noticed, in two instances, a papular eruption, resembling lichen simplex. It was only temporary.

M. Brochin, in a communication to the Société de Médicine Pratique (*Bull. gen. de thérapeutique*, February 15, 1880), gives the case of a young, strumous girl who was attacked with eczema of the lips, who, on two different relapses, saw the affection return immediately after the administration of a potion and a wash of chloral, and with such intensity that the mouth and tongue were attacked. The diagnosis of this curious case of buccal eczema was confirmed by M. Bazin.

M. Limousin has seen reddening of the face, almost like erysipelas, disappearing with the suppression of the medicine.

M. de Boyer had seen in Bouchut's practice scarlatiniform eruptions, but without angina, develop themselves in the cases of choreic patients submitted to large doses of chloral. They disappeared spontaneously.

M. Gillet de Grandmont had observed five analogous cases with manifestation of erythema on the eyelids and around the neck.

M. Grellety has noticed that the irritating contact of chlorine with one surface and its elimination from the other must play the principal part in the production of this singular buccal eczema. But this erythema is controlled by an individual susceptibility which is often met with among the dermopathics; it is thus that the use of alcohol and of coffee is sufficient to act as a spur to certain eczemas; in all cases there exists a personal idiosynerasy for which we must make allowance from a therapeutic and dietetic point of view."[32]

Dr. J. N. Lawson,[31] of Silver Creek, Miss., reports to me the case of a man, aged sixty-two years, suffering from spinal irritation in whom the continued use of chloral produced a red, pustular eruption. The doctor is uncertain as to whether the eruption was due to the chloral, and from his description of the case it seems more likely that it was produced by the bromide of potassium, which was present in large amount in the mixture taken.

Dr. Breward Neal[33] writes: "A female patient, aged twenty-one years, under treatment, suffering from dementia, with periodical attacks of sexual excitement, generally coexisting with the catamenial flow. During the first attack of excitement she was ordered to take gr. xxx. chloral night and morning. On the third or fourth day of its administration an eruption appeared, in every respect similar to measles—in fact, that was the diagnosis, she having a little coryza, catarrh, etc. Temperature in axilla, 100° F. Chloral stopped, and eruption disappeared in three or four days without leaving any sequela of measles. Four or five weeks later she was again excited and sleepless. Chloral, as before; on its administration the measles reappeared, much to the surprise of the medical officers. Chloral immediately withheld and rash disappeared in twenty-four hours."

Dr. John B. Squier, of Sulphur Springs, Ohio, reports to me the case of a lady, who was suffering with disease of the brain and spinal cord, that eventuated in paralysis and was accompanied by mental aberration. She was given chloral hydrate, from thirty to ninety grains a night, for some weeks, when there appeared pustules, with a hard, inflamed base, that looked like small boils. The doctor believed them to be due more to the vitiated condition of the system than to chloral.

Dr. William G. Wilson, of Shelbyville, Ill., reports to me the case of a lady, aged sixty years, suffering from schirrus disease of the uterus. Chloral, fifty grains in one night, produced a well-marked urticaria that disappeared on the discontinuance of the remedy.

A patient of mine, under treatment for the morphia habit, was given ten grains of Schering's chloral to produce sleep. Urticaria, with intolerable itching followed, and lasted for four days. In a week's time I repeated the dose with the same result.

The following interesting letter is from Dr. W. C. Telford, of Brushland, N. Y.:

"In regard to my case, there was a question about the bromide producing the eruption. I was of the opinion it did, which was backed by some of our good physicians; while another one claimed to have given the bromide in heroic doses without any such result. Was called to see the case February 3, 1879. The lady had always been healthy; about forty-six years of age; no uterine trouble, the insanity being due to mental causes. When I commenced the bromide and chloral, gave dose of about fifteen grains of bromide and ten grains of chloral. After using for about a week, there appeared upon the whole body an eruption, looking very much like a general eczema, very itchy, and high state of febrile movement with same. After seeing the fact that upon the days when the patient was quiet and did not need to take large amounts of mixture, the eruption was not as bright, when she took more the opposite was the case, I ordered it discontinued, when the eruption subsided. Not being able to control her with other remedies, I again gave it with same results, only more aggravated form of eruption; when I discontinued it with same result as before. The husband of the lady, being in a neighboring village on business, saw one of the consulting physicians and told him about the case. He told him it could not be the mixture which caused the eruption. Coming home, he found his wife acting wildly, and being

[30] Lancet, March 16, 1872.
[31] By letter.
[32] American Journal Medical Science, July, 1880, p. 279.
[33] Lancet, August 23, 1873.

unable to control her with other means, and with the opinion of the physician, he gave her the chloral and bromide during the night, which was followed by a profuse eruption which destroyed the entire skin, the whole being replaced by a new. She was then sent to Utica Asylum, where she had attacks of eruption; as to treatment, I do not know what it was there."

The following extremely interesting and conclusive extract is taken from Dr. Ludwig Kirn's article[34] on "Chronic Poisoning by Chloral:"

"The most prominent of the symptoms were those connected with the skin; their production, for the most part, depended on the cutaneous vaso-motor nerves. They were more or less extensive erythemas and pustular or papular exanthemata."

The clinical observations of Schüle[35] on chloral erythema must here take the first place. "The use of chloral produces a tendency to fluxionary hyperæmias, with increased and strengthened heart action. This is first and most considerably manifested in the head; the vessels being dilated and an intense erythema occurring at first in spots, but afterward more diffusely. In the more pronounced forms the erythema extends downward to the trunk and becomes general, in which case it seems to follow, by preference, the course of the larger nerve-trunks. This chloral rash remains latent until it is set going by some stimulus to the vascular system, but then appears in an intensity and rapidity which are proportioned to the existing current of (general) chloralization."

I reproduce these results of Schüle[36] probably because I can entirely confirm them, although from the varying chloral idiosyncrasies of individuals, they are not always observed. The statement is true for a great number of cases, and I have at this moment a series of patients under my eyes in whom the chloral rash can be produced with the certainty of an experiment. For instance, in a paralyzed patient, who took thirty grains of chloral every night: ten minutes after she had drank her beer there occurred increased action of the heart and spots of roseola on the forehead, nose, cheeks, and neck, which quickly coalesced into a patchy erythema with swelling and heat of the affected parts, which symptoms disappeared in about an hour. Still more strongly appeared the same symptoms in a young and previously healthy woman, affected with mania, who every night took thirty to forty grains of chloral (although she had not previously suffered from congestion of the face). As soon as she took a glass of beer there was a strong pulsation of the arteries, and the whole face was swollen and of such an alarmingly deep color that we were obliged to forbid the use of wine and beer.

At present we but rarely allow alcoholic drinks to patients who are being treated with chloral. In another young woman suffering from mania, who took thirty grains of chloral at night, four ounces of wine were sufficient to induce the chloral rash.

Chloral erythema has also been studied from other sides. We may specially mention the observations of C. Browne, which led him independently to results similar to those of Schüle. He, too, observed as a consequence a great tendency to congestions of the head and face, which, in a few cases, were limited to the cheeks, but in many extended to the forehead, neck, and ears. He observed simultaneous excitement of the vascular system, strong contraction of the pupils, and injection of the conjunctiva. The symptoms also were at their height after the taking of quite moderate doses of alcohol. He attributed this to temporary paralysis of the vaso-motor centres in the head and neck. Browne also observed another case in which, after a dose of chloral (the amount of which is not stated), a diffuse inflammatory redness appeared over the whole body, so that it was thought advisable to isolate the patient; in ten hours this redness had disappeared. Husband gave to a patient daily for eight days two twenty-grain doses, and for five days more two thirty-grain doses of chloral. A scarlatinal rash broke out over the whole body, accompanied by fever and tenderness of the skin, and was followed by desquamation.

The effect is not always limited to congestion and erythema of the skin, but other skin affections are occasionally produced.

Reimer observed in a series of patients the following fact, especially after the use of morphia and chloral together:

After slight external pressure there was congestion in circumscribed spots with much lowered sensibility, which quickly disappeared if the pressure was soon removed. Under less favorable circumstances the red spots swelled and assumed a darker color. Vesicles were soon developed which might even run on to sloughing. This phenomenon is distinguished from the usual mark after long pressure in conditions of gradually sinking vitality, especially because, whilst the epidermis and cutis remain intact, it extends into the deep subcutaneous tissue; for instance, our female patients, who had taken sixty grains of chloral daily, first had erythema of the face and later a papular rash on the arms with red bases. In some, nettle-rash occurred.

The swelling, accompanied or not by rash, which has been noticed in the face after continued use of chloral, may equally occur on extensive portions of the body.

In several patients observed at Illenau a swollen condition of almost the whole body was noticed, which might be ascribed to serious infiltration of the skin from stasis of blood.

A case somewhat similar to one already reported is given by Dr. J. H. Raymond:[37] Herpes labialis appeared after a few days in two cases of puerperal eclampsia treated by chloral, *which was given subcutaneously.*

Dr. C. H. Hughes, of St. Louis, Mo., has seen eruptions, "especially in inebriates, and when given with egg-nog, as I often used to give it."

Cutaneous eruptions have also been noticed by the following correspondents, and some others whose names I do not give:

D. N. Knisman, of Columbus, O.; E. H. Coover, of Harrisburg, Pa.; A. P. Hayne, of San Francisco, Cal. (rarely); Allison Maxwell, of Indianapolis, Ind.; *Practitioner*, January, 1880; Dr. Clark, of Millington, Md.; A. P. Boon, of Jefferson, Texas; James P. Landis, of Hollidaysburg, Pa.; D. B. Florentine, of Saginaw, Mich.; and R. E. Howard, of Durand, Miss.

Dr. Dixwell,[38] of Boston, Mass., noticed a papular, broad-based eruption on face, with reddening of nose, from chloral.

Dr. Bradley,[38] of this city, says: I have seen the body covered with furuncles which were attributed to it, and which soon disappeared on withdrawing the remedy.

[34] (Allgem. Zeitsch. für Psychiat.) Practitioner, 1873.

[35] Ueber eine bemerkenswerthe Wirkung des chloral Hydrats, Allgm. Zeitsch. für Psych., xxviii. 8.

[36] Kirn, op. cit.

[37] New York MEDICAL RECORD, December 1, 1869.

[38] By letter.

NASAL STENOSIS.

Its Influence on Olfaction, Audition, Vocalization, and Respiration, and its Treatment.

By J. O. ROE, M.D.,

ROCHESTER, N. Y.,

FELLOW OF THE AMERICAN LARYNGOLOGICAL ASSOCIATION, ETC.

(Read before the New York State Medical Society, February 1, 1881.)

The office of the nose in the animal economy is a very important one.

Besides being a part of the mechanism of facial expression, it performs four very important functions: 1st, it contains within its cavities one of the organs of special sense, that of olfaction; 2d, it affords access of air or ventilation to the middle ear, or tympanum, through the nasal passages and Eustachian tube; 3d, it enters as a prominent factor into the mechanism of vocalization; 4th, it is a very important portion of the respiratory apparatus in affording protection to the organs below.

For any or all of these functions to be performed properly the essential and indispensable condition is a clear and unobstructed passage through both the nasal openings.

Obstructions of the nasal passages may be divided into three principal classes: 1st, those arising from defective growth or deformity of the cartilaginous and bony framework; 2d, those existing in the soft parts, resulting from hypertrophic or other diseased conditions; 3d, those caused by foreign bodies and neoplastic growths.

I. *Obstructions in the hard parts.*—In studying the development of the nose in relation to the growth of other parts and organs, we find that it takes place much more slowly, and that the size of the nasal cavities in children are much smaller relatively than in adults.

The anthræ Highmorianum, which are the first of the sinuses to appear, begin to be formed about the fourth month of fetal life, and at birth are very small, round cavities, but as development takes place they become large, irregular, and pyramidal.

The frontal sinuses and ethmoidal cells do not begin to form until two years later.

At birth the vertical plate of the ethmoid is cartilaginous, but the vomer is already ossified. The cribriform plate is a mere membrane continuous with the falx cerebri of the dura mater, and attached behind to the partially ossified body of the sphenoid.[1]

It is this late development of the central portion of the face and skull, and more particularly of the frontal eminences and sinuses, that gives a flattened appearance to the nose of the infant.

As a result of this tardy growth many errors of development take place.

To those already recognized, viz., hare-lip, cleft palate, cervical fistulæ, and dermoid tumor, Dr. Harrison Allen, of Philadelphia, adds another, the asymmetrical rate of growth between the visceral arches, which prevents the perfect shaping of the oral and nasal cavities.[2] Thus, when one arch has not grown as actively as the other, the nasal chamber on the same side will be found narrowed and obstructed, and the septum deflected to that side, while the opposite chamber will be large and capacious.

In these cases of congenital deformity of the oral and nasal cavities the teeth will also be found irregular, the permanent incisors overlapping and convergent, the two halves of the upper dental arch more or less V-shaped, the vault of the mouth high and narrow, and the nose very peculiarly prominent and projecting.

This projecting appearance of the nose is due to two causes: 1st, a retarded growth of the perpendicular plate of the ethmoid; 2d, a high-pitched and narrow, hard palate. This prevents the vomer from growing downward, and, not being able to grow backward, it is crowded forward, thus producing the projecting and often unsightly nose. In addition to these errors in developmental force, we have another force operating on these delicate and yielding parts, when the nasal passages become occluded. It is the suction caused by deglutition and the repeated attempts at inspiration through the nose, which tend to produce a partial vacuum in the nasal chambers, thereby preventing the frontal eminences from expanding, and causing the anthra to remain small and undeveloped.

Deviation of the septum from the normal median line is a frequent cause of nasal obstruction. The frequency of its occurrence has been shown by Dr. Allen[3] in his study of fifty-eight adult crania preserved in the Wister and Horner Museum. Of these only eighteen exhibited normal nasal chambers; in the remaining forty, nineteen were found in which the curvature was so great as to be in contact with the superior and middle turbinated bones. In forty-nine skulls examined by Semeleder, the septum was straight in ten of them, bent toward the left in twenty, toward the right in fifteen, and in four it was in the shape of an S.

Usually, the deflection is in the anterior portion of the septum, although there may be as many as three distinct curves, thus forming in shape a letter S, and thereby occluding both nostrils.

I have recently had under treatment a child four years old, having a severe catarrhal trouble and incipient deafness. In this case the septum had three distinct curves, closing both nostrils. This was congenital and the nostrils had been impervious to air since birth.

In children with deformed nasal septa the external contour of the nose is usually straight, but, as the child develops, the growth of the septum turns the nose to one side, narrowing or nearly closing one or both nostrils. This is also the case with the cartilaginous portion, whether from congenital deformity or accidental displacement of the cartilage, which has been allowed to go uncorrected.

Deflection or deformity of the nose is often produced by the common practice of pressing more firmly on one side than the other in the act of blowing, in order to force out a profuse or tenacious secretion from the other side.

Beclard explains it by the habit of wiping the nose with the right hand, as it is most often turned to that side, while in left-handed people it is turned to the left side. I have seen several cases in which the septum was deflected to such a degree from this cause as to greatly narrow the calibre of the nostrils.

In other bony structures of the nasal fossa we meet with deformities diminishing its calibre.

Not unfrequently one or more of the turbinated bones are very large, and projecting across to the vomer, occluding or greatly narrowing the nostril; and, as has been observed by Lennox Browne, the

[1] Watson: Diseases of the Nose, p. 22.

[2] Philadelphia Medical Times, December 6, 1879, p. 120.

[3] American Journal of Medical Science, January, 1880, p. 70.

nostril may also be occluded by angular curvature forward of the upper cervical vertebra.[4]

II. *Obstruction by the soft parts.*—The form of nasal obstruction which is most frequently found in the soft parts is a hypertrophied or turgescent condition of the tissues covering the inferior and middle turbinated bones and the lower half of the septum. The cause for this is in the histological structures of the tissues of this region.

Each nasal passage is divided anatomically into three distinct regions, viz.: the *vestibule*, the *respiratory region*, and the *olfactory region*.

The vestibule, the anterior portion of the nasal cavity, contains but little loose cellular tissue, but few blood-vessels, and accordingly it is rare that an obstruction occurs in the soft parts of this region, except from membranous occlusion. The olfactory region is located in the superior portion of the passage, and extends downward to the upper border of the middle turbinated bone, and to a corresponding extent on the septum, where the olfactory nerve is supposed to terminate. The respiratory passage is that portion of the cavity below this point, and is to be regarded as a continuation of the respiratory tract.

The tissues of these two regions differ greatly in character and thickness. The mucous membrane covering the superior portion is scantily supplied with blood-vessels, and is quite thin, except where the olfactory nerve is distributed. Here the membrane is thick, soft, and pulpy, and contains numerous glands of Bowman, which are peculiar to this region.

In the respiratory portion the mucous membrane and submucous tissue is thick and vascular and contains numerous mucous glands. In addition to the numerous venous plexi, which are here found very abundant, particularly over the posterior portion of the turbinated bones and the septum, there exists a true erectile tissue analogous to the cavernous tissue of the penis. The analogy of this tissue in the nares to the erectile tissue of the genital organs was observed by Kohlrausch[5] twenty-seven years ago. Afterward, Kölliker[6] observed the same similarity; but to Prof. Bigelow, of Boston, is due the honor of demonstrating the identity of these tissues, and pointing out the connection of this erectile tissue in the nose with nasal disease. To this he gave the name of "turbinated corpora cavernosa,"[7] a microscopic section of which is shown in Figs. 1 and 2.

A study of this tissue, in connection with frequent colds in the head, discloses the key to the great prevalence of obstructed nostrils from hypertrophied tissue, and also of nasal catarrh.

The rarity of the recognition of this cause leads Professor Bigelow to remark that "it will be perhaps conceded that practitioners are not generally familiar with this anatomy, of which they will readily make a practical application."[8]

[4] British Medical Journal, August 24, 1878, p. 282.
[5] Müller's Archives, 1853, p. 149.
[6] Handbuch der Gewebelehre des Menchen, p. 711. Leipzig, 1867.
[7] Boston Medical and Surgical Journal, April 29, 1875.
[8] Op. cit., p. 492.

It is the engorgement of this tissue which causes the sudden impaction of the nose in attacks of acute coryza or on exposure to irritants, and not simply engorgement of the vascular mucous membrane, as is so commonly supposed. The effect which prolonged engorgement of this cavernous tissue will produce in the surrounding parts is illustrated by the case cited by Dr. Bumstead of an attack of urethritis, which was brought on by an excitement of one day's duration.[9] Thus, as a result of each cold or engorgement, from whatever cause, there is more or less proliferation and exudation of plastic material into the surrounding tissues, which, becoming organized, leads to permanent hypertrophy. The accompanying illustrations represent this hypertrophy, not to an extreme degree, but, as we more com-

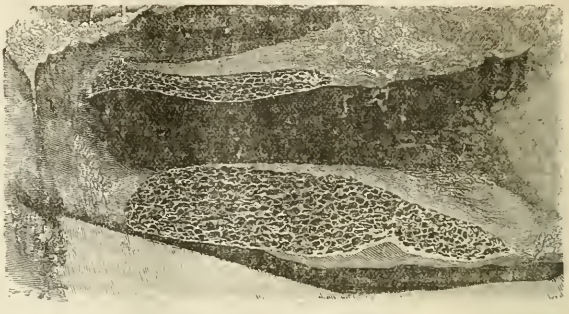

FIG. 1.—Portion of upper jaw, showing inferior and middle turbinated bones, sections of turbinated corpora cavernosa, inflated, dried, and magnified two diameters (after Bigelow).

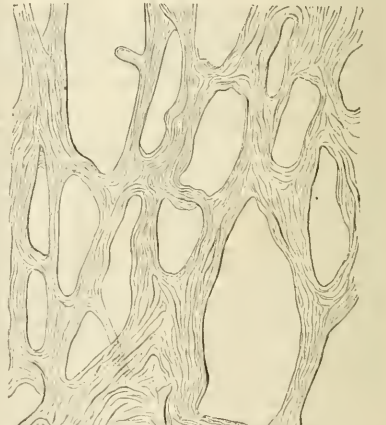

FIG. 2.—Section of posterior extremity of a turbinated corpus cavernosum, hardened in alcohol, treated with iodine and glycerine, and magnified ninety diameters, showing cavities, walls, and trabeculæ (after Bigelow).

[9] Venereal Diseases, p. 44. 1879.

monly find it, as taken from one of a number of similar cases in the practice of the writer.

We can readily understand from the nature of this tissue, being as it is under the control of the vasomotor nerves, subject and very sensitive to emotional influence from various external impressions, how it is that the nostrils will become so suddenly closed from slight exposure to local irritating causes, as dust, acrid vapors, and the like; or from peripheral reflex causes, as sitting in a slight draught or sudden exposure to cold chilling the surface of the

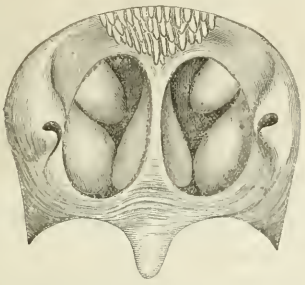

Fig. 3.—Represents the posterior appearance of the inferior and middle turbinated bones and the septum, showing the hypertrophied tissue.

body; or from cold hands or feet. Turgidity of this tissue is often caused by emotions. The emotional effect of a blush is also participated in by the other parts as well as by the cheek.

It is often observed that in conditions of apparently slight cold one nostril may be closed when soon there will be an interchange to the opposite nostril, the first nostril becoming free. This is undoubtedly due to the functional activity of the coats of the vessels. When the nostril becomes closed the local irritant is excluded and the engorgement soon

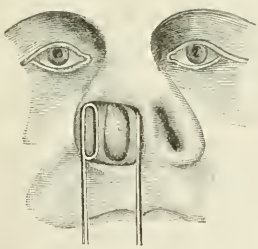

Fig. 4.—Represents the anterior appearance of the hypertrophy on the inferior turbinated bone.

subsides. Cold air is a common cause of these turgescences. The first effect of it, or of any slight irritant or stimulant, will often be to unload the tissues, but soon the vessels will dilate and increase the obstruction beyond its previous condition.

Etiology.—Hypertrophy of the nasal mucous membrane can invariably be traced to a catarrhal origin. In many cases it is supposed to be due to a catarrhal, strumous, tuberculous, rachitic, or gouty diathesis, which, to my mind, are only so many terms to indicate different and peculiar manifestations of a broken-down, anæmic, or impoverished condition of the system, in consequence of which the circulation is sluggish and the vitality is low, and, not being able to resist the sudden changes to which they are subjected, the parts most exposed become engorged and impairment or disorganization takes place.

Thus, if catarrh is seen affecting persons in otherwise robust health, it is considered a purely local disease. If it is seen in the same individual when the system has become impaired and the lymphatics involved, it is considered to be of strumous or scrofulous origin. If it is also seen in the same individual when tuberculosis has followed, it is then considered to be of tuberculous origin. Those cases with marked tendency to engorgement of the lymphatics are very often associated with adenoid hypertrophies in the vault of the pharynx, and in tuberculous patients there is often caseous degeneration and ulceration, sometimes ending in suppuration.

Catarrh is often thought to be hereditary, because the person's ancestors have been troubled with it; but, as I see it, they inherit a physical organism of low vitality and favorable to the development of this class of diseases. Catarrh, therefore, is the prime and great cause of these hypertrophies, and the consequent narrowing or closing of the nasal passages, and catarrh is the result almost invariably of neglected colds, which are allowed to run their course unchecked. From each cold results a slight augmentation of the hypertrophy, until sufficient has taken place to in turn become a cause for further and continued trouble.

In addition to obstruction and atresia of the nasal passages by hypertrophied tissue or by a congenital osseous deformity, a variety of other pathological processes may produce this condition—such as syphilitic ulcerations and cicatricial contractions, polypi, and other tumors and neuroses.

Functions depending on unobstructed nasal passages.—We will now briefly consider the functions depending on normally free and unobstructed nasal passages, viz.: *Olfaction*, *audition*, *vocalization*, and *respiration*, and the manner in which these become impaired or deranged by the narrowing or closing of these passages.

Olfaction.—In the perfect performance of the olfactory function there is of necessity a free and complete interchange of the air in the nasal cavities during each respiration, by which means the odoriferous particles are brought in contact with the terminal fibres of the olfactory nerve.

To fully perceive a very delicate odor we instinctively snuff or draw the air forcibly through the passages to carry the odorous particles with full force and in greater quantities up into the olfactory region; consequently, if the free circulation of air through the nose is obstructed or cut off altogether, the sense of smell becomes correspondingly impaired. In many instances, however, the impairment of the sense of smell is not proportionate to the degree of respiratory obstruction. This is owing to the greater frequency of obstruction of the lower than of the upper passage from the vascular tissue.

The sense of smell is also impaired by the disease obstructing the respiratory passage extending by continuity of tissue to the tissue of the olfactory region, impairing the free ends of the olfactory cells, or by covering them with mucus, which intercepts the odorous particles. Thus the sense of smell is impaired by any obstruction cutting off the circulation of air through the nasal passages. This is equally true whether the obstruction is located an-

teriorly or posteriorly, as well as if it be located at the region of olfaction.

Effect on the voice.—The tortuous nasal passages have the effect on the voice to increase its resonance, or to re-enforce it, as it is termed—an effect similar to that of the sounding-board in the piano, or, to use a better illustration, of the long and curved pipe in the horn or cornet.

In addition to the nasal cavities we have six sinuses—two maxillary, two frontal, and two sphenoidal—which communicate with the nasal cavities and also act as resonators to the voice.

These are evidently somewhat analogous in their effect to the reverberations produced by the fossæ found in the os hyoides in howling monkeys.[11]

Obstruction of the nasal passages has a marked effect on the acoustic properties of the voice.

It is a very common observation in case of attacks of acute nasal catarrh, or coryza, where the nasal passages are blocked by the swollen pituitary membrane, that the voice loses its timbre or resonant qualities, and, in common parlance, we "speak through the nose," a term, however, which expresses a condition directly opposite to the one that in reality exists. The peculiar thickness in the articulation, and indistinctness of enunciation, or so-called stagnation[11] of the tone, caused by partially obstructed nostrils, is most marked in pronouncing words ending in "ing," when the nasal ending is cut off. This defective enunciation and unpleasant nasal twang is to be observed in many public speakers, and is made painfully apparent to their listeners by the absence of euphony from their most rounded and polished sentences.

In cases of complete obstruction, the letters "m" and "n" become perverted into "b" and "d," as was first pointed out by Meyer[12] to be the case in obstruction from adenoid growths. The manner in which this substitution takes place is very clearly explained by Löwenberg.[13] In obstructed nares, much of the melody, richness, and fulness of the singing voice is lost. The highest, the head-tones, and usually the richest tones of the voice, are absent, and accordingly the voice becomes flat and nasal.

Effect on the ear.—Toynbee first demonstrated by a series of experiments the altered condition of atmospheric pressure in the fauces and ears when swallowing with closed nostrils.

Lucae repeated these experiments, and also observed that, with obstructed nostrils, these changes in atmospheric pressure produced abnormal tension of the membrana tympani, which gradually produced indistinctness in hearing.[14]

Let us briefly consider the manner in which these changes are produced. With the completion of the first stage, and during the second stage, in the act of swallowing, the nasal passages and the upper pharyngeal space are almost completely shut off from the pharynx by the soft palate being closed firmly against the posterior pharyngeal wall.

In the third stage of this act, the pharyngeal constrictors close by reflex action on the substance swallowed, and force it onward in its course to the stomach, and at the same time air is exhausted from the naso-pharyngeal space and middle ear, by the suction naturally following the descent of the bolus. This tendency to produce a partial vacuum is prevented by air entering freely through the nasal passages, and the normal air-pressure in the posterior nares and middle ear is maintained.

If the anterior nasal passages become closed, it is readily perceived that, during each act of swallowing, a corresponding degree of disturbance in air-pressure will take place in the nasal cavity, and in the ear also, because of the direct communication through the Eustachian tube.

This aural pressure one can very easily illustrate on himself by closing the nostrils while swallowing, when a marked sensation of pressure will be felt in both ears, supposing the Eustachian tubes to be unobstructed, and with the aural speculum this movement inward of the drum-head can readily be seen.

I have found it to be a rule that when the nostrils are not free enough to permit one to breathe entirely through them, even during a brisk walk, they are not sufficiently free to maintain the aural equilibrium during continued acts of swallowing.

It is an undoubted fact that, even in a state of repose, air continually permeates the Eustachian tubes,[15] and that more or less of the aërial[16] conduction of the sounds of the voice in autophony is through the Eustachian tubes.

Were this not the case, and did air enter the ears only during the act of deglutition, as stated by most authorities, an uncomfortable aural pressure and a slight impairment of the hearing would not take place almost immediately upon the stoppage of the Eustachian tubes by a plug of mucus, or from any other cause, whereas one may remain for hours, awake or asleep, without swallowing, and yet the ears and hearing remain perfectly normal.

Thus we see that a continually free communication of the external air with the middle ear is necessary to perfect hearing, and as the air cannot be supplied to the tympanic cavity by any other route than through the nasal passages and Eustachian tubes, so the aural pressure is lessened in proportion to the degree of nasal obstruction.

If the obstruction is great, aural changes take place rapidly; if it is only slight, they go on more slowly, sometimes imperceptibly, and sooner or later the most serious functional and structural changes take place.

The continuous external pressure increases the concavity, and causes a rigidity of the membrana tympani.

From this results an inactivity of the ossicular chain, and from this inactivity the delicate articulations become stiffened, impacted, and finally immovable. Besides, the tensor tympani muscle and ligament become relaxed and ultimately rigid from disuse, so that, as remarks Cassells,[17] "were it possible, which it seldom is, to remove the other consequences of altered tension, this contracted tendon and ligament mars the best efforts of the practitioner to effect an improvement."

The characteristic symptoms are gradually increasing deafness, giddiness, distressing tinnitus, which

[10] Watson: Diseases of the Nose, p. 19. London, 1875.

[11] Merkel: Stimm- u. Sprachorgan, S. 652.

[12] Medico chirurgical Transactions, vol. liii., p. 191. London, 1870.

[13] Les Tumeurs Adénoïdes du Pharynx Nasal, p. 26. Paris, 1879. Or, vide the writer's article, Adenoid Growths in the Vault of the Pharynx: their Removal by the Galvano-Cautery. New York MEDICAL RECORD, September, 1879, p. 245.

[14] Verhandlg. der Berliner med. Ges., 1267-68, S. 133; Ziemssen's Cyclopædia, vol. iv., p. 111.

[15] This view is quite elaborately advocated in an article on "The Method of Air-Supply to the Middle Ear," by Dr. Thomas F. Rumbold, St. Louis Medical and Surgical Journal, July 20, 1880.

[16] "Hearing by the Aid of Tissue-Conduction, the Mouth-Trumpet, and the Audiphone," by Samuel Sexton, M.D., American Journal of Otology, April, 1880.

[17] In a masterly article, with the striking title, "Shut Your Mouth and Save Your Life," J. P. Cassells, Edinburgh Medical Journal, February, 1877, p. 740.

diminish or altogether pass away as the deafness deepens.

If this condition is still allowed to go unrelieved, another and sometimes more serious set of changes supervene.

In consequence of the catarrh and thickening of the mucous membrane of the naso-pharynx, the Eustachian tubes become invaded, and concentrically closed, 1st, by the collapse of their flaccid walls by the suction or negative pressure; 2d, by the catarrh and thickening of the mucous membrane of the naso-pharynx invariably attending nasal stenosis.

The air thus shut up in the tympanic cavities is speedily disposed of, and, as a result of the diminished pressure, engorgement of the lining membrane of the cavity follows, and free serous transudation takes place sufficiently to fill the tympanum, and from the pressure of the imprisoned fluid the membrana tympani gives way, and an otorrhœa is established. Thus, when "unrelieved by art, nature attempts, although in a rude way, to perform a natural cure," by establishing an opening to the middle ear.

Effect of nasal stenosis on the organs of vocalization and respiration.—An office of most vital importance which the nasal passages perform is the protection which they give to the throat and lungs in the modification of the air we breathe, rendering it suitable for respiration.

The evil consequences of mouth-breathing are scarcely appreciated by those who have not studied or stopped to consider its effects.

Occasional allusion has been made to the subject by medical writers, but the first to draw definite attention to the serious results of mouth-breathing was George Catlin, the famous American traveller, whose accuracy of observation on this subject, for a non-medical man, was quite remarkable. Catlin observed the practice of mouth-breathing to be "the most destructive of all habits," and applied to it the classical but significant name of "malo-inferno," and remarked: "If I were to endeavor to bequeath to posterity the most important motto which human language can convey, it should be in three words, *Shut your mouth.*"

The importance of this injunction can scarcely be too forcibly impressed on the minds of all.

The lower animals are nose-breathers, many of them by necessity, as they are not provided with a communication between the mouth and the respiratory passage. This we find to be the case with the solipeds.

That man was intended to be a nose-breather is clearly shown by the fact that the first inspiration of the newly born babe is through the nostrils, and if these passages are closed the child can scarcely breathe at all, even though the mouth be open and unobstructed.

Cases are known of suffocation occurring in infants from closure of the nares alone.

That air enters the nostrils of the infant before it enters the mouth is shown by Cassells by cases in which "air was found in the tympanic cavities of the newly born infant, when no air could be demonstrated to be present in the lung-tissue."[18]

When the nares become closed, it is a long time before we can become accustomed to the perverted process.

Many of the troubles of the pharynx, larynx, and lungs are the direct result of mouth-breathing.

The disease called clergyman's sore throat, common to public speakers and singers, is caused, not by the excessive use of the throat, but by the excessive amount of mouth-breathing commonly indulged in while speaking or singing.

If we will observe a collection of people on a foggy or dusty day, or in a dusty hall, we will at once notice the prevalence of mouth-breathing, and the marked contrast between the quiet, noiseless breathing of the nose-breathers, and the coughing, sputtering, and spasmodic action of the respiratory muscles of those who are mouth-breathers.

The air is not only freed from dust and foreign substances by passing through the nose, but moisture is imparted to it and its temperature elevated,[19] thus rendering it more uniform and suitable for respiration. When nasal respiration is cut off there is a noticeable diminution in the air-supply to the lungs, which, as Berhart[20] observes, can be readily ascertained by listening to the chest of one who alternately breathes through the mouth and the nose.

Many cases of spasmodic asthma are due directly to polypi and other conditions occluding the nasal passages, as was first pointed out by Voltolini.[21]

Symptoms.—The symptoms attending nasal stenosis have been mainly enumerated in detailing the derangements of the various functions which depend on free nasal passages—as inability to breathe through the nose and consequent impairment of the sense of smell, with its accompanying absence of the perception of flavors; deafness; hoarseness, and disturbances in speech; respiratory obstruction; asthma; inability to remove the nasal secretions; a painful dryness and parching of the throat; a sense of fulness and pressure about the nasal and frontal region; often more or less persistent frontal headache; a dull and languid feeling, with indisposition or incapacity for mental effort; weakness of the eyes, which become painful and congested on reading for a short time; a constantly open mouth, giving to the countenance a vacant, silly expression; and a sensation of taking cold on slight unfavorable changes in the weather.

A person who breathes through the mouth almost invariably snores during sleep. He is restless and his sleep broken. "Tired nature's sweet restorer, *balmy* sleep," is seldom known to the mouth-breather.

He is apt to arise with a feeling of lassitude and general malaise, an unpleasant, bad taste in the mouth, and a morning headache.

A few or many of the above enumerated symptoms may be present in one case at one time, but nasal obstruction is almost invariably attended by all the symptoms of an obstinate and annoying nasal catarrh, and in many cases by offensive breath and serious derangements of the digestive organs. In infants there is also an inability to take the breast and breathe at the same time.

Diagnosis.—The objective symptoms are invariably sufficient for a diagnosis.

The two conditions most liable to be confounded on a subjective examination are the hypertrophy of the tissues covering the turbinated bones, polypi, or other tumors, but these can readily be differentiated by the situation and appearance and by exploration with a probe.

(To be continued.)

[18] Op. cit., p. 730.

[19] Milne Edwards: Anatom. et Physiol. Comp., tome ii., p. 266. It has been shown by experiment that the air is raised in temperature 2° higher when respired through the nose than when by the mouth. Goodwillie: Med. Gazette, N. Y., July 31, 1880.

[20] Asthma: its Pathology and Treatment, p. 238. London, 1878.

[21] Galvano Kaustic, S. 246, U. 312. 1871.

Progress of Medical Science.

Treatment of Cholera Infantum by Resorcine.—Drs. Loltmann and Rotenhoefer, of the Children's Hospital, in Breslau, have observed the following beneficial effects from the use of this new drug. Emesis is arrested by it in a very short time, and by very small doses; the symptoms of collapse are ameliorated, and diarrhœa becomes less frequent. Resorcine is an antizymotic, like carbolic acid, but it is quite devoid of irritating properties, and does not cause symptoms of poisoning in therapeutic doses. The little patients take it well, and the stomach tolerates it. Its action usually appears in two days, and a cure is established, as a rule, in six days. The dose is from ten to thirty centigrammes. —*Lyon Méd.*, February 20, 1881.

Treatment of Carbuncle by the Ether-Spray.—Zimberlin (*Schmidt's Jahrb.*, No. 1, 1881) has obtained favorable results in two cases by this method. In the first case, a malignant pustule was caused by the sting of an insect on the left angle of the mouth. On the following day a small black nodule was developed. In the evening a chill followed by fever set in. On the fifth day a pustule as large as a fifty-cent piece had formed, and was surrounded by an intensely red areola. After directing a spray of ether (Richardson's atomizer) upon the tumor, it became pale and its temperature was reduced. On the following day the pustule was found covered by a dry scab surrounded by a large inflammatory areola. Five days later the inflammation had subsided, the scab came away leaving only a sensitive skin behind it. The same treatment was successful in the second case, a carbuncular œdema in an arm, which it had already been decided to amputate.

A Case of Peripleuritic Echinococcus with Retromammary Perforation.—Dr. Lesser reports this case, which occurred in a woman thirty-five years old. The tumor was first noticed three years before, and had slowly increased in size without causing pain until quite recently. By occupation a pedler of vegetables, she could assign no cause for the swelling. The tumor, as large as a man's fist, was situated above and behind the left mamma. There was indistinct fluctuation, a prolongation apparently extending backward toward the axillary line, and the tumor seemed to adhere to the ribs. Percussion revealed flatness over the swelling and toward the left axillary line. Respiratory sounds around the tumor were normal. No bruit was heard in the growth itself. Skin not adherent; no swelling of axillary glands. General condition of patient good.

An incision was made external to the left mamma, along the free edge of the pectoralis muscle. When the fibres of the serratus were cut through two tumors were found, one about as large as a lemon, situated behind the mamma, the other somewhat smaller, external to the former. Both were intimately adherent to the thoracic walls. By compression a portion of the contents could be forced out, when the wall of the cyst could be inverted and the point of the finger inserted into a hole at the base of the tumor, which communicated with the thoracic cavity. During an attempt to isolate the larger cyst, it burst and discharged about three hundred grammes of characteristic echinococcal fluid. The smaller cyst collapsed at the same time. That portion of the fourth rib which intervened between the openings of the two cysts had lost its periosteum, and was rough to the touch.

All those portions of the cysts which projected beyond the chest-wall were removed close to the ribs. Four drainage-tubes were inserted (two through each opening), and the cavity washed out with a three per cent. solution of carbolic acid, which process brought out a number of large daughter-vesicles. The edges of the wound were brought together by silver sutures and carbolized jute dressing applied. Elevation of temperature was very slight; eight days after the operation it became normal; on the tenth day the largest drainage-tube was removed. Patient was now out of bed. Discharge very slight, granulations springing up from below. On the sixteenth day the patient was discharged, returning daily for change of dressing. Two months later the wound had healed up entirely and patient felt perfectly well. Auscultation and percussion now revealed nothing abnormal. She still complained of occasional cough and a feeling of pressure in the region of the liver. The author assumes that the disease was derived from two dogs, which pulled the wagon used by the patient in her trade. These dogs were fed on the offal of sheep and cows and slept in the same room with their mistress.—*Deut. med. Wochenschrift*, January 1, 1881.

Inhalation of Turpentine-Vapor in Relapsing Fever.—Prof. Gerhardt noticed, in a patient suffering from recurrent fever, fall of temperature, reduction of the splenic enlargement, and shortening of the attack, following an inhalation of turpentine-vapor, which was ordered for an intercurrent symptom. On the eighth day the patient became sick again, the temperature rose several degrees above the normal, and the spleen was enlarging. The inhalation was repeated, and in two hours the fever fell nearly to the normal; the spleen also became smaller. The spirilla present during the first attack were absent during the second. Similar good results were observed in three other patients.—*Meditz. Obozrenie*, xiv., p. 201.

Bicarbonate of Soda in Burns.—Dr. Troitzky has used it in twenty-five cases of burns, and pronounces it superior to all other modes of treatment. He recommends using the powder in burns of the first degree; but, in the severer cases, crusts are formed which irritate the parts and prevent the access of fresh applications. In burns of the second degree he recommends covering the part with cloth, and irrigating it constantly with solution of one drachm of bicarbonate of soda to four ounces of water. Burns of the third degree he treats with compresses soaked in the same solution. Irrigation is not applicable, on account of the accumulation of discharge under the cloth. The beneficial action of bicarbonate of soda is due to its anæsthetic and antiseptic properties.—*Vratch.*, No. 4.

Inflammatory Changes in the Cornea.—The results obtained by Councilman from his experiments on the cornea, as published in the *Journal of Physiology*, vol. iii., No. 1, are entirely at variance with Stricker's, but go far toward clearing up some of those points in the pathology of keratitis over which there has been much contention. He chose the corneas of the frog and of the cat, and employed various means for exciting inflammation, such as croton-oil, the actual cautery, and by passing a thread through the centre of the cornea and bringing it out through

the sclerotic. A cornea which had been inflamed by silver nitrate, and examined about twenty hours after the application of the caustic, was found to present the following conditions: the large branched cells became distinctly visible and were observed to be no more granular than in the uninflamed cornea. The wandering cells were present in vast quantities, exhibiting the most active and varied movements. Sometimes one could be seen to send out a long process, at the end of which a knob appeared, which, growing larger and larger, finally became the main body of the cell, as if in this way it had passed from one space to another through a narrow communication. Sometimes they would be seen as more or less irregular bodies, undergoing changes of form and not of position; again as the long, staff-like bodies spoken of in the normal cornea. They are present in greatest numbers at the edge, becoming fewer as we proceed to the centre. For staining, the triple method of silver with hæmatoxylon and carmine was used, its advantage over the gold chloride method being that it is always certain in its results. Another great advantage is that we have both the negative and positive picture at once; the cell-space shown with the cell within and the relation of the one to the other always is kept in view. The preparations were mounted in slightly acidulated glycerine. Examination of the twenty-four hour preparations revealed the fact that in no case was there any indication which would lead to the supposition that multiplication of the corneal corpuscles had occurred or was taking place. In twelve hours, however, after the injury, these wandering cells will be confined to a small area at the outer edge; if later than twenty-four hours—forty, for example—they will be found to fill almost the entire cornea, completely obliterating the unchanged zone in some cases. After cauterizing two corneas in the centre, and making a prick at the outer edge of the cauterized spot of one, examination reveals plenty of wandering cells around the laceration in the cornea whose tissue was punctured, and none at the same spot in the other. The presence of these cells are accounted for by Councilman as having entered the cornea where its substance was broken, since a keratitis can scarcely be produced in this way without involving at the same time an extended conjunctivitis, and as a consequence of this leaving quantities of white blood corpuscles in the conjunctival secretion. From this source they could easily enter the tissue where broken. The cat's cornea differs from that of the frog in the fact that the corpuscles are smaller, more numerous, and the cell-spaces communicate by larger passages than in the frog. The brightly staining wandering cells in the normal cornea are fewer in number than in the frog's cornea, and mostly found in the cell-spaces. Here the solid stick of caustic potassa was used to excite the inflammation. The silver staining before removal, and the after-staining with carmine are used. In forty hours after the cauterization the changes around the corneal edge show the cell-spaces somewhat larger and the communications between them wider than in the normal cornea. In the immediate neighborhood of the eschar the change is more pronounced. It is here that Stricker says the corneal corpuscles are undergoing the most rapid proliferation. The carmine staining shows an outer ring, in which the large oval nucleus of the branch cell is totally unchanged, and other round cells with a brightly-stained granular nucleus of the shape of a horseshoe, which correspond to the wandering cells in the normal cornea.

Pilocarpine in Diphtheria.—Professor Lashkewitz has tested the treatment recommended by Guttmann, in ten severe cases of diphtheria. The age of the children ranged from two to seven years, and the disease, when the treatment was adopted, was in the first to the third day. All cases died. Dr. Guttmann, it will be remembered (*Berl. klin. Woch.*, No. 40), claims that the profuse salivation separates the membrane and arrests the extension of the disease. —*Vratch.*, No. 3.

Dr. Warschauer has also used pilocarpine in a number of sufficiently severe cases of diphtheria. Although the patients recovered, he considers the remedy not free from danger, as it produces at times a marked depression of their strength. It should be used conjointly with stimulants.—*Przeglad Lekarski. Vratch.*, No. 4.

Recurrent Scarlet Fever.—Dr. Godneff reports an interesting case, confirming the statement of Trojansky that such a disease exists. The patient was a young man, seventeen years of age. He contracted the disease while taking care of a child with scarlet fever. It began with a chill during the night, and was followed by fever. The next day the throat became inflamed and the cervical glands were enlarged. On the third day the usual rash made its appearance on the neck, shoulders, and chest. During the fourth day the disease reached its height. Soft palate and tonsils presented purulent excoriations; fever reached in the evening 40° C., the rash coalesced, abdomen, face, and legs remaining free from redness; urine contained a trace of albumen. During the fifth day the symptoms began to subside, and the next day the temperature became normal. The exfoliation appeared on the eighth day, first on the neck, and four days later large flakes began to come off on the hands and feet. On the fifteenth day, as he was ready to leave the hospital, he was again seized with a chill and fever; during the sixteenth, throat-symptoms recurred. This second attack was more severe than the first, fever reaching 41° C. (105½° F.). The mucous membrane of the throat presented diphtheritic exudations; patient was delirious; the rash extended all over the body, with the exception of the face. Albumen reappeared in the urine, and the quantity of the latter was diminished. On the twentieth day the temperature became normal; the rash passed away on the twenty-fourth day; exfoliation began on the twenty-seventh, and he was sufficiently well to leave the hospital on the twenty-ninth day.—*Meditz. Vestnik*, No. 4.

The Blood of Puerperal Women.—Drs. Kasinaia and Ekkert state that during labor the number of white blood-corpuscles becomes considerably increased, while the number of red corpuscles corresponds to the minimum in health; the amount of hæmoglobine is also diminished. After labor, and in case of the absence of complications, the number of white corpuscles may continue to increase during the first day; but, as a rule, their number immediately diminishes. The red corpuscles and hæmoglobine continue to decrease, but during the second half of the week their amounts increase. If labor is followed with some mild complication, they have noticed only a more marked increase of the white corpuscles. When grave complications occurred this was particularly the case, when also a greater diminution of the red corpuscles took place. After the cessation of fever the number of white corpuscles decreases, the number of red corpuscles and the amount of hæmoglobine increase.—*Vratch.*, No. 1.

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THE WOOD MUSEUM OF BELLEVUE HOSPITAL.

THE publication of the catalogue of the Wood Museum of Bellevue Hospital may be considered as the formal announcement to the profession that the magnificent collection of anatomical and pathological specimens presented to the city by our esteemed townsman, Professor James R. Wood, M.D., has a permanent habitation and a distinctive name.

It is rarely our privilege to record an event of more importance to the profession of this and other cities than the one to which we refer. The establishment of such a museum, and its liberal donation by a private citizen, are matters of no common concern to those who are now entitled to enjoy the benefits thereof. It is a new departure in the history of medicine in this city which it is to be hoped will leave its impress for good upon the present and future generations of medical men, and afford an example worthy of the widest following.

The origin of the collection may be traced to the presentation to the city, in the year 1856, by Professor Wood, of the "specimens, mainly pathological, which he had accumulated for twenty years from his hospital and private practice." At that time, also, he offered "certain prizes to the students of all the medical colleges in the city and county of New York for the best specimens aforesaid, to be placed in the proposed museum, accompanied by testimonials signed by the professors of the said colleges, who were to be the judges of the said specimens and to award the prizes therefor." As a result of this offer, the first award of prizes was made in 1858, at Bellevue Hospital. The prize specimens on that occasion were the first contributions to the museum extra of the specimens already donated by Professor Wood. The occasion of the presentation of these prizes was one to be remembered by all interested. Addresses were made by the late Dr. J. W. Francis, Dr. James R. Wood, and the late Prof. Valentine Mott. The latter presented the diplomas, and took occasion to say that the prize specimens were unequalled, for the skill in their preparation, by any in this country or elsewhere. These preparations are still preserved, and correspond with Nos. 1495 and 1496 in the Catalogue. The former, which obtained the first prize, is a dissection of the cranial, cervical, and dorsal nerves, showing their varied and intricate inosculations; and the latter, which obtained the second prize, is a beautiful dissection of the nerves of the orbit. Since then numerous prize specimens have been added to the museum, and have from time to time brought out the best anatomical talent of the students of the different competing medical schools. This part of the collection comprises careful dissections of almost all the important regions of the body, and gives to the museum a peculiar value.

Gradually other specimens accumulated also. In the meantime Prof. Wood, with an earnestness of purpose worthy of the cause, and with a confident faith in the ultimate success of his scheme, worked patiently and quietly until the time arrived for more definite action. In June, 1867, Prof. Wood formally deeded the museum to the mayor, aldermen, and commonalty of the City and County of New York. It then became necessary that some steps should be taken toward securing a suitable place for the museum. Accordingly the Commissioners of Public Charities and Correction, with a public-spiritedness ever to be remembered by the profession of this city, ordered the classification and arrangement of the specimens in suitably fitted apartments above the Morgue. It is the final completion of these arrangements which we now take pleasure in announcing.

The museum thus far contains two thousand two hundred and twenty-four specimens, arranged according to systems, and representing interesting anatomical and pathological conditions in every part of the body. Very many are exceedingly rare, and not a few are unique.

There is quite a collection of bones, diseased and malformed. Also of preparations representing normal and abnormal conditions of the circulatory, digestive, and genito-urinary systems. The specimens of tumors are eighty in number, and give the usual proportion of pathological divisions. The strictly anatomical preparations number one hundred and forty-two, and include all the Wood Prize Specimens contributed since the prize was founded in 1858. A great addition to the value of the museum for the student and practitioner is a splendid collection of casts and models presented by the Bellevue Hospital Medical College. The Section on Comparative Anatomy, which contains a large number of valuable specimens, was, in great measure, due to the untiring efforts of the late Benjamin Drake, who was desirous of making it one of the fea-

tures of the collection. But it is useless to attempt to review in detail the contents of this superb collection of anatomical and pathological specimens. It is safe to say that it is unsurpassed by any similar museum of the city.

We are fain to believe that, fine as it is and valuable as are its contents, the museum is now but the mere nucleus of what it must become. Belonging to the public, but especially to the profession, and so provided for that in future it shall be controlled in the interests of medical science, it has all the elements about it of a brilliant success. It can hardly fail to be otherwise. While it gives opportunities for study to all, it must in turn invite the presentation of valuable specimens which are of no value except to their owners, but which can be made to add to the value of this noble collection, and still more increase its usefulness.

It will be known as the "Wood" Museum. This is as it should be, and will be considered by the profession as a fitting tribute to the zeal, industry, and generosity of its distinguished founder.

CONVALESCENT HOSPITAL.

A DAILY contemporary recently called attention to the case of a poor consumptive, who shot himself after failing to obtain admission to a hospital because of the incurability of his disease. The paper in question takes occasion to refer to the disposition on the part of hospitals to refuse admission to incurables, and casts unpleasant reflections upon the motives which actuate them in so doing. There is no denying the fact that the majority of our hospitals are adverse to admitting incurables, simply for the reason that thereby help would be denied to many other cases which are curable, and which might otherwise die.

Besides, hospitals are intended for the relief of the greatest number, and cases of emergency naturally have the preference. But this is only half a reason why the incurable should be shut out from the ordinary benefits of humanity. What is needed is a convalescent hospital arranged on an economical plan, furnished with the ordinary conveniences of a home, and supplied with medical attendance.

Such an institution could be also used for incurables, without being so designated. We are well aware that there are certain religious "homes" established with such a design, but they are too insignificant in number and too small in size to merit recognition in connection with the present necessities of the armies of partially recovered and incurable patients that are discharged from our hospitals. The hospitals cannot spare the beds for patients that are incurable, or who are merely recuperating to the full measure of health. These institutions are hardly expected to bridge over the time between convalescence and health in one case and incurability and death in another. And yet it is inhuman to allow the patients to suffer when they require other assistance. If a patient is friendless when discharged, he is likely to have beggary or starvation staring him in the face, and that at a time when, from his weakened condition and consequent inability to work, he is least able to help himself. If suitable reception-places were provided for such persons, how much misery to the weakly and sick could be averted. No costly accommodations are required, neither would it be necessary that the buildings be situated in the city, on expensive ground. Hospitals could be built on the cottage plan in suburban districts, and be made to a certain extent self-supporting by the light work that could be easily performed by the majority of the patients. It seems strange, in view of the great good to be accomplished by the establishment of such an institution on a sufficiently comprehensive plan, that some definite means have not been taken to the end. Some time ago efforts were made to raise money for such a purpose, but the projectors of the scheme seem to have grown faint-hearted. Raising the funds for such purpose is one of the ways by which the rich man can squeeze his camel through the eye of the needle.

TRICHINOSIS AGAIN.

THE Government report on trichinæ and trichinosis, prepared by the late Dr. Glazier, assistant surgeon in the Marine Hospital Service, comes to hand very opportunely at a time when the subjects with which it deals occupy so goodly a share of attention, both general and professional. Those who have looked forward to this publication with the hope that it would contain the results of original investigation, and that it would shed new light upon several mooted points in connection with trichinosis, are doomed to disappointment. In spite of a manifest lack of originality, however, the value and importance of such an official document should not be underestimated. Besides, this is the first time that so exhaustive and reliable a monograph on matters pertaining to trichinæ and trichinosis has been presented to the American reader. We doubt not that Dr. Glazier's work will receive all the attention and commendation which such painstaking labors justly deserve. The Government also deserves praise for its pains in the matter—pains which secured the prompt publication of this monograph. The perusal of this report cannot fail to dispel certain prevalent misapprehensions and inaccuracies in connection with this subject. Above all, the reader will learn the great importance of renewed investigations in our country, with a view to prevent the spread of the parasite here, and in order to re-establish the flourishing condition of a vast commercial industry. For it would be useless to deny, in the face of positive facts, that absolutely no decline has taken place in the American pork indus-

try; and it would be equally injudicious to smother the awakening alarm of the populace, by pointing out the non-existence of all danger. This Government report, if it accomplish anything, will, it is to be hoped, convince some of our incredulous newspaper writers that danger lurks in the muscles of the American pig, that we have a greater proportion of infected swine than almost any other civilized country, and that the disease is more prevalent among the human subject of American citizenship, even if of foreign extraction, than it has yet had credit for. On the other hand, the same report will also show how the existing danger can be, in great measure, avoided, and how, by proper measures of rigid inspection, new facts may be revealed which may at length lead to the entire eradication of the worm.

It is not our intention here to minutely analyze Dr. Glazier's work, but the main features of it may be briefly passed in review. The book is divided into seven unequal sections, only one of which—viz., the last—deals with the question in its purely American aspects. All the remaining portions are made up of carefully prepared compilations from various sources, but mainly from the German authors. We are told that "the free translation from the German authorities in this report—Leuckart, Pagenstecher, Gerlach, and others—is due to the fact that original experiment is less necessary at the present time than a knowledge of the established facts, and the Germans have had greater experience with the disease than any other nation," etc. This view can hardly be accepted in its entirety. Human trichinosis, it is true, has been sufficiently well studied; but the various sources of infection among swine, the exact mode or modes of parasitic propagation—these and similar matters are eminently fit subjects for further original investigation.

The history of the discovery of the parasite, the natural history of the worm itself, the various theories regarding the origin of the disease it engenders, statistics of many epidemics, the pathology, symptoms, diagnosis, prognosis, and treatment of trichinosis, are satisfactorily exhibited in the first four divisions of the book. Additions to our previous knowledge are not given, but the compilation has been made with care and judicious discrimination. In the section on the symptoms of trichinosis in animals we find a statement which is original with the author, and deserving of notice. It is this: "Thus, a recovered hog may have fifteen thousand to twenty thousand trichinæ in every half-ounce of muscle. Hogs may become highly trichinosed with small and repeated feedings, and may not show marked symptoms of disease."

In the section on prophylaxis, as well as in most other portions of the work, we are glad to find that the author is in entire accord with our views as already expressed in former issues of the RECORD. As to the necessity of rigid supervision and the desirability of legislation, he says: "That legislation with appropriations will be necessary, etc., because the disease, if it does exist in this country to such an extent, etc., is not sufficiently recognized to arouse the fears of the people, and as the expense is considerable, and the subject one that interests commerce, it should be commenced by the Government, under direction of the Commissioner of Agriculture." In all considerations pertaining to prophylaxis one fact should never be lost sight of, viz.: trichinosis may follow the eating of raw or underdone pork, despite alleged or actual microscopic examinations. But this is rather an argument in favor of a more rigid inspection than one which can be construed as proving the uselessness of such examination.

As regards the expediency and cost of legislation, Dr. Glazier justly says: "If there is a possibility of eradicating, in a few years, the disease from our midst, it should be attempted at any price." There can be no reasonable doubt about the spreading of trichinosis from certain centres of infection, and it is the whereabouts of such centres that ought to be ascertained in our country. The opinion of a German authority is cited, to show that a drove of ten thousand hogs may become trichinosed through the addition of one infected animal. Alluding to a custom here prevalent of feeding hogs with their own offal, the same author vehemently asserts that "in the American slaughter-houses there is apparently a system for propagation of trichinæ scarcely less effective in its consequences than if it had been instituted with a view to this end." This rather extreme view would seem to receive corroboration from the results of examinations in Chicago in 1866, and again in 1878. In the former series only two per cent. were found trichinosed, whereas in the latter eight per cent. were found thus affected.

The erection of public abattoirs would be a step of prophylaxis in the right direction. Wherever these establishments already exist they should be immediately supplied with competent inspectors for trichinæ.

The work of Dr. Glazier concludes with condensed reports from pathologists and others in the United States, which possess no value at all in this connection beyond the demonstration that these gentlemen have never paid any special attention to the subject. In an appendix to the report proper there are found the official letters from United States consuls to the State Department on this subject. They are interesting documents, proving, despite certain conflicting opinions which they express, that trichinæ have been abundantly found in American pork products, to the great detriment of our trade. Altogether, the Government have done well to order the printing of this report, thus signifying its good intentions.

There is a sufficiency of other matters which it would repay Government to have examined. We need only mention two diseases in this connection, viz.: hog-cholera and the pleuro-pneumonia of cattle. It is to be hoped official action will be taken to elucidate the true condition of affairs pertaining to these widely fatal diseases.

QUININE AND OPIUM IN 1880.

Mr. D. C. Robbins, of this city, has recently published a review of the drug trade in this country for the year 1880. We learn from it that the importation of drugs and chemicals into this country has been steadily increasing, and that last year it reached the enormous money value of $48,073,158. This is an increase of fifty per cent. over the importations of the year 1878.

The facts in regard to the importation of quinine and the cinchona barks are of especial interest.

In 1879 there were 46,700 bales of cinchona bark and 228,348 ounces of sulphate of quinine imported. In June, 1879, Congress took the duty off quinine. In 1880 the importations of bark amounted to only 32,800 bales, while the importation of quinine was nearly doubled, being 416,998 ounces. At the same time the amount of bark in the European markets was very greatly increased.

Mr. Robbins states that the action of Congress in taking the duty off quinine was a foolish one, and failed to secure its object of reducing the price of that drug. The real results, according to the authority quoted, are these: a large amount of bark was turned from American to European markets; the price of imported quinine was raised from $2.05 to $2.66; the drug has got into the hands of speculators; American manufacturers have made less of it; and the consumer has had to pay more, on the whole, for his quinine since the tariff was removed from it. The chief trouble lay in the fact that Congress removed the duty on quinine, but left the barks, and the materials with which quinine is manufactured, still among dutiable articles. Mr. Robbins would have the duty on all barks removed, and a duty of ten per cent. placed on quinine.

Mr. Robbins, moreover, fails to show by figures that quinine has been, on the average, higher since the removal of the tariff. On the contrary, he states that in the first half of 1879, it ranged from $2.60 to $3.25 per ounce. After the removal of the tariff, in June, the price, having first made a slight advance, fell to $2.60, which was the ruling price at the end of the year. The average price of imported quinine since the repeal of the duty has been $2.66. Mr. Robbins does not give the average price of home-manufactured quinine before the removal of the duty, and only says, in a general way, that it was lower.

It was certainly unjust in Congress to remove the duty on the salt, and not that on the bark. But we do not think Mr. Robbins has shown any good reason why a tariff should be put on quinine again.

It is a fact that quinine has been imported for $2.05 an ounce, while American manufacturers were asking very much more than this. We have yet to see whether the present higher prices are to be permanent. The large and steady increase in the production of bark in India will have the effect of lowering the price eventually. While not wishing any injustice done to American manufacturers, who make the best quinine in the world, we must look chiefly to the interest of the consumers—our patients.

Mr. Robbins gives some statistics regarding the importation of opium. These show that the quantity of the gum imported has not very greatly increased in the past five years. In 1880 the amount was 243,211 pounds; in 1876 it was 228,742 pounds. These figures do not give any basis for the alarms in regard to the reported increase in the use of the drug. They do not correspond at all with the figures, said to be official, given by Dr. Kane in his work entitled "Drugs that Enslave." According to that authority, the opium imported into the United States in 1876 was 388,311 pounds; in 1880, it was 533,451 pounds.

The statistics regarding the importation of prepared opium, or extract of opium for smoking, are, however, more notable. This form of the drug finds its way into the country *via* San Francisco, and is almost entirely consumed by the Chinese and other opium-smokers. It is a little startling to learn that in gold value, and presumably in actual narcotic power, the opium used for smoking nearly equals that employed in all other ways.

There were imported 77,196 pounds of this prepared opium in 1880, being an increase of over 20,000 pounds upon the year 1876. The gold value of the opium for smoking in 1880, was $773,796. The gold value of the gum-opium imported in the same year was $858,225.

In view of a good many assertions that the practice of opium-smoking is extending from the Chinese to the native Americans, these statistics are worth bearing in mind.

THE ADIRONDACKS AS A HEALTH RESORT.

Since the appearance in the Record of Dr. Loomis's article on the Adirondacks as a health resort for phthisical persons, a considerable number of patients have given the place a trial, and with good results.

An article has just appeared in *Harper's Monthly* on this subject, which is likely to attract a great deal of attention, and renew interest in the region in question. It is written by a layman, Mr. Marc Cook, who has just returned from eighteen months of camping-out among the mountains, and who comes back cured, as he says, of his phthisis. He went out when in the last stages of the disease, and

scarcely strong enough to bear the trip. He went into camp at once. There was at first scarcely any change in his condition, which was a very critical one. But improvement did finally set in. He continued at the same place through the winter, and now returns almost entirely restored to health.

The article is written with the enthusiasm which would naturally be felt by a person whose life was plainly saved by his going among the Adirondacks. Mr. Cook believes that the St. Regis country is the future Mecca of consumptives. He insists only upon two points: that they have patience, not expecting too much at first, and that they stay through the winter. Many excellent practical directions are given for the guidance of persons who may wish to follow Mr. Cook's example. The article, as a whole, is a very interesting one, and is of just the character to be read with eagerness and hope by sufferers from phthisis.

It is hardly necessary to caution physicians against sharing an enthusiasm for a health resort whose value is measured, as yet, by so few cases. There are many other health resorts where the same results as those reached in Mr. Cook's case are occasionally obtained.

But the Adirondack region is already established as a good health resort for phthisical patients, and as a result of the article in *Harper's*, it will undoubtedly swarm with phthisical patients during the next few years. We shall then learn more of its value. It will certainly be a boon to many persons living in the North, who are unable to take the long trips South or West, if the Adirondack region proves to have even half what is claimed for it now.

Reviews and Notices of Books.

LECTURES ON DISEASES OF THE RECTUM AND THE SURGERY OF THE LOWER BOWEL; delivered at the Bellevue Hospital Medical College. By W. H. VAN BUREN, M.D., LL.D., Professor of Principles and Practice of Surgery, Bellevue Hospital Medical College, etc. 8vo, pp. 412. Second Edition. New York: D. Appleton & Co. 1881.

THE second edition of this work by Prof. Van Buren comes to us somewhat enlarged, and, for the most part, rewritten. The additions made are mostly "in the shape of opinions and cases from authentic sources, which his own experience has led him to select for their value in illustrating the present state of our knowledge."

The general arrangement of the volume is the same as in the former edition. The lectures, twelve in number, are presented in a graceful style and practical manner, which makes their reading at once pleasurable and profitable. The range of subjects is comprehensive, embracing all the affections of the rectum and lower bowel which are apt to come to the notice of the practitioner. Nothing is left to be desired, either in the clearness of description of the diseases which are given or the practical methods of treatment which are advocated.

Correspondence.

QUESTION OF SHORTENING IN FRACTURES.

DR. HAMILTON'S REPLY TO DR. SAYRE.

TO THE EDITOR OF THE MEDICAL RECORD.

DEAR SIR—In the number of your journal for April 16th, Dr. Sayre has made a formal complaint that in the last edition of my work on "Fractures and Dislocations" I have made misstatements in regard to him; and I make haste to reply, that if I have done so, it was not intentional, and no one can regret it more than myself.

I will consider the complaints as they are understood by me.

First.—Dr. Sayre claims that I have misrepresented his opinions as expressed in his "Report on Fractures," made to the American Medical Association at its Detroit meeting in 1874.

In order to avoid repetition I will quote here only the first paragraph of the "report" as found in Dr. Sayre's communication.

"Fractures of the long bones require that *extension and counter-extension*, under chloroform, or other anæsthetic, if necessary, should be made in a *proper direction*, until perfect accuracy of adjustment is obtained, and after this, *retention and fixation in this normal condition* until *consolidation*.

"*By accuracy of adjustment* I mean the perfectly normal condition of the bone as to length and position. When the extension and counter-extension have been properly made, the muscles and other tissues surrounding the bones will necessarily and positively force the fractured extremities into their natural position, as above described, unless some foreign body, as a shred of muscle or connective tissue, has got between the fragments. "(The italics are Dr. Sayre's.)

For the remaining portion of Dr. Sayre's "report" I must refer the reader to the "Transactions of the Association" for 1874, or to Dr. Sayre's copy of a portion of the same, contained in his late communication, and which latter is correctly copied, so far as any material point is concerned, except in the following instances: In a copy of the "Transactions" before me the report reads, "When the bone (whatever bone it may be) is thus placed and retained in its normal position, the patient is free from pain, and all the functions of the limb are as well performed as in cases of simple fracture, and the recovery, in a healthy constitution, will be as perfect and complete, with normal length, without deformity, as if no fracture had occurred."

In the quotation from the same, made by Dr. Sayre, the following changes or interpolations appear: In place of "is thus placed and retained" it reads "is thus placed and *can be* retained." (The italics are my own.)

A few lines farther on, the original reads, "If this position, therefore, be positively maintained, shortening cannot by any means take place;" but Dr. Sayre's copy reads, "*If this position*, therefore, *can be positively maintained*." (The italics are Dr. Sayre's, and neither these nor some of the words are in the original.)

In these two examples the words "can" and "can be" are interpolated, and by the use of italics special

emphasis is placed upon portions, changing materially the whole sense of each paragraph, and the significance of the entire report; for nowhere else in the report, I think, is a word used to imply a doubt as to whether these perfect results may not always be attained. I say nowhere else in the report, although Dr. Sayre seems to think that the following paragraph implies this qualification. Speaking of the method of treatment, "briefly sketched" by himself, he says, in conclusion, "The surgeon *who can most accurately put it into actual practice* will have the best results in the treatment of fractures." (The italics are not in the original.)

For myself, taking this paragraph in connection with what Dr. Sayre had already said, in all of which there had been no such words as *if the surgeon can do it*, or *if it is possible to do it*, or *if it seems proper and safe to do it*, I would interpret this last paragraph to mean that some surgeons doubtless had the skill to do all that he demanded, and if they did so they would necessarily get perfect results; but that just in proportion as the less skilful approximated the practice recommended they would approximate perfect results. This was evidently the interpretation given to the report by the majority or all the members of the association present when the paper was read. Remember that the supplemental report handed in was not read to the association. If it had been, the members would have had no occasion to be astonished at Dr. Sayre's *remarkable* results. For the truth is that they were, according to my standard, not remarkable in any other sense than bad. They certainly do not justify Dr. Sayre's statement in the MEDICAL RECORD that he had made "a report showing the result of his treatment in a *very favorable* light."

The only allusion to lack of success contained in Dr. Sayre's report, as read to the association, was in explanation of the "three cases of greatest shortening," which allusion, taken in connection with what precedes the allusion, could only be interpreted as meaning that in these cases the fracture ought to have been treated by something else than plaster-of-Paris, since this kind of splint was not efficient, and therefore not the proper one to be used if the patient is "necessarily confined to his bed."

In short, I think that I was authorized, by Dr. Sayre's report, to believe that he intended to teach that a skilful surgeon might make all long bones unite without shortening, except some foreign body was interposed between the fragments, when, of course, it would not unite at all; the course and spirit of the debate which ensued upon its reading before the association seems to show that the members thought so; and finally, it is quite plain that the gentleman who copied Dr. Sayre's report from the Transactions for his use in the columns of the RECORD thought so, and therefore interpolated the words "can" and "can be" where they were most needed to convey a more rational view of the subject. I do not hold Dr. Sayre responsible for this, and, no doubt, he will not thank his too loyal friend for this palpable interference with the words and meaning of the original report.

Second.—The *Detroit Review of Medicine* for July, 1874, in a report of the proceedings of the association held at that city in June preceding, says (these remarks occurring in the course of the debate, and immediately following the remarks of Dr. Pierce, of Illinois, in which a doubt was suggested as to the correctness of Dr. Sayre's measurements), "Dr. Sayre said that he *knew* his measurements were correct, that Dr. Frank Hamilton had made the measurements, and that he was a man who was so violently opposed to the theory that, in his published writings, he had denied the possibility of any oblique fracture being cured without shortening. For this reason he (Dr. Sayre) had asked him to measure the patients. He said if seven successive cases would be presented he would agree to give up his opposition to the theory. He found the cases, and surrendered."

In the following number of the same journal I denied the truth of the statement. This denial was alluded to or repeated in other journals. Dr. Sayre never corrected the statement publicly, as he admits, because, as he says, he never saw it until he saw it in my book on Fractures. After having waited seven years for Dr. Sayre's correction, I held him responsible for the statement as it appeared in the *Detroit Review of Medicine*, and in my sixth edition, at page 437, I wrote as follows: "I was not present when these statements were made, but in the following number of the same journal in which they first appeared I called attention to their untruthfulness. And I will now repeat, that I have never said in any of my published writings or elsewhere, that it was impossible that any oblique fracture of the femur could be cured without shortening, and I never entertained such an opinion; but, while I have myself published several cases in which oblique fractures of the femur treated by me have united without shortening, I have declared this to be the exception, and not the rule. Further, I am obliged to say that no such conversation as that related by him ever occurred between us, and that I never measured or saw the cases mentioned by him. It is difficult for me to conceive, therefore, how this gentleman has fallen into these errors; and I confess I would have been very much gratified if—his attention having been repeatedly and publicly through the medical journals called to the matter—he had made some such public explanation or denial as would have rendered it unnecessary for me to allude to it in this place."

In Dr. Sayre's communication he denies that he is quoted correctly by the *Detroit Review of Medicine*, and refers his readers to the "Transactions" of the association for a correct statement of what he did say. I am not able to say that the journal in question did not make an incorrect report—the journal must answer for itself as to that matter—but *this* was the statement which I characterized as "untruthful."

Dr. Sayre, quoting, as he says, from the "Transactions," admits that he said, among other things, "he *knew* (italics in the 'Transactions') the statistics to be absolutely and positively true. . . . Many of the measurements were made by Prof. Frank Hamilton, who, until recently at least, did not believe that union of fractured bones could occur without shortening. Dr. Hamilton, along with Dr. Sands, had made a personal examination of the cases in his (Sayre's) wards. Dr. Hamilton acknowledged that there were some cases in which he could find no shortening, and had stated that if he could bring seven consecutive cases together he would admit the principle."

The only inaccuracy which I find in this statement of Dr. Sayre's as to what is published in the "Transactions," is when the word "all," found in the "Transactions," is not found in Dr. Sayre's professed copy. In the original it reads "Dr. Hamilton, along with Dr. Sands, had made a personal examination of *all* the cases." In Dr. Sayre's copy the word *all* is omitted. No doubt, not Dr. Sayre, but his copyist

is responsible for this error, no less than for the error relating to the interpolation of the words "can" and "can be," already referred to, but it changes very much the meaning of the sentence, as the reader must see.

I am now prepared to characterize the report of Dr. Sayre's remarks as found in the "Transactions" as no less "untruthful" than his remarks as quoted by the *Detroit Medical Review*.

First. I never said or believed that "union of fractured bones could not occur without shortening."

Second. I have never said or believed that it was "impossible that any oblique fracture of the femur could be cured without shortening."

Third. I never said to him, or any one else, that "if he could bring seven successive cases together he would admit the principle."

Fourth. If Dr. Sayre means by the expression "along with Dr. Sands," that I measured a single case with Dr. Sands, it is not true.

Fifth. "I never measured or saw the cases mentioned by him." (This is the statement in my book, p. 438, and is in reply to the report made in the Detroit journal that Dr. Sayre had reported me as saying "if seven successive cases would be presented he would give up the theory," and the correctness of which portion of the report Dr. Sayre admits in his communication.)

The untruthfulness of the *first* of these statements it is not necessary for me to expose to any who has ever read or heard my opinions, and Dr. Sayre presents no testimony as to its truthfulness.

To establish the *second*, Dr. Sayre refers to my "Report on Deformities after Fracture," published in the "Transactions of the American Medical Association," in 1857, p. 74; to which I will add, if the reader will give himself this trouble, or will refer to Dr. Sayre's report of the same, he will find no such sentiment there expressed by me; but that I have said: "In view of all the testimony which is now before me, I am convinced—first, that in the case of an oblique fracture of the shaft of the femur, occurring in an adult, whose muscles are not paralyzed, but offer the ordinary resistance to extension and counter-extension, and where the ends of the broken bones have once been completely displaced, no means have yet been devised by which an overlapping and consequent shortening of the bone can be prevented."

Essentially the same statement was made by me in the first edition of my work on "Fractures," etc., and was repeated in the three subsequent editions. In the fourth, p. 397, ed. 1871, and in all subsequent editions, the word "generally" has been inserted, so as to read, "can *generally* be prevented." The fifth and sixth editions contain a note explaining that this improved result is due to improved appliances. All my later editions contain examples of perfect results under the conditions named in previous editions as having hitherto given only imperfect results.

The same opinions and facts of later experience, with improved appliances, have been repeatedly affirmed in my public lectures, some of which have been published in various medical journals.

Of the *third* statement Dr. Sayre says, in explanation, "I was told these facts by some members of the house staff"; and yet in the reply of the members of his house staff to his letters there is no recollection of such a conversation. It must be remembered, however, that Dr. Sayre, in his remarks to the association, never said he got his information from the house staff, but he speaks as if it were of his own knowledge that he made this statement.

The *fourth* statement is changed in the copy from the original, so that Dr. Sayre has rendered it unnecessary for me to correct it.

The *fifth* is an attempt to show that when I said "I never saw the cases mentioned" ("seven *successive* cases"), I told an untruth, and in proof he refers again to the letters received in reply to his inquiries from four members of the house staff. These letters show that, according to the recollections of the young men, revived after seven years, I had measured cases at their request in their wards, but how many, and what cases, with two or three exceptions, they are not certain. The truth is, I did measure two adult thighs at their request, and several gentlemen were present in one, at least, of these cases. One of them was a transverse fracture in an *adult*, and there was no shortening, of course. There never had been any sign of fracture, except crepitus. The second was also an adult, and it was said to have been oblique. This limb was a little longer than the sound one, but whether it was originally longer or not could not, of course, be known. That I did not measure *seven* cases of fracture of the thigh united without shortening is shown by the fact that only three or four of the whole number reported (thirty-two) are said not to be shortened. Of this number, also, only one case of oblique fracture of the shaft in a healthy adult is united without shortening; and it was in reference to this class of fractures of long bones alone that I have ever at any time expressed a doubt as to our ability to secure union in a large proportion of cases without shortening. One of Dr. Sayre's cases was shortened 1 inch; one, 1½ inch; one, 1½ inch; one, 2 inches. In my own treatment of similar fractures I have been more fortunate, as may be seen by a reference to my "Treatise on Fractures," etc., sixth edition, p. 461.

It seems necessary for Dr. Sayre to declare, whether he wishes it to be understood that the supplemental report prepared by Dr. Van Wagenen, and presented by Dr. Sayre to the association, indicates what, in his opinion, surgeons ought to attain, and the highest skill which he and others have yet attained; or whether, on the other hand, he wishes that what is contained in his own report (I mean the original and not his professed copy) should be regarded as his standard of possible attainment, for between these there is a wide difference. The one seems to demand uniform perfection, if union takes place at all; and the other seems to demand only that oblique fracture of long bones should, in exceptional cases, unite without shortening. (For a pretty full analysis of these tables I must refer the reader to the last edition of my work on "Fractures and Dislocations," p. 48.) If Dr. Sayre really entertains the latter opinion he is in accord with the vast majority of intelligent medical men, and there was no propriety in the energetic "protest" which he entered against a resolution to that effect at the Buffalo meeting of the association, in 1878, nor in the equally emphatic "protest," *said* to have been made by Dr. Sayre at Chicago, in 1877. Of this latter protest it must be said that on the first day of the meeting of the Surgical Section, following a discussion or Dr. Hodgen's paper on "The value of Extension in the Treatment of Fractures of the Femur," the following resolution was passed:

"*Resolved*, That it is the opinion of this Section that shortening, in cases of fractures of long bones, is the rule in practice, regardless of any of the plans of treatment now in use." (See "Transactions," p. 507.) In the report of the proceedings of this Section, found

in the MEDICAL RECORD for June 23, 1877, immediately following the reading of a paper by Dr. Jones, appears the following: "Dr. Lewis A. Sayre, of New York, rose to a question of privilege, and entered his protest against the resolution adopted by the Section on Tuesday, to the effect that shortening followed fracture, in spite of any methods of treatment now in use. It was a confession that the profession couldn't properly treat a fracture, and he protested against such a declaration."

The facts are, that this protest appeared originally in a Chicago newspaper. Dr. Sayre called the attention of the reporter for the MEDICAL RECORD to it, and he, supposing it to be correct, inserted it in his report to the RECORD, from which it was subsequently copied, I think, into the *Virginia Medical Monthly*, and perhaps other journals. I was myself Chairman of the Section, and was in my chair on the day and at the time Dr. Sayre is said to have risen to a question of privilege, and Dr. John E. Owens, of Chicago, was Secretary of the Section. Neither of us heard any such "protest," and it is not found in the Secretary's minutes, nor is it in the minutes of the General Secretary of the Society, Dr. Atchinson. The protest was actually made by Dr. Sayre; but, by accident, it was uttered in a daily newspaper, with the public—our patrons—as an audience, and not in the meeting of the association, with medical men—our critics—as an audience. Naturally enough it provoked no reply.

FRANK H. HAMILTON, M.D.

43 WEST THIRTY-SECOND STREET, NEW YORK.

TURPETH MINERAL IN CROUP.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR—Referring to Dr. Cassidy's communication in your issue of April 16th, I desire to disclaim emphatically any claim of novelty or priority in the treatment of croup as given by me in the RECORD of March 26th. Dr. Fordyce Barker is revered wherever he is known. His name is synonymous with all that is best and most honorable in scientific medicine. Years ago he advocated the treatment by turpeth mineral and veratrum viride. His practice has been as large and satisfactory as that of any physician in our land. He is not accustomed to lend his name to anything that might be productive of danger. His frequent and almost exclusive use of these remedies in croup has been followed by the most gratifying results. Other physicians, of almost equal eminence, have had similar results. My own, a much more limited experience, bears out to the letter the published statements of Dr. Barker. Our materia medica is stripped of all efficacy if we are to discard dangerous drugs, or those which have occasioned fatal results. Arsenic, atropia, strychnia, morphia, chloral, etc., ad infinitum, are of great service when their administration is controlled by the judicious physician, but dangerous if controlled by ignorance. The ejection of false membrane following the hypodermic use of atropia was due to the increased respiratory effort giving the necessary supplement of strength for its dislodgement. Emetics had failed in this particular; hence the inference of a loosely attached membrane is not a tenable one.

I know nothing of Dr. Tanner's formula experimentally. But if it has served Dr. Cassidy as well as turpeth mineral and aconite or veratrum viride have served me, then he is wise to adhere to it.

HORATIO R. BIGELOW, M.D.

1502 FOURTEENTH STREET, WASHINGTON, D. C.

"CAN A MAN GRADUATE WITHOUT SEEING A CASE?"

TO THE EDITOR OF THE MEDICAL RECORD.

DEAR SIR: In your issue of April 2d attention was called by you to the statement which has recently been repeated over his signature by an English surgeon, Mr. Broster, to the effect that in Philadelphia a student in medicine could graduate "without having seen a case." However startling this may seem, is it not true, and not only of Philadelphia but of this and other cities where medical colleges flourish? Indeed, may one not go even still farther, and say, as I can, of our own city, and from personal knowledge, that a student may graduate without ever having dissected any part of the human body, without ever witnessing or attending a midwifery case, or without ever being present at a hospital clinic.

Even worse than this. It is possible for a student, by registering himself nominally with a preceptor, to spend, in business of a commercial nature or in teaching, two years of the three required by law, and then, by attending a full course in a winter college and repeating the same in a summer college, to graduate in less than a year from the beginning of his actual study.

These are not new facts, but they are facts, and only show that while the various competing colleges are making a slow zigzag toward improvement, much yet remains to be done. But the improvement will be more rapid if the defects are kept plainly in sight. The compulsory attendance at clinics, both college and hospital, should be required, with similar provisions for dissection, together with examinations in the special branches now so uniformly taught, but upon which the student dwells but little, knowing that they are not necessary to graduation.

These advances in medical education can easily be accomplished without materially risking the pockets of the college faculties, and I trust such may soon be done, and not relegated to the time when the Utopian scheme of an endowed college can be established in connection with a hospital with its professorial chairs amplified, with a severe test examination for entrance, and with a three or four years' graded course, in which laboratory and clinical work with recitations will constitute the major part of the instruction there given. Such a vision seemed not long since about to be realized in the bona fide junction of Columbia College with one of our medical schools; but I fear this must now be postponed to the distant future.

Yours, very truly,

ROBERT F. WEIR.

NEW YORK, April 22, 1881.

MORE CASES OF TRICHINOSIS. The first case of trichinosis that ever developed in Pittsburg, Pa., made its appearance there on April 12th. The patient, a German, had been eating freely of pork that was not well cooked.

Another case of trichinosis was discovered in Bellevue Hospital on April 17th. The patient is a German, and has been in this country for only a few months. About six weeks before entrance to the hospital he eat some raw ham. A week later his muscles began to be sore. Then symptoms of what was thought to be rheumatism developed. He finally went to the hospital. Trichinosis was suspected, and, on harpooning the muscles, trichinæ were discovered.

New Instruments.

WIRE-SNARE NASAL ÉCRASEUR.

By WM. C. JARVIS, M.D.,

NEW YORK CITY.

Having been frequently questioned about the wire-snare nasal écraseur, invented by me for the execution of the several operations on the nose, I have lately recommended—particularly that for the relief and radical cure of hypertrophic nasal catarrh—I will, in accordance with the suggestion of several of the medical profession, ask leave to occupy a part of your journal with a brief description of the instrument.

Of the number now in use, I much prefer the two latest constructed. Fig. 1 represents the instrument most frequently made use of for the removal of hypertrophied nasal tissues of the nature and shape described by me in a paper read before the American Laryngological Association. It consists of a fine brass canula, about six inches long, a little less than one-half its length being threaded for the movement of a milled nut over the proximal three inches of its surface. This nut carries before it a larger canula, which glides over the screw-thread. Lateral movement of the large canula is prevented by the contact of a slight indentation, on its distal extremity, with a smooth surface on the thread. Two small retention-pins attached to the proximal end of the movable canula serve to retain the ends of the wire, which are made to enter the tube at its distal extremity. The milled button fixed to the middle of the canula should be used as a finger-rest. The canula of this instrument has been made malleable, in order that the direction of its bore may be placed in a line perpendicular to the base of the growth. It is lightly constructed, being intended only for the more delicate operations in the nose. The instrument represented in Fig. 2 is intended for the removal of fibroids and other tumors and tissues of great density. It is of the same length as the one shown in Fig. 1, but is made much stronger. The main canula is of German silver, and has its point tipped with hard steel. This effectually prevents the fine wire from cutting the orifice of the canula, which sometimes happens in the other instrument. The milled button is replaced by a roughened cross-bar, which affords a much better hold and prevents injury to the operator's fingers. The near extremity of the larger canula carries a milled metallic ring. This ring can be screwed against the flange which supports the retention-pins. The wire is introduced in the same manner as in the first instrument, but only a single turn around the pins is necessary. Rotation of the retention ring, by forcing the wire against the flange, prevents the possibility of its being dislodged, which accident sometimes happens when the other instrument is made to sustain a heavy strain. As the utility of the instrument largely depends upon slow section of the growth, anything that interferes with this will naturally prove an obstacle to the accomplishment of one of the main objects sought after, namely, a bloodless operation (which is often the case), or loss of the smallest amount of blood in the more serious operations. This end is often defeated by the operator removing the écraseur before complete section has been accomplished, and at the very moment when he should be most intent upon carrying out this principle. The tearing of the tissue will be invariably followed by the occurrence of more or less hemorrhage. The firmness with which some growths are impacted in the nares may be offered as an excuse for not knowing when complete section has occurred, as may also the desire of taking advantage of the adherence of the tissue to the orifice of the canula, to draw it out of the nostril. A series of markings, representing as many millimetres, engraved upon the smooth, flat surface of the main canula, will serve to indicate the moment when complete section has taken place. After a loop has been formed, and just before proceeding with the operation, withdraw the outer tube until the tip of the loop is on a level with the orifice of the main canula. Note the relation the distal extremity of the outer canula bears to the figures in the scale: a little beyond this point will be that indicating complete section of the growth. This arrangement will also enable the operator to measure the dimensions of various growths, for by noting the relation the movable canula bears to the figures on the scale, at the moment slight tension indicates that the loop has been made to evenly encircle the growth, its circumference and thickness can be easily read off in millimetres. In most cases no definite idea can be formed as to the size of a growth after its removal, on account of the expression of the fluids and disorganization of the mass, caused by the steady compression of the wire. As an evidence of the success attending the practice of my method of operating, in the hands of those who have given it a fair trial, I subjoin an extract from the New York Medical Record for April 9, 1881. This journal, in its criticism of Dr. Bosworth's new work on the "Throat and Nose," gives its approval of the operation, and adds: "Should this method prove as successful in other hands as it has in his own, it may be considered a most valuable contribution to laryngology." The manner of using the écraseur may be found described in Prof. Bosworth's work on the "Throat and Nose," and Dr. Robinson's on "Nasal Catarrh." The instrument represented in Fig. 1 can be had of J. Ford; that in Fig. 2 is manufactured by F. Eissner, No. 115 Third avenue.

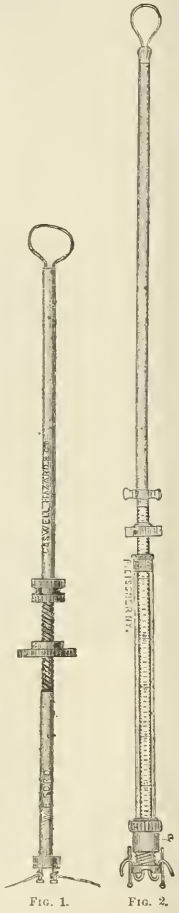

Fig. 1. Fig. 2.

No. 123 East Twenty-fifth Street.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from April 17, 1881, *to April* 23, 1881.

McClellan, Ely, Major and Surgeon. When relieved by Asst. Surgeon Ebert, to repair to these headquarters for assignment to duty. S. O. 44, Department of the Columbia, April 5, 1881.

Bartholf, John H., Capt. and Asst. Surgeon. When relieved by Asst. Surgeon Spencer, to proceed to Fort Laproai, Idaho, and report for assignment as medical officer of that post, relieving Asst. Surgeon Ebert. S. O. 54, C. S., Department of the Columbia.

Heizmann, Charles L., Capt. and Asst. Surgeon. Relieved from duty at Vancouver Barracks, and assigned to duty as Post Surgeon at Fort Townsend, W. T. S. O. 44, C. S., Department of the Columbia.

Ainsworth, F. C., Capt. and Asst. Surgeon. Having reported at these headquarters, will report to the commanding officer post of San Antonio, Texas, for temporary duty. S. O. 56, Department of Texas, April 11, 1881.

Spencer, William G., Capt. and Asst. Surgeon. When relieved by Asst. Surgeon Heizmann, to proceed to Fort Cœur d'Alene, Idaho, and report for assignment as medical officer of that post. S. O. 44, C. S., Department of the Columbia.

Ebert, R. G., First Lieut. and Asst. Surgeon. Instructions by telegraph of this date, to proceed to Fort Laproai, Idaho, and relieve Surgeon McClellan as medical officer of that post, temporarily, confirmed. When relieved by Asst. Surgeon Bartholf, to rejoin proper station, Fort Walla Walla, W. T. S. O. 44, C. S., Department of the Columbia.

Arthur, William H., First Lieut. and Asst. Surgeon. To report in person to the commanding officer, Fort Saunders, W. T., for duty. S. O. 31, Department of the Platte, April 16, 1881.

Bushnell, G. E., 1st Lieut. and Asst. Surgeon. Assigned to duty at Fort Yates, D. T. S. O. 61, Department of Dakota, April 11, 1881.

Wyeth, M. C., First Lieut. and Asst. Surgeon. Assigned to duty, at Fort Meade, Dakota. S. O. 61, Department of Dakota, April 11, 1881.

Medical Items and News.

Contagious Diseases — Weekly Statement. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending April 16, 1881.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
April 9, 1881.	55	20	137	21	66	85	51	0
April 16, 1881.	68	24	170	26	61	91	31	0

Trichinæ not Found in Chicago Pork.—An examination of four hundred hogs, taken at random in the packing-houses at the stock-yard, Chicago, by Dr. Paton, Chemist of the Board of Health, failed to reveal any trichinæ. These results are different from any previous ones, however, and the Department contents itself in advising that all pork should be cooked.

Wickersheimer's Fluid—Modified Formula.—The original formula of Wickersheimer's fluid has been recently altered, so as to facilitate its manufacture, and to make it better applicable for various purposes. Messrs. Poetz and Flohr, of Berlin, prepare two kinds, one intended for injections, the other for macerating and immersing bodies, etc. Their composition is as follows :

	For injecting.	*For immersing.*
Arsenious acid	16 grammes.	12 grammes.
Sodium chloride	80 "	60 "
Potassium sulphate	200 "	150 "
" nitrate	25 "	18 "
" carbonate	20 "	15 "
Water	10 litres.	10 litres.
Glycerin	4 "	4 "
Wood-naphtha	¾ "	¾ "

Analgesia by Rapid Breathing.—Prof. H. C. Wyman reports (Detroit *Lancet*) some cases in which anæsthesia was induced in the dog by producing rapid artificial breathing. A terrier was fastened to the table and the nozzle of a Davidson's syringe introduced into the trachea and worked rapidly. The chest was quickly distended, and soon all attempts at respiration ceased. Various cuts were then made, and the crural and sensory root of the fifth nerve pinched and irritated, but no evidences of pain were produced. The dog after a time resumed respiratory movements, but died in a few hours with epileptiform convulsions. A similar analgesic condition was produced on another animal.

The theory offered in explanation of this is that the process interferes with oxydation and the blood is unduly filled with carbonic acid, the effect of which is to benumb the system. This can hardly be, however, for by rapid breathing a condition of apnœa with cessation of respiratory movements is induced. Now, apnœa means that the respiratory centre in the medulla has an over-supply of oxygen. It is difficult to believe that this over-supply of oxygen is confined to the medulla, while the rest of the system is surcharged with carbonic acid gas.

A more rational theory is to suppose that the condition is one of the forms of trance. The concentrated attention induced by rapid breathing inhibits general sensation.

The phenomena of hypnotism extend to the lower animals, and this explanation can be made to apply even in cases such as we have referred to above. The fact that rapid breathing does not always produce analgesia either in man or (so far as is known) in the lower animals, is in accordance with the laws of hypnotism. This condition can only be produced in a certain proportion of cases. We have heard of a number of private attempts at securing analgesia by rapid respiration, which have been utter failures. A recent article in the *Review Médicale*, going over this same ground, reports a number of cases in which the method has been used for surgical purposes, with some success. The theory that a condition of hypnotism is produced is favored. We must admit that a number of objections can be urged against it, however, and the whole subject requires more extended investigation. With our present knowledge, it seems that the range of applicability of the rapid-respiration method is narrow.

Medical Graduates.—We add to our list: University of Nashville, 168; Nashville Medical College, 53; Indiana Medical College, 85; Memphis Hospital College, 18.

A Historical Case of Impulsive Monomania.—Dr. E. C. Spitzka *(Journal of Nervous and Mental Disease)* asserts that Dr. Samuel Johnson was an impulsive monomaniac.

The Origin of Enteric Fevers.—Dr. S. S. Turner, of Fort Buford, Dakota, writes: "The discussion of this question in a general way will not be useless. The history of the subject forms one of the interesting curiosities of medical literature. We have to look back less than twenty years to find the identity of typhoid and typhus still strongly insisted upon by many who believed them to be as truly identical as scarlatina anginose and simplex, and their common origin to be 'crowd-poison.' At the same time country practitioners were encountering, and country people were dying of typhoid, when crowding was wholly out of the question. Then identity was abandoned, except, perhaps, by a few old men, who, though silenced, whispered to themselves, 'They are identical all the same.' Crowd-poison being abandoned, a new cause must be found, which was perfectly proper. It could not be saddled upon malaria, the great Pandora of the profession, because of the fondness of the disease for cold climates and winter months. Our English cousins have been extremely lucky finders, and if it be true that the wisest are the best doubters, there would appear to be not many wise among them. In England to-day nearly every case of enteric fever is traced without difficulty to one of three causes: in the cities it is sewer-emanations acting through defective plumbing; in the country it is a question between the dairy and the privy-vault, and local examination soon settles the point. In reading modern English, and to a large extent American reports also, one can hardly help being struck by the determination of the reporters to find what they are looking for. In the meantime, however, rural practitioners are finding typhoid fever, and rural people are dying of it, in regions where there are neither sewers, privies, nor dairies in the ordinary sense, and under sanitary conditions seemingly the best as well as the worst. The prairies of Dakota are very healthy. The air is exceptionally pure and invigorating. And yet typhoid fever is not unknown here, as something entirely distinct from the indigenous mountain malarial remittent so called. An occasional 'sporadic' case is seen at military posts where the sanitary conditions are seemingly the best, and the general health entirely satisfactory. I have seen the same thing in commands living in tents upon the dry prairie, where the natural conditions were perfect, and the privy-sinks remote from the camp. These cases have furnished perfect clinical histories of typhoid, and where they have terminated fatally the pathological conditions were found to be typical, as specimens now in the Army Medical Museum will testify. Further knowledge is evidently in order. Dr. George B. Wood spoke of typhoid as 'the ordinary endemic fever of Continental Europe,' and if it should eventually prove to be the ordinary endemic fever of America as well, plumbers and dairymen may yet be happy."

The Louisville Medical News.—Dr. J. W. Holland becomes editor of the *Louisville Medical News*, to fill the place made vacant by the death of the lamented Dr. R. O. Cowling. Dr. Holland, in occupying the vacant chair, gracefully and modestly appeals to the indulgence of the readers of the *News*. Speaking of Dr. Cowling, he says: "His successor deprecates comparison with him, feeling emulous rather than equal, and begs for a while the indulgent regards of all who shall find in the change a foil to set off to greater advantage the high qualities of the deceased."

Operations for Cancer of the Pylorus.—Billroth has operated on two more cases of cancer of the pylorus. One died at the end of eight days; the other at the end of twelve hours.

Large Calculus Discharged through Female Urethra.—Dr. N. S. Richardson, of Macon, Mo., sends photograph of a calculus 2¼ inches long, and 3½ inches in circumference, and weighing 360 grains, which was discharged during urination, from the bladder of a female aged sixty-five years.

The Metric System.—Dr. J. B. Stair, of Spring Green, Wisconsin, writes: "In the Record of a recent date Dr. Churchill favors your readers with a very erudite, if not a very satisfactory answer, to something I had lately written on the above subject. I do not intend to enter into a discussion of the subject, nor do I now, but will say a few words further. When I assume that the old system of weights and measures is American, in contradistinction to the metric system, which is French, I do not think I make a misstatement in the ordinary way in which these terms are used. Certainly, if we were to trace the genealogy of the matter finely, we should find ultimately, that not only is our system derived from our English mother, but we ourselves as Americans, yea, America would have to acknowledge the same progenitor. So that, in speaking of our American system, I did not use an expression that could not readily be understood. I stated before, and will state again (as Dr. Churchill seems to have overlooked it), that the metric system is not adaptable to the wants of the practitioner, *if he desires to be accurate*. Either the whole mass of medical textbooks would have to be revised, every reference to the old system be stricken out and practically forgotten, and the new one substituted, or one must be contented with an *approximate* system throughout. The one alteration is scarcely a probable one, so that the other (if any) will be practically adopted. This being true, then, we see how fallacious is the boasted 'correctness' of the metric system when *applied to medicine*. The physician, when desiring to prescribe a dose of sulphate of morphine, cannot well divest himself of the belief that he wants to prescribe one-eighth, one-fourth, or may be one-third of a grain, and he will naturally find some difficulty, and may run some risk in expressing it metrically. If a doctor understands his business he will want to know that, when he prescribes a grain of any active medicine, precisely *a grain* is prepared, and not an *approximate* grain. These may be old objections, but they will forever stand in the way of the successful adoption of the metric system in the popular fashion, and I think that as yet they have not been satisfactorily answered. I am sorry that Dr. Churchill did not confine himself to the elucidation of some of these practical points instead of telling us so eloquently of some things we already knew, foreign to medical matters. We see with what readiness we assume that which is untrue by a reference to one of the numerous 'explanations' of the

way in which the metric system may be utilized, written by Dr. Eames in the RECORD of January 8, 1881, where he says 'a gramme contains fifteen grains,' and goes on to prepare a formula upon that basis. Of course the formula is an approximate one. A careful prescriber will not use approximate terms."

EXTRACTING TEETH WITHOUT THE CONSENT OF THE PATIENT.—A new branch of burglary has been opened in Chicago. A young lady went into a dentist's shop to have five teeth extracted. Having put her under the influence of gas or ether, he drew fifteen teeth from her upper jaw. She sued the dentist for damages. He pleaded the teeth all needed pulling. She denied this, but as the dentist had the teeth she could not prove her case, and the dentist would not produce them in court. Therefore the jury, evidently thinking that the dentist knew better than the young woman whether she needed the teeth or not, disagreed, and she could not recover. Like the sailor who, during a battle, threw the live man overboard in spite of his cries, because he had been told that the man was dead, the young woman was not considered trustworthy authority on the state of her own teeth. Hers, it appears, was not the only instance. Several persons have been subject to the same involuntary dental bereavement in the same establishment, with a view to compelling the victims to buy false teeth.

AMERICAN MEDICAL ASSOCIATION.—Delegates desiring reduced rates of travel to and from the meeting of the Association in Richmond, can obtain information regarding the same by addressing Dr. W. B. Atkinson, M.D., Philadelphia, Pa.

NITROGLYCERINE, in minim doses of the one per cent. solution three or four times a day, sometimes relieves albuminuria and dropsy in the early stages.

NEW YORK MEDICAL TIMES.—The *Homœopathic Times* has dropped its sectarian title, and is hereafter to be known as the *New York Medical Times*.

CHICAGO MEDICAL SOCIETY.—Dr. E. Ingals has been elected President for the ensuing year, and Dr. L. H. Montgomery, Secretary.

DARTMOUTH MEDICAL COLLEGE.—Dr. Paul F. Mundé, of this city, has been elected Professor of Gynecology at Dartmouth Medical College, to fill the chair occupied by the late Professor E. R. Peaslee. Dr. Mundé will, of course, retain his residence and practice in this city, lecturing at Dartmouth only during the month of September.

EPIDEMIC METASTATIC PAROTIDITIS.—Charles H. Miller, M.D., Peabody, Kansas, in referring to a communication from Dr. Skelley on the subject of orchitis following parotiditis (MEDICAL RECORD, February 26, 1881), writes that the disease found its way into his district during the month of November, commencing in an isolated case about eight miles from town, in a young farm-hand, eighteen years of age. At first the case presented the ordinary features of parotiditis simplex, the right side being affected and then the left, and before this had quite subsided the right testicle and afterward the left.

The young man having a great many friends in the neighborhood, was the recipient of consolatory calls. In less than a month not only the young man's friends were afflicted in the precise manner, but nearly the whole neighborhood, young and old, male and female, the females suffering from no metastasis, however, to my knowledge. Some families had as many as four or five confined at one time, all the males afflicted in the same manner. In the course of the four months ensuing it worked its way into town, and is among us at the present writing.

If this is not *epidemic and contagious*, what is it? Far from being rare, as both Erichsen and Flint would have us believe, it seems to be uncommonly common, notably with us. Dunglison and Hartshorne, of all the writers on the subject, regard it as epidemic and contagious, and the above facts, faithfully and truthfully given, should more than confirm them in their statements.

Assuming, as it undoubtedly does, a form both epidemic and contagious, would it not be well to give it a distinct classification as a disease, and call it metastatic parotiditis, robbing it of its terrors as well?

The epidemic now among us, it may be necessary to state, has been so far an extremely mild one, although the winter has been unusually severe. One instance only has come to my knowledge where the testicles were not attacked, and that occurred in my own practice, in a brakeman, a young man nineteen or twenty years of age, whose parents reside here, and who was taken with the epidemic while on a visit to them several weeks ago. An instance also occurred where the ovaries seemed to have been affected, very likely from metastasis, in a young girl fourteen or fifteen years of age, and in which pressure in their region developed extreme tenderness and pain as well as vomiting. The vomiting, in fact, was a prominent symptom throughout the entire course of the disease. In a great many instances, however, this was also the case in those in whom it attacked the testicles.

SULPHITE OF SODA IN DIPHTHERIA.—We have received a communication from Dr. Smythe, of Baldwin, Miss., in which he suggests the use of the sulphite of soda in diphtheria. Although he has not hitherto had an opportunity to give the drug a trial in this disease, he is nevertheless convinced of its beneficial action. His arguments in favor of employing it are based on the consideration that the sulphurous acid and the sulphites are destructive to the life of low organisms. He believes the remedy should be used as a wash or gargle, either in a saturated aqueous solution, or in any degree of concentration which proves grateful to the patient.

SMALL-POX, DIPHTHERIA, AND SCARLET FEVER IN THE CITY.—In 1880 there were sixty-nine cases of small-pox in the city, the most of these occurring since October. During the present year the record is as follows:

Week ending	*Cases.*	*Week ending*	*Cases.*
Jan. 8	21	Feb. 26	12
Jan. 15	11	March 5	14
Jan. 22	20	March 12	36
Jan. 29	26	March 19	39
Feb. 5	15	March 26	39
Feb. 12	20	April 2	29
Feb. 19	15	April 9	51

The present outbreak of the disease is more serious than any that has occurred since 1876, when the city was afflicted with a small-pox epidemic.

Diphtheria has been more prevalent during the past fall and the present winter than at any time since 1875–76. During 1879 it was very light. The following table will show the cases and the deaths from the disease since October last up to the present time:

Week ending	Cases.	Deaths.	Week ending	Cases.	Deaths.
Oct. 2	91	31	Jan. 8	168	69
Oct. 9	97	42	Jan. 15	129	50
Oct. 16	94	52	Jan. 22	108	73
Oct. 23	97	37	Jan. 29	121	39
Oct. 30	98	43	Feb. 5	104	48
Nov. 6	83	54	Feb. 12	90	43
Nov. 13	77	40	Feb. 19	103	40
Nov. 20	150	51	Feb. 26	104	26
Nov. 27	122	66	March 5	82	31
Dec. 4	147	66	March 12	98	39
Dec. 11	166	55	March 19	92	40
Dec. 18	176	34	March 26	106	46
Dec. 25	177	52	April 2	85	
Jan. 1	157	48	April 9	85	

The disease is scattered all over the city, no section being particularly affected by it. It is also as prevalent in the dwellings of the rich as of the poor.

About the same state of affairs exists in relation to scarlet fever. It has not been so prevalent in this city since 1872 as it is at present. The following table will show the number of cases and deaths since October last:

Week ending	Cases.	Deaths.	Week ending	Cases.	Deaths.
Oct. 2	50	10	Jan. 8	179	39
Oct. 9	58	5	Jan. 15	171	42
Oct. 16	54	11	Jan. 22	185	40
Oct. 23	82	15	Jan. 29	175	48
Oct. 30	66	15	Feb. 5	173	43
Nov. 6	100	14	Feb. 12	162	40
Nov. 13	102	28	Feb. 19	181	49
Nov. 20	132	31	Feb. 26	171	43
Nov. 27	110	28	March 5	151	32
Dec. 4	151	38	March 12	150	30
Dec. 11	180	38	March 19	146	36
Dec. 18	191	38	March 26	145	37
Dec. 25	153	34	April 2	149	
Jan. 1	173	39	April 9	157	

Recognition of Bravery.—It may be that "peace hath its victories more renowned than war," but it is certain glory and honor and medals come chiefly from facing cannon-balls and bullets. The public does not realize or recognize the dangers which physicians undergo in treating many contagious diseases, or the bravery that is often and quietly shown in the ordinary discharge of duty.

The prevalence of typhus fever brings up the subject now. There is hardly any disease occurring in this climate with which it is so dangerous to come in contact. During the three years, from 1861 to 1864, that typhus prevailed at Bellevue Hospital, fifteen of the twenty-two members of the house-staff were taken with the disease, and a large proportion died. The visiting physicians kept at their work at the peril of their lives.

The prevalence of typhus at present is attended with great dangers to medical men and other attendants, the per cent. of deaths being quite as large as in the ordinary battle.

We notice that the French Assembly has recently taken this subject into consideration, and has voted a pension to the family of every physician who dies from an infectious disease contracted in attendance at hospital. This pension is equal to that of the soldier who dies upon the field of battle.

The Rectal Lever to check the flow of blood in the iliacs has recently been twice used with success. One case, by Mr. W. Howard, was an amputation of the left hip; the other, by Mr. R. Davy, deligation of left external iliac.

La Salpêtrière.—A fancy-dress ball has recently been given in Paris for the benefit of La Salpêtrière. The effect upon the patients of preparing for the ball is said to have been quite remarkable. Every one became thoroughly interested, and for a month scarcely any hysterical or maniacal attacks occurred.

A daily edition of the *Southern Clinic* will be issued during the meeting of the American Medical Association in Richmond, Va. "This will be for *gratuitous distribution*, in honor of the occasion."

The Annual Dinner of the East River Medical Association took place at Delmonico's on Tuesday evening, April 19th.

In accordance with the time-honored custom, which our graver and more strictly scientific medical societies might well follow, the ladies, wives, and daughters of the members participated in the dinner, to the enjoyment of all.

Dr. J. Marion Sims is convalescent from his pneumonia and hopes soon to be entirely restored to health. The University of Pennsylvania has recently given Dr. Sims the degree of LL.D.

Palatable Cod-Liver Oil.—Still another method of making cod-liver oil palatable and digestible is proposed by Mr. Fairthorne in the *Pharmaceutical Journal*. It consists in adding two drachms of tomato or walnut catsup to each ounce of the oil. This mixture has been found to agree with many persons much better than any other form in which the oil has been taken.

Quebracho as a remedy for dyspnœa is useful in some cases, but on the whole it does not seem to be a very reliable drug. It is given in teaspoonful doses of the wood or bark tincture.

The Late Dr. Max Herzog.—At a meeting of the Board of Directors of the Mount Sinai Hospital, held on Sunday, April 17, 1881, it was

Resolved, Whilst the sudden and unexpected demise of Dr. Max Herzog, in the prime of life and in the full flush of professional success, has afflicted with sorrow not only his bereaved family, but a vast host of friends to whom he had become endeared, it has made the directors of the Mount Sinai Hospital conscious of an irreparable loss sustained by this institution.

Associated as he was for many years as a member of the Medical Board, a position calling for constant self-sacrifice, earnest devotion, and unremitting labor, we have had occasion to observe not only the faithfulness with which his self-imposed work of benevolence was performed, but the sympathy and kindness which he always displayed for the sufferers entrusted to his care, so that, whilst we have admired his skill and ability as a physician, we have learned to esteem him for his noble, unselfish, and humane character.

Brought into constant contact with him in our official capacity, we can bear witness to the sound practical judgment shown by him in respect to all matters affecting the hospital in which he was deeply interested.

The patients who have known him will miss his ministering consolation, we the benefit of his advice, direction, and assistance, but he leaves behind him as a consolation and an example the memory of a well-spent life.

Desiring to give publicity to these sentiments, a copy is sent to the family of the deceased, and published in the *Jewish Messenger* and in the Medical Record.

Moses G. Hanauer,
Isaac Wallach,
L. M. Hornthal,
Committee on Resolutions.

Original Communications.

SOME CONSIDERATIONS ON THE ETIOLOGY OF FIBROUS PHTHISIS.

By JOHN D. NEET, M.D.,

VERSAILLES, KY.

(Read before the Kentucky State Medical Society, at Covington, April 6, 1881.)

W. C——, insurance agent, aged forty-one years, married, and the father of four children, came under observation September 1, 1880. The family history of this patient nowhere reveals any tubercular disposition or other morbid constitutional tendency, and he had enjoyed exceptionally good health until twenty years of age, when he contracted diphtheria, and from that time never considered himself a healthy man. The attack was quite severe, and left him with cough and expectoration.

It was impossible to obtain a connected history of the case from its inception to the date of observation, but he has been pronounced repeatedly the subject of tubercular phthisis. As time moved on he gradually grew worse, the cough and expectoration continued; he lost flesh and strength, and in the fall of 1878 a change of climate was advised, and he removed at once to Colorado. This, instead of proving beneficial, acted detrimentally to him, and his downward course was so rapid that he returned to his home in Kentucky after a sojourn of nine months in the West. During his stay in Colorado he was troubled with intractable diarrhœa, which was attributed to the water used there, but after his return to Kentucky he very soon recovered from this, and was not again troubled with it until a week previous to his death. Without having made material improvement, about a year after his return home he noticed that whenever he coughed, or made a forced expiration, there appeared a tumor over the anterior aspect of the right chest, and it was at this time that we first saw him.

The patient presented a cachectic appearance, and was very much reduced in flesh and strength; cough and muco-purulent expectoration were present, and he complained of constant pain over his right chest, of a dull, aching character, except on coughing, when he compared it to the plunging of a hot iron into his side. Cough at this time was not, however, a very troublesome symptom, but two or three times in twenty-four hours he would "throw off" (as he called it) about three ounces of very heavy muco-purulent sputa, somewhat fetid in character, and varying in color from a dark-yellow to a pea-green. His appetite was irregular and capricious, but digestion good and bowels regular. Slept well under small doses of morphine, was never short of breath except on exertion, nor was there any swelling of the feet or puffiness of the ankles. Pulse, 100; temperature, 99° (evening); and respirations, 22. Patient states that he never spat blood, never had hectic or night-sweats, but about three years ago had "chills and fever," for which he was treated with quinine, and has not suffered a recurrence. The tumor on the anterior aspect of the chest was markedly apparent on coughing and forced expiration, and under these conditions would assume dimensions as large as a pigeon's egg. It was situated between the fourth and fifth ribs upon the right side, was compressible and without discoloration. Its surface was smooth, and its boundaries were sharply defined. It would disappear on inspiration, to appear again with cough and expiratory effort. There was no emphysema or cellulitis about the parts, and it was evidently a tumor containing air.

Physical examination.—On inspection, there was no very marked difference in the contour of the two sides; the right was, perhaps, slightly more depressed. The expansion of the left lung was fair, while the right side was almost entirely motionless. Auscultation revealed chronic bronchitis throughout the left lung, and there was slight dulness at the apex. The right chest was so painfully sensitive to pressure that he could scarcely endure the lightest percussion, yet the mild stroke was sufficient to reveal the presence of air in the chest cavity, anteriorly and posteriorly. On auscultation there was increased vocal resonance and bronchophony over the second intercostal space, and over the remainder of the lung amphoric respiration and metallic tinkling. Heart, liver, spleen, and kidneys were pronounced normal, and there was no discernible enlargement of the axillary or mesenteric glands, nor was there any abdominal tenderness.

Progress of the case.—There was no material improvement in the patient's general condition from the date of our first observation; the tumor gradually attained greater dimensions, until in four weeks it measured four inches and a half vertically, three inches horizontally, and rose more than an inch above the free surface of the chest with every effort at expiration. During this time the subjective symptoms remained about the same, pulse varied from 85 to 100, temperature, from normal to 100°, and there had been neither rigors nor sweating.

About the middle of October a small red spot made its appearance at the lower and inner margin of this bulging, and on the second day of November a spontaneous opening occurred into the pleural cavity. Twenty-four hours previous to this occurrence the patient's sufferings were intensified, constitutional symptoms were more aggravated, pulse, 108, and temperature 100½°, the highest thermometrical range observed during his protracted illness. When the opening was established the patient sunk at once into a state of collapse, was pulseless at the wrist, and unable to speak. Under stimulants, however, he soon reacted, and the next morning his temperature was 99°, and pulse 90. Contrary to expectations, there was no escape of fluid of any kind from the pleural sac for twenty-four hours, at which time there drained away perhaps a drachm of pus. Artificial drainage was impracticable, for the effort to introduce a catheter into the pleural cavity induced such paroxysms of coughing as to render it unavailable. To facilitate drainage the patient was induced to sit in a low chair, and by bending his body forward, the upward pressure of the abdominal organs succeeded admirably in draining the pleural cavity through the opening in the chest-wall. A careful record was kept of the case, but, omitting unimportant details, suffice it to say, that at no time for a period of ten weeks did his temperature exceed 99°, and pulse 90. For days in succession his temperature was normal, and pulse rated from 76 to 80. The opening in the chest-wall gradually grew larger, the discharge from the pleural cavity increased, until by the first of December it amounted to about six ounces in twenty-four hours. During this time his appetite improved, and he would not infrequently eat for breakfast two soft-boiled eggs, two-thirds of a quail, a piece of tripe as large as half the hand,

two rolls, and a glass of cream—besides a fair dinner in the afternoon. His digestion was at the same time good, and general functions regular. By placing his hand over the opening in the chest-wall he was able to converse in his usual tone of voice, and on the whole was wonderfully comfortable for one in this serious condition.

By the latter part of November this opening in the chest-wall had increased to about the size of a silver quarter, was almost perfectly round, its edges were smooth, but still there was no cellulitis about the parts. On December 1st another red spot appeared upon the surface over the fifth rib, and in a few days ulceration was established, and it rapidly enlarged to about the size of the first. On December 26th a third opening formed over the fourth rib. On January 16th another formed over the third rib; on January the 24th a fifth opening formed between the fifth and sixth ribs, and in a few days merged into the second. There were several smaller openings formed subsequently.

Up to the middle of January the patient did not manifest any unusual constitutional disturbance, but was gradually losing flesh and strength. Under the circumstances, however, his strength kept up well; for he was able all the while to sit up and drain after the manner already alluded to, and could do so the very day of his death. The discharge from the pleural cavity had now increased to about eight ounces in twenty-four hours, yet his temperature ranged from normal to a fraction of a degree above, and pulse varied from 80 to 86, regular and of good volume.

About the middle of January, however, he began to fail very fast; his appetite became meagre, his sufferings increased, pulse more rapid and feeble, but there was no rise in temperature, nor was there any dyspnœa or swelling of the feet. Thus the steady waste went on until death closed his eventful history by exhaustion on February 10th.

Autopsy eight hours after death.—Emaciation great and rigor mortis limited. On opening the thorax it was impossible to ascertain the quantity of pus left in the pleural cavity, as the undertaker had already injected a quart or more of "embalming fluid" into it through the external openings. The right lung occupied a space in the chest cavity scarcely as large as a hand of average dimensions, and was bound down to the spinal column by dense adhesions. Running hither and thither to the chest-wall and diaphragm were strong fibrous bands, forming a complete network. Both layers of the pleura were destroyed by ulceration over a considerable surface, and what remained was very much thickened and resembled newly organized fibrous tissue. Portions of the fourth, fifth, and sixth ribs were necrotic near their costal attachments, the fifth being nearly bisected. The intercostal muscles in this locality were destroyed, but the inflammatory products had not infiltrated the tissues beyond the margins of the external ulcerations.

On removing the right lung it was observed to be a mass of fibrous tissue and dilated bronchial tubes. There seemed to be an entire destruction of air-cells, for an attempt at inflation was followed by almost complete negative result in every section. Upon the free surface of the lung were found six openings, about six millimetres in diameter, connecting bronchial tubes with the pleural cavity. These openings did not show evidence of recent ulceration, and there was not a tubercle or any other phthisical deposit to be seen in the fibroid mass. The pathological specimen before you will show the exact condition of this advanced state of disease.

The left lung was slightly adherent at the apex, and a few adhesions existed at the posterior and lower portion. Localized emphysema was observed on the anterior surface, and on section, two or three very small abscesses were encountered. Chronic bronchitis was pretty general throughout the lung, but there was no tubercular deposit. Heart and liver were normal. Other organs not examined.

Remarks.—The annals of clinical medicine rarely furnish a more interesting case than the one detailed in this report. Its origin, progress, duration, and complications make it alike interesting to the pathologist as to the student of clinical phenomena. Here was a man of untarnished family history, robust and healthy, and who had enjoyed perfect immunity from disease until he was attacked with diphtheria at twenty years of age. Although recovered from the immediate attack, it left him with chronic cough and expectoration, which endured to the end of life—twenty-one years thereafter.

It remains for us to point out the manner of ingress of the disease, the avenues of its invasion upon the economy, and the fatal consummation of its purpose in the pulmonary structures. It will not suffice to say the man had this or that disease, and that it ran into consumption, for we would thus promulgate an idea that would be about as definite as comparing the relative sizes of objects to a piece of chalk. We must investigate its pathology if we would rightly comprehend the workings of the disease; and in this case, as in all others, the causal factors must be defined in order to apply a rational treatment.

It is a matter of regret that the previous history of the case was so obscure as to render it impossible to ascertain with any degree of exactness the primary pathological expression and the tissues of its most potent action. We might safely say, however, that the primary disturbance was some form of irritation originating (1) in the throat and bronchial tubes, or (2) in the parenchyma proper of the lung, or (3) in the pleura.

In accordance with strict pathological inquiry, we might assume that the local nutritive disturbances following an attack of diphtheria of severe type may leave the throat in an irritable, hyperæsthetic state, abnormally sensitive to the mildest irritants, and that cough and expectoration may be the expression of this altered state of things. Added to this, any hereditary or acquired disposition to the development of a low form of cellular hyperplasia, we could readily understand how irritation in the throat and cough might lead to enlargement of the bronchial glands with caseous degeneration of the multiplied elements, and thus be a hot-bed for issuing supplies of tubercle to the pulmonary and other structures of the body.

In the absence of tubercles at the autopsy, however, it would hardly be just to accord to them the leading rôle in the etiology of the destructive disease in this case. The profession of medicine is not yet prepared to believe that tubercle, like an incendiary, would start the active conflagration, and then as quickly take up its tents and move silently away. As a rule, to which we grant the legitimate exceptions, tubercle, once present, usually finds the environment too inviting and exhilarating to weary in its ceaseless vigil, but with unfaltering avidity it works its ravages upon the constructive metamorphosis of the tissues, and leaves its implements of de-

struction on the field of its final conquest. Are we to wander into the alluring realms of vain and theoretical speculation, and say with some that tubercle is capable of taking on developmental action, issuing in the formation of fibrous or fibroid tissue? that a product which is itself the offspring of a morbid state, characterized by strong tendencies to break down the integrity of healthy structures, should escape, not the liability to decay, but the essential condemnation which is the innate characteristic of its existence, and become a part and parcel of the organized body of man, sharing the benefits of the recognized processes of maintenance and growth in a degree differing in no wise from parts in their normal relations? For one, I am not willing to believe that any part of the dense fibrous mass in the specimen before you is the result of organized tubercle. The marked disposition of tubercle to degenerate and suffer molecular decay is too well established to ignore the fact, and in its stead accept this gauzy and fanciful hypothesis. While we accord to the microscope the full measure of its dues, and recognize the vastness of its resources in clinical medicine, it cannot entirely supplant the powers of clinical observation; hence it is incumbent upon us to look in another direction for the etiological factor of the extensive morbid process here.

The history of the case shows that the disease was essentially chronic, and whatever form of irritation is imparted to the pulmonary structures that would produce chronic phthisis without tubercle declares itself, either in the multiplication of epithelial and mucoid elements—establishing catarrhal pneumonia—or the fibro-cellular textures receive its full impress—from the bronchial tubes or pleura—resulting in proliferation of the connective-tissue elements with subsequent contraction, according to the law of all new connective-tissue formations, and fibroid induration is then the dominant characteristic. The chief causes, then, of fibroid phthisis are (1) chronic bronchitis, (2) pneumonia, and (3) pleurisy.

Chronic bronchitis alone rarely, if ever, produces such an advanced stage of fibroid induration as we observe in this specimen. Besides, chronic bronchitis, unless due to some localized pulmonary disease or disease of the pleura, exists as a bilateral affection, and the fibroid increase would be manifest in both lungs. The left lung, while it was the seat of chronic bronchitis, was entirely devoid of anything like fibroid induration, and if chronic bronchitis produced this extensive fibroid condition in the right lung, we must look to that lung or the pleura for the fuel that fed the consuming fire.

This patient may have had pneumonia complicating his diphtheria, and by virtue of the debilitated state consequent upon the attack, the pneumonia may have undergone that form of caseous change which, instead of going on to liquefaction and absorption, resulted in fibroid induration. Had this been the case, however, the tendency to the formation of lobular pneumonia in the left lung would have been very strong, and in the length of time that this case endured, it is more than probable that fibroid increase, the same in kind if not in degree, would have occurred, or the disease would have taken a different course, ending in softening, ulceration, and the formation of cavities. There was no evidence to support this idea, aside from the two small abscesses, neither of which was larger than a pea, and which could be accounted for by the condition of disease in the right chest.

Pleurisy sometimes leads to fibroid induration of the lung, or fibroid phthisis, and to such an extent that the cellular structure of the lung is almost entirely destroyed. This condition might be of more common occurrence if all mankind were endowed with the same degree of vitality as the subject of this report. This form of phthisis is less likely to be complicated with the other forms—bronchitic and tubercular—than the reverse condition. Dr. Andrew Clark, of London, in a clinical lecture at Bellevue Hospital Medical College, says: "Fibroid phthisis which has fibroid tissue for its destructive agent may occur alone, and does so occur more frequently than the other forms, yet sometimes may have, as a secondary complication, either the cheesy or tuberculous change." It is in these cases of uncomplicated fibroid phthisis that we observe the pleuritic origin of the disease.

Sero-fibrinous pleurisy is more frequently followed by fibroid phthisis than any of the more common forms of pleuritic inflammation. The special form of pleurisy, however, which is most commonly productive of this disease we would designate *fibro-proliferous*, and differs in many respects from the acute and sub-acute, or sero-fibridous forms of pleurisy. The principal distinguishing points are:

Acute Pleurisy.	*Fibro-proliferous Pleurisy.*
Sudden in development.	Insidious in development, as a rule.
Marked constitutional symptoms: chill or rigors, fever, dyspnœa, and general systematic disturbance.	Not much acute constitutional disturbance, the local symptoms predominating.
Pain acute, lancinating, and of short duration.	Pain dull and aching, of long duration, and pretty constant.
Friction sounds occur early, are high-pitched and of short duration.	Friction sounds occur early, but are dull and harsh and of long duration.
Physical signs of effusion into the pleural cavity.	There being a diminished tendency to serous effusion, the physical signs of fluid in the pleural cavity are not marked, the dominant feature being the fibro-proliferous character.
A disease with a natural tendency to rapid repair, and occurs usually in a healthy subject.	The expression of some unknown constitutional state, tending to produce grave organic disease.

The principal features of difference between *sub-acute* or *sero-fibrinous* pleurisy and *fibro-proliferous* pleurisy are:

Sero-fibrinous Pleurisy.	*Fibro-proliferous Pleurisy.*
Subacute, with a tendency to chronicity.	Essentially chronic.
Physical signs of fluid in the pleural sac.	Absence of the more important of these signs.
Inspection shows lack of motion, with enlargement of the affected side and increased expansion of the other side.	Inspection in the early stages negative.
Vocal fremitus absent as a rule.	Vocal fremitus increased.
Flatness on percussion over the area of effusion.	Dulness on percussion, varying in degree with the advance of the disease.
Respiratory sounds absent as a rule, when detected at all are feeble and distant.	Respiratory sounds present, but are masked to some degree by the harsh and rough character of the friction sounds.

In some cases of fibro-proliferous pleurisy direct adhesion of the pleural surfaces takes place and retraction of the chest-wall occurs, just as in the other forms, but not in the same degree and from a dif-

ferent cause. Traction of the newly formed tissue in the visceral layer of the pleura and lung is the main causative factor in the one, atmospheric pressure over a vacuum the chief cause in the other. In other cases of fibro-proliferous pleurisy the adhesion of the two layers occurs indirectly by numerous interlacing bands of fibrous tissue. Proliferation occurs in the cellular elements of the septa of the lung, and if the vital powers of the patient do not become rapidly exhausted, in time the lung will be reduced to a fibrous mass, with dilated bronchial tubes, leaving the space between the mass and chest-wall filled up with bands of dense fibrous tissue. In contraction of the chest-wall in this form of disease we do not, therefore, usually find the displacement of organs that are so frequently observed in recoveries from sero-fibrinous pleurisy.

Bronchitis is very commonly engrafted upon a lung the subject of these fibroid changes. It is, however, a secondary complication, and is due to the disturbances of the circulation and nutrition in the bronchial mucous membrane, superinduced by the cough and irritation of the tissues in immediate proximity. We have, in consequence, when the disease is well advanced, cough, with muco-purulent expectoration, loss of appetite and strength, leading us to suspect tubercular development. A careful survey of the history, the physical signs, and last, but not least, the low thermometry of the case, marking it almost afebrile, will generally protect us from error. From the presence of so many of these diagnostic signs and symptoms in the case here reported, together with the post-mortem appearances, we feel justified in the conclusion that this was a case of *fibroid phthisis*, originating in *fibro-proliferous pleurisy*.

Some of the peculiarities of this case are deserving of special notice, and prominent amongst these was the marked absence of dyspnœa throughout its progress. The function of the right lung in the process of respiration was in a manner entirely abrogated, and the left lung was the seat of chronic bronchitis, with emphysema. The wonder is how the man lived at all with one lung, and that a diseased lung besides. How are we to account for the absence of dyspnœa? Possibly upon the grounds that the disease was: 1. Approximately afebrile in its course, the thermometry being low. 2. Its slow but steady progress, thereby enabling the system to attain the power of accommodation. 3. The low state of the patient's nutrition. 4. The maintenance of perfect rest and quietude. He would lie in the supine position, with head but slightly elevated for hours in succession, not moving from place to place as most patients would do with this taxing disease. This position was a sheer necessity with him, for when he turned upon the left side, severe paroxysms of coughing ensued; when upon the right, the pain was unendurable. The absence of dyspnœa, however accounted for, was, to say the least, quite unique for such an aggravated condition of disease.

It was also singular that there was no swelling of the feet or ankles, and no gastro-intestinal distrubances until a few days preceding death. The absence of constitutional irritation after suppuration had been established in the pleural sac is also noteworthy. If we are correct in our opinion regarding the etiology and pathology of the disease, we would offer one thought in explanation of the absence of special symptoms pointing to a suppurative process: the pleura was very much thickened; there had been a great increase of fibro-connective tissue elements, so that the entire pleural cavity was lined with a dense, newly formed membrane. This being an adventitious membrane, it was devoid of two of the most important functions of a healthy serous membrane, viz., secretion and absorption. If it be granted that these two functions were, in the main, abrogated; that ramifying through this newly developed fibroid tissue were fewer blood-vessels and lymphatics, and that the processes of endosmosis were impaired by reason of the pathological character of the new formation, we would readily understand the absence of symptoms indicative of purulent or septic absorption.

The propriety of considering this new formation such as to remove it beyond the pale of a structure obedient to the laws of full, normal nutrition and resistant of disturbing influences would seem tenable, in view of the fact that for more than two months, to our positive knowledge, pneumothorax existed without any appreciable evidence of pyothorax—indeed, suppurative action was not established in the pleural sac until after perforation of the chest-wall had occurred. In perforation of the lung from a disease process, the patient either dies very soon, or pyothorax rapidly ensues. But in this instance the pleura, instead of being a healthy structure, had taken on a peculiar form of disease. It was less highly nourished; its vaso-motor and general nerve-supply were diminished, so that it was not prepared to resist the ingress of an irritant with the same alacrity that less extensively diseased structures would do.

The perforations of the lung which you observe in the pathological specimen were doubtless not due to the presence of any form of phthisical deposit, nor were the perforations of the chest-wall the result of an ulcerative empyema in its strict sense, but as the morbid action progressed, and general disturbances of nutrition increased, a process of necrobiosis, or molecular decay, was established in the visceral layer of the newly developed tissue, ending in the formation of openings between the bronchial tubes and the pleural cavity. The same process was established in the parietal portion, and the nutrition of the patient not being sufficient to stay the destructive action, the irritation extended to the intercostal muscles and integument, resulting in ulceration and a free communication between the pleural cavity and the outer world.

Hymen in a Primipara.—Dr. Alger W. Rice, of Readsboro, Vt., reports the case of a primipara, aged nineteen, who fell in labor with a nearly imperforate hymen. He says: "In attempting to make the examination, as soon as my index finger passed the labia minora, I came in contact with a tense membrane, which I at once recognized as the *hymen*, which had a small aperture just above the centre, which would not admit the passage of my index finger, and in attempting to do so it gave her intense pain. She at this time informed me that her husband had never had complete copulation with her, and whenever the attempt was made it was very painful. After trying several times to make the examination, I became convinced that my only way was to divide the hymen by means of a scissors, which I did, snipping the membrane on either side of the aperture. The os was found to be well dilated, and the child presented by the breech first position. In two hours more the woman was delivered of a girl baby weighing eight and a quarter pounds." The child was asphyxiated when born, but after much trouble was resuscitated.

NASAL STENOSIS.

Its Influence on Olfaction, Audition, Vocalization, and Respiration, and its Treatment.

By J. O. ROE, M.D.,

ROCHESTER, N. Y.,

FELLOW OF THE AMERICAN LARYNGOLOGICAL ASSOCIATION, ETC.

(Read before the New York State Medical Society, February 1, 1881.)

(Continued from p. 489.)

Treatment.—The treatment of nasal stenosis may be divided into constitutional and local. The local may again be divided into conservative and radical.

The constitutional treatment should be such as to build up the system and remove any constitutional disease or dyscrasia which may be present and which may have caused or aggravated the local difficulty. Further than this it cannot be of avail.

The conservative local treatment advised for the removal of nasal hypertrophies are such as the use of medicated solutions applied by means of the douche or spray, the use of powders blown or snuffed into the nostrils, medicated soft gelatine bougies, and the like; but as they are those so commonly employed in the treatment of nasal catarrh, and are not often satisfactorily effective, I will not attempt to discuss them here. In some instances, however, where the obstruction consists in the recent tumefaction or infiltration of the soft parts, these measures will prove of service, but in the great majority of instances radical means are the only ones that will prove permanently successful.

The radical treatment consists in speedy and complete removal by surgical or chemical means of the obstruction, whether it results from a deflected septum, a membranous occlusion, hypertrophied tissue, or neoplastic growths.

Removal of obstructions located in the bony framework.—Hoppe [22] employs for the forcible separation of the abnormally approximated bones, a pair of thin long-armed forceps, by the opening of which the bones are driven apart. If the obstruction is due to a deflected septum bent throughout, or nearly throughout its whole length, the most successful operation for correcting it is that proposed by Mr. William Adams,[23] of London, and modified by Dr. Weir, of New York, and which was so ably detailed to this society by Dr. Weir one year ago.[24]

In other cases, where the obstruction is caused by an abrupt curve or bulging in the septum, the most successful and easiest plan is to excise it by means of a pair of Rupprecht's [25] or Blandin's [26] punch-forceps.

Where there is an exostosis or a spicula of cartilage or bone projecting from the side of the vomer, a very convenient instrument for its removal is the small double-gouge forceps devised by Dr. Weir.[27] These I have also found very serviceable for removing similar growths from the turbinated bones.

Dr. Goodwillie [28] recommends, and reports excellent results from, the use of a surgical engine for drilling away these exostoses on the turbinated bones and septum by the revolving multiple knife enclosed within a sheath.

Dr. Cohen [29] also reports an interesting case of exostosis from the palatine ridge of the superior maxilla and vomer, occluding the right nostril, which he removed with the burr of the dental engine.

Removal of obstructions located in the soft parts.—The most common obstruction is that of hypertrophy of the tissue, and chronic engorgement of the erectile cavernous structure before described.

Among the chemical agents employed are the various caustics, as nitric acid, chromic acid, London and Vienna pastes, nitrate of silver, and glacial acetic acid. The latter has come quite recently into use, but is the most useful of them all. It is applied with a flat probe wound with cotton. The slight stinging pain which it causes quickly passes away, or can be immediately relieved by a few sniffs of chloroform. It causes but slight irritation or inflammation, not more than a slight stuffiness of the nostril for from twelve to twenty-four hours, after which the cauterized tissue is discharged for two or three days in the form of whitish, membranous shreds, with a corresponding diminution in the secretion and obstruction. The septum, where not to be touched, is protected by introducing Shurley's speculum.

The London and Vienna pastes are made of the proper consistency by mixing with absolute alcohol, and are applied in a similar manner.

Chromic acid is most conveniently applied in a similar manner, by adding just sufficient water to liquefy the crystals, but if it is desired to localize its action to a limited spot, it is best applied in the crystal. Its special advantage is that it causes but very slight pain.

The most deeply eroding escharotic which we have, is nitric acid. The main difficulty has been to limit its action, but with the guarded canula devised by Dr. A. H. Smith, of New York, for applying it, this difficulty is obviated.

Its two main disadvantages are, that a severe burning pain may follow the application for several hours, sometimes for twenty-four hours or more, and a troublesome ulceration, very slow to heal, may result.

After the application of each of these escharotics, the nostrils should be washed out with a spray of Dobell's solution, to remove any free caustic on the surface.

The above enumerated agents will, as a rule, be found most efficient in cases of simple and moderate hypertrophy, but in cases where the membrane is greatly hypertrophied, or where the obstruction consists of a chronic distention of the cavernous vascular tissue, they are inefficient, unless perseveringly applied. In these cases a great number of applications are required, which become tedious to both patient and physician.

Each application of the escharotic only removes a superficial portion, and should be repeated as soon as the slough comes away and the surface is clear, which is ordinarily in about six or eight days. The passages in the interim should be kept clear by frequent cleansing with the posterior nasal syringe, or the anterior and post-nasal spray, with Dobell's solution.

In regard to the use of nitrate of silver in the nares, I fully concur with Dr. Bosworth,[30] that owing to its

[22] Ziemssen's Cyclopædia, vol. iv., p. 14.

[23] Watson's Diseases of the Nose, op. cit., p. 305.

[24] New York Medical Record, p. 279, March 13, 1880; also Trans. N. Y. State Medical Society, p. 273, 1880.

[25] Wien. med. Wochenschrift, S. 1157, 1868. Ziemssen's Cyclop., vol. iv., p. 114.

[26] Dict. Encyclopéd. des Sciences Med. et Chirurg., article Nez.

[27] New York Medical Record, op. cit., p. 281.

[28] Surg. Treat. of Naso-Pharyng. Catarrh: New York Med. Gazette, July 31, 1880.

[29] Philadelphia Med. and Surg. Reporter, p. 30, July 13, 1878.

[30] Some of the Unsettled Questions Concerning Nasal Catarrh: Medical Record, New York, p. 508, November 6, 1880; or, Diseases of the Throat and Nose, p. 199, 1881.

powerfully stimulating qualities, it is often positively injurious, from the increased stimulus it gives to the morbid process; but in the treatment of morbid processes requiring stimulation, it is invaluable.

Gradual dilatation is employed by some, to cause absorption of the hypertrophy.

Hoppe[31] uses hollow bougies as dilators, in narrowing to a moderate degree.

He also recommends the use of pieces of gum-elastic catheter, passed through the nostrils, in cases of coryza of the new-born, in whom breathing during the act of suckling is otherwise impossible.

Dr. Wagner, of New York, employs gradual dilatation with sponge tents, or soft metallic bougies, made of different sizes.

The most radical and efficient plan of treatment for removing these hypertrophic and vascular obstructions to the nasal cavities is the use of the galvano-cautery.

The employment of this most potent agent in such delicate and sensitive passages, would at first thought seem heroic, but the very frequent failures of all other means gradually led to its adoption, as its usefulness had been demonstrated on other parts.

The advantages which it possesses over all other modes of treatment are the thoroughness of its operation, the ease with which it can be applied and controlled and its action limited with our improved electrical instruments, and the healthful tissue changes which it stimulates in the immediately surrounding parts.

The priority of the application of it in the treatment of diseases of the nasal passages is claimed by Dr. Thudicum, of London.[32] He began its use in the removal of nasal polypi sixteen years ago.

Each operator, as a rule, adopts a different method for arriving at the same result, and accordingly uses the form of instruments best adapted for his method. Thus, Voltolini uses an electrode with a single wire-loop point; Michaels, of Bonn, wire loop écraseur: Thudicum, of London, a wire loop: each of them depending on engaging the mass within the wire.

Lennox Browne, of London, employs a bullet-pointed electrode, and destroys the tissue as it passes in already heated. Drs. Shurley, of Detroit, and Bosworth, of New York, use a slender knife electrode, and remove the mass by cutting through it or by making linear incisions through the tissue, depending on the contracting of the resulting cicatrices to draw the tissues down tightly over the turbinated bone, and leave the opening free.

In case of simple hypertrophy of the superficial tissue, with but moderate narrowing, I use a small

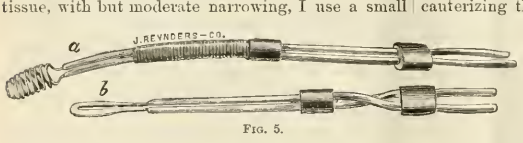

Fig. 5.

flat-blade cautery, as shown in Fig. 5, *b*, which is pressed flatly against the surface until sufficient tissue is destroyed. In case it is desirable to cauterize deeper into the cavernous tissue, I turn the blade edgewise. For this purpose Dr. Bosworth has devised a very convenient blade, with the cauterizing surface on one side only.[33]

In cases of excessive hypertrophy I prefer an electrode which I have devised, with a flattened spiral point made quite broad, as shown in Fig. 5, *a*, which is introduced into the nostril heated to a bright red heat, and passed along the end of the turbinated bone, thus destroying the tissue in mass.

This method of removing this tissue in mass from the whole length of the turbinated bone has given me the most satisfactory results, on account of its speedy effect and permanent results; and I have come to consider it in all cases of marked hypertrophy decidedly preferable to the plan of superficial cauterization, or of scarification by linear incision.

For the hypertrophies on the septum, and minor points on other parts, the small electrode should be used.

In the application of the galvano-cautery certain precautions should be observed. The vestibule and parts of the nasal passages anterior to the turbinated bones should not be cauterized, as the contraction which follows will tend to constrict the passage. On the turbinated bones it is quite different. They, being convex, the cicatricial contraction draws the tissues down more tightly over them, and leaves the passages more free.

In removing hypertrophies from the septum, care should be taken to touch only the parts to be burned, and then not to burn too deeply.

In those cases in which a rhinoscopic examination enables one to make the diagnosis of the hypertrophy on the septum, with a little dexterity the electrode can be guided by the aid of the rhinoscopic mirror so that the surgeon can see when sufficient tissue has been destroyed.

This is also true of hypertrophies on the posterior ends of the turbinated bones, particularly in those cases in which the posterior pharyngeal space is wide, and the patient has good control over the soft palate.

In cases in which the progress of the cauterization cannot be watched as above suggested, and since it cannot be determined by anterior inspection, when the end of the electrode has reached the posterior ends of the turbinated bones, the depth of the nasal chamber should be accurately measured with a probe and marked on the electrode. From this should be deducted the distance (ordinarily about one inch) from the posterior ends of the turbinated bones to the posterior pharyngeal wall, and the result gives the depth to which the electrode should be introduced.

By thus exercising due precaution, the accident of cauterizing the mouth of the Eustachian tube, or other parts not to be touched, can be avoided.

When using the large, spiral point, it is by far the best plan to heat it before introducing, as the length of time required to heat it when in contact with the tissues may elevate the temperature of the air in the nasal fossæ to the detriment of the ear, but the small one heats so quickly that it is best placed in position before the connection is made.

I employ Dawson's battery and Leiter's universal handle, in which the electrodes all fit. The handle contains a current-breaker, giving perfect control of the electric stream, thus removing all danger if the manipulations are properly and carefully made.

Dr. Shurley,[34] of Detroit, has devised a very conve-

[31] Ziemssen's Cyclopædia, op. cit., p. 114.

[32] Polypus and other Morbid Growths in the Nose: their Radical Treatment by the Electro-Caustic Method, and their Connection with Asthma: London Lancet, April 17, 1880, p. 594.

[33] Vide MEDICAL RECORD, op. cit., p. 510.

[34] The Galvano-Cautery as a Therapeutical Measure in Chronic Nasal and Naso-Pharyngeal Catarrh: The St. Louis Med. and Surg. Journal, January 5, 1880, p. 38.

ment handle for holding the electrodes; also Dr. Bosworth[35] has recently constructed a handle which, although in many respects similar to that of Dr. Shurley, is, I should judge, the most convenient han-

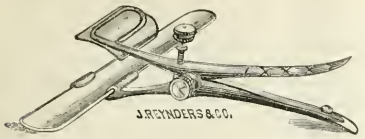

Fig. 6.

dle of all, although I have not as yet had an opportunity of using it.

The best form of speculum is that of Shurley, which I have modified by widening the outer blade and closing the aperture with an ivory plate, as shown in Fig. 6, so as to more thoroughly protect the outer side of the nasal opening when the heated electrode is introduced.

I have, also, a number of short, thin, ivory blades, made of different widths, to correspond with the size of the nose (see Fig. 7). These I introduce at the sides of the speculum, one above and one below, to protect the upper and lower borders of the passage from any possible injury.

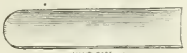

Fig. 7.

I have also a very convenient speculum (see Fig. 8) with an ivory slide on one side, to be introduced along the septum to protect it from injury. It is made of ivory or of annealed glass, like Dr. Goodwillie's nasal shield. It is made in three sizes, to correspond with the size of different noses. It also makes a very light and convenient speculum to use in the application of acetic acid or other caustics.

The pain attending the application of the cautery is generally slight, and therefore does not usually

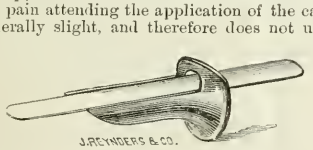

Fig. 8.

require an anæsthetic. A few sniffs of chloroform, to remove the sensitiveness of the nostril, and to prevent sneezing on the introduction of the speculum, is all that is necessary.

In children, an anæsthetic is necessary to keep them quiet, and for them chloroform is preferable. Sometimes, however, from fear, an anæsthetic is necessary in adults; for this reason, in three cases, I have given nitrous oxide gas. The after-effect, for about a week, is to cause one to feel as if he had taken a severe cold, occasionally to feel quite sick, accompanied by a severe headache, but in no case have I had anything but a favorable result.

Dr. Daley,[36] of Pittsburg, reports severe aural complications resulting from the operation, but this may be due to the method employed, *i. e.*, introducing the electrode cold and allowing it to become heated in the posterior pharyngeal space before applying it to the tissue, thus superheating the air in the pharyngeal vault, which, entering the ear, may have caused the difficulty; or the mouth of the Eustachian tube may have been accidentally cauterized.

Other methods are used for the removal of this redundant tissue.

Dr. Goodwillie[37] employs, in some cases, the thermo-cautery, but at the same time remarks that "the galvano-cautery is by far the most efficient cautery to be used in the nose."

Dr. Robinson, of New York,[38] has employed a pair of strong forceps with biting blades, by which this tissue is forcibly torn away, sometimes taking a turbinated bone with it. This, at best, seems a very harsh and unwarrantable procedure, and is attended by profuse hemorrhage. In cases where the hypertrophied tissue is more or less pedunculated, or projects in the form of a rounded mass, it can be very satisfactorily removed by the wire écraseur devised by Dr. Jarvis, of New York.[39]

The application and retention of the wire is facilitated by transfixing the mass with a long, slender needle, and passing the wire over the needle, when the tissue can be slowly cut through. In a number of cases I have found it very efficient, but in cases where the hypertrophy is moderate and distributed over a larger surface, my experience accords with Dr. Shurley's in the use of the snare in the nasal passages, that at each attempt "to learn how difficult it is to apply it."[40]

In hypertrophy on the nasal septum the snare can very seldom be used.

In the removal of other less common obstructions of the nose, such as foreign bodies, polypi, adenoid growths in the vault of the pharynx, syphilitic cicatricial contraction, or membranous occlusion, each must be dealt with according as the exigencies of the case demands.

I will briefly cite from my note book a few cases by way of illustration, as we meet them in practice —those, however, in which the main treatment was with the galvano-cautery.

Case I.—Mr. T. J——, of North Rush, thirty-three years of age. Referred to me September 18, 1879, by my late friend, Dr. J. F. Denman, of Scottsville. During the fall of 1877, as the result of a severe cold, his nostrils became closed so he could scarcely breathe through them. This condition continued, and was attended by a profuse muco-purulent discharge. He suffered from a constant dull, heavy pain in the frontal region, was restless at night and his sleep broken. His throat was constantly parched, and he had an unpleasant taste in the mouth, particularly in the morning.

Examination revealed closure of the nostrils from hypertrophy of the tissue covering the inferior and middle turbinated bones.

The hypertrophied tissue was thoroughly destroyed in both nostrils by the galvano-cautery; no febrile symptoms followed. On the third day I removed a large slough from both nostrils. The surfaces soon healed, his nostrils were left free and unobstructed, and all his unpleasant symptoms disappeared.

Case II.—Mrs. M. C——, aged thirty-seven years. Referred to me by Dr. Farley, October 16, 1879. She had suffered from a severe nasal catarrh and stop-

[35] Op. cit.

[36] An Analysis of the Value of the Galvano-Cautery in the Treatment of Diseases and Growths of the Naso-Pharynx: Trans. Am. Med. Assn., 1880, p. 654.

[37] Op. cit.

[38] American Jour. Med. Science, April, 1877, p. 435: also, A Treatise on Nasal Catarrh, p. 114. 1880.

[39] Presented before the Am. Laryng. Assn., June 2, 1880: also, vide Dr. Bosworth's article, New York Medical Record, op. cit., p. 511.

[40] Op. cit.

page of the nostrils for five or six years, a sensation of pressure in the nasal region, a frontal headache, and a profuse watery discharge from the nostrils.

On examination, a small polypus was found in each nostril, filling the slight opening between the hypertrophied turbinated bones. The polypi were removed by the snare, after the base of the growths and the hypertrophied tissue was thoroughly destroyed by the electro-cautery. As soon as the slough was removed and the surfaces healed the nostrils became clear, the watery discharge ceased, and she has remained free from nasal and catarrhal trouble since.

Case III.—G. C——, aged twenty-seven years, theological student, consulted me April 5, 1880, for obstruction and difficulty in breathing through the nose, which had annoyed him for about ten years, and was attended by all the symptoms of an obstinate nasal catarrh. Had a sensation of pressure about the bridge of the nose and frontal region, eyes weak, unable to use them but for a short time each day, and also complained of inability for mental application. Throat sensitive and tires easily on speaking, his voice has a marked nasal twang, but no hoarseness. He snores loudly at night, and arises in the morning with a headache, dry, parched throat, and a bad taste in the mouth. General health fair.

Examination.—Nasal obstruction from hypertrophy of tissues on inferior and middle turbinated bones on both sides. Naso-pharyngeal and laryngeal catarrh. Pharynx granulated.

The treatment first instituted was the thorough removal of the hypertrophied tissue in the nose with the galvano-cautery. After the surfaces had healed and free nasal respiration was established, the pharyngeal and laryngeal trouble yielded readily to treatment, and a complete and permanent relief resulted. His eyes became strong and his head clear.

On meeting him a few days ago he said he rejoiced to tell me how well and free he was from all his old nasal and throat difficulties.

Case IV.—T. K——, of Buffalo, aged twenty-three years, came under my care July 30, 1880. For two years past has had considerable trouble in the throat, subject to frequent colds, and a severe and almost constant cough, with a slight mucous expectoration.

Has obstructed nostrils and constant discharge from head. Is weak and anæmic and losing flesh quite rapidly. His friends are apprehensive of consumption.

Examination.—Chronic laryngitis and slight bronchitis. Nares obstructed on right side by an exostosis from inferior turbinated bone; on left side by hypertrophied tissue.

The hypertrophied tissue was removed by the galvano-cautery electrode. The exostosis in the right nostril by a pair of nasal bone forceps. By local applications applied to larynx and inhalations, together with tonics internally, he improved very rapidly, and at the end of two months he had gained in weight thirty pounds.

Nasal respiration is now entirely free. There is no irritation about the throat or lungs, and he is entirely well.

Case V.—Henry S——, four and a half years old. Was brought to me by his parents for treatment of obstructed nostrils and catarrh. He breathed entirely through the mouth, and had done so since birth; was subject to very frequent colds, which increased the nasal discharge and he was becoming quite deaf.

Examination.—The septum of the nose was very crooked, bent in the shape of an S (as referred to in the early part of this paper), obstructing both nostrils. He also had very large tonsils.

Treatment.—First removed both tonsils; after the cut surfaces had healed I anæsthetized the child and fractured the septum by a pair of Adams' forceps, and held the septum in place by means of a pair of ivory plugs until it reunited.

After this the right nostril remained obstructed by some hypertrophied tissue on the inferior turbinated bone. This I removed by the electro-cautery. In the vestibule of the left nostril there was some hardened tissue which greatly contracted its calibre. This I decided to remove with London paste, as I did not desire the marked cicatricial contraction which follows destruction by the electro-cautery. The removal of this tissue by the paste I have not quite completed, but even now, with the right nostril free, he has but little or no difficulty in breathing entirely through the nose, and his hearing is restored.

Case VI.—R. A. H——, Bath, N.Y., aged twenty-four years, came under treatment January 18, 1881, for an aural trouble associated with obstructed nostrils and nasal catarrh.

Been slightly deaf in right ear, with marked tinnitus, for six or seven years, which he attributed to diving, and to the entrance of water into that ear while swimming. Also slight deafness and tinnitus in left ear for two years.

The aural trouble seems to sympathize very actively with the nasal trouble, for when the catarrh and nasal trouble is aggravated the deafness and tinnitus is greatly increased. It is markedly affected by damp weather, winds, dust, exposure to cold, damp or wet feet, and often even by moderate exercise. He has also a mild chronic laryngitis. General health is very good.

Examination revealed hypertrophy of the inferior and middle turbinated bones, more particularly at the posterior ends, and also hypertrophy of the tissues along the lower portion of the septum, as shown in illustration, Fig. 3. (From this case the drawing was made.) The mouths of the Eustachian tubes were thickened and filled with a catarrhal secretion. Membrana tympani very concave.

Treatment.—Applied the galvano-cautery to hypertrophied tissue of the turbinated bones and septum, guided the electrode at the posterior portion by the aid of the rhinoscopic mirror.

Marked febrile symptoms and severe headache followed on the fourth day and continued two days. No aural complications. After the sloughs were removed and the surfaces healed the nasal passages were free and clear, and the aural symptoms much relieved, so that, with the necessary subsequent treatment which this case requires, the prospects are good for a more or less complete recovery from this aggravated and distressing aural trouble.

It will be unnecessary to cite more cases to illustrate the evil results of obstructed nostrils and the beneficial results following the operation of removing these obstructions. By these means we are enabled to provide our patients with luxuriously free nasal passages, to remove the main cause for the invariably accompanying persistent and annoying nasal catarrh, and, after removing this barrier to apply other effectual means of treatment to the diseased portions of the naso-pharyngeal mucous membrane; and are compelled no longer to cant with Niemeyer that "chronic catarrh of the nares is a very obstinate disease, which not seldom mocks at every treatment,

and often lasts with changing intensity for many years."

In conclusion, gentlemen, this subject of nasal stenosis and mouth-breathing does not elicit the close and careful attention which it deserves.

We are all apt to become intensely interested in a new method of dressing for a fracture, a rare form of heart disease which is inevitably fatal, or a new type of fever that will get well spontaneously, but these so-called minor ailments are allowed to go unheeded, gradually undermining our superstructure, destroying our organs of special sense, cutting us off from social pleasures, and rendering us unfit to fully enjoy the life we so dearly cling to.

It is in the early stage of these difficulties that our work becomes most effective and curative.

The sanitarians devote a vast amount of time to devising the most effective means for *house ventilation*. If an equal amount of time were devoted to *nose ventilation*, I am sure that quite as much misery would be prevented.

Much can be accomplished toward obviating this unfortunate condition by timely attention, in children, to the maintenance of free nasal respiration, thereby preventing the formation of the habit of mouth-breathing.

Catlin, in his travels among the American Indians, covering a period of about ten years, found among two millions of them living in a savage state but three or four deaf mutes, and not a single case of deafness, nor could a case be remembered by any one of the one hundred and fifty chiefs whom he interrogated.

This is explained by the Indian mothers training their babes to breathe by the nostrils alone, and never to open their mouths except to take food or to use their tongue.

Another important fact to be observed is that among the Indians in a state of nature, ear, throat, and lung diseases, and particularly consumption, are almost unknown.

The same is true of ear and lung diseases in the lower animals, and they are invariably nose-breathers.

As we all know, the use of an organ will strengthen, expand, and develop it, whereas from lack of use it soon shrinks away, and becomes rudimentary. So with the nose; if it is allowed to go unused, and mouth-breathing is established, a tissue change will take place in the nostrils leading to narrowing, and in many instances complete closure of them, just as "a disused pathway will become covered over and at last choked up by rank and luxuriant vegetation."

To the Medical Profession of the City of New York.—The Board of Censors of the Medical Society of the County of New York request the co-operation of the profession for the enforcement of the existing medical laws.

To this end the Board request physicians who are cognizant of persons practising in this city under fraudulently obtained diplomas, or who practise without any diploma (and this includes prescribing druggists), to forward the name and residence of the offender, the name and residence of the person treated, and the name and residence of the physician making the complaint, to the secretary of the Board, Daniel Lewis, M.D., 147 E. Forty-fifth street, for action by the Board.

The name of the person making the complaint is required, as a guarantee of good faith, and to show that the charge is not made to gratify private spite. *Anonymous communications will receive no attention whatsoever.*

A CASE OF PROLONGED TRANCE.

By GEORGE M. BEARD, A.M., M.D.,

NEW YORK.

I have recently had opportunity to see a case of prolonged trance, relating to which there have been a number of newspaper statements.

The patient—whom I found in the Lehigh County Alms-house, Pa., five miles from Macungy—is a Hungarian, about twenty-two years of age. He came into the county alone, and in a trance state, though able to totter about, and went to a public-house, where he became entirely or mostly unconscious, and then he was removed to the poor-house. He is a patient without a history—who he is, whence he came, or whither he was going is known to no one. He had in his pocket a Hungarian prayer-book, recognized as such by certain Hungarians who have been in that district and who visited him, and one penny in money. He has a fine organization; is evidently a mechanic, who has labored hard with his hands. These are all the facts that suggest his history. It is probable that he was a Hungarian immigrant, and that, discouraged perhaps by want of money and employment and friends, he was thrown into this state in which we now find him.

Dr. Erdman, of Macungy, by whose kindness I had the opportunity to see the case, and who went with me to the alms-house, of which he is one of the physicians, had assumed, as had also his associate, Dr. Kline, that there was effusion on the brain, and on that theory had treated him with iodide of potassium, and ergot also had been used. There is, however, no certainty, nor probability even, that there is any such condition of the brain; for effusions and hemorrhage in the cerebral substance cause paralysis of motion or sensation on one side or the other, and they do not cause symptoms of trance.

When I saw the patient, March 23d, he had been forty-one days in that condition in the institution; how long he had been in this state before he became entirely helpless is not known, and probably never will be known. Although his case has been published in all directions in the papers, yet no friend comes to claim him; and it is doubtful whether we shall ever know much more about him or his history than we now know.

On visiting him, on March 23d, I found the following conditions:

First. General appearance.—The patient rests in bed, apparently asleep; on seeing him, one would suppose that he was asleep, and that on slight agitation he would awake. Only on full examination would I have thought he was not in ordinary sleep. There are movements of his lips and countenance; he smiles, at times, on being spoken to or on hearing any noise, but it is a smile without intelligence. There is nothing in his general appearance that suggests apoplexy or paralysis, or, indeed, any morbid condition whatsoever, except the condition in which he is, or ordinary sleep. The temperature of the body is about natural—all the extremities being warm. There is no pallor over the face, or any sign of very great bloodlessness.

The eyes.—The eyes have been closed all the time; are, indeed, never open, except when forced open. In attempting to raise the lid there is some resistance, as is usually found in cases of trance when the lids are raised. The eyeball rolls about, but not so much upward or inward as I have seen it in many cases. The pupils react to the light, as is always

the case in trance. No ophthalmoscopic examination of the retina was made; but I have no doubt, if made, there would be found a normal condition, for that has been the result in all the examinations in cases of trance where I have had the ophthalmoscope used. The eyes then present the condition of a person in health, they certainly do not indicate any coarse disease of the brain or spinal cord. I doubt much whether, if the brain could be examined with all the aids of research, the senses would be able to discern any deviation from the normal state.

Consciousness.—The patient is probably conscious but dimly, if at all. It is more than probable that there is no rememberable consciousness; that is, when he comes out of this state he will have no clear recollection of his experiences while in this state. In trance, as in dreams, there is sometimes a remembrance of what has happened, as clear and strong as the memory of the events of normal waking life; and then again, there is a dim, foggy, and delusive remembrance which soon passes away. This person is probably conscious—in a vague and uncertain way—of sounds and of external impressions of various kinds; just as we are conscious of our dreams at the time, although on awakening we know nothing about them; and just as in dreams, also, we have no will or power of control, so he, in this trance state, has no power of responding in an intelligent way to external irritations, if he knows what is going on about him by what he hears; if he has an uncertain consciousness of his environment, he is yet unable to adapt himself to it, for he cannot ask for food or open his eyes. In sleep one may strike or kick, or even speak or seem irritated, without having any rememberable consciousness of what they do.

Sensation.—Sensation is not, I think, entirely abolished. There is no evidence that he feels the prick of a pin, so far as I could judge by experiment; there is no evidence that he feels a strong faradic current applied over the face and forehead, though the muscles respond to it, as they always do in trance. It is, indeed, one of the important diagnostic points between trance and death, where death is pretty closely simulated; but when I cauterized him on the back of his neck in a severe way, holding the cautery on the skin for some time, he winced under it, although not at all as a person in health would have done. This was the only evidence I could get of any sensation. I have no doubt whatever that the cautery was felt at the time by this patient, although if he should recover to-morrow, he would probably have no recollection that it was applied. It is probable, however, that just as under an anæsthetic, patients cry out sometimes, and flinch under an operation from which they have no recollection of pain on coming out from it, so in this case, the flinching under the cautery may have been a purely automatic process, below the plane of conscious pain.

Automatic phenomena.—In this case of trance, as in trance usually, the automatic processes go on, though there is no evidence that they are positively exalted; the response of the pupil to light is a type of what is going on all over the body. He cannot speak—has not spoken through all these weeks, and cannot in any way indicate desire for food, but when liquid nourishment is placed in his mouth, he swallows it mechanically, and after a certain amount has been placed in his mouth, he ceases to swallow.

Discharges from the bladder and bowels occur regularly when the patient is put in position for them to be discharged; otherwise they would discharge, in time, without his being placed in position, but there is on the patient's part no expression of desire in these respects. The patient is, in a word, an automaton—a piece of machinery without any of that intelligent, directed, and controlled behavior which we see in all persons who are in a normal state.

This automatic character of this patient's actions is well illustrated in his walking. When he is pulled up, put on the floor, and gently led by the hand, he walks, and walks apparently without difficulty, and without any marked indications of feebleness. When the person who is leading him takes off his hand he stops. I found on experiment, that if I spoke very loud, commanding him to follow me, he would do so, and even turn around after me, and he did this not only when his eyes were closed—for they are always closed—but when, in addition, they were thoroughly bandaged. He could not understand my language, but an impression of sound was made upon him that induced him, mechanically, or automatically, to follow me.

A pistol fired off near his head caused no change of expression of countenance, so far as I could see, but a slight tremor of the body was observed.

The pulse.—The pulse was about 68, and was full and regular. While walking it went up to 100 or more, and was less regular and not so full, but on putting the patient in bed it soon resumed its normal regular and full beat.

In classifying this case we find that it comes under the head of spontaneous trance, and the patient is in the special condition of trance lethargy or trance coma. If he were in the condition of trance sleep he would be aroused, or would arouse himself in time. There is none of the rigidity, the stiffness of the muscles which we see in trance artificially produced, and which I have shown to physicians in my recent lecture and private experiments. The muscles are flaccid, as in the natural state. There is no suggestion whatever of the special form of trance to which we give the term cataleptic trance; the limbs do not stay in any position in which they are placed, but fall limp and flaccid as soon as we let go.

Compared with induced trance.—Many times during the past few months, in my private experiments in the presence of physicians of this city, I have put many subjects into a condition very much like that of this Hungarian, the difference between them being that, in the case of the Hungarian, there is simple lethargy, while in the case of the subjects there is trance sleep, which resembles ordinary sleep mainly in being more profound. When my trance subjects are put into this state they resemble, to external appearance, and also on close examination, this Hungarian; the behavior of the lips, of the eyes, of the eyeballs, of the pupils, and of the pulse being much like those of the case here described, although there are individual variations from the general standard. These cases of induced trance on which I have experimented can be, though with considerable difficulty, aroused. I have found myself considerably exhausted by the labor required to awaken a number of these cases in succession; besides speaking very loudly, not a little muscular exertion is required in waking them up after they have been long in the trance sleep. In the case of this Hungarian, the condition—as I have before stated—is more like trance lethargy than trance sleep. There seems to be no way to arouse him; the powerful cautery applied repeatedly caused, as has been stated, only a slight wincing, and no sign of recovery from the trance.

Treatment.—The treatment that I have advised in

this case is an alternation of sedatives and tonics, bromides, strychnine, and quinine, with the use of faradization, general and local, with sponges and the wire brush.

The probable future of the case.—This patient may remain for weeks or months longer in this condition, or he may recover in a week, or even less; or it is possible that he may die before recovery. If he should die, and on post-mortem examination there should be found any coarse lesion of the brain or any part of the nervous system, it would none the less be true that the patient *is now* in a trance state. Disease of the brain may sometimes, indeed often, excite symptoms of trance in addition to other symptoms; but as already stated, effusions in the substance are not likely to excite that condition, so far as is known, although it is not absolutely impossible that sometimes lesions of that sort should do so. Injuries of the brain that produce trance—as the notable case of the French surgeon who was injured at Sedan—will be recalled. In that case, which has been reported by Mesnet, and popularized especially by Huxley, there were alternations of trance and the normal life.

A very extraordinary case of trance rigidity has lately been reported in the *British Medical Journal* of February 5, 1881, by W. C. Bland, M.R.C.S., Medical Superintendent of the Borough Lunatic Asylum, Portsmouth, under the title, "A Case of Long Maintained Fixed Position."

The facts are, that the subject, thirty-one years of age, was struck by lightning, in a boat during a gale, and from this was dated his peculiar symptoms. He had passed nineteen months in two asylums; fourteen of them in the Borough Asylum at Portsmouth. During these fourteen months he had been in the following states: every limb rigidly extended, the legs and feet pressed firmly together, the arms and hands pressed to the side, the eyes closed, and, when the lids are retracted, the eyes roll upward, so that it is impossible to see the pupils; the features fixed and impassive; normal electrical reaction; tendon reflex scarcely apparent; flies crawling over him during the summer did not cause him to move a muscle; he was able to move his jaws a little, but food was given by a spoon. On admission to the asylum he was emaciated, but had gained many pounds by treatment. During these fourteen months he was moved but twice, though under continual observation night and day; he had spoken but once; the retina, when examined by the ophthalmoscope, appeared to be normal.

I have had for months under my observation, a class of fifteen or twenty subjects, most of whom can be at any moment put into precisely the condition here described. The body is as stiff as a board; the head may be held in the hands of one person and the feet in those of another, and there is no sign of bending, and the whole appearance of the body is exactly as here described by Dr. Bland. These subjects go into this condition as they go into all other trance conditions—as blindness of one or both eyes; color-blindness of one or both eyes; deafness of one or both ears; anæsthesia of the whole or one part of the body; abolition or modification of the sense of taste, the sense of smell, or the sensation of vertigo—by suggestion, the expectation that such a result must come about; but these and all other trance symptoms may occur spontaneously, or may be induced by any disease of the brain.

INTRA-PARIETAL HERNIA.

By GEORGE F. SHRADY, M.D.,

NEW YORK.

(Read before the Medical Society of the State of New York, February 4, 1881.)

The following case of intermuscular or intra-parietal hernia is not only interesting on account of its rarity, but also from a clinical point of view.

The patient was a Scotchman, fifty-four years of age, whose left testicle had not descended until he was twenty-two years of age. When four years old he fell over an embankment, since which time he dated the occurrence of a hernia in the left groin. After the descent of the testicle the hernia appeared in the scrotum also. During the greater part of his life he had worn a truss and suffered no more than the ordinary inconveniences attending a reducible inguino-scrotal hernia. About one year ago he had difficulty in returning the hernial contents, and suffered from temporary strangulation. On the 4th of last December, while waiting upon a customer, the hernia came down, and the patient was unable to reduce it as formerly. Symptoms of strangulation soon after appeared, and Dr. F. W. O'Brien, of Harlem, was summoned. Failing in accomplishing the desired result by taxis, Dr. O'Brien advised an immediate operation. The patient would not consent to this measure, and determined to trust to the chances of his own efforts.

Four days afterward Dr. M. J. Roberts was called in to see the case, and also proposed an operation. The patient consented to have taxis tried under ether, but exacted a promise from Dr. Roberts that no cutting operation should be performed. The patient awoke from the anæsthetic with the strangulation under-reduced. The following day I was called upon to perform herniotomy. The patient was at that time in the fifth day of strangulation, had an anxious expression, feeble, thready pulse, cool surface, and was constantly vomiting stercoraceous material. The hernia was situated on the left side, and presented some striking clinical features. The swelling, which was equal in size to a largely distended colon, extended continuously from above the anterior superior spine of the ilium to the fundus of the scrotum. The overlying tissues were tense, particularly those of the scrotum, and there was considerable tenderness over the external abdominal ring. The unusual situation and the peculiar shape of the tumor suggested at first the possibility of reduction *en masse*. The existence of such a condition was, however, disproven by careful examination, and by the assertion of the patient that the swelling had been there as long as he could remember, and that it was almost invariably larger after a hernia in the scrotum had been reduced.

Percussion gave superficial intestinal resonance throughout the entire extent of the tumor. Inasmuch as the swelling extended above the line of the internal ring, contained intestine, and was apparently situated in the substance of the abdominal walls, the diagnosis of intra-parietal hernia was made. The existence of the supplementary sac was believed to be due either to a previous rupture laterally of some portion of the vaginal process of the peritoneum, and the subsequent formation of a cyst around the escaped intestine, or to a true diverticulum of the peritoneum. It was proposed to cut down in the usual situation, over the external ring, divide the stricture wherever it might be, and, if possible, reduce the contents of both sacs. But the patient again refused the operation. This was on Thursday. On the following Sunday, by request of one of the patient's family,

Dr. O'Brien called Dr. Ripley in consultation. That gentleman, recognizing the urgency of the symptoms, advised immediate operation, but to no effect. To my surprise I learned that the patient was still alive on the eleventh day after the commencement of symptoms of strangulation, and that he had finally consented to an operation. He had been in the meanwhile very much reduced by constant vomiting. When I saw him at that time, in company with Drs. O'Brien, Roberts, and John Shrady, he was evidently fast sinking, and it was decided not to take the chances of the patient dying during an operation. The site of the hernia was infiltrated, ecchymosed, and œdematous. This condition was assumed to be due to sloughing of the strangulated gut, and the discharge of its contents into the surrounding areolar tissue. The patient died shortly after my visit.

The autopsy was made the day following, by Dr. W. H. Porter, who verified the diagnosis which had been made before death. The tissues of both the groin and scrotum were immensely thickened by fecal infiltration and resulting inflammatory processes. At the seat of constriction, which was the external ring, the walls of the gut had sloughed entirely through on one side and partially through on the other, allowing the escape of fecal fluids into the adjacent tissues. The hernia was of the congenital variety, the sac being formed by the vaginal process of the peritoneum. Continuous with this sac, was a diverticulum of peritoneum, seven inches long, extending from the inguinal canal upwards above the anterior superior spine of ilium and between the external and internal oblique muscles. The diverticular sac contained several knuckles of ilium, which had found their way thither through the enormously enlarged internal ring.

As previously stated, this form of hernia is rare. So far as can be learned from the meagre literature upon the subject (as contributed by Birkett, Bryant, Klebs, Hartung, and Lenhart), intra-parietal hernia is associated with the congenital variety, and is probably due to the existence of a congenital diverticulum of peritoneum in the inguinal canal. In this particular instance, the left testicle remaining in the inguinal canal until the twenty-second year may have been an important factor, if not in the actual production of the diverticulum, at least in its early development. It is quite probable that the hernia produced at four years of age was in the diverticulum, the undescended testicle virtually plugging up the inguinal canal. Up to the time of the descent of the testicle the intra-parietal sac was being constantly stretched, as was also the internal ring. When the testicle descended the vaginal process of the peritoneum remained open, and of course formed the sac for the congenital hernia.

The clinical features in this case are of great importance. The principal interest centres in the possibility of making a correct diagnosis. In the present instance this was not difficult, owing to the history of the case and the general appearance of the swelling. The tumor was of long standing, it extended external to and above the internal ring, it contained intestine, and was quite superficial. The treatment in case of strangulation would, as in the present instance, involve the consideration of possible stricture either at the external or internal ring, or within the diverticulum itself. If by any chance a diagnosis of the condition of the parts is not made in such cases, it is easy to understand how a herniotomy for strangulation might result in confusion to the operator, and in his possible failure to save the patient's life.

Progress of Medical Science.

Rare Twin-Malformations.—A very rare and interesting case of twin-malformation is reported to the Wiener *Medizinische Presse*, January, 1881. The designation of the monster, or monsters, is *bicephali tetrabrachii*, there being two heads and four arms. A healthy woman, aged nineteen years, gave birth to these *gemilli tocci* in 1877, at Lacona, in the province of Turin. There are two heads, fully developed in proportion to their age, and two corresponding chests with apparently separate organs. Inspection from in front shows that the double thorax passes over into a single abdomen at about the sixth rib. There is but one umbilicus, and a single penis and scrotum, though the rudiments of a second male genital apparatus are visible behind the latter. One anus, and a single right and left leg are seen. A posterior aspect reveals a double spine, double sacrum, and three nates, the middle one being evidently formed of two melted into one. This middle one also shows a fistulous opening, as a reminder of an anal aperture. The single anus serves both bodies, whereas urine occasionally also dribbles from the rudimentary genital appendix. The right foot is controlled by the right twin, named Battista, and the left one responds to the will of the other, called Giacoma. Giacoma has a club-foot for his share of inferior extremity. It is for this reason that the twins, although quite healthy, make no attempts to walk. Each child controls perfectly well the unimpaired mobility of its knee and hip-joint. Nothing abnormal is found in the inguinal regions. Each child also sees, hears, feels, thinks, talks, eats, drinks, laughs or cries, and sleeps "on its own hook," so to speak; that is, one acts independently of the other. The boys are lively, and appear to be good-natured. Their language is quite intelligible. They talk to each other as well as converse with strangers. They actively gesticulate with their normally developed hands and arms. Their head and thorax is, as a rule, considerably bent to either side, the head being sometimes placed in an almost horizontal position. One head at a time may, however, assume a very nearly vertical poise.

It does not appear which of the two children controls the common bladder and anus. Apparently neither the one nor the other. (Examination by inspection was alone permitted by the parents.) It was stated that both expressed a desire to defecate at the proper time. In the writer's presence, Battista demanded *la piscia*, and immediately afterward his clothes were found to be wet. The twins have until now been healthy and in lively spirits. They are well-nourished.

Förster has placed these rare double malformations in the group of *bicephali tetrabrachii*. The Wiener *Medizinische Presse* supplements its account of the twins by a brief mention of a similar occurrence, that of Fubini and Mosso. When thirty days old these children weighed 4,005 grammes; on the sixty-second day their weight had increased to 5,345 grammes. The vital functions of the two children, even at that early period, were quite independently performed. One infant would play while the other was asleep; one would cry, the other laugh. Cardiac action and respiration were not simultaneous in the two children. If one child swallowed food, the corresponding side of the common abdomen alone

moved, showing that two at least physiologically distinct diaphragms existed. One infant would vomit while the other was quietly taking the breast, a proof that there were two distinct stomachs.—*Allg. med. Cent.-Zeit.*, January 12, 1881.

In this connection, a communication from Dr. Burke, with inclosed photograph, may also be mentioned. The gentleman writes from Texarkana, Texas, under date of March 20, 1881. He states that some time ago he had occasion to deliver a young woman of a pair of twins exhibiting a somewhat remarkable malformation. The mother is described as a woman twenty-three years old, of fair complexion, nervous temperament, weighing ordinarily one hundred and ten pounds, and a native of Atlanta, Ga. She had been married eighteen months, and had had two miscarriages. The twins are grown together, being well formed, and fully developed in all particulars. Their interconnection is apparently of a bony character. It begins just below the sterno-clavicular articulation, and extends down to the umbilicus, measuring just seven inches in length. The children have a common sternum. The free ribs are as in other natural infants. There is but one navel, one cord, and a single placenta. Each child has a separate chest, abdomen, and hips. Both are provided with two natural legs and feet. Each infant, also, has two arms and hands, as well as a separate head. The latter appears to be well formed. Regularity of features and symmetry of arrangement are also noticeable. In fact, the doctor rather enthusiastically pronounces them to be "perfect little beauties, with a fine coat of black, glossy hair."

These twins were seventeen inches long, and weighed fourteen pounds. The occipito-frontal measurement of each infant's head was four and a half inches, the bi-parietal diameter three inches, across the chest seven inches. It appears that they were still-born, at least the doctor says so, adding that decapitation became necessary on account of difficulties in the progress of the labor. Finally, the mother is still among the living, and, according to our informant, may entirely recover, "though it required an extraordinary amount of tact and coolness to engineer the case through, as convulsions and hemorrhage were fast and profuse." The doctor now has "the little girls in preservation in alcohol."

The Treatment of Albuminuria.—Eucalyptol has been prescribed with apparently beneficial effects in the shape of an emulsion in cases of albuminuria. The dose was gradually increased from five to fifteen drops four times a day (*St. Louis Clinical Record*, February, 1881). Fuchsine has also been tried and found to be efficacious in chronic albuminuria with œdema (*The London Practitioner*, January, 1881). Dr. Sawyer says of this drug, which is the chlorhydrate of rosanaline, that in most of the cases in which he employed it the quantity of albumen either diminished considerably or else the albuminuria disappeared altogether. He administered one grain three times a day. Cases of passive renal congestion of cardiac origin were not benefited by this medicament. The cases treated, as a rule, represented affections of the chronic contracting kind. The patients using the remedy experienced no inconvenience from its effects. The urine became of a rosy color, and even the fæces were frequently tinged with the same hue. As mixtures stained the lips, the drug was prescribed in pill form.

Washing out the Stomach in Dilatation of that Organ.—The value of washing out the stomach in the treatment of gastric dilatation is well shown by the following case, reported by Dr. James Russell in the *British Medical Journal*, February 26, 1881. A man, aged fifty years, began to suffer from pain in the right hypochondrium twenty years ago. It was chiefly produced by the presence of food, so that he avoided eating. He then vomited, or rather eructated, clear food, and in process of time began to throw up his food about three hours after a meal. He lost flesh considerably, and had to leave work. These symptoms persisted with varying severity through six years, when one night, without any further change having occurred of which he was sensible, he was awakened by something giving way within him in the hepatic region. A quarter of an hour afterward he vomited, without effort, about three pints of "thick, sticky, greenish" pus. Regularly for the next month, on awakening in the morning, he rejected about half a pint of the same matter, and remained free during the rest of the day. This discharge began to lessen at the end of a month, but it continued for nine weeks longer in smaller quantity. Two years later the patient had a temporary return of the pain.

On his entrance into the Birmingham Hospital, the stomach reached half way between the umbilicus and pubes. Sarcinous matter was vomited. The man was thin, but not cachectic. There was no other physical sign of disease in the chest or abdomen. Washing out the stomach by means of the syphon-tube was commenced, and was continued daily, the patient falling into the use of the tube with great facility. The food was at first milk, but solids soon became necessary. During his residence in the hospital, his bowels acted quite regularly, and the stools were of perfectly natural quality. He continuously improved, and after several months had returned to ordinary diet.

When at home, however, he presumed too much on his improved condition, and neglected to wash out his stomach. There was a renewal of his former symptoms, and he returned to the hospital with an increased distention of his stomach. The same plan of treatment was again employed, and was attended with the same fortunate results.

A Year's Work in Ovariotomy.—As a means of exemplifying the value of antiseptic methods in the operation of ovariotomy, Dr. John Homans, of Boston, has published the results of twenty-five cases in the Boston *Medical and Surgical Journal*. Of the total there were two deaths only, one from exhaustion on the fifth day, the other from shock. In all of these cases the pedicle was secured by Dawson's clamp, burned with Paquelin's cautery, tied with a double ligature of carbolized silk (disregarding catgut entirely), and the stump then returned to the abdominal cavity. In two cases a mild form of phlegmasia dolens, following the operation, was attributed to injudicious exercise during convalescence. One case was followed by hæmoptysis, but whether it was accidental and entirely unconnected with the operation and the precursor of phthisis, could not be decided at the time. The patients generally were ready to leave the hospital at the end of the third week after the operation.

Another Insane Asylum Burned.—The Illinois Southern Hospital for the Insane, at Anna, was partially burnt on the 18th ult. All the inmates escaped except one. This makes the third insane asylum that has been burned within less than a year.

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GEORGE F. SHRADY, A.M., M.D., Editor.

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THE SPREAD OF TYPHUS FEVER.

At about the middle of March last there were discovered a number of cases of typhus fever in different hospitals of the city. They were all, or nearly all, traced to a very large and overcrowded lodging-house in the lower part of the city. The patients were at once transferred to the Riverside Hospital, and the lodging-house and its occupants thoroughly disinfected. The next week the number of cases reported was very much less, and it was thought that the disease was "stamped out." But since the 26th of March the weekly number of cases reported has been increasing. The capacity of the Riverside Hospital has been put to its utmost test. Nearly three hundred patients have been treated there, and the number under treatment at one time has been kept at about one hundred. Several tents have been erected, each holding about twenty-five patients, and thus the essential therapeutic agent, fresh air, has been secured. Either because of this treatment in tents or because the epidemic is not a malignant one in itself, the rate of mortality has been small, not exceeding ten per cent.

But in spite of rapid isolation and disinfection the disease continues to appear, and at unexpected places. Five patients at Bellevue Hospital were seized with the disease on the same day. The firemen on a steam yacht and a person living as far up town as Lexington avenue have also taken the fever. Eleven cases have been reported in one day. A second reception-station for typhus has been established at Bellevue Hospital.

Public interest is being aroused in the matter, and the question whether we are to have another epidemic, like that of 1861, is asked.

It is very evident that the Health Board, though they may have done all that they could, did not do all that was necessary for stamping out the disease in the places where it first appeared. The Shiloh House was at first disinfected, and then after many days it was vacated. If any fact is known about the contagion of typhus it is that the poison is carried by the person, and but very slightly, if at all, by his clothes. Disinfection of these and of apartments where typhus has been, therefore, are of but secondary importance. The only way to stamp out the disease is to quarantine the persons who have been exposed and presumably or certainly infected. If it cannot be shown by the Health Board that such a measure was entirely impracticable the responsibility for the increase of the disease must be thrown upon it. In case an epidemic develops, that responsibility is a most serious one.

As regards the possibility of an epidemic developing there are no data on which to base a prophecy.

It may be asserted with confidence that typhus fever rarely, if ever, originates *de novo*, but that the latent activities of the germ are brought out by poor food, overcrowding, and filth. It follows that the spread of the disease depends chiefly upon whether or not all infected persons are promptly quarantined, and secondly upon securing fresh air, cleanliness, and sufficient food for those who may be in danger. The condition of our streets, though filthy enough, is but one element in the question. With more air and fewer persons in the tenement-houses the chief indications for prophylaxis, apart from quarantine, are met. The approach of summer, when windows are kept open, may tend to counteract the spread of the disease. Yet it is to be remembered that the epidemic of ten years ago began in July.

THE ENFORCEMENT OF THE MEDICAL LAW.

It will be good news to such as are interested in the matter to learn that the Medical Society of the County of New York is now ready and willing to enforce the existing medical laws in this State. The Board of Censors of the Society, to whom cases for prosecution are referred, have published a card requesting all physicians who are cognizant of persons practising in this city under fraudulently obtained diplomas, or who practise without diplomas (and this includes prescribing druggists), to forward the name and residence of the offender, the name and residence of the person treated, and also of the complainant, to the Secretary of the Board, Dr. Daniel Lewis, 147 East Forty-fifth street. A competent attorney has been secured, who will frame the complaints and advise as to the cases to be selected, in order that the provisions of the law may be fairly tested. We understand that one or two arrests have been made, and that immediate steps will be taken to secure an early decision as to the validity of the law. The name of the person making the complaint is required by the board, as a guarantee of good faith and to show that the charge is not made to gratify private spite. For obvious reasons anonymous com-

munications cannot receive attention. We believe that the censors are in earnest in their endeavors to secure the enforcement of the law, and it is now the duty of the profession to aid them.

RECENT STUDIES IN INEBRIETY.

A STATISTICAL report of two hundred and fifty-two cases of inebriety has recently been published by Dr. Lewis D. Mason, of Hartford. This report, in connection with Dr. Crothers' more philosophical contribution to the subject in the pages of the MEDICAL RECORD, furnishes an addition to the literature of inebriety that deserves some notice.

We are informed by Dr. Crothers that inebriety, like insanity, is rapidly increasing in this country. The estimated number of inebriates largely exceeds that of lunatics, being now about one hundred thousand. The author considers that these facts justify a more careful attention to inebriety from medical men.

The point which Dr. Crothers urges with greatest force is the somewhat old one, that inebriety is a disease, and not a vice. He would have this fact more fully impressed upon the public and physicians. The view that inebriety is a vice has some very eminent champions, while the view that it is a disease is advocated most urgently by the superintendents of inebriate homes. These may be presumed to have at the same time the most knowledge and the most bias in the matter.

We can afford to go over the question briefly.

According to the latest data of ethics, a bad habit or bad conduct is "that in which the special acts are not well adjusted to the general end of self-preservation."

It would be easy to show by this, or indeed, any other system of ethics, that the constant intemperate use of liquors is a bad habit. But a man may have a bad habit, and yet be only partially responsible for it, or not at all so. In saying that inebriety is a vice, therefore, we imply that the man is indulging in a bad habit for which he *is* responsible, because it is a habit which it is in his power to control. A person is not directly to blame for conduct which structural changes in his body compel him to perform. He is not directly responsible for his diseased heart palpitating, or for the intemperate thirst of diabetes. These habits are of the body, and are now beyond the power of the will. They may have been brought on by excesses for which he is responsible. But the point is that he is not to be called to account for them now. They are actual diseases. It is claimed that the same is true of inebriety. The patient may or may not have been responsible originally for his bad habit. But eventually it has as its cause and basis a structural change or a nutritive disturbance of the system.

That such physical change does occur in inebriety is the claim of the majority of those who have given attention to the subject, in this country at least, and it seems to be a rational and well-supported one. It is not an easy thing to draw a sharp line, however, as some have attempted to do, between the vicious habit and the disease. So far as actual and characteristic structural changes are concerned, none have been found, and the distinction between the disease and the vice has only a clinical basis. It is certainly impossible practically to separate all cases into the drunkards, or responsible, and the inebriates, or irresponsible. Indeed, by the lights of the later philosophy, which gives to our moral and intellectual actions a purely physical basis, we are responsible for nothing. The first drink is a reflex act, and the first as well as the last act of drunkenness the result of the irresponsible activity of cerebral molecules.

Leaving such discussions, however, we know that, practically, a man's first indulgences in alcohol are generally voluntary and controllable, but that by and by they become the result of an absolutely uncontrollable craving. We must treat the first condition, therefore, chiefly by moral means; the latter by moral, physical, and medicinal measures. Here, however, the studies in inebriety give us help. We learn that at times the man is an inebriate by inheritance. His first drink is the result of an inherent craving. He needs to be treated at once by other than moral means. This fact that a man may inherit an inebriate diathesis, that prophylaxis and early treatment are as important here as in phthisis or insanity, are the rich results of the yet incomplete studies in inebriety.

It shows with the accuracy of scientific demonstration, also, the error of Rev. Dr. Crosby, so far as he advocates the general innocuousness of moderate drinking. There are, as we have said, estimated to be one hundred thousand inebriates in this country. One-third of these were born with the inebriate diathesis; moderate indulgence in alcohol was the spark that lighted their disease into activity. The children of inebriates should never drink. The children of moderate drinkers indulge at their peril.

As throwing further light upon this subject, we add now some of the conclusions arrived at by Dr. Mason from his studies of a large number of cases of inebriates.

He states, regarding the education of inebriates, that nearly one-fourth had received a liberal education, and on the whole the statistics show that dipsomaniacs come from the more intelligent and educated class of society. It is to be remembered, however, that the poorer classes can rarely afford treatment in, and, therefore, do not reach most inebriate asylums, from one of which these statistics are obtained.

The influence of heredity is fully shown. Over

one-third had inebriate fathers, while less than half a dozen had inebriate mothers. Inebriate grandparents are not at all frequent, however, there being only seven in the two hundred and fifty-two cases. It would hardly be an exaggeration to say that the primary cause of inebriety in one-third of these cases, at least, is hereditary influence.

While insanity was found in the family in fifteen cases, in only three were the parents (the father) insane, and no cases of epilepsy or neurasthenia in parents are given. The alternation of the inebriate with the insane or other neurotic diathesis must be considered as of somewhat exceptional occurrence, judging from Dr. Mason's figures.

An important deduction is that relating to the age in which inebriety most frequently appears. In over four-fifths of the cases it was between the ages of fifteen and thirty-five, and in the larger proportion between the ages of fifteen and twenty-five. Knowing, therefore, the time at which this dread affliction is most likely to appear, we can tell when to advise the most stringent precautions against it.

There were one hundred and sixty-two habitual to ninety-two periodical inebriates, and the average duration of the disease in the former class was thirteen years; in the latter, fifteen years. There is a curious regularity in the times of dipsomaniac attack—the favorite periods being quarterly, semi-annually, and annually.

Most of the inebriates were whiskey-drinkers; nine, however, used brandy, two gin, and thirteen beer. One quart of whiskey per day is a low average for the daily consumption of the habitual inebriate.

Among exciting causes, association is by far the most prominent, one hundred and eighty-five assigning this as the thing which led them into their condition. Injuries to the head take, perhaps, the next place. About one in seven had their disease started in this way.

The author concludes by referring to the fact that treatment in inebriety begins, as a rule, very late. It is for this reason, in part, that the disease is very difficult to manage. As in the case of insanity, treatment at the beginning of the disease is of the utmost importance. As it stands now, the results of treatment are hardly brilliant. No statistics or estimates of the per cent. of cures is given by Dr. Mason. It is thought, however, by others to be about the same as in the case of insanity.

THE OLEOMARGARINE FIGHT.

An active contest has been going on in the State Legislature over the question of oleomargarine. The great increase in this industry has given fresh alarm to the dairymen; and the discovery that cheese, adulterated with lard, has been put upon the market, has added a stimulus to their invectives against the manufacturers of these artificial foods. Some weeks ago a resolution was introduced into the Legislature, reciting that "Whereas these articles are believed to be prejudicial to the public health, increasing the rate of mortality"—and so on, therefore, let the Public Health Committee look up the matter. This the Public Health Committee has been doing, having taken much testimony in this city during the past few weeks.

The result of this testimony has not been very damaging to oleomargarine. It is shown in the committee's report that the manufacture is a very extensive one. Mr. John Michels, an excellent microscopic expert, testified that he had found some very suspicious looking cells in artificial butter. The evidence of Dr. W. H. Dallinger, of Liverpool, was cited to the effect that the temperature at which the oil is extracted is not sufficiently high to destroy organisms in refuse fats. To this there might have been added the results of the experiments in France on insane patients. There it was claimed that the artificial butters used were not quite so digestible or nutritious.

On the other hand, there is a very great mass of testimony from various experts in favor of the article in question. Sanitarians, chemists, and physiologists all endorse it as a useful, harmless, and palatable addition to our food products.

We have before asserted our belief in the substantial correctness of this latter view. The possibility exists that the new butter is not so digestible as the old. This is an argument for its being sold under its own name, but not for any actual restrictions upon its sale or manufacture. There is, perhaps, a future danger in a less careful process of manufacture than now exists.

As establishments increase and competition becomes more active, the scrupulous care now said to be exercised may relax. This, however, would only justify the existence of official inspectors, and not the abolition of the industry.

The dairy interests in our State Legislature are very great, and the question of the food value of oleomargarine may be settled in the interests of this class rather than in that of the people. But it is to be hoped that the State will not interfere any further than to furnish assurance that the article is carefully manufactured, and is not being sold under any other than its own name.

National Academy of Sciences.—The annual meeting of the National Academy of Sciences was held in Washington on April 19th, 20th, 21st, and 22d. A large number of papers were read, among which was one "On the Domain of Physiology," by T. Sterry Hunt; "On the Relations of Soils to Health," by R. Pompelly; "On the Relations between Strain and Impacts and the Feet of Mammalia," by Prof. E. D. Cope; "On the Utilization of the Sun's Rays in Heating and Ventilating," by Prof. E. S. Morse.

Reviews and Notices of Books.

Clinical Lectures on the Physiological Pathology and Treatment of Syphilis. Together with a Fasciculus of Class-room Lessons Covering the Initiatory Period. By Fessenden N. Otis, M.D. New York: G. P. Putnam's Sons, 1881.

The utterances of Dr. Otis upon the subject of the pathology of syphilis have been variously regarded as "epochal" and as commonplace. Neither of these extreme views, however, can be properly adopted. Dr. Otis has studied his subject with great zeal, and he has expounded a theory which comes nearer to what is rational and true than any that has been offered before it.

Amid the turbulent abundance of hypotheses regarding specific organisms as agents of disease, the views of Beale have held their own the best of all, and it is Beale's theory of disease-germs that our author has in the present case taken up. He asserts that the special poison of syphilis exists in the modified or degraded protoplasm of leucocytes. The "vital" activities of this material are changed. Reaching the abraded surface of the penis, it comes in contact with healthy lymph-cells and impresses its morbid activity upon them. It gives these in consequence a tendency to multiply. There is a cellular infiltration about the infected point which produces finally the characteristic induration. After these diseased cells have thus begun to multiply they are carried along the lymphatics to the neighboring glands. Here their progress is obstructed. They again multiply and produce enlargements and indurations of the gland. Here we have the initiatory period of syphilis.

In course of time the cells are carried along the lymphatics and are poured into the general blood-current. Constitutional symptoms then appear. One of the most noticeable of these is the roseola eruption. Dr. Otis explains this on the theory that the degraded protoplasm poisons the sympathetic centres controlling the calibre of the arterioles. Local dilatations are produced. When, subsequently, papules appear, the cause is attributed to the diseased corpuscles escaping from the blood and then rapidly multiplying, as is their natural tendency.

The chief disturbances produced by the syphilitic poison are in the lymphatic system, into which the disease-germs are first absorbed. It is owing to their presence here that the various catarrhs of syphilis are brought about.

And, finally, the sequelæ of syphilis are thought to be due largely to obstructions and other derangements of the lymph-channels.

In trying to explain the various symptoms and lesions that develop in syphilis by the light of physiology and the "degraded protoplasm" theory, Dr. Otis displays great ingenuity and research; more, perhaps, than of thorough physiological knowledge. One naturally gets suspicious of an author who has to bolster up his views chiefly with quotations from this or that "authority." Dr. Otis would have us believe that the specific poison of syphilis is not a distinct morphological or chemical entity. It is rather a "power" possessed by the diseased protoplasm. It might be considered a physiological entity, a ferment, perhaps, or anything else which expresses the idea that we do not at all know what it is. Of course, such a definition is very unsatisfactory, and Dr. Otis might have made his idea clearer; but he is not, after all, to blame because he cannot tell us what the more recondite physiological forces really are.

The theory that the diseased cells accumulate, form the indurated chancre, and then gradually pass through the lymphatics into the blood is well enough as far as it goes. But it might be asked why diseased particles of protoplasm, which may be $\frac{1}{1000000}$ inch in diameter, do not enter the blood, or at least poison its fluids at once. The blood-vessels absorb as well as the lymphatics. And why the delay, if the poison is only in white blood-corpuscles not modified structurally, in their entrance into the blood? The passage of lymph from the penis to the subclavian vein takes place many times every day. Why are the disease-germs forty days in doing it? The theory that the roseola is due to an influence of the poison on the sympathetic system is evidently moulded to suit the occasion. And the sympathetic system, by the way, does not control the calibre of the blood-vessels at all, as any tyro in physiology could tell the author. It simply carries in part vaso-motor fibres, the centres being in the medulla and spinal cord. It is hardly possible to conceive how a centrally acting poison could act so as to produce local and circumscribed vascular dilatations. Regarding the production of the papules Dr. Otis' theory is more rational.

We may well inquire, however, why, with this alleged tendency to rapid multiplication of cells, pus is not oftener produced. It is curious, also, that if this multiplication, with its accompanying perverted activities, is so prominent a feature, there are not more evidences of it in the spleen and other places where the blood moves slowly, and where leucocytes normally multiply.

Dr. Otis would explain the throat-disturbances by the fact of the large lymphatic supply to those parts; but there is a still larger supply in the intestines.

The view that obstruction or other derangement of the lymphatics causes the lesions of the third stage of syphilis is put forward more tentatively by our author. It furnishes an explanation of the development of gummata; but its application to the arterial lesions is strained, and the attempt to relegate the activity of the poison to the lymphatics cannot be considered successful.

Dr. Otis's work is an earnest and honest endeavor to give a rational explanation of the pathology of syphilis. It strikes us that he is working in the right vein, though he has a great deal yet to explain. We trust that he will continue his studies upon the subject.

An Index of Comparative Therapeutics. By Samuel O. L. Potter, M.D., pp. 280. Chicago: Duncan Brothers. 1880.

The object of this book is to place the therapeutics of homœopathy side by side with the reputed orthodox therapeutics of the present day. To accomplish this the author arranges the two classes of remedies in two separate parallel columns, selecting for this purpose the therapeutical recommendations of certain authors in both branches of practice. The drugs common to both are thus seen to be very numerous; they are designated by black type.

The author is not very particular about the nomenclature he uses so long as a comparison can be readily made between the two "schools." He arranges the uses of drugs under such headings as chronic nasal catarrh, cerebral anæmia, freckles,

hysteria, headache, hair, gums, foreign bodies, deafness, cough, corns, coldness, convalescence, etc. On page 111 we find *feces* and *fees* discussed; in the former, drug usage differs somewhat, but respecting the latter there appears to be unanimity, if the absence of the usual antagonizing columns may be regarded as a harmonizing expression.

This book, we suppose, may be regarded in the light of a pioneering effort—a sort of skirmishing sally, as it were, to be followed up by more serious work when it is seen that a real advance may be made with some prospect of success. Homœopathists, however, must adopt more exact methods of observation, and adhere more closely to recognized pathological facts as a guide in their treatment of disease before their work can exert a very great influence upon medical science.

The much good work that homœopathy has accomplished must now needs be grubbed from such a mass of rubbish that but few have the patience to begin the exploration.

THE HYGIENE AND TREATMENT OF CATARRH. By THOMAS F. RUMBOLD, M.D., pp. 456. St. Louis, Mo.: George O. Rumbold & Co. 1881.

THE first part of this book has been reviewed in the RECORD. Part Second now appears bound up with the first part, thus completing the work. A perusal of the concluding moiety before us leaves the impression that such matter is less valuable than the paper upon which it is printed, but an inspection of the paper itself raises a doubt as to the justness of such a conclusion.

DER EINFACHE UND DIPHTHERITISCHE CROUP UND SEINE ERFOLGREICHE BEHANDLUNG MIT WASSER UND DURCH DIE TRACHEOTOMIE. DARGESTELLT NACH EIGENEN ZAHLREICHEN ERFAHRUNGEN. Von DR. G. PINGLER, Königl. Phys. A.D., etc. Zweite vermehrte und verbesserte Auflage. Heidelberg: C. Winter's Universitätsbuchandlung.

SIMPLE AND DIPHTHERITIC CROUP SUCCESSFULLY TREATED BY MEANS OF WATER AND TRACHEOTOMY. By DR. G. PINGLER.

THIS is a book of 207 pages, in which the author (who, by the way, is the medical director of a large water-cure establishment) attempts to prove the claims to general recognition of his particular method. We fear that he will not be successful, although he certainly is an able and enthusiastic defender of a one-sided system. The fact that his book has lived to see a second edition also demonstrates that his urgent advocacy of the water method has probably found numerous readers. Whether these became convinced of the applicability and usefulness of hydriatic treatment, or whether they remained, as we did, unbelievers, it is not possible to determine.

DIE KINDERERNÄHRUNG IM SÄUGLINGSALTER. Von Dr. PH. BIEDERT, Spital- und Kreisarzt zu Hagenau. 8vo, pp. 392. Stuttgart: Ferdinand Enke. 1880.

INFANT-FEEDING. By DR. PH. BIEDERT.

AS stated by the author in his preface, the object of writing this book was a twofold one. First of all, Biedert wished to present the essential and assured facts pertaining to infant-feeding in a thoroughly scientific manner, and then at the same time he desired to furnish a guide to the intelligent lay mind as to the best means of rearing the infant offspring. With such a double purpose in view, it is not surprising to find in the work many truths familiar to every educated physician, whereas some of the more scientific deductions of the author will scarcely be found palatable by materfamilias. Nevertheless, a perusal of the interesting volume will amply repay even the learned practitioner, and he will not fail to discover here and there a valuable hint or practical suggestion. The book is divided into six sections. Of these the first is devoted to a consideration of infant mortality in the first year of extra-uterine life. Many topics of general interest are broached in this division, strictly medical matters having obtained only a minority representation. Thus the law of Malthus, the perfectibility of the human race, poverty and prolificness, etc., each in turn claim the author's attention.

Section II. treats of the organs of assimilation, and different foods. Here medical matters decidedly preponderate over non-medical subjects. Yet, for all this, the first section was hardly less interesting to the professional mind. In the following sections the important topic of nursing is amply set forth. The kind of nourishment to be taken by the mother or nurse, the proper selection of the latter, the process of weaning, teething, vaccination, and similar matters, are satisfactorily dealt with.

Artificial feeding, *i.e.*, the nourishment of infants by other means than the giving of breast-milk, is described in the next section. A somewhat incomplete account is given of the various articles of food used in place of breast-milk, where the latter is inaccessible. The importance, or rather necessity, of selecting pure milk, as well as its proper dilution with various fluids, is insisted upon.

In the last section but one, we find a description of the various disturbances of nutrition, to which infants are particularly liable. New facts are not brought forward by Biedert in this portion of his treatise.

The final section is a rather valuable *résumé* of the preceding ones—valuable because it contains, in a condensed form, the opinions of the author. These are found to be those of a close observer and man of experience, though they convey no notion of much originality possessed by their author. A list of the principal authors, arranged in chronological order, is appended to this interesting little treatise.

COMPENDIUM DER ALLGEMEINEN PATHOLOGIE FÜR STUDIRENDE UND AERZTE. Von PROF. DR. S. SAMUEL, IN KÖNIGSBERG. Stuttgart: Ferdinand Enke. 8vo, pp. 432. 1880.

A COMPEND OF GENERAL PATHOLOGY, designed for the Use of Students and Practitioners. By DR. S. SAMUEL.

THE present work was evidently intended mainly for the use of students, and perhaps such practitioners of medicine as lacked the time to study the principles of general pathology as laid down in the more voluminous treatises of authors. The great merit of this compend consists of the fact that disputed points and unessential details have been entirely omitted, to make room for a systematic presentation of the important facts of modern pathology. Thus, while the work is of small bulk, it contains a large amount of information, the mastery of which will enable the reader to study with profit some of the more elaborate treatises.

The subject-matter is considered under four headings: 1, General Nosology; 2, The Disorders of the Body based on Physiological Principles; 3, Disturbances of the Organism from an Etiological Standpoint; and 4, The Different Terminations of Disorders. Section 1 is the longest and most important

part of the work. The various disturbances of circulation and the nature of inflammatory processes are well stated, and the author devotes a rather long special chapter to hæmo-pathology, which embodies the results of the most recent researches in this department of our science. Thermo-pathology, neuro-pathology, histo-pathology, and organo-pathology are then successively considered in separate chapters, the names sufficiently indicating the character of each division. Throughout the volume the latest contributions to our knowledge concerning pathological matters find adequate consideration, so that we may cheerfully state our conviction that the book of Samuel contains the best and most concise *résumé* of everything relating to recent general pathology of any work with which we are acquainted. The language of the author aims at precision rather than elegance, and the simple, unadorned style greatly facilitates comprehension, thus enabling even persons unacquainted with the intricacies of the German idiom to readily gather the author's meaning. This point is not to be undervalued, especially when one considers the frightfully elaborate and complicated diction found in some of the medical publications which issue from the pens of our Teuton friends.

Diphtheritis und Ozon. Neue erfolgreiche Behandlung der Diphtheritis. Von Dr. Ph. Jochheim, Arzt zu Darmstadt. Heidelberg: C. Winter's Universitätsbuchandlung. 1880.

Diphtheria and Ozone. A New Method of Treatment for Diphtheritis. By Dr. Jochheim.

The Germans are certainly great in the discovery of novel methods for successfully treating croup and diphtheria. Unfortunately, statistical evidence tends to show that the mortality from these diseases continues at rather a high figure. This is hardly fair on the part of such maladies, for it displays a lack of due deference to theoretical proofs and reasonings. But perhaps the germs and bacteria are not amenable to intelligence and logic, and pay no heed to authors, in a reprehensible desire to fasten themselves somewhere in the economy, and cause serious distress to the individual, or maybe his death. Jochheim believes in the efficacy of ozone in the treatment of diphtheria, but he is also convinced that this gas is destined in the future to assert its curative power over all forms and varieties of infectious maladies. Would that this prophecy could be fulfilled, only we have not the faintest suspicion that it will be.

Untersuchungen aus dem physiologischen Institute der Universität Heidelberg. Herausgegeben von Dr. W. Kühne, O.O., Professor der Physiologie, etc. Band iii., Heft 1 und 2. Band iii., Heft 3 und 4. Heidelberg: Carl Winter's Universitätsbuchhandlung. 1879, 1880.

Researches Undertaken at the Physiological Institute of the University of Heidelberg. Edited by Prof. W. Kühne.

The various laboratories connected with the medical schools of the German Empire constitute an essential and important feature of these educational institutions. Such workshops of pure science must be regarded as the birthplaces of much that has given to the German savants their position of undisputed pre-eminence in matters of abstract scientific knowledge.

The volumes before us record the work of about one year performed at his laboratory of physiology by Kühne himself, and, under his auspices, by his pupils. Prof. Kühne is well known to the American reader, through his valuable contributions to our knowledge of the visual purple. His most important writings on this subject appeared in previous numbers of the present serial publication. Perhaps the practitioner will not find time to study at headquarters the results of recent physiological investigations. But he who desires to remain *au fait* of the progress of physiology can scarcely afford to do without these reports. Among the excellent articles of the volumes before us, we mention, as deserving of especial notice, a paper on the relation of nerve to muscle, by Kühne, and a contribution to the physiology of the visual epithelium, by Kühne and Sewall. The latter hails from Baltimore, and we may remark in this connection that others of our countrymen are found among the contributors to this collection of physiological essays. Thus, we find an interesting contribution to the histo-chemistry of the sarcolemma, from the pen of Chittenden, of New Haven. W. C. Ayres also published a paper in a former volume of the *Untersuchungen*. We mention this circumstance because we have reason to feel gratified about it. The medical profession of our country is not generally credited with possessing any special aptitudes for the pursuit of science for its own sake. This universal judgment will soon have to be reversed if our countrymen continue to take rank with the occasionally ultra-scientific Germans.

Practical Histology and Pathology. By Heneage Gibbes, M.B. Philadelphia: Presley Blakiston. 1881.

This unpretentious little volume is well calculated to fulfil its object, *i.e.*, the presentation to the student and practitioner of "a few concise and simple methods, by which the various tissues of the body may be prepared for examination with the microscope." It seems to embody the experiences and methods of Klein, for the author acknowledges his indebtedness to that histologist in a short preface. The methods of double and treble staining, which have given Gibbes the best results, are fully set forth, and appear to be good ones.

A Treatise on the Materia Medica and Therapeutics of the Skin. By Henry G. Piffard, A.M., M.D., Professor of Dermatology, Medical Department of the University of the City of New York. William Wood & Co. Wood's Library Standard Medical Authors.

The volume in hand is original in its design, and embraces two distinct works, viz., a list of all drugs which have been reputed to affect the skin in either health or disease, and a practical treatise on dermatology. In Part I., devoted to materia medica, the author has compressed, in very little space, several thousand references to dermatological literature, and for this labor is entitled to the hearty thanks of every one especially interested in this branch of medicine. In Part II., devoted chiefly to cutaneous therapeutics, the author has given brief descriptions of the various affections, and drawn largely upon his own experience in discussing their treatment. The work is a valuable addition to the series in which it appears.

The Sanitary News is the title of a new sanitary journal, published monthly, and edited by Drs. R. C. S. Reed and C. A. L. Reed, of Hamilton, Ohio. It aims to be the health journal of the Mississippi Valley.

Reports of Societies.

KENTUCKY STATE MEDICAL SOCIETY.

Twenty-sixth Annual Session, held at Covington, April 5, 6, and 7, 1881.

(Specially reported for THE MEDICAL RECORD.)

THE Society convened at twelve o'clock, on Tuesday, April 5th, with the president, DR. L. BEECHER TODD, of Lexington, in the chair. After the reading of the minutes, and the usual reports of Secretary and Treasurer and the Chairman of the Committee of Arrangements, the programme was entered upon.

REPORT ON SURGERY.

The report on Improvements in Surgery was made by DR. FAYETTE DUNLAP, of Danville, who, by way of introducing the subject, said that while there had been no want of zeal in the advancement of surgical science during the past year, no startling discovery or strikingly new procedure had been established in practice. The interest recently manifested in the surgery of the kidney was mentioned, and the belief expressed that many conditions now regarded as irremediable will, in the early future, be benefited, if not cured, by timely surgical interference. The elastic bandage in the treatment of aneurisms of the extremities is advancing in favor, and though recorded experience is limited, it promises much in the treatment of this class of aneurisms. Excision of joints and bones for the correction of deformities, whether in the rachitic or robust, congenital or acquired, has given better results than ever before, and has been largely practised. It is claimed that the splendid results of this branch of conservative surgery is to be attributed to the antiseptic method of Lister. He called attention to the splendid record of Bigelow's operation, and said it was now firmly established in practice, and its introduction marks an era in the surgery of calculous disease. Experience has fully sustained every claim of its author, and the reliability of his maxims is established. He next alluded to the introduction of Chian turpentine as a remedy for cancer, and said that, after being extensively applied to the treatment of this form of disease, it had been laid aside as useless, either as palliative or curative of cancerous affections. The long-hoped-for discovery of a curative agent in malignant disease finds no encouragement in this drug, and it will soon be forgotten.

Much attention has been directed to Freund's method of extirpation of the uterus, in whole or in part, and though it has met with some favor, and given good results in the hands of a few, its chances for becoming widely adopted are by no means favorable. Its performance is now relegated to a few skilful gynecologists, and there is very little hope of any increase of the favor now extended the operation.

The antiseptic system in surgery was given extensive notice, and its present status quite thoroughly defined. While no marked progress could be claimed for Listerism during the past year, it certainly had lost nothing in favor, and is as enthusiastically advocated and as zealously practised by its distinguished founder and his disciples as at any previous time. The system is practised wherever advanced ideas and methods have reached, and certainly those who look upon it with scepticism are becoming fewer in number. The opposition to the method is small, and while not adopted in all its details everywhere, very few surgeons fail to take advantage of its main features. It has brought before the profession the entire subject of the treatment of wounds, and has certainly taught some valuable lessons. Like everything emanating from Mr. Lister, his recent lecture on the value of the catgut ligature promises to create a decided impression in favor of the application of animal ligatures. His claims are strengthened by experiments and practical experience, and come, consequently, with force. The reintroduction of the animal ligature in a greatly improved form was announced as one of the important events of the last year in surgical practice.

REPORT ON PRACTICE OF MEDICINE.

DR. CHARLES H. THOMAS, of Covington, next read a report on the Improvements in Practical Medicine. He treated, *in extenso*, the subject of the germ theory in reference to acute infectious diseases. He stated that the belief is extending that pneumonia is dependent upon and originates in a specific cause, and that this cause is independent of malaria. He favored the expectant method of treatment in this disease, and said the specific influence of quinine in its management was worthy of thoughtful consideration. In that type of the disease where the temperature is excessively and dangerously high, he favored the exhibition of antipyretic agents, particularly quinine. He then outlined recent investigations tending to establish the infectious character of tuberculosis, calling especial attention to the fact that it had been shown that the disease may be communicated by the milk and flesh of tuberculous animals.

DR. PINCKNEY THOMPSON, as Chairman of the Committee on Hygiene, made an elaborate and carefully prepared report. This report was for the most part devoted to a detailed account of the present status of sanitary science in Kentucky, the existing legislation relating to public health, and the necessity of additional legislation, so as to bring the State laws up to the standard of advanced ideas in these matters. The report concluded with a delineation of the relations of the medical profession to sanitary legislation.

THE BETTER PROTECTION OF THE INSANE.

The address of the president, DR. L. BEECHER TODD, of Lexington, was delivered in the evening, thus closing the first day's session. The address was devoted to topics of urgent interest just now to the profession. He alluded to the present system of appointing medical officers to our insane asylums as rewards for party work and personal preference as follows:

The better protection of the insane appeals to you, my fellows, as well as to the politician and political economist, to labor and legislate for their relief. That relief is asked for through you of the Kentucky State Society this evening from those at our very doors in whose behalf I most earnestly appeal to you. That relief is to be obtained only by legislative enactment taking from the governor of the commonwealth the power of appointing medical superintendents for the hospitals for the insane, and returning the power of appointing that officer to the boards of commissioners, where it belongs, and whence it was taken but a few years ago. These commissioners should receive adequate compensation for the faithful performance of the delicate and responsible duties; they should be men of high

character for learning, integrity, and philanthropy, eschewing all local and other prejudices, but above all and especially *politics*, that fatal rock against which the hopes and fortunes of many of our charitable institutions have been dashed and wrecked. The medical superintendent should hold office during life or good behavior, the question of the latter to be decided by a court composed of all the commissioners of the State. . . . Frequent change of medical superintendents needs must be detrimental to restoration of patients and general prosperity of the institutions. Therefore this relief to the unfortunate is demanded by humanity and the progress of the age. In the name and for the sake of those who wander forth with the gates of reason closed behind them, I demand it. Let the Kentucky State Medical Society demand it, and with such a respectful emphasis and firm authority that no man standing for office can look his constituency in the face and dare refuse it.

Session of Second Day—Wednesday.

After the hour for irregular and executive business had elapsed, Dr. J. W. Holland, of Louisville, read a paper on

PLUMBISM FROM THE USE OF COSMETICS.

Dr. Holland called attention to the fact that there are certain distinctive, though rather vague symptoms of lead-poisoning which precede the more marked symptoms of mist-drop, colic, and lead-line, and which, when more carefully studied, would suffice to lead to an earlier diagnosis. These symptoms he described as headache, vertigo, slight colicky pains, and constipation. He then gave in detail an illustrative case of a woman who, two years before coming under observation, had begun the use of flake-white powder as a cosmetic. After exhibiting the symptoms already mentioned, she had an attack of melancholia of a month's duration, afterward the signs of plumbism—double wrist-drop and the blue line on the gums—were abruptly presented. He related in detail several similar cases illustrating the essential points deduced from the paper; that lead may be introduced into the system to the extent of its toxic effects when applied to the skin in the form of powder and lotions; that the most popular beautifying cosmetics contain lead. The results of the chemical analysis of various popular cosmetics were given in detail.

Dr. A. M. Vance, of Louisville, read a paper upon

AN IMPROVED DRESSING FOR SPINAL CARIES AND CURVATURE.

He stated that three years since he addressed the society upon this subject, and he now purposed to give the result of a very considerable study of this class of dressings in the treatment of spinal curvature. The dressing consists of paper, glue, and steel stays, so arranged and fitted as to meet all the indications of the plaster-of-Paris jacket, and at the same time permit its removal and reapplication. The additional advantages claimed for the dressing are the qualities of lightness, firmness, perviousness, and cheapness. He exhibited the dressing in several sizes, one specimen having the jury-mast attached, and detailed the particulars of its construction and method of application. He reported a number of cases in which he had successfully used the dressing.

Dr. W. W. Dawson, of Cincinnati, in response to the invitation of the president, spoke at some length upon the subject of splints and the treatment of Potts' disease of the spine. He said the entire subject of fixed dressings was one of great importance, and though much has been accomplished by the plaster-of-Paris jacket in spinal disease, much yet remains to be accomplished before the ideal dressing for relieving this condition can be attained. The qualities desired are elasticity sufficient for motion, together with unyielding support to the diseased vertebra—qualities which, from the nature of things, are most difficult of combination. He said he was not sure that he had ever seen the spine when in this condition of the disease unbent or straightened by suspension or the application of the jacket. He does not believe that the angle of curvature could be changed, from the fact that the altered condition of bone and ligaments would not permit it. Hence, he has always considered the measurements with the lead tape, as made by Dr. Sayre, to be deceptive. He said he had satisfied himself, in treating Potts' disease of the spine, with arresting the disease at the stage presented when the treatment was instituted, without attempting to reduce existing deformity. As a means of extension he preferred the hammock introduced by Mr. Richard Davy, of London, rather than the suspension method. In conclusion, he expressed the belief that the dressings now in use were too rigid, and said the great desideratum was an appliance that would give the same amount of support and be easy and yielding.

Dr. D. W. Yandell said this is a department of surgery in which we have every reason to expect much advance and great improvement. He, too, is quite satisfied, with the present means at command, to lock the deformity just where he finds it and leave it alone. He related an instance in Louisville where an instrument-maker attempted by screws and steel to correct a deformity when anchylosis was progressing well, and the death of the child followed. As a means of extension he prefers simple extension by the hands to either suspension by pulleys or in the hammock. He has, however, almost abandoned extension, on account of the danger of disturbing the anchylosis. The plaster-of-Paris he considers the best dressing to secure rest and immobility while anchylosis is in progress, and after that time he prefers the dressing exhibited by Dr. Vance. In lateral curvature the paper-dressing he regarded preferable from the beginning of treatment, as it could be removed and the patient go through with the gymnastic exercise.

Dr. Dawson called attention to the essential difference in the nature of the lateral and antero-posterior curvatures of the spine. The former being due to a want of equilibrium on the part of the muscles, while the latter is due to changes in the bones.

The discussion was continued at some length by Dr. Charles Mann, Dr. W. A. Roberts, Dr. A. M. Vance, and Dr. J. N. McCormack.

THE DIAGNOSIS OF INTRA-THORACIC ANEURISM.

Dr. M. T. Scott, of Lexington, read a paper on the diagnosis of intra-thoracic aneurism, with the report of an illustrative case. He gave a statistical account of the frequency of aneurism in the various portions of the aorta, and enumerated the various conditions which may exist in the thoracic cavity and alter the calibre of the vessels so as to produce physical signs simulating those of aneurism. He considers the diagnosis of intra-thoracic aneurism by means of physical signs very difficult and uncertain. He related the case of a brick-mason, who for fifteen

months had complained of distressing symptoms relating to the thoracic organs. He complained for the most part of dyspnœa, not materially increased by exercise and not of extreme character. There was pain in the vicinity of the left scapula, which was described as of a dull, boring character, and most severe at night. The patient died suddenly while in a paroxysm of coughing, and the autopsy revealed an aneurism about the size of an orange at the upper portion of the aorta. The dorsal vertebræ from the fourth to the seventh were eroded. In this case the physical signs were frequently studied with special reference to aneurism, and they failed to give positive indication of anything further than emphysema, which was comparatively an unimportant factor in the case. The author of the paper claimed that in the diagnosis of intra-thoracic aneurism we are compelled to rely more upon the general and indirect symptoms than upon physical signs.

FIBROID PHTHISIS WITA PYOTHORAX.

Dr. John D. Neet, of Versailles, reported a case of fibroid phthisis with pyothorax, which appears in the present number of the Medical Record.

Dr. James T. Whittaker, of Cincinnati, discussed the paper at considerable length, inclining to the belief that the case was one of tuberculosis. He regards tuberculosis as a blood disease and more frequently acquired than inherited, and hence the absence of an hereditary tendency to tuberculosis in this case was of little importance. He described with wonderful alacrity the manner in which pus is formed, calling especial attention to the fact that before a white blood-corpuscle can become a pus-corpuscle it must undergo the process of death. He did not believe that pus formed in the chest until air was admitted. The case was further discussed by Dr. Neet, and Dr. D. W. Yandell added some remarks upon the surgical aspects of the case.

LARGE DOSES OF QUININE PRODUCING ELEVATION IN TEMPERATURE.

Dr. J. M. Harwood, of Shelbyville, read a paper upon the therapeutic uses of quinine, in which he claimed that the administration of twenty grains of quinine will, of itself, produce a rise in the temperature, and that such elevation of temperature in the course of malarial fevers during the remission and intermission is mistaken for a relapse. He deemed this fact important in treating this class of fevers.

Dr. R. W. Dunlap, of Danville, read a report on the epidemic and contagious diseases of the State during the past year.

Dr. Edward Alcorn, of Hustonville, read a paper on uterine subinvolution, its pathology and treatment.

Dr. L. S. McMurtry, of Danville, read a paper on some points in the treatment of typhoid fever.

THIRD DAY—THURSDAY.

THE LATE DR. R. O. COWLING, OF LOUISVILLE.

After the hour for executive and miscellaneous business, the Secretary announced the death of Dr. Richard O. Cowling, of Louisville, and Dr. J. W. Holland, of Louisville, offered the following resolutions of the committee appointed, which were unanimously adopted:

"Your committee appointed to report resolutions expressing the sentiments of the Kentucky Medical Society on the announcement of the death of Dr. R. O. Cowling, find the task a very difficult one. All formal phrases are unworthy the occasion. What he was to us, each shall often feel in thoughts that lie too deep for words. Memory alone can adequately remind us of the cheer we had in his company and the confidence we put in his counsels. Our sense of immeasurable loss, and dissatisfaction at this feeble public indication of it, will be duly appreciated by his family, and all others whom a good fortune brought near to him. To them we offer all the comfort they can get from the knowledge that their grief is shared by a large circle of his professional associates.

"We suggest that this testimony be spread upon the minutes, and properly engrossed for transmission to his family."

MISCELLANEOUS REPORTS.

Dr. W. O. Roberts, of Louisville, reported a successful case of ovariotomy, remarking that the case contained nothing of unusual interest, but he would avail himself of this opportunity to make this addition to the statistics of the operation. The operation was performed under strict antiseptic precautions, and the woman made an excellent recovery in two weeks. He exhibited the tumor.

Dr. M. F. Coomes, of Louisville, offered a report on otology. The report was, for the most part, devoted to a description of an instrument for testing the acuteness of hearing, which is termed the audiometer. In the use of this instrument, by a system of gradation of sound, any change in acuteness of hearing, from time to time, may be accurately determined and recorded.

Dr. W. H. Wathen, of Louisville, made a report on the progress of gynecology, and devoted the greater portion to the subject of urethral diseases and the method of examining the female urethra.

Dr. J. J. Speed, of Louisville, made an exhaustive report on the subject of sanitary measures in Kentucky, and the prospects for improvement in practical sanitation in the State.

The following officers were recommended by the committee and elected by the society:

President, Dr. J. W. Holland, of Louisville; Senior Vice-President, Dr. C. Mann, of Nicholasville; Junior Vice-President, Dr. C. H. Thomas, of Covington; Recording Secretary, Dr. L. S. McMurtry, of Danville; Assistant Secretary, Dr. H. Brown, of Hustonville; Corresponding Secretary, Dr. S. M. Letcher, of Richmond; Treasurer, Dr. J. D. Neet, of Versailles.

The society will hold its next annual meeting in the city of Louisville.

Prevention of Small-pox in Scranton.—Dr. J. Emmet O'Brien, health officer of Scranton, Pa., writes: "Commencing in August last the Board of Health of this city vaccinated with bovine virus five thousand six hundred children and adults according to my plan, detailed in the Record, November 15, 1873, at an expense of only $200. The work was pushed in anticipation of the present epidemic, and induced thousands of others to get vaccinated by their family physicians. In addition to this, we took the precaution of deporting visitors who came from infected localities, with suspicion of contagion, and have gotten through the winter without a single case of small-pox or varioloid within the city limits, while the disease has prevailed in a severe form in neighboring towns for months."

Correspondence.

THE GERMAN SURGICAL CONGRESS.

(From our Special Correspondent.)

BERLIN, April, 1881.

THE German Surgical Congress, which meets annually in Berlin, has just closed its session, and some report of its proceedings may be of interest.

The Congress, which continued four days, had morning sessions in Professor Langenbeck's beautiful new clinic, which has just been opened, and also in that of Professor Bardeleben, in the hospital La Charité, and afternoon sessions in a large hall of the University. The number in attendance upon the Congress was about three hundred, and among these were to be seen many of the most prominent men of Germany. Professor Langenbeck was President of the Congress, and though past seventy, he still continues in active practice, superintending his clinic and attending to his many private patients. Though he shows his years, he still undertakes the most severe operations, and is doubtless the most beloved and honored surgeon of all Germany.

The programme pursued was to listen to and discuss papers, chiefly surgical. At the morning session at the hospital, patients treated by various surgeons were exhibited. These patients were not only those treated in the various hospitals of Berlin, but others brought from different cities.

One striking feature of the Congress was the number of papers presented by young men, chiefly by assistants in various hospitals, whereas many of the most noted men presented no papers themselves, but merely discussed those presented by their colleagues and their assistants. Though it would have been far more interesting at times to listen to the celebrated men whose words carry with them the authority of experience, still the encouragement and stimulus given to young men to carry on and make known their original investigations has often produced in Germany excellent results.

ABDOMINAL SURGERY.

The one theme which, perhaps, attracted more interest than any other was that of abdominal surgery in its various departments. Ovariotomy was little discussed, doubtless from the secure position to which it has attained among recognized operations, but the operations for the removal of wandering kidneys, the resection of portions of the intestine, and the amputation of the pylorus attracted much consideration.

The specimens of pylorus which have recently been resected by Prof. Billroth, of Vienna, in three cases of cancer, were exhibited, and the method in which he performed the operation was demonstrated upon the cadaver by his first assistant, Dr. Mikulicz. Of the three cases operated upon up to this date, one has recovered and two have died. In the discussion as to whether the catgut or silk ligatures and sutures should be used in abdominal surgery, some advocated one and some the other, and satisfactory reports were made of each method. An especially serious difficulty experienced by all operators upon the abdominal organs seemed to be to avoid the escape of any fecal matters into the abdominal cavity, and it is chiefly to infection that the dangers of these operations are assigned rather than to the difficult manipulation incident to operating, or the shock consequent upon opening the abdomen or the division of the alimentary canal.

TREATMENT OF SPINAL DISEASE.

Another subject which attracted much discussion was the old one of the treatment of spinal disease by the Sayer plaster jacket and the pliable felt corset. Several cases were exhibited where, after injuries to the spine and resulting paralysis of limbs, bladder, and rectum, the patient had been treated by the application of a plaster of felt jacket, and great improvement had followed, paralysis of the bladder and rectum having disappeared, and the patient being able to walk with the jacket.

PROF. LANGENBECK said he always chloroformed the patient before applying the corset, that the muscles might be wholly relaxed, and used extreme caution lest serious or even fatal consequences might follow the suspension of the patient. He related a case in which a patient in his clinic had been suspended for application of the corset, in which there was sudden cessation of breathing, and though respiration was partially restored, the patient died in an hour, despite the performing of tracheotomy and artificial respiration.

The post-mortem examination showed that an abscess, which was situated in the angle formed by the sinking together of the eroded bodies of the vertebræ, had been ruptured by the suspension of the patient, and the pressure of the escaping pus upon the trachea, and possibly upon the nerves, had caused the cessation of respiration.

General opinion seemed to favor the felt corset instead of the plaster jacket. The cases of burning of patients, which sometimes result from the overheating of the felt corset in a gas oven, is avoided by Prof. König by heating the corsets in an oven heated by hot water. He says since he has used the hot-water oven he has not burned a patient.

STITCHING OF ENDS OF DIVIDED NERVES.

The stitching together with catgut of the ends of divided nerves, and the stretching of nerves for various causes, was also discussed. A number of cases were exhibited in which section of a nerve had been followed by complete loss of sensation and motion. The ends of the nerve were united, and after a time sensation began to return. Motion began to return considerably later, as is always the case, but finally both were fully restored.

A series of experiments performed upon animals, by Dr. Gluck, Prof. Langenbeck's first assistant, illustrated well the restorative power of nerves. He exhibited specimens taken from animals in which he had divided nerves, removing segments of varying length; others where, after removing a segment of a nerve, he had supplied the defect by a segment of nerve from a different animal, and still others where sections of nerve had been removed, allowed to remain for varying lengths of time in different fluids, and had then been restored to their place, and in all of these experiments upon animals he had secured regeneration of the part. Two cases of advanced tabes dorsalis, attended with excruciating pain, were exhibited, in which the sciatic nerve of one side had been stretched. One patient, who had been able to walk only with the greatest difficulty, two months after the operation was wholly free from pain, and could walk vastly better than before operation. Of course it was impossible to say how long this marked relief would continue, or what would result from the

stretching of both sciatic nerves instead of one. Of about twenty cases of stretching of different nerves reported by our surgeon, no evil consequences had occurred, while another reported a case of complete and permanent paralysis resulting from stretching the sciatic.

RECURRENT TUMOR OF FOREHEAD.

Prof. Langenbeck exhibited a patient upon whom he had several times operated for recurrent tumor of the forehead. In the last operation he had been obliged to chisel away the entire thickness of the skull, exposing the dura mater, and he stated that he thought in the future we would come to remove portions of the skull when involved in tumors, and of the dura mater as well, if this were diseased. To prevent hemorrhage during operations on the scalp he applies an Esmarch bandage about the head, over the orbital ridges and beneath the occiput.

TREATMENT OF SOFT, FATTY TUMORS.

Dr. Schwalbe, of Magdeburg, described a method of treating telangiectasis, soft, fatty tumors, and even small hernia, by the injection of a fifteen to twenty per cent. solution of alcohol. By these injections, which in most cases he repeats perhaps twice a week, and for a prolonged interval if necessary, he has secured some excellent results. Perhaps the best example of this was that of an extensive telangiectasis of the face, which had resisted treatment by the Paquelin cautery. By repeated injections he had secured a gradual shrinkage and almost entire disappearance of the tumor. A vast number of other interesting cases were shown and subjects discussed. Among these it may be worth while simply to mention one in which the two segments of a fractured patella had been wired together, and the wire cut off short. The segments were apparently united by bone, and the wires were left in place, being entirely covered by integument.

Prof. Hüter also illustrated his new method of resection of the tarsus by an anterior transverse incision. He identified the anterior tendons and nerve, divided them, and, after removal of the required bone, united them again, an operation from which he reported excellent results.

One of the closing acts of the congress was to vote a letter of congratulation to the Russian surgeon, Pirogoff, author of the noted operation which bears his name, in recognition of his worth as a surgeon, and of the fact that he has recently completed his fiftieth year of surgical service. D. P. A.

HYPNOTISM.

To the Editor of The Medical Record.

Dear Sir—Some time ago I entered a protest in your valuable journal against the use of the word *polio-myelitis*, on the ground that it did not mean what it was supposed to mean. Now comes another new medical term, which exceeds in barbarism any word that I have ever seen used in a scientific work, Dr. Hammond proposes to call the trance or hypnotic state "syngignosticism." When I first saw this word in a newspaper report of the meeting at which he suggested it I believed it to be misprinted, but I have since seen it printed in the same way so many times that I am brought to accept it as it stands.

The objection to the word is simple enough. In forming nouns from verbs, the Greeks used the *root* of the verb in the compound or derivative, and so never introduced the reduplication of verbs of the primitive form (such as *τίθημι*, *δίδωμι*, *γίγνομαι*, etc.) in such a compound noun, for this reduplication is not found in most of the forms of the verb, but only in the so-called present tenses, which are of comparatively late differentiation. Indeed, many such nouns seem not to have been formed from the verb at all, but both noun and verb came from a common source, which disappeared as the language was developed, only to be recovered by the searching analysis of the philologist.

To form "syngignosticism" from *συγγιγνώσκω* is like forming "syntithesis" from *συντίθημι* instead of synthesis, "syngignesia" instead of syngenesia from *συγγίγνομαι*, or "parthenogignesis" instead of parthenogenesis. A word much more to the purpose and more correct would be "syngnomism" or "syngnosticism," though I would not recommend a word from the proposed source at all.

I hope that the distinguished doctor will not allow this barbarous compound to go abroad, or it will surely be mercilessly ridiculed.

Yours respectfully, Roger S. Tracy.

63 West Thirty-Seventh Street, April 23, 1881.

To the Editor of The Medical Record.

Dear Sir—Since the attention of the profession has been called anew to the investigation of the phenomena accompanying that peculiar psychical condition called *hypnotism*, I make bold to request that your columns aid the profession in applying some suitable name to an abnormal mental condition recognized since the days of primeval man.

Braid, in his "Neurypnology," A.D. 1843, uses the word *hypnotism* and also *monoideism*, but no one has been satisfied with the terms. In a clinical lecture recently delivered by Prof. Hammond, it was stated that "hypnotism was not a good name for the condition he was describing, as it was not an *induced sleep*," and he suggested the word "*suggignoskism*, which he had worked out with fear and trembling, as expressing the condition of agreeing with some other person's mind," but with all due respect to our greatest neurologist, this simply expresses *consensus*, and gives no idea of *subjection of the will*.

Dr. Beach, in the Medical Record of January 15th, well describes the phenomena of hypnotism in saying "that they resulted from a *suspension of function of the centre for ideas* in the brain of the subject, and *also of his will*."

Rem acu tetigit, as Cicero might have said. Now, some word that expresses this seizure, subjection, or suspension of the will in medical parlance is a desideratum. *Θέλημα* and *βουλή* mean will; but *θυμός*, in Attic Greek, is the mind as the *willing principle*, or *seat of*, or *agent of purposes*, and stands somewhat contrasted with *νοῦς*, as power of thought. *Ληψίς*, denoting *seizure*, we have already familiarized in *epilepsy* and *catalepsy*. Combining the two words —thymolepsy—might denote the peculiar mental condition referred to without compromising an explanation.

For an allied condition we have the word ecstasy, from *ἐξ-ιστημι*, *to put out of normal condition*, from which, if preferred, we might coin the word thymoecstasy, or by ellipsis, thymecstasy, as denoting abolition or suspension of volition.

These suggestions are thrown out in hopes that through your columns some philological neurologist may come forward to supply a "want long felt."

J. W. Wadsworth, M.D.

Saltillo, Mexico, April 11, 1881.

THE TOEPLER-HOLTZ ELECTRICAL MACHINE IN MEDICINE.

To the Editor of The Medical Record.

Sir—In the last three issues of your valuable journal have appeared very interesting communications from Dr. W. J. Morton, of New York, on the subject of the Holtz electrical machine.

In his first paper he anticipated me in the publication of observations on the Holtz machine, which will appear in my treatise on "Medical Electricity," the printing of which has been completed and is now in the binder's hands. At the last moment I was able to append a note to the preface, calling attention to the appearance of Dr. Morton's paper on the subject, which I had announced as novel. Dr. Morton does not allude to the important modifications made by Toepler in the structure of the original Holtz machine. Any one who has worked with the original machine will support me in stating that it is capricious, uncertain, and troublesome. The least dampness will prevent any electrical effects, and it often strikes work without apparent cause. In the Toepler-Holtz machine, none of these irregularities exist; it never fails to work in all weathers, and water may be dashed against the plates without impairing its efficiency. Besides an absolute certainty of performance, the Toepler-Holtz machine produces much more striking and powerful effects than the original machine. The instrument which I now use was a Holtz machine, and was converted last year into the Toepler-Holtz machine by J. W. Queen & Co., the eminent philosophical instrument makers of this city. Whilst formerly I was continually disappointed and baffled in my use of the instrument, it is now always ready for use, and has not failed at its highest performance for one moment since the change was effected. It is sufficiently powerful, although the diameter of the stationary plate is sixteen inches.

My mode of using the instrument to produce the muscle and nerve reactions which have been hitherto produced by the primary faradic current, differs somewhat from that employed by Dr. Morton. I make no change in the instrument; the condensers are left in their proper position, and the discharging rods are kept at a certain distance apart. I am provided with two brass chains such as are furnished for electrical purposes; at one extremity of each is a clasp, at the other the usual copper wire for attaching the electrodes. The clasp of one chain is fastened over the rod communicating with the interior of the left-hand condenser; the clasp of the other chain is fastened around the tin-foil coating of the base of the right-hand condenser. (The operator is supposed to be facing the machine.) Moistened electrodes are attached to the chains. If the discharging rods are placed nearly together, and the machine is put in motion, a faint tingling is felt; if the rods are further apart, decided tingling, and if distinct sparks pass, strong muscular contractions occur. It is remarkable how decided are the effects, how strong the muscular contractions, without causing pain. In the course of six months' experience with these applications, I have had all the results heretofore attained by faradism, and with a moiety of the pain. That I have not heretofore announced these results is explained by the fact that they appear in my treatise on "Medical Electricity," now publishing. It is, however, satisfactory to find confirmation of results that were supposed to be novel.

Roberts Bartholow, M.D.

1509 Walnut Street, Phila., April 26, 1881.

WHAT CONSTITUTES A REGULAR PHYSICIAN?

To the Editor of The Medical Record.

Dear Sir—In your editorial note entitled "Lord Beaconsfield and Homœopathy," in your last number (April 23, 1881), you say, "The regular medical adviser of Lord Beaconsfield was a reputed homœopath, Dr. Kidd. This gentleman was a person of good medical education, and of more than ordinary ability and force of mind."

Now, the question arises, Is Dr. Kidd a regular practitioner?

If not, then what constitutes a regular physician?

A Regular Subscriber.

Johnstown, Pa., April 25, 1881.

[The facts about Dr. Kidd appear to be that at one time he was what is known as a "homœopath." Some years since, however, he severed all relationship with the homœopathic organizations with which he was connected, and announced himself as a follower of rational medicine, that is, one who avails himself of all therapeutic aids that experience has proved useful, and not confining himself to the exclusive following of any one special therapeutic theory. He has more recently, in his "Laws of Therapeutics," published a couple of years ago, given abundant evidence of his position in these respects. We presume these facts are not generally known in London, and that his old repute as a homœopath still clings to him among those who do not keep themselves informed concerning matters transpiring around them; otherwise we cannot comprehend why certain gentlemen refused to consult with him on the occasion referred to. As to the propriety of Dr. Quain's action, we judged of the matter simply from our standpoint—the American Code, and we presume that similar ethical principles prevail on the other side of the Atlantic, as, since the publication of our remarks on the subject (April 23d), the *British Medical Journal* of April 16th has reached us, and contains the following: "Nor does there seem room to doubt that the course of inquiry and action adopted by Dr. Quain, which met with the approval of Sir George Burrows, of the President of the College of Physicians, and subsequently of Sir Thomas Watson and Sir James Paget, was alike accordant with professional ethics and public duty."

Our correspondent's inquiry as to "what constitutes a regular physician," is a little difficult to answer, in the absence of any distinct and authorized declaration on the part of the prominent medical associations of this country. The Code of Ethics is silent on the subject, and, so far as we are aware, the American Medical Association has never given a definition of the phrase "regular physician." The Code, however (Art. iv., § 1), states that "no one can be considered as a regular practitioner or a fit associate in consultation whose practice is based on an exclusive dogma, to the rejection of the accumulated experience of the profession, and of the aids actually furnished by anatomy, physiology, pathology, and organic chemistry." This, it will be perceived, is simply a negative declaration, and we believe that, as a matter of fact, the persons answering this description are now quite few in number. It certainly does not strictly apply to a large proportion of so-called homœopaths of this country, and notably of this State, who a few years ago made public declaration, through their State Medical So-

ciety, that they had abandoned their exclusive devotion to "similia," and that they proposed to make use of all methods of treatment that experience appeared to warrant. As the homœopathic colleges teach "anatomy, physiology, pathology, and organic chemistry," it is hardly to be supposed that their graduates reject these "aids" in actual practice. —Ed.]

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from April 24, 1881, *to April* 30, 1881.

Surgeons J. H. Janeway and J. S. Billings, directed to represent the Medical Department of the Army at the annual meeting of the American Medical Association, to be held in Richmond, Va., on May 3, 1881. S. O. 96, A. G. O., April 27, 1881.

Bache, D., Major and Surgeon. Granted leave of absence for one month, on surgeon's certificate of disability, to take effect as soon as a medical officer reports for duty at Benicia Arsenal and Barracks. S. O. 62, Division of the Pacific and Department of California, April 16, 1881.

Greenleaf, Charles R., Major and Surgeon. To report to Superintendent General Recruiting Service, to conduct a detachment of recruits to Department of Dakota; and on completion of this duty to join his station (Fort Shaw, Montana Territory). S. O. 95, A. G. O., April 26, 1881.

Cronkhite, H. M., Capt. and Asst. Surgeon. To proceed from Camp Sheridan to Fort McKinney, Wy., and report for duty at that post. Camp Sheridan to be discontinued May 1, 1881. G. O. 8, Department of the Platte, April 20, 1881.

Biart, V., First Lieut. and Asst. Surgeon. So much of par. 1, S. O. 205, September 24, 1880, from A. G. O., as relates to him, is revoked. S. O. 94, A. G. O., April 25, 1881.

Medical Items and News.

Lemon-juice in Diphtheria.—I desire to invite the attention of the readers of the Medical Record to the topical use of fresh lemon-juice as a most efficient means for the removal of membrane from the throat, tonsils, etc., in diphtheria. In my hands (and I have heard several professional brethren here say the same) it is by far the best agent I have yet tried for this purpose. I apply the juice of the lemon, by means of a camel's-hair probang, to the affected parts every two or three hours, and in eighteen cases on which I have used it the effect has been all I could wish.—I. R. Page, M.D., Baltimore, Md.

The Robert Nelson Gold Medal.—Dr. C. E. Nelson, of this City, has, in memory of his father, Dr. Robert Nelson, donated a fund for the establishment of a prize in the shape of a gold medal for proficiency in medical studies for the students of Bishop's College, Montreal. The recent commencement of this institution was the occasion of the first presentation of this prize. The recipient was Walter de Monilpied, of Montreal.

Medical Ethics and the Consultations in the Case of Lord Beaconsfield.—We publish in full a very interesting letter from Dr. Kidd regarding the case of Lord Beaconsfield and of Dr. Quain's connection with it. If what Dr. Kidd states is true, and we have no reason to doubt it, his letter entirely justifies the opinions we have expressed upon the case and its ethical complications. The position which Dr. Kidd, according to his letter, holds regarding the use of drugs, is that of a rational physician. It is absurd that there should have been any question as to the propriety of consulting with such a man unless there was an ignorance of, or disbelief in, the facts which Dr. Kidd asserts regarding himself.

Replying to the criticisms that had appeared upon him in certain local medical journals, Dr. Kidd says:

"*First.*—Although, to quote the words used, a 'reputed homœopath,' I design once for all to disclaim any such party designation. Four years ago I resigned all connection with the Homœopathic Hospital and Society. In a very extensive practice, extending over thirty-four years, I have always adopted that course of treatment which my own study and experience have taught me to be most effectual to my patients. Herein I claim to have acted as any man does who is not bound by the trammels of a merely mechanical routine. Like other practitioners, I use the drugs of the British Pharmacopœia, but in many cases I have learnt from experience that what are called 'homœopathic remedies' may be usefully prescribed. Such remedies I freely use in suitable cases, and according to my own judgment. I do not prescribe infinitesimal doses, nor according to the caprice of my patients.

"*Second.*—With regard to the co-operation of Dr. Quain with myself, the facts are as follows: A valuable life was at stake—one precious to her most Gracious Majesty the Queen, and to many millions of her subjects. I had been enabled for nearly four years to afford prompt and effectual relief to that illustrious man in many severe illnesses. From the first moment of the present attack I recognized its gravity and danger. For ten nights and days I bore the strain of incessant attention; then her Majesty wished that the responsibility of so momentous an illness should be shared in consultation. I was asked to make arrangements accordingly. Knowing the satisfaction it would give her Majesty to have Sir William Jenner's co-operation and opinion, I at once wrote to him. He replied to the following effect: 'Holding, as you and I do, different views as to practical treatment, I do not think Lord Beaconsfield's interests could in any way be served by our meeting in consultation; on the contrary, it could not be without risk to him.' Thus, without inquiring as to the manner in which I was treating the patient, Sir William declined to meet me. Before receiving his reply, however, Lord Beaconsfield had selected Dr. Quain, who immediately communicated with me as to how I was treating the case, and upon my assurance that it was on the ordinary principles of medicine and not homœopathically, he visited the patient, thus fulfilling the spirit of that 'boast of the medical profession, that in the hour of sickness it recognizes only humanity in need of succor!' In this way Dr. Quain and I did not work together, as your contemporary supposed, without being agreed, nor did either sacrifice his convictions to effect the co-operation; on the contrary, Dr. Quain's great skill was thus made useful to our illustrious patient,

and my intimate knowledge of his constitution and of the disease was as helpful to Dr. Quain.

"*Third.*—As to the rules of professional etiquette which have been alleged herein to have been violated, it is impossible within the limits of this letter to discuss the entire question; but of this at least I am convinced, that if the boast of the medical profession above set forth is to remain a living principle of conduct, we must be guided, not by the misleading flicker of prejudice and jealousy, but rather by the clear and convincing light of humanity and common sense.

University of the City of New York.—By a recent vote of the trustees, the academic department of this university was recently abolished. It is understood that an effort will be made by some of the trustees to have the vote reconsidered and rescinded. It is a question of some importance whether or no, in view of the present action, the name of the institution can remain in connection with the law and medical departments.

The State of the Croton Water.—Notwithstanding all the complaints concerning the bad taste and bad smell of the Croton water, and notwithstanding the numerous explanations therefor which have been offered, no satisfactory conclusions seem to have been reached. The Health Board, as the result of analysis of the water, assures the public that its use will not be attended with any danger to health. In the meantime the "ancient and fish-like smell" continues, and every drink of water is taken under protest. In the lack of positive facts to prove the sources of contamination we are thrown back upon probabilities. The latter are numerous enough. First and foremost, the dead fish theory seems the most plausible. Second comes the explanation that an extra amount of organic material, living and dead, exists in the water. Third, that the Croton River is contaminated by sewage along its banks. Fourth, that the supply pipes are themselves the receptacles of decaying material. It is not unreasonable to suppose that all these supposed factors are in more or less active operation.

While the Water Board is deliberating as to the course to be taken, it is proper that the consumers should protect themselves against possible dangers. To this end the water should either be boiled and filtered before using, or some of the artificial table waters should be substituted. Probably the best outlook for the future of our water-supply is the fact that the Croton is worse than it has ever been, and that the people are becoming aroused regarding the necessity for some radical measures of reform. The last straw appears to be breaking the camel's back. The prospect of new aqueducts and increased sources of pure supply are beginning to look proportionately promising.

It is idle to suppose that the continued use of the Croton in its present condition will be unattended with danger to health. The approach of warm weather gives to the subject an anxious interest. The dangers from the use of impure water are too numerous to be entirely offset by the results of chemical analyses by the Health Board.

Typhus and Small-pox.—Typhus fever is still on the increase in this city, according to late reports. Small-pox, however, holds its own. The cases of the latter disease occur almost entirely, it is said, among the unvaccinated, or among those who have not been vaccinated for several years. The experience of the Health Board this winter abundantly corroborates the belief in the protective power of small-pox, if any such corroboration were needed.

Medical Society of New Jersey.—The one hundred and fifteenth annual meeting of the Medical Society of New Jersey will be held in the drawing-room of the Ocean Hotel, at Long Branch, on Tuesday, May 24, 1881, and will continue in session the following day. Wm. Pierson, Jr. *Secretary.*

The Pennsylvania State Board of Health.—The act to regulate the practice of medicine and to establish a State Board of Health, which has already passed the Senate of Pennsylvania and awaits the action of the House of Representatives, embodies many important points, of which the following abstract may be interesting:

"The board shall consist of six members appointed by the governor, by and with the advice and consent of the Senate, which board shall elect a secretary, who shall, by virtue of such election, become its executive officer. The members shall hold office for six years, but the term of office of two members must expire every two years. No member is to receive compensation except the secretary, whose salary is fixed at $3,000.

"The board shall have the general supervision of the interests of health and life of the citizens of the commonwealth; it shall have authority to make such sanitary investigations as it may, from time to time, deem necessary in improving the public health; it shall pass upon the competency of practitioners of medicine; it shall have the general supervision of the collection of the vital statistics of the commonwealth; it shall, at the session of the General Assembly next following its creation, report for legislative action a code of sanitary laws; it shall prepare an annual report of its operations, which shall be submitted to the governor; it shall diffuse a knowledge of the means of obtaining individual and public health, and of preventing disease.

"The standard qualifications of a practitioner of medicine, surgery, or obstetrics in the commonwealth shall be and consist of the following, namely: A good moral character. A thorough elementary education. Three years' study of medicine in its various branches under a competent preceptor. Attendance upon two full courses of lectures in a legally chartered medical school. A satisfactory examination by the professors of said school, before or on graduation, in human anatomy, human physiology, pathology, chemistry, materia medica, obstetrics, practice of medicine, surgery, and public hygiene. A diploma received in regular manner from a chartered medical school duly authorized by law to confer upon its alumni the degree of Doctor of Medicine, and in which school the aforesaid branches of medicine are taught, and a license granted, as set forth in the act.

"The Board of Health shall examine every diploma or affidavit of competency recorded and filed in the offices of the courts of Common Pleas of the various counties; and shall be the judge of the genuineness of said diploma, and of the truth of said affidavit of competency. If said diploma or affidavit of competency be found genuine and true, and if the person therein named be the person applying for a license to practise medicine, the State Board of Health shall issue such license, which shall be conclusive evidence of the right of the lawful holder of the same to practise medicine in this commonwealth.

"It shall be unlawful, on and after the first day of January, A. D. 1882, for any person not qualified and licensed by the State Board of Health, according to the act, to practise medicine, surgery, or obstetrics, or to collect any fees for medical, surgical, or obstetrical services; but this act does not apply to commissioned surgeons of the United States army and navy.

"Any itinerant who shall sell any drug, nostrum, ointment, or agency of any kind intended for the treatment of disease or ailment, or who shall, by writing or printing, or by any other method, publicly profess to cure or treat disease, injury, or bodily ailment whatsoever, shall pay a license of one hundred dollars a month, to be collected in the way now prescribed by law for pedlars.

"Any person who shall offer for record a copy of any diploma to practise medicine which shall have been issued to any other person, or shall offer for record a diploma or affidavit of competency issued or obtained fraudulently, or in violation of the laws of this commonwealth, or in violation of the charter of the institution conferring said diploma, shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be punished by a fine of not less than three hundred dollars nor more than five hundred dollars, or imprisonment, at hard labor, for not less than one nor more than three years, or both, at the discretion of the court, and his license shall thereby be revoked. And any person who shall in any other respect violate or fail to comply with the provisions of this act shall be deemed guilty of a misdemeanor, and on conviction, before any court of competent jurisdiction, shall be sentenced to pay a fine of not less than two hundred dollars nor more than four hundred dollars for each and every offence, for the use of the county wherein such misdemeanor is committed, or to undergo an imprisonment of not more than three months, and his license shall thereby be revoked."

This act has met with much favor among the profession of Pennsylvania, and has been unanimously indorsed by the Philadelphia County Medical Society.

At a general meeting of the profession, held at the College of Physicians recently, and presided over by Dr. John H. Packard, resolutions were passed stating that the medical profession of Philadelphia regarded the act as embodying valuable reforms, and urged upon the Legislature of Pennsylvania the speedy passage of the bill.

The West Philadelphia Medical Society has recently been organized with the following officers: President, Dr. Samuel S. Stryker: Vice-President, Dr. Charles A. McCall; Secretary, Dr. James Hendrick Lloyd; Treasurer, Dr. W. H. Wallace; Censors, Drs. Skillern, Girvin, and M. B. Musser; Executive Committee, Drs. J. H. Musser, Dixon, and Dulles.

Philadelphia Academy of Surgery.—At the April meeting of this society, which consists exclusively of surgeons, Dr. Joseph C. Hutchison, of Brooklyn, read a paper on the Physiological Method of Extension in the Treatment of Hip-joint Disease. The meeting was a large and spirited one, though the Fellowship of the Academy is limited by its constitution to thirty.

Dr. J. Marion Sims.—The degree of Doctor of Law was conferred upon our distinguished townsman not by the University of Pennsylvania, as stated in last week's Journal, but by the Jefferson Medical College, from which Dr. Sims graduated in 1835.

Importation of Opium.—Dr. H. H. Kane, of this city, writes: "In an editorial article in to-day's Record you state that Mr. Robbins's figures regarding the amount of opium imported into the United States differ materially from those given in my little work, 'Drugs that Enslave.' My statements as to the amount of opium imported each year for the past ten years was kindly furnished me by the Bureau of Statistics, etc., of the New York Custom-House, was marked 'official,' and is, I believe, correct.

"The quantities as there given, with their money value, read as follows:

Imports of opium into the United States for the ten fiscal years ending June 30, 1880.

	Lbs.	
1871	315,121	$1,926,915
1872	416,864	2,107,341
1873	319,134	1,978,502
1874	395,909	2,540,248
1875	132,541	939,553
1876	388,311	1,805,906
1877	349,223	1,788,347
1878	430,950	1,874,815
1879	405,957	1,809,696
1880	533,451	2,786,606

Anonymous Communications.—No attention can be paid to anonymous communications.

Gangliasthenia is the name given by Dr. E. Halsey Wood to a condition due to weakness of the ganglia, or ganglionic system of the body. All disturbances of the organic functions are due to this asthenic condition.

The symptoms of gangliasthenia and of passive congestion are the same. The treatment is bromide of ammonium.

Dr. Wood proclaims his opinions (in the *Michigan Medical News*) in a forcible and interesting way. He forgets, however, that the ganglionic system is intimately connected with the cerebro-spinal, and that the centres which modify circulation and nutrition are chiefly in the latter.

A Commencement Address that rises above the usual plane of common-place rhetoric is that delivered by Rev. Dr. B. M. Palmer at the closing exercises of the medical department of the University of Louisiana. It is published in the *New Orleans Medical and Surgical Journal*, and it is a pleasure to read language so choice and eloquent. The speaker urges a broader culture among medical men.

Another Fast.—It is reported that a Mr. John Griscom, of this city is to commence a forty-five days' fast in Chicago, under the auspices of Professor Haines, of the Rush Medical College. Mr. Griscom is a man rather under middle age, of good *physique*, and is a very wild enthusiast. At least so he is characterized by the daily press, which reports his prospective movements.

Bellevue Hospital, N. Y.—Dr. Chas. McBurney has been appointed one of the attending surgeons to this hospital, vice Dr. J. G. Curtis, resigned.

Dr. Salvatore Caro, a distinguished physician of this city, died April 30th, at the age of fifty-eight years. He was born in Sicily in 1823. After receiving a classical education, he graduated in medicine at the University of Palermo in 1848, after which he served as hospital interne to the Palermo Hospital for two years. He then came to this country in 1852, and after residing in Elizabeth City, N. J., for three years, moved to this city. He was an active worker in the various societies, and enjoyed a large and lucrative practice.

American Medical Association.

THIRTY-SECOND ANNUAL MEETING,

Held in the City of Richmond, Va., May 3, 4, 5, and 6, 1881.

TUESDAY, MAY 3D—FIRST DAY.

THE Association met in Mozart Hall, and was called to order at 11 A.M.

DR. JOHN T. HODGEN, OF ST. LOUIS, PRESIDENT, IN THE CHAIR.

Prayer was offered by RT. REV. BISHOP KEANE.

The address of welcome was given by Gov. F. W. M. HOLLIDAY, who, in the name of the medical profession of Virginia, welcomed the members of the Association to their capital city, and above all to the cordial hospitality of their homes and hearts.

The Secretary, DR. W. B. ATKINSON, then read the names of those who had registered, and as a member by invitation, DR. J. COOPER MCKEE.

On motion by DR. BRODIE, of Detroit, the ex-Presidents of the Association were invited to seats upon the platform, and DRS. N. S. DAVIS, of Chicago, S. D. GROSS, of Philadelphia, J. M. TONER, of Washington, and LEWIS A. SAYRE, of New York, responded.

Notes of regret, at their inability to be present, from DRS. W. O. BALDWIN, of Alabama, Vice-Presidents PROF. H. CARPENTER, of Oregon, and W. K. ANDERSON, of Alabama, J. MARION SIMS and FOSTER PRATT, of Michigan, were read by the Secretary.

PRESIDENT'S ADDRESS.

DR. JOHN T. HODGEN then delivered his address, in which he spoke especially of the recent progress of medical science in the direction of extending the domain and perfecting the methods of operative surgery. Might it not be worth while to avert, for a little, our admiring gaze from the contemplation of the triumphs of our art, to bestow a passing glance upon some of the causes which militated against the success of the surgeon, sometimes betraying him into error; again, embarrassing him in his choice between conflicting and perhaps opposite plans of treatment; and, too often, frustrating his best directed efforts.

Surgeons might be divided, roughly, into two classes—the one seeking to perform every practicable operation, the other avoiding operations whenever it was possible; the former class, including the bold, the enterprising, the ambitious, and the reckless men of our profession; the latter the timid, the conservative, the cautious, and the procrastinating.

The first class was largely made up of young men fresh from the schools, enthusiastic, full of the inspiration caught from Professors whose task it was to make the way seem clear and easy; students of the current medical literature, which teemed with new suggestions, and was crowded with reports of remarkable cases and wonderful operations, generally ending, or reported as ending, happily to the patient and to the great credit of the operator. Fired by the story of great difficulties encountered and vanquished by some great master, working under conditions exceptionally favorable to success, they burned to follow his example.

Simon excises a kidney, turns an aberant ureter into the rectum, touches, through the natural passages, a stone in the kidney—and immediately hundreds of ambitious surgeons are seeking kidneys to excise, ureters to turn, and renal calculi to touch.

Battey removes an ovary for the relief of an obscure nervous disorder; and forthwith ovaries are extirpated for almost every imaginable nervous disease.

Billroth cuts out a cancerous larynx or a diseased pylorus, and at once a demand springs up for similar cases, and the daring operations are repeated in all the four quarters of the globe.

The second class of surgeons is recruited largely from the first, but often only after many and bitter lessons of disappointment drawn from the experience of many and grave disasters.

The practice of seeking cases for operation, and of operating by blindly following the dicta of authority without a full understanding of the condition to be relieved, was well illustrated by two surgical procedures which had been resorted to with far too great frequency, as he believed, by gynecologists. One of these procedures was the division of the cervix uteri for flexures, an operation without proper foundation in pathology, which was generally useless and often dangerous, and which always entailed deformity, and the other was the operation for the cure of lacerations of the cervix uteri. From the very large number of operations which had been reported by many practitioners whose opportunities had not been unusual, it might be fairly concluded that the latter as well as the former had often been needlessly and unprofitably performed.

A simple knowledge, however accurate it might be, of the parts involved in an injury, or in any operative procedure, was very far from qualifying a man to make an intelligent prognosis, to decide upon the advisability of the operation, or to treat judiciously or successfully even such diseases as consisted mainly in pathological changes in the part in question, to say nothing of the many cases in which subjective symptoms, often of great severity, were referred to a particular part when they were, in fact, but the local expression of some remote or possibly constitutional trouble.

Herein was a great danger, which had threatened and still threatens the profession, through the ill-considered adoption of exclusive specialties by physicians not well trained in general medicine.

In the best sense a specialist is a physician, and something more; in the worst, and he feared a too frequent realization of specialism, he was something else and something less than a physician.

Sir James Paget has placed the whole medical profession under lasting obligations by the publication of a portion of his own experience as illustrating the dangers incident to surgical operations.

The rapid progress which had been made of late years in the precision and perfection of regional surgery; the brilliant triumphs secured, and the almost unlimited possibilities attained, combined to tempt surgeons to reckless and unjustifiable operative procedures. Captivated by the knowledge that almost every region of the body had been, and therefore might be, invaded, without necessarily destroying life, we were in danger of overlooking the general and constitutional influences which were ever present to modify and control the results of injuries, whether accidental or inflicted deliberately and for a beneficial purpose.

On the other hand we recognized certain diseases and conditions in which, however defective our

knowledge might be in some respects, we were at least certain that very early operation was indicated, both as involving a minimum of risk and as offering the best or perhaps only chance of saving life, or of averting great calamity.

In this class we included tumors benign, also tumors of possibly malignant tendency.

The President then gave some illustrations: for example, the early and complete removal of rodent cancer, epithelioma, and even scirrhus of the breast, in which removal of the diseased portion had effected a cure. From this point he passed to the consideration of the effect produced upon the results of surgical operations by good general health, anæmia, and the general diatheses.

On motion by Dr. Brodie, of Detroit, the thanks of the Association were extended to the President for his able and interesting address, and a copy requested for publication in the Transactions.

Dr. Joseph H. Warren then presented his report from

THE DELEGATION TO FOREIGN MEDICAL SOCIETIES,

which was referred to the Committee on Publication.

The Association then adjourned to meet on Wednesday morning, May 4th, at 10 o'clock.

WEDNESDAY, MAY 4TH—SECOND DAY.

The Association was called to order at 10 A.M. by the President, and prayer was offered by Rev. Joshua L. Peterken, D.D.

COMMITTEE ON NOMINATIONS.

The Secretary announced the following as the Committee on Nominations: Alabama, W. C. Cross; Arkansas, W. B. Welch; California, R. Beverly Cole; Connecticut, G. A. Shelton; Georgia, T. S. Powell; Iowa, J. C. Stone; Illinois, H. C. Reno; Indiana, W. Lomax; Kansas, C. V. Mottram; Kentucky, D. B. Greenlee; Maine, F. E. Hitchcock; Massachusetts, J. H. Mackie; Michigan, W. Brodie; Minnesota, A. J. Stone; Mississippi, W. G. Stone; Maryland, H. P. C. Wilson; Missouri, T. B. Lester; North Carolina, E. Grissom; New Hampshire, M. C. Lathrop; Ohio, Alexander Dunlap; Pennsylvania, W. J. Asdale; New Jersey, A. Coles; Rhode Island, Ariel Ballou; South Carolina, R. A. Kinloch; Tennessee, D. J. Roberts; Texas, C. L. Gwynne; New York, A. C. Post; Vermont, H. D. Holton; Virginia, O. F. Manson; West Virginia, James E. Reeves; Wisconsin, J. K. Bartlett; District of Columbia, J. Ford Thompson; U. S. N., J. M. Browne; U. S. A., John H. Janeway; U. S. Marine Hospital Service, George Purviance.

Dr. J. M. Toner then read the report of the

COMMITTEE ON NECROLOGY,

which was referred to the Committee on Publication.

The hour for the special order having arrived, action was taken on the following proposed amendment to the Code of Ethics, Article I, paragraph 1, add, "and hence it is considered derogatory to the interest of the public and honor of the profession for any physician or teacher to aid in any way the medical teaching or graduation of persons knowing them to be supporters and intended practitioners of some irregular and exclusive system of medicine."

A motion made by Dr. H. O. Marcy, of Massachusetts, to postpone its consideration indefinitely was lost—ayes, 74; nays, 76.

The question recurring on the adoption of the proposed amendment, Dr. E. S. Dunster, of Ann Arbor, argued against it, and Dr. N. S. Davis, of Chicago, moved that the further consideration of the subject be postponed until to-morrow, at 12 o'clock, which was opposed by Dr. Howard, of Baltimore, favored by Dr. Moore, of North Carolina, and carried by the Association.

ADDRESS IN MEDICINE.

Dr. William Pepper, of Philadelphia, Chairman of the Section, then delivered his address, in which he devoted himself to the consideration of the great importance of local lesions, especially catarrhal inflammation of mucous membranes, as forming the cause of many apparently obscure diseases, and also as adding greatly to the danger of many diseases which all now regard as due exclusively to the presence of some specific poison in the blood. He dwelt on the present tendency, which he thought exaggerated, to assume the existence of blood-poisoning, and on the injury that is apt to result in practice from regarding disease in so many instances as a special self-limited process, pursuing a definite course, and practically uninfluenced by remedies. This theory will lead us to the dependence on the merely supporting and inactive treatment, and to the neglect of the minute care in looking for and treating local affections that is so essential to the highest practical success. Dr. Pepper illustrated this, especially, by reference to typhoid fever, dysentery, and rheumatism. Allusion was also made to the importance of seeking for remedies possessing special antidotal power against the great epidemic or contagious diseases, such as diphtheria, the eruptive fevers, etc. In a few instances such specific remedies have been discovered, and reference was made to the remarkable results which have recently been observed in the treatment of grave cases of diphtheria by the use of large doses of the bichloride of mercury. Without accepting those results as conclusive, they must be regarded as most encouraging.

A careful discussion then followed as to the large part played by chronic irritations of mucous membranes in the production of nervous disturbances and the impairment of vital powers. Ample illustration might be drawn from dyspepsia caused by intestinal irritation. Again, he spoke of the part played by such chronic irritation in maintaining a peculiar extended fever which resists all treatment until the local trouble is sought out and removed. Such cases are not rarely mistaken for malarial fever, and the excessive use of quinine then is not infrequently irritative and mischievous. Finally, reference was made to the part played by such local causes in producing morbid accumulations that might undergo changes, and infect the system with the most fatal poisons. The most frequent and impartial instances of these are found in the development of pulmonary consumption from neglected or imperfectly cured catarrhal affections of the lungs. In this connection, he stated that phthisis is not a self-limited disease, and to so regard it was to ignore all pathological teaching.

ADDRESS ON OBSTETRICS AND GYNECOLOGY.

Dr. Jas. R. Chadwick, of Boston, chairman of the section, reviewed the progress made in the publication of obstetrical and gynecological literature from the year 1876 to 1881, and the result showed that the periodicals in this department have increased in America from 3 to 6; in France from 4 to 6; in

Germany from 2 to 3; in Belgium, Italy, and Denmark each a new periodical has been established, and in Great Britain the number remains unchanged; total increase from 13 to 22.

The increase in the number of obstetrical and gynecological societies during the same years has been from 16 to 22. In America the increase has been from 6 to 11, and our number now is equal to that in all the rest of the world. But the membership of the American societies is less than that of those in Great Britain and other countries, and for reasons which are obvious.

The total bulk of literatnre in obstetrical and gynecological medicine is increasing at the rate of about 25 per cent. annually.

In the year 1880 the largest number of articles on obstetrics was published in France, and was 1,643. In America the total was 1,316; in Germany, 669; in Great Britain and Ireland, 488.

"The above quantitative analysis of Obstetric and Gynecological Literature with regard to nationalities manifests the prominence of America in this branch of medicine. America contributes more journal articles than any other nation, supports by contributions, both literary and pecuniary, as many special periodicals as France, and twice as many as either England or Germany, and carries on as many special societies as all the other countries of the world together.

"England, despite the labors of Wells, Keith, Thornton, Barnes, Duncan, Tait, Leishman, and Playfair, is fast losing its pre-eminence in this branch of medicine, and has recently demonstrated its inability to support even one special journal, by the discontinuance of the *Obstetrical Journal of Great Britain and Ireland*, on January 1st of the present year.

"France is exhibiting an unnatural activity, under special influences already adduced.

"Germany holds on the even tenor of its way, while Belgium, Italy, Spain, Denmark, and Russia are awakening to a more active participation in the advance and dissemination of obstetric and gynecological lore.

"I have throughout these pages restricted myself to a quantitative study of the literature. I cannot close without giving in a few words an estimate of the quality of each nation's contributions to the science and practice of gynecology and obstetrics.

"Germany unquestionably advances pure science more than any other nation; the papers in its three journals are the most profound and the most critical.

"France manifests a great dearth of original ideas and a most discursive style of discussion, but considerable painstaking historical research. Its journals are prolix and, for the most part, profitless reading, and exceed in number the legitimate demand.

"England exhibits a waning interest in this branch of medicine, little originality, but a notable discrimination in adopting new theories and applying them to practice. Its only special journal died a natural death at the close of the last year.

"To America I have no hesitation in according pre-eminence in this special field. Our countrymen meet the emergencies incident to child-bearing with a quickness of perception and readiness of action rarely seen in other countries. Their ingenuity has led them to devise new operations in gynecology and to extend their art with brilliant results, so that to-day the practice of that branch has reached a stage here far in advance of other nations. Of conrse, our natural aptitudes lead many of us to overestimate the beneficial results of surgery, but taken all in all, close observation and study in most of the countries of Europe have confirmed me in the opinion that in obstetrics and gynecology America leads the world.

"The two most prominent exponents of our branch in America, *The American Journal of Obstetrics* and the *Transactions of the American Gynecological Society*, present a more happy blending of scientific facts and practical suggestions than is found in any other special gynecological or obstetrical journals in the world."

Dr. Fred. Horner, of Virginia, moved that in the morning session for Thursday the question of establishing a

MEDICAL AID SOCIETY

be brought before the Association. Carried.

REPORT OF THE COMMITTEE ON JOURNALIZING THE TRANSACTIONS.

Dr. John H. Packard, of Philadelphia, read the report, which was elaborate and carefully prepared, and, in closing, submitted the following resolution:

Resolved, "That a committee of five be appointed, whose duty it shall be to digest and report in detail, as early as possible, a plan for the publication of a weekly journal by the Association, the nomination of an editor, his salary, and the time and place of publication of such journal."

On motion by Dr. N. S. Davis, the resolution was so amended as to leave out the nomination of an editor.

On motion by Dr. J. M. Toner, the Secretary and the Treasurer were added to the committee.

On motion by Dr. H. O. Marcy, the committee was made to consist of the members of the old committee, who were in attendance upon the present meeting, and that the President appoint others to make the number required by the resolution as amended.

The report read by Dr. Packard was also signed by Drs. S. D. Gross, J. S. Wetherlee, E. S. Dunster, and W. R. Gillette.

On motion by Dr. Toner, the Secretary was instructed to publish, in the forthcoming volume of the Transactions, a

GENERAL INDEX OF ALL THE TRANSACTIONS.

Drs. W. J. Lumsden, of New Jersey, and J. N. Butt, of North Carolina, were elected

MEMBERS BY INVITATION,

after which the Association adjourned, to meet on Thursday morning at 10 o'clock.

THURSDAY, MAY 5TH—THIRD DAY.

The Association met at 10 A.M., and was called to order by the President.

Prayer was offered by Rev. W. E. Hatcher.

The Chairman of the Committee of Arrangements, Dr. Cunningham, announced the reception of a communication from Dr. Janeway, of New York, which was referred to the Judicial Council.

He also announced that Dr. A. Jacobi, Chairman of the Section on Diseases of Children, would deliver his address before the Section this afternoon, instead of before the Association in general session.

Dr. S. D. Gross asked for a suspension of the reg-

ular order of business, that he might take the steps necessary to the formation of a

"SECTION IN DENTISTRY."

Permission was granted, but the Association refused to suspend the rules further, and the question, therefore, went over for one year.

THE PRESIDENT announced as the Committee on Journalizing the Transactions, Drs. John H. Packard, N. S. Davis, J. S. Billings, L. A. Sayre, and R. Beverly Cole, with the Treasurer and the Secretary.

ADDRESS IN SURGERY.

DR. HUNTER MCGUIRE, of Richmond, Chairman of the Section, restricted his remarks to the consideration of gun-shot wounds in the abdomen: In many of the cases of penetrating wounds of the peritoneum, the ball passes obliquely through the abdominal wall, and the aperture shuts up like a valve, or if passing directly through the parietes, the aperture of entrance contracts at once and closes. To all intents and purposes the cavity is hermetically sealed, and the missile, pieces of clothing, blood from wounded vessels, fecal effusion, if the intestine is wounded, and inflammatory products, are all hopelessly imprisoned there. Can it be wondered at that such wounds are fatal? In no other gun-shot wounds of cavities do we allow the wound of entrance and exit to be closed. Who would think of shutting up the opening in gun-shot wound of the knee-joint? During the late war, the plan of hermetically sealing up wounds of the pleura, a structure analogous to the peritoneum, proved most disastrous. In gun shot wounds of the chest involving the serous membrane, we keep the wound pateut, and if not dependent, we do not hesitate, when effusion takes place, to make a counter-opening with a knife or trocar, and sometimes to flush out the cavity with detergent and antiseptic lotions. In view of these facts, the writer ventures to advocate operative interference in gun-shot penetrating wounds of the peritoneum with intestinal injury, in penetrating wounds of the peritoneum with any visceral lesion, and similar cases without visceral injury. The wounds in the abdominal walls should be enlarged, or the linea alba opened freely enough to allow a thorough inspection of the injured parts. Hemorrhage should be arrested If intestinal wounds exist, they should be closed with animal ligatures, trimming their edges first if they are lacerated and ragged. Blood and all other extraneous matter should be carefully removed, and then provision made for drainage. If the wound of entrance is dependent, drainage may be secured by keeping this open. If the wound is a perforating one, and the aperture of exit dependent, the patency of this should be maintained, and, if necessary, a drainage-tube of glass or other material introduced. If there is no wound of exit, and the wound of entrance is not dependent, then a dependent counter-opening should be made and kept open with a drainage-tube. If it is urged that the means suggested are desperate, it can be said in reply that the evil is desperate enough to justify the means.

After the reading of Dr. McGuire's address,

DR. JOHN S. BILLINGS, of Washington, presented

SOME OF THE RESULTS OF THE TENTH CENSUS AS REGARDS MORTALITY STATISTICS.

Early in the census year forms were prepared for a small register of deaths to be kept by physicians.

Each register contained twenty-four slips, and a copy of the register, with a stamped envelope for its return at the end of the census year, was sent to every one in the United States who was reported by his or her postmaster to be a physician, or to be addressed as such.

The first rough count shows that about 620.000 deaths have been returned upon these schedules. To these there will be added from the register slips above described about 50,000 deaths, and the records of the cities from which no enumerator's schedules are received will add about 80,000 more, making a total of about 750,000 deaths returned for the year, which, for a population of 50,000,000, gives a death rate of 15 per thousand. While it is certain that this does not include all the deaths, it is evident that it is much more complete than previous censuses—the total number of deaths for that of 1850 having been 323,098, being a mortality rate of 13 9.10 per thousand. In 1860 there were returned 394,153 deaths, being a mortality rate of 12 5.10 per thousand. Upon this last Prof. Elliott constructed life tables, assuming a deficiency in returns of deaths of 41 per cent., or in other words, that the true death-rate was a little over 18 per thousand. If this were assumed as the true death-rate for the last census year, the deficiency in returns would be less than 10 per cent.

From this brief statement it will be seen that General Walker is to be congratulated upon the improvement which has been effected in the tenth census in regard to the completeness of the mortality statistics, and also that the medical profession of the country has contributed largely to the securing of this relative completeness.

QUESTIONS OF PRIVILEGE.

DR. LEWIS A. SAYRE rose to a question of privilege and asked that the minutes of the association be so amended that it would appear that the protest which he entered against the resolution adopted in the Surgical Section, at the annual meeting held in Chicago in 1877, relative to shortening in fractures of the long bones, was sent to the President of the Association and not to a Chicago newspaper as charged by Dr. Frank H. Hamilton, in the last number of the MEDICAL RECORD.

DR. HODGMAN, of New York, said that he carried the message for Dr. Sayre, who was sick, and delivered it to the Secretary, who, in his presence, handed it to the President.

The Association accepted the explanation and granted permission that the amendment be made.

DR. J. M. KELLER also rose to a question of privilege, and stated that at the same meeting he also entered his protest against the resolution referred to, which was offered by Dr. Peck, of Iowa, and also presented his protest in writing, signed by Drs. E. T. Easley, Irvin Keller, and himself, and yet no record of it appeared in the notes of the secretary of the Section as published in the Transactions. He asked that those gentlemen and himself be placed upon the record correctly, and permission was granted to make the necessary addition to the proceedings to secure that end.

DR. N. S. DAVIS, of Chicago, then read the

REPORT ON CLINICAL OBSERVATIONS AND RECORDS.

At present we have no test by which we can detect the presence of ozone with a reasonable degree of scientific accuracy, yet it does not follow that all previous labor has been of no value, for the reason that active oxidizers have been found, the influence

of which is not yet understood. He concluded with the distinct recommendations:

First. That a committee of five be appointed by the President of the Association, to be called the Standing Committee on "Atmospheric Conditions and their Relations to the Prevalence of Diseases."

Second. That that committee be authorized to select such places as will best indicate atmospheric conditions in the more important climatic and sanitary districts of the United States, not less than six nor more than twelve, and establish therefor a means for continuous observation and record of all appreciable conditions of atmosphere, according to the most approved methods, and of the origin and prevalence of all acute diseases.

Fifth.—That the committee, through their chairman, be authorized to draw upon the Treasurer of this Association for such sums as may be found necessary for the proper execution of the work assigned to it, the aggregate amount not to exceed $500 during the ensuing year, and that a detailed report of all sums drawn and expenditures made must be presented at the next annual meeting of the Association.

The report was signed by Drs. N. S. Davis, J. M. Toner, and H. O. Marcy. It was accepted and the recommendations were adopted.

Dr. William Brodie then read his report from the delegation to the Canada Medical Association.

REPORT OF THE COMMITTEE ON NOMINATIONS.

The committee reported as follows:

For *President*—J. J. Woodward, M.D., of Washington, D. C.

For *First Vice-President*—P. O. Hooper, M.D., of Arkansas.

For *Second Vice-President*—Leartus Connor, M.D., of Michigan.

For *Third Vice-President*—Eugene Grissom, M.D., of North Carolina.

For *Fourth Vice-President*—Hunter McGuire, M.D., of Richmond, Va.

For *Secretary*—W. B. Atkinson, M.D., of Philadelphia, Pa.

For *Treasurer*—R. J. Dunglison, M.D., of Philadelphia, Pa.

For *Librarian*—William Lee, M.D., of Washington, D.C.

For *vacancies in the Judicial Council*—S. N. Benham, M.D., of Pittsburg; J. M. Toner, M.D., of Washington; Daniel A. Linthicum, of Arkansas; William Brodie, M.D., of Detroit; Henry D. Holton, M.D., of Vermont; A. B. Sloan, M.D., of Missouri; and R. Beverly Cole, M.D., of California.

The Next Place of Meeting—St. Paul, Minn.

For *Chairman of the Committee of Arrangements*—A. J. Stone, of St. Paul.

Dr. J. S. Billings, U.S.A., moved the adoption of the report, and thanked the committee, in behalf of the Medical Staff of the Army, for the high compliment paid it in the selection of one of its most honored members for the highest position in the gift of the Association.

Dr. J. M. Toner, from the Judicial Council, directed the attention of the Association to the by-laws concerning delegateship, and the societies and organizations entitled to representation, to the end that a more uniform representation may be secured.

The hour for the special order having arrived, Dr. Davis took the floor, and spoke in favor of the proposed amendment to the Code.

Dr. Markin, of Massachusetts, opposed the amendment.

Dr. Dunster replied to Dr. Davis.

Dr. Marcy moved to lay the subject upon the table indefinitely, and the motion was lost: ayes, 106; nays, 108.

On motion by Dr. Davis it was made the special order for Friday morning, immediately after the preliminary exercises of the session.

The following

AMENDMENT TO THE BY-LAWS,

proposed by Dr. J. M. Keller, of Arkansas, was then adopted: "In the election of officers and appointment of committees by this Association and its President, they shall be confined to members and delegates present at the meeting, except in the Committee of Arrangements."

The Association then adjourned to meet at 10 A.M. Friday, May 6th.

FRIDAY, MAY 6TH—FOURTH DAY.

The Association was called to order at 10 A.M. by the President.

Prayer was offered by Rev. Charles Read, D.D.

The Secretary announced the following Committee on "Clinical Observations and Records" as appointed by the President: Dr. N. S. Davis, Chicago; Dr. J. M. Toner, Washington, D. C.; Dr. H. O. Marcy, Boston, Mass.; Dr. W. H. Geddings, Aiken, S. C.; Dr. S. M. Bemis, New Orleans.

AMENDMENT TO THE CODE.

The Association then resumed the consideration of the amendment to the Code of Ethics.

Dr. Billings, of Washington, offered the following substitute for the proposed amendment:

"It is not in accord with the interest of the public or the honor of the profession that any physician or medical teacher should examine or sign diplomas or certificates of proficiency for, or otherwise be specially concerned with, the graduation of persons whom they have good reason to believe intend to support and practice any exclusive and irregular system of medicine."

Dr. Davis seconded the substitute.

The previous question was ordered, and the substitute declared adopted by a three-fourths vote.

REPORT OF THE COMMITTEE ON NOMINATIONS.

The Committee on Nominations made the following supplementary report:

Section in Practice of Medicine—Chairman, Dr. J. A. Octerlony, Louisville, Kentucky; Secretary, Dr. D. J. Roberts, Nashville, Tenn.

Section in Surgery and Anatomy—Chairman, Dr. J. C. Hughes, Keokuk, Iowa; Secretary, Dr. William A. Byrd, Quincy, Illinois.

Section in Obstetrics—Chairman, Dr. H. O. Marcy, Boston, Mass.; Secretary, Dr. C. V. Mottram, Lawrence, Kansas.

Section in Medical Jurisprudence and State Medicine—Chairman, Dr. A. L. Gihon, Washington, D. C.; Secretary, Dr. J. H. Sears, Waco, Texas.

Section in Ophthalmology, Otology, and Laryngology—Chairman, Dr. D. B. St. John Roosa, New York, N. Y.; Secretary, Dr. J. Solis Cohen, Philadelphia, Pa.

Section in Diseases of Children—Chairman, Dr. S. C. Busey, Washington, D. C.; Secretary, Dr. William Lee, Baltimore, Md.

Section in Dentistry—Chairman, Dr. D. H. Good-

willie, New York, N. Y.; Secretary, Dr. P. W. Brophy, Chicago, Ill.

For Committee on Necrology—The same as properly constituted, with the following: E. R. Duval, C. H. Pinney, G. P. Conn, B. F. Kittrell, D. B. Wallace, J. B. Lindsley, A J. Stelle, J. H. Kidder, W. J. Bates, H. M. Barnes, J. W. Jones, E. M. Snow.

For Committee on Publication—The present committee was continued.

For Assistant Secretary—Dr. Charles H. Boardman, of St. Paul, Iowa.

The Committee on State Medicine was continued.

On motion the report, as a whole, was unanimously adopted,

On motion of Dr. E. Grissom, the honorarium of last year was continued to the permanent secretary.

Dr. D. G. Goodwillie, of New York, offered an amendment to the constitution, making provision that permanent members, as well as delegates, be entitled to vote.

Laid over for one year under the rules.

ADDRESS IN OPHTHALMOLOGY.

Dr. Dudley S. Reynolds, of Louisville, Ky., Chairman of the Section, delivered his address, in which he referred to puncture of the drum-membrane as superseding the use of poultices, and the use of the hydrobromate of homatropia for the relief of headache dependent upon errors in refraction.

THE REPORT OF THE TREASURER

showed a balance in the treasury of $2,008.46, and the Treasurer repeated the conviction that the present rule of the Association, which allows permanent members to escape payment of annual dues two out of every three years, should be so amended as to make annual payment of dues obligatory.

The report was accepted, and referred to the Committee on Publication.

The report of the Committee on Publication was read by the Secretary and referred.

The report of the Librarian showed that two hundred and seventy-three distinct titles had been added to the library during the year, and the Librarian asked that an appropriation of $200 be made for the binding and purchase of periodicals such as cannot be otherwise obtained.

The report also recommended that the Treasurer be authorized to subscribe $50, to aid in the publication of the Index Medicus.

The report was accepted and the recommendation adopted.

The Secretary acknowledged the reception of a communication from the Commissioner of Education, which was referred to the Committee on Publication.

A communication from the Philadelphia County Medical Society was read, and referred to the Committee on Publication.

The Judicial Council reported concerning charges presented against the Nebraska State Medical Society, that the officers be duly notified of the same, to the end that they may have their defence ready for presentation on the first day of the next annual meeting. It also reported that it is contrary to the By-laws of the Association to hold patents, and that the communication submitted be returned by the Secretary.

The report of the minutes of the Section on State Medicine, with the accompanying papers, was accepted, and referred to the Committee on Publication.

The report from the Section in Medicine contained a resolution by Dr. Martin, of Massachusetts, making provision for the appointment of a committee of *three*, whose duty it shall be to investigate as to where and by whom the business of

PROPAGATING BOVINE VIRUS

is carried on, and report, if possible, at the meeting of the Association in 1882.

On motion by Dr. A. C. Post, of New York, the expense allowed was limited to $100, after which the resolution was adopted.

The report also contained the following resolution concerning

PATENTS AND TRADE-MARKS,

which, on motion by Dr. J. M. Toner, was referred to the Judicial Council for report at the next annual meeting:

"*Resolved*, That the spirit of the Code of Ethics forbids a physician from prescribing a remedy controlled by a patent, copyright, or trade-mark. This, however, shall except a patent upon a process of manufacture or machinery, provided patent be not used to prevent legitimate competition; and shall also except use of a trade-mark used to designate a brand of manufacture, provided that the article so marked be accompanied by working formulæ, duly sworn to, and also by a technical, scientific name, under which any one can compete in manufacture of same."

REPORT OF THE COMMITTEE ON SOCIAL POSITION OF MEMBERS OF THE MEDICAL STAFF OF THE ARMY AND THE NAVY.

Dr. William M. Beech, of Ohio, Chairman, submitted the report of the committee appointed on Social Position of Members of the Medical Staff of the Army and Navy, in which he asked that the committee be continued. In doing so, he argued that the principle of promotion which prevailed among army officers should prevail the same that it does in the other departments of the Government.

Dr. J. M. Browne, United States Navy, suggested that the report was wrong in its title, complaining of the lack of social recognition of medical officers of the army and the navy. He thought the matter of official recognition would ultimately right itself.

Dr. J. S. Billings, United States Army, concurred in what Dr. Browne said, and thought the subject had better drop.

Dr. Beech was willing to strike out the language relating to social recognition, but he thought some legislation should be enacted by Congress to secure equal preferment with other officers of the army and navy.

On motion of Dr. N. S. Davis the matter was laid on the table.

Dr. John H. Packard, of Philadelphia, offered amendments to the Constitution, contemplating changes in the plan of organization of the Association.

Laid over for one year under the rules.

DELEGATES TO FOREIGN MEDICAL SOCIETIES.

The following were announced as appointed by the President, who was also authorized to add to the list as might be desirable:

H. P. Walcott, H. O. Marcy, Massachusetts; George L. Corcoran, Illinois; N. J. Pittman, North Carolina;

J. T. Hodgen, Missouri; D. H. Goodwillie, N. C. Husted, New York; D. W. Yandell, Kentucky; I. N. Quimby, New Jersey; M. A. Pallen, A. Jacobi, J. W. S. Gouley, New York; J. M. Toner, District of Columbia; S. W. Gross, J. Solis Cohen, Pennsylvania; H. L. Bartlett, New York; S. J. Jones, Illinois; R. Beverly Cole, California; C. F. Stillman, New York; H. A. Martin, Massachusetts; E. M. Hunt, New Jersey; J. S. Billings, U. S. Army; E. T. Caswell, Rhode Island; Edw. Warren, Paris, France; A. F. A. King, District of Columbia; S. P. Bishop, Ohio; R. A. Cleeman, Pennsylvania; Eugene Smith, Michigan; Moses Gunn, Illinois; R. Battey, Georgia; E. C. Harwood, New York; S. C. Busey, District of Columbia; W. E. Anthony, Rhode Island; John Morris, Maryland; Stephen Smith, R. F. Weir, New York; J. R. Weist, Indiana; D. S. Reynolds, Kentucky; W. T. Briggs, Tennessee; F. W. Pearson, Maryland; J. B. Roberts, Pennsylvania; G. M. B. Maughs, Missouri; J. M. Browne, U. S. Navy; L. D. Bulkley, New York; M. L. Herr, Pennsylvania; N. S. Davis, Illinois; P. F. Mundé, Lewis A. Sayre, C. A. Leale, New York.

Dr. W. Brodie, of Detroit, offered the following resolution, which was unanimously adopted:

Resolved, That the thanks of this Association are hereby tendered to the Committee of Arrangements for the faithful attention they have given to their duties and requirements; to the medical profession and citizens of Richmond for their hospitality and endeavors to make the time spent by us while here pleasant and agreeable; to Drs. McCaw and McGuire for the elegant special entertainment given by them at the Westmoreland; to Mr. McCluer, superintendent of the Telephone Company, for special facilities given the Committee of Arrangements and the association; to Vice-President Parsons, of the Richmond & Alleghany Railroad, for his kind invitation for a free ride on his road to show us the interior of the State of Virginia; to Mr. Powell, manager of the Richmond Theatre; to the managers of the Mozart Association, and all others who have contributed to our pleasure and comfort; to the press, and especially their reporters, in giving such a full résumé of the proceedings in the daily papers; to the railroad companies generally, who have so liberally reduced the rates of transportation for our benefit, and any other modes of conveyance that have so contributed; to Mr. Valentine for his kind invitation to his studio.

Be it specially

Resolved, That our thanks are particularly due to the ladies of Richmond for their attention and kind interest in making our sojourn so pleasant and agreeable.

The hour having arrived for adjournment,

Dr. Davis alluded to the very harmonious session which had been held, and complimented the retiring president for his efficiency in the discharge of his duties.

President Hodgen returned his thanks to the Association and to his friends in Richmond who had so kindly entertained its members. He was reminded that his ancestry first breathed the air of heaven in this delightful country, and as he remembered the bright smile of his now dead, dear mother, he would in future remember the impression that had been made upon him by the people of Richmond, Va.

The Association was then declared adjourned, to meet in the city of St. Paul, Minn., on the first Tuesday in June, 1882.

SECTION IN SURGERY AND ANATOMY.

Hunter McGuire, M.D., Richmond, Va., Chairman.

Duncan Eve, M.D., Nashville, Tenn., Secretary.

Tuesday, May 3d.—First Day.

Dr. J. H. Warren, of Boston, presented various

NEW SURGICAL INSTRUMENTS,

consisting of vermicular-pointed catheters, his modification of Sir Henry Thompson's tube, having a tip, one-half of which is thrown back by a spring after it has entered the bladder; also Bigelow's tube with a vermicular point, a uterine probe with a revolving point, urethral and uterine sounds with revolving bullular points, etc.

Dr. Sayre, of New York, asked, why complicate all these instruments by the addition of a joint and a rotary point?

Dr. Warren replied that the vermicular point facilitated introduction.

Dr. J. W. S. Gouley, of New York, regarded it as a complication in the construction of instruments, the chief idea of which should be simplicity. Besides, the jointed arrangement gave opportunity for the retention of poisonous material, and therefore its possible transfer from one patient to another. In sounding for stone we should have an instrument with an absolutely rigid extremity. If anything was to be added it should be at the distal and not the vesical extremity. We need not trust to resonance, for the surgeon's experienced touch is sufficient to enable him to recognize a vesical calculus. He hoped the instruments would not be introduced into surgical practice.

Dr. Benham, of Pittsburg, believed that the joint was in violation of acoustic principles; that an unbroken communication offered the best possible means for the transfer of sound.

Dr. Schriver, of Bethany, W. Va., did not approve of complications in the construction of surgical instruments, and therefore did not see any special value in those exhibited.

DOUBLE IRRIGATION AND INJECTION TUBE.

Dr. H. O. Marcy, of Massachusetts, presented soft rubber double tubes, which could be used as stomach tubes, uterine and rectal tubes, and catheters.

Dr. Gouley remarked that he had had a double soft rubber catheter during the last five years. He, however, never uses the double catheter in the male bladder. Irrigation should be done as quickly as possible, and not kept up constantly.

Dr. Marcy believed that cystitis could be treated satisfactorily with heat, and that it could be applied by means of the double soft rubber catheter better than by any other.

Dr. Wm. A. Byrd, of Quincy, Ill., uses a single rubber tube for a stomach tube, and fills it from a funnel, reversing the patient and allowing the fluid to run out. He was taught to do so by Dr. Hodgen, of St. Louis.

The Chairman referred to a case in which a soft rubber catheter was rubbed completely into the bladder, from whence he removed it the next day with a lithotrite.

Dr. Wm. A. Byrd, of Quincy, Ill., presented

A SPECIMEN OF ULCERATION AND PERFORATION OF THE APPENDIX VERMIFORMIS.

He had operated in four cases, previously published. His plan was to cut down, stitch the edges of the

opening into the abdominal section, and then keep the wound thoroughly clean and antiseptically protected.

Dr. T. Herring Burchard, of New York, spoke of acute perforation, and proposed operation immediately after the patient had rallied, and before the supervention of peritonitis. [See Medical Record, vol. xviii., p. 663.]

Dr. Nancrede, of Philadelphia, referred, among the causes of intestinal obstruction which might require laparotomy, to *inflammation of all the coats of the intestine*, and so arresting peristaltic action. An acute inflammation of some portion of the intestinal tract might follow any of the causes of peritonitis, and be severe enough to involve all the coats of the bowel without becoming general peritonitis. He referred to a case in which that view was sustained by autopsy.

Dr. ——, of Pittsburg, thought it possible that operations might be avoided by proper study of the cases and the use of preventive medication.

NEPHRITIC CALCULUS—PYONEPHROSIS.

Dr. James E. Reeves, of Wheeling, W. Va., presented for Dr. B. W. Allen, of Wheeling, the report of a case of pyonephrosis, with a nephritic calculus weighing 480 grains. The patient was a widow, aged fifty-five years. Her urine was always found normal. The tumor was aspirated, and eighteen pounds of sero-purulent fluid removed; the sac refilled, when aspiration was repeated, and fourteen pounds of purulent fluid were withdrawn. At the autopsy, ten pounds of pus escaped from the sac, which was fifteen inches long, twelve inches wide, and six inches thick. The pressure of the tumor occluded the ureter, and prevented any of the fluid from finding its way to the bladder.

The Section then adjourned, to meet on Wednesday at 3 P.M.

Wednesday, May 4th—Second Day.

Dr. Charles F. Stillman, of New York, read a paper on

A NEW SYSTEM OF SURGICAL MECHANICS.

The system demonstrated by Dr. Stillman is based upon the principle of *local extension* as opposed to *general extension* developed by all other systems, which local extension is produced by the use of the sector splint in the various forms shown by him as adapted to the several joints. He first traced the history of this sector splint from the initial idea of two slatted and clamped strips, attached by copper plates, to its present improved and varied form.

The advantages claimed for his system are as follows: 1, extension at any angle, with motion; 2, extension at any angle, with luxation; 3, fixation; 4, motion, complete or limited, constant or occasional; 5, exposure of surface about the joint, admitting compression, elastic or otherwise, hot and cold applications, blisters, dressings and easy inspection.

This was followed by an exhibition of splints for the spine, hip-joint, knee-joint, ankle-joint, and elbow. Also an instrument for reducing cases of talipes in various forms and of long standing, by which instrument the surfaces of the tarsal bones are separated before the foot is made to assume a normal position.

The paper was well received, and was discussed by Drs. Kinloch, of South Carolina, and Quimby, of New Jersey.

PLASTIC OPERATIONS ON THE FACE

was the title of a paper read by Dr. A. C. Post, of New York. He gave the histories of two cases, one of epithelioma involving the left side of the face in a man aged sixty-one; the other, absence of the upper lip of the columna nasi, and a portion of the right ala nasi in a man aged sixty-five.

The paper was illustrated with water-colored drawings. The results were good.

ARTHRITIS OF THE TEMPORO-MAXILLARY ARTICULATION.

Dr. D. H. Goodwillie, of New York, read a paper on the above subject, and reported cases treated.

The treatment of the arthritis is done by means of an apparatus to relieve the joint of pressure on the inflamed articular surfaces. It is made as follows: An impression of the teeth is taken and an interdental splint made, the posterior part of which is raised a little for the purpose of a fulcrum, on which the back tooth of the opposite jaw rests.

Another impression is taken of the chin, and a rubber splint is made to fit it. A skull-cap is next made to fit the head closely, with elastic bands on each side passing down from it and fastened to the chin-splint.

The interdental splint is placed in position in the mouth, and the back teeth of the jaw closed on the fulcrum of the interdental splint; then, when pressure is made on the chin by tightening the elastic bands connecting the skull-cap with the chin-splint, the joint is relieved from pressure.

Dr. E. M. Moore, of Rochester, called attention to cases in which cicatricial bands caused the trouble, division of which usually cured them.

Dr. S. D. Gross, of Philadelphia, had seen comparatively few such cases since the abuse of calomel has ceased. He had not been able to accomplish much with wedges, etc. He also alluded to section of the bone, and had performed the operation successfully.

The Chairman thought that treatment with wedges, etc., should be prolonged. He referred to a case in which a bony bridge passed from the lower jaw, giving rise to apparent anchylosis. He divided the bridge, and movements were soon restored.

LATERAL SPINAL CURVATURE—PLASTER JACKET.

Dr. Lewis A. Sayre applied a plaster-of-Paris jacket to a patient suffering from lateral curvature of the spine.

Dr. J. C. Hutchison, of Brooklyn, believed that lateral curvature of much duration could not be cured by any mechanical appliances.

Dr. J. T. Hodgen, of St. Louis, had seen some unpleasant effects produced upon the lower jaw by the jury-mast, and he also spoke of the liability of the plaster jacket to produce hernia.

Remarks were also made by Dr. S. D. Gross, and on his motion a vote of thanks was extended to Dr. Sayre.

The Chairman announced as

COMMITTEE ON PRIZE ESSAY,

from the Surgical Section: Drs. R. A. Kinloch, of Charleston; T. F. Pratt, of St. Louis; and T. Herring Burchard, of New York.

The Section then adjourned, to meet on Thursday at 3 P.M.

THURSDAY, MAY 5TH—THIRD DAY.

DR. B. A. WATSON, of Jersey City, read a paper entitled

AN EXPERIMENTAL AND CLINICAL INQUIRY INTO THE ETIOLOGY AND DISTINCTIVE PECULIARITIES OF TRAUMATIC FEVER.

In the first part of his paper he entered fully into the history of traumatic fever, and presented the views of Billroth, Wagner, and Weber. He was of opinion that the numerous and ever-changing views of the etiology of traumatic fever, beginning with Hippocrates and coming down to our times, reflected for each age the true condition of the medical and allied sciences; but thought it sufficient to classify all of the theories as the septic, nervous, and nervo-septic. The question first to be answered was, what was understood by traumatic fevers? According to the writer's interpretation of the differentiations given by most writers, he thought it unfortunate to use the term traumatic instead of septic, since many severe traumatisms are not attended with fever. Another objection was found in the fact that recent investigations in connection with the practice of antiseptic surgery suggested the probability of another form of fever developed in connection with wounds, unlike that from septic absorption. The symptoms, such as stupor, unfitness for mental efforts, hallucinations, prostration, etc., were not noticeable in this form. Frequently the increased temperature was the only important clinical symptom. Patients with a temperature of 102° to 104° F. go about with ease and amuse themselves. A patient with both arms amputated, treated by Lister's method, and whose wounds healed by first intention, walked all over the house on the day after the operation, and continued to do the same, with an axillary temperature of 104° F. Another, who had received a severe compound fracture of the leg, with extensive contusion and laceration of the soft parts from the knee to the malleoli, and who showed an axillary temperature of 105.8° F., did not exhibit the slightest trace of illness. There can be no question of the propriety of this division into the septic and non-septic wounds. We observe putrefactive decomposition, septic absorption, and septic fever in the wounds which are open to the air; but in those wounds which are purely subcutaneous, or where the antiseptic treatment has been successfully applied, we find only the non-putrefactive decomposition, harmless absorption, and a non-septic fever, which has neither pathological nor prognostic significance. The term traumatic fever, referring to that morbid condition due to septic absorption, is a misnomer, and it is questionable whether or not it should be applied to the mere septic form. An open wound is essential to the development of a septic fever; but its relation to the non-septic fever is not settled, and can only be studied in connection with antiseptic fever.

Regarding the influence of agents, such as chloroform, ether, and carbolic acid in lowering the temperature and influencing the production of fever, Dr. Watson found on experimenting with rabbits, normal temperature 102.7° F. After thirty minutes of complete anæsthesia with ether the temperature fell to 101.6° F.; in thirty minutes more it was to 101.9° F.; in one hour and a half it rose to 102.5° F.; in two hours to 102.2° F. The average temperature of the rabbits to which chloroform was given was 103.2° F.; in thirty minutes it went down to 101.2° F.; one hour back up to 101.9° F.; and one hour and a half to 101.7° F.; in two hours to 101.2° F.; on the first day it was 102.3° F.; second day to 102.4° F.; third to 102.3° F. The fall of temperature under ether was rapid, but transient, passing off almost entirely in an hour; while the fall after the use of chloroform was marked, and lasted three days; in this latter the fall is greater and the reaction slower.

In studying the influence of shock in traumatism, it was aimed to do so without organic lesions. One pole of a battery applied to the mouth and the other to the rectum of rabbits, whose normal temperature was 103.2° F., showed, after eighteen hours of use, no reduction of temperature. In non-compound fracture of the rabbit's leg with a normal temperature of 103° F.; in second, third, and fourth hours, 103.5° F.; sixth, 103.4° F.; seventeenth, 103.6° F. The highest average temperature occurred on the seventeenth day. On the twenty-second day there was quite firm union. The average temperature before the injection was 103.6° F.; average temperature three hours after, 103.6° F.; second day, 103.4° F.; third, 103.2° F.; fourth, 103.7° F.; fifth, 103.6° F., and eighth, 103.6° F. The injections produced no rise of temperature above that produced by the simple fracture; in most cases absorption of the fluid and swelling took place without a rise of temperature; in an exceptional case abscess occurred with septic poison, and death resulted. After these careful experiments, the writer is convinced that the fever is not due to the lesion, and raises the question as to whether or not it is due to the absorption of carbolic acid. He had carefully repeated the experiments of Edelberg, and inclined to think that the traumal fever noticed in connection with the antiseptic treatment should be attributed rather to the partly congealed and partly fluid blood than to the carbolic acid. After reviewing the question thoroughly, Dr. Watson was confident that traumatic fever is due to blood extravasation, but thought it could only be due to the action of the carbolic on the wound secretion aided by the air, whilst the absorption of the acid product is unquestionably the first step in the development of the morbid condition.

DR. A. C. POST, of New York, directed attention to Dr. Markoe's plan of through drainage, and thought it superior to that practised by Lister.

The paper was further discussed by Drs. H. F. Campbell, of Ga., I. N. Quimby, of New Jersey, and C. B. Nancrede, of Pa.

LABIAL CARBUNCLE; OR, MALIGNANT PUSTULE AND ITS TREATMENT.

DR. CHAS. A. LEALE read a paper on the above subject, in which he gave an account of the etiology of the malady, its extremely fatal nature, and described the minute anatomy of the parts in which it usually appears, together with the *modus operandi* of the infection of the contiguous parts, terminating in death by asthenia or heart clot. His method of treatment was, bearing in mind the arteria septi nasi, to make a free incision outward and downward along the course of the fibres of the orbicularis oris muscle, extending the cut each way until all the diseased tissue had been passed, taking care not to go through the mucous membrane lining the lip, to which the disease rarely extended; then with a fine piece of ivory or wood, covered with cotton, he thoroughly applies to the cut surface the chemically pure nitric acid, which is pressed with sufficient force so that every little pocket of pus is reached, and the intervening membranes destroyed, which would otherwise be left to slough and con-

tinue the septic or purulent infection. Morphia, p.r.n., should be given, and whiskey, liberally and largely diluted with water In some cases Dr. Leale had been obliged to re-apply the acid on the second or third day. His subsequent treatment was, as an open wound, applying ung. bals. Peru, gently on lint, and giving the patient the most nutritious diet and tonics.

Dr. Leale claimed that by this treatment all the little canals making the cut surface appear like a sieve are reached, and that the entire poisonous mass is rendered inert and kept within circumscribed boundaries, and the absorbed poisons, by sustaining the system, were eliminated. In the early part of the treatment a full dose of sulphate of magnesia, largely diluted in water, was given. As a rule, it would be found that on the third or fourth days after the incision and the first application of the acid, all danger will have subsided, and the convalescence will steadily progress, leaving in one case, after an incision over an inch and a half long, a scar on the upper lip not a quarter of an inch in circumference.

But in some instances we may have acute mania from cerebral meningitis or erysipelas; the former to be treated by large hypodermic injections of morphia, and the latter, when possible to be retained, by the cooling lotion of lead and opium.

His conclusions were that carbuncle of the lip, or malignant pustule of the lip, have by the usually recommended modes of treatment proved fatal in a very large proportion of cases, even in healthy, strong and vigorous adults, and is, therefore, a much dreaded malady. The causes of the failure, in Dr. Leale's opinion, being that, by the usual method of treatment, only a portion of the diseased mass is reached, and consequently the remaining imprisoned *materies morbi* contained in these minute multiple pustules cannot be eliminated, nor can any local application reach the disease.

Dr. Alfred C. Post, of New York, stated that the subject was a most important one, and he was very much pleased with the paper of Dr. Leale. Dr. Post thought that when we see the patients early with malignant pustule a large proportion can be saved. He usually operated by cutting through the vermilion border of the lip.

After the appointment of certain committees, the Section adjourned.

SECTION IN DISEASES OF CHILDREN.

A. Jacobi, M.D., of New York, Chairman.
T. M. Rotch, M.D., of Boston, Secretary.

Tuesday, May 3d—First Day.

THE RELATION BETWEEN GROWTH AND DISEASE.

Dr. H. I. Bowditch, of Boston, presented a paper on the above subject, of which the following is an abstract:

After discussing the various influences which must be taken into consideration, such as climate, race, social condition, occupation and sex, Dr. Bowditch directed attention to carrying out more extended observations on this subject, especially in the West, where the immigrant class, coming from different countries, present especial advantages for this kind of investigation. He also spoke of the intention of the Massachusetts State Board of Health, Lunacy, and Charity, to distribute blank cards and circulars of instruction to aid in this work, and it is probable that the National Board of Health will soon undertake a similar work on a larger scale. Dr. Bowditch said that it seemed probable that the accurate determination of the normal rate of growth in children will not only throw light upon the nature of the diseases to which childhood is subject, but will also guide us in the application of therapeutic measures. The statistics of growth, taken in connection with those of disease, might very possibly reveal unexpected relations between periods of slow and rapid growth, and the ages at which certain diseases most frequently occur.

He referred to Dr. Percy Boulton's expression of "danger signal" in his paper on the weighing of children. Dr. Bowditch then exhibited a chart representing the case of a child, between two and three years old, where careful and systematic weekly weighing showed, first, the approach, by some weeks, of a chronic disturbance of nutrition, represented by enlarged cervical glands and clay-colored stools, and second, after recovery, the approach of an attack of measles, the "danger signal" of progressive loss of weight preceding the eruption by at least a week.

Dr. J. S. Billings, of Washington, spoke of the value of Dr. Bowditch's paper, and presented to the Section the statistical cards intended for circulation by the National Board of Health.

Dr. Wm. Lee, of Baltimore, remarked that he had paid especial attention to this subject, and that he had noticed that a female child could lose more in proportion to its weight, without detriment to its health, than the male child of the same age. He also said that if the loss of weight, preceding the eruptive diseases was excessive, the case was so much more grave in its prognosis, especially if this loss of weight preceded the eruption by from four to five days.

Dr. S. C. Busey, of Washington, D. C., read a paper entitled

THE RELATION OF METEOROLOGICAL CONDITIONS TO THE DIARRHŒAL DISEASES OF CHILDREN.

He reached the conclusion, from the records of the observations of the Signal Service Bureau, that there were regular terms of heat, lasting for a certain length of time, and returning at certain intervals; and that at almost the same time, in large cities—of which he compared Washington, Baltimore, New York, New Orleans, Chicago, etc., and had reports from twenty or thirty other places—diarrhœal diseases returned. In addition, he had found that diarrhœal diseases were less frequent in New Orleans, where the heat was more permanent than where it came on in exacerbations.

SOME OF THE CAUSES OF INFANTILE ECZEMA, AND THE IMPORTANCE OF MECHANICAL RESTRAINT IN ITS TREATMENT,

was the title of a paper presented by Dr. James C. White, of Boston.

He first described the many and varied external influences which immediately affect the delicate skin of the new-born, as being a common cause of eczema, and laid especial stress on the fact that heat was the more usual cause of the disease than cold. He said, however, that these external influences furnish but a small proportion of all the cases of the disease which occurred at this period of life, although by far the greater part of those concerning the etiology of which we have any positive knowledge. During the last twelve years he had treated at the Massachusetts General Hospital 5,000 cases of eczema, of which 1,770 occurred in children of ten years of age and under, and of which the largest proportion, viz.,

569 cases, was in the first year of life. He said—eliminating the operation of the causes directly acting upon the skin from without, above mentioned, and a few other extraneous agencies, the parasitic chiefly—that he did not hesitate to say that he knew nothing whatever of the causes of the disease in the remainder; also, that as far as his experience went, eczema affected all classes of society alike, occurred at all seasons of the year, came in children of all degrees of health, in the perfectly sound as frequently as in the feeble; that it had no necessary connection with any other disease of childhood; that it showed itself in an equal proportion in bottle-babies and those reared at the breast, and was independent of diet; also, that if there were other assigned causes, he would here say that his observation gave him no justification for believing any of them.

He stated that there was no more necessity for a supposed sympathy with or dependence upon the state of the blood, or the condition of some other organ, when the skin is affected with eczema, than when the lung, kidney, etc., is affected. He then, after speaking of the extreme suffering which the little patients undergo, said that the prime factor of the treatment was the prevention of scratching, and he described what he considered to be the proper method of controlling the child's movements, viz., a system of swathing in a pillow case, by which the same chances of success in the therapeutics of infantile eczema is given as exist in the adult.

He finally said that when the straight-jacket treatment is carried out, the child soon becomes used to the confinement, and a wonderful improvement takes place, not only in the disease itself, but in the morale of the family, which always becomes painfully disorganized during the existence of the disease; and he mentioned, as an important factor in the success of the treatment, that a grandmother (if present) in every case of infantile eczema is the first evil to be eliminated. In conclusion he considered that the simple mechanical means found in every household included all that was important in the treatment of one of the most distressing and rebellious diseases of infancy.

Dr. L. Duncan Bulkley, of New York, regretted criticizing the paper, as he felt obliged to do in the absence of his friend Dr. White, but the views presented differed so radically from those which he had formed from experience, that he could not help so doing, because he felt that the subject demanded it. For those who did not know of his acquaintance with the disease he would state that he had recently made analyses of two thousand five hundred personal cases of eczema, and of these nearly seven hundred had occurred at an age which classed them as infantile eczema; he therefore believed that he could speak with authority on the subject. Dr. White had, it is true, treated of only one feature in the management of the disease, namely, physical restraint; but he believed criticism to be called for because of the principles which underlie, or which call for this element of treatment; the premises being wrong, what follows must of necessity be wrong.

The speaker believed that Dr. White here, as elsewhere, laid far too great stress upon local causes of eczema, and ignored entirely the influence of internal, general, dietary, and hygienic causes; if these are not recognized and managed, the results of local treatment are imperfect and uncertain. He did not believe that the children with infantile eczema were really in perfect health, but that always the evidences of imperfect assimilation could be discovered; the evacuations from the bowels were faulty, the urine constantly presented evidences of mal-assimilation, and searching investigation would always demonstrate imperfect health in the child.

In regard to the method of restraint proposed in the paper, he would say that he had never employed such restraint, simply because he had never found it necessary. If the itching is relieved, the restraint is not required, because the habit of scratching is soon overcome when the infant finds that a proper application gives relief. If the itching is not relieved, such confinement is torture beyond any description, judging from the statements of older patients, who cannot abstain from it by any force of will, and who assert that they would scratch, even if they died from it. The agony of little ones mechanically restrained is fearful to see.

Dr. W. B. Ulrich, of Chester, Pa., said that he fully agreed with Dr. Bulkley, and that he entirely opposed Dr White's treatment. In a long professional career he had never used a system of restraint in these cases, and that he would prefer to knock the little patient on the head at once rather than submit it to the tortures of Dr. White's straight-jacket.

A paper on

THUMB-SUCKING

was then read by Dr. D. H. Goodwillie, of New York, who reported a case, and illustrated it with a wax model.

Treatment consisted in breaking up the habit by applying a leather pad to the elbow, preventing the hand from coming to the mouth.

Nasal catarrh, by douches and the application of powder blown into the nose, proper food, clothing, and rest.

His conclusions were that thumb-sucking is more disastrous to the health of the child than the sucking of the other fingers, for the thumb once in the mouth, it more readily remains during sleep; that it interferes with the child's proper rest, which should be continuous and undisturbed, and so becomes a source of nervous irritation and exhaustion; that it interferes with the natural respiration through the nose, and sets up abnormal conditions; that it malforms the anterior part of the mouth, and affects proper mastication.

The Section then adjourned, to meet on Wednesday at 3 P.M.

WEDNESDAY, MAY 4TH—SECOND DAY.

The Chairman, Dr. Jacobi, spoke of the discussion on *Eczema*, which took place at the preceding meeting, and said it did not appear that Dr. White's and Dr. Bulkley's opinions concerning restraint differed very markedly, inasmuch as in some cases Dr. Bulkley did not object to the tying of the wrists. The preventing of the child, by the mother or the nurse, from scratching, was also restraint to which he had sometimes been obliged to resort. At all events, a mask for the head and face had proved very serviceable in a number of cases. He agreed with Hebra that the use of water should be avoided. In chronic cases the first indication was removal of the scab. A mixture of liquor caustic potassa, with from eight to ten parts of olive or cod-liver oil, and applied from two to five times daily, soon breaks up the scabs so that they can be removed. In mild cases oil, soap, or poultices will suffice. After the removal, keep the surface dry with soft cloth, and thus pre-

vent a new formation of scab. The most reliable external application is diachylon ointment. Constitutional treatment depends upon circumstances. Arsenic and iron may be of great service in many cases.

TREATMENT OF DIPHTHERIA.

Dr. R. J. Nunn, of Savannah, sent a paper on the above subject, which was read by Dr. Jacobi. The disease had raged in Savannah with very fatal effects; and a letter from a friend elsewhere said, that after treating six hundred or seven hundred cases his faith in the efficacy of drugs was very feeble. The causes will probably remain speculative for a long time. Is the disease the same always and everywhere? The causative influences are probably not the same in all cases. Medicines which cure the disease in Germany fail in this country, and the discussions as to the identity of croup, diphtheria, and scarlet fever are strong arguments in favor of this belief, and all treatment based upon one case must fail to relieve all cases. Dr. Nunn quoted Dr. Jacobi as saying: "The entrance of the diphtheritic poison into the system is not the same in all cases." . . . . "There are cases in which the origin of the disease is decidedly local." . . . . "There are others in which the poisoning of the blood through inhalation is the first step in the development of the disease." A powder used by Dr. J. B. Read is as follows: Sulphur sub., grs. xlviij.; acid. tannic., grs. xij.; acid. salycilic., gr. j; pulv. potass. chlor., grs. xij. Precaution must be used in compounding this prescription. A little of this powder is put on the back of the tongue every hour or two, and a small piece of ice given afterward. It will be seen that this prescription is a combination of antiseptics principally.

Dr. M. C. Lathrop, of New Hampshire, had experimented with chloroform largely, and had found it a highly useful agent. He used it in diphtheria and other throat affections, on a piece of cotton attached to a tube or pen-holder. The cases usually required visiting no longer than four days, but they were not so malignant as had been reported in other localities.

Dr. Lathrop stated that no unpleasant effects had ever followed this plan of treatment, and that the child, in true diphtheria, would not complain of *smarting* from the application of chloroform.

To a question from Dr. Jacobi, Dr. Lathrop replied that he had used this plan of treatment in one hundred cases. Of course constitutional measures were added.

Dr. William Lee, of Baltimore, had used equal parts of tinct. ferri chlorid. and olei ricini with benefit. He considered the disease as local at first and then constitutional. A physician from his county had used large doses of olei copaiba with benefit. An emetic was then given to remove the membrane.

Dr. G. Vivian, of Minnesota, had used in severe epidemics alcohol as an inhalation, and had employed as much as a quart a day with marked benefit. He had never seen any constitutional effects ensue.

Dr. J. McNeal, of Gettysburg, Pa., recommended the following: Potass. bromid., ʒ i.; potass. chlorat., ʒ ij.; acid. carbolic., grs. xx.; aq., ♁j. Use in an inhaler. Locally: chloroform, ʒ ij.; lin. saponis, ℥ j.—℥ ij.

Dr. F. E. Hitchcock, of Rockland, Me., uses equal parts of sulphurous acid and water in an atomizer. The proportions can be varied, and the acid used as a gargle. Cold affusion externally.

Dr. Jacobi, in auswer to an inquiry concerning the benefit of pilocarpine, said that his opinion of it was unfavorable. It was proposed as a specific by a Dr. Guttmann, who recommended it first about eight months ago, but he must not be mistaken for the well-known author, Paul Guttmann, of Berlin. In his opinion the recommendations of the drug were too positive and the author too self-asserting. Besides, when he says that he used it in twenty very severe cases, he does not specify what those symptoms were. It is recommended as the best remedy for diphtheria for the present, and probably also for the future, and as a specific. Such assertions, of themselves, are suspicious, and are not likely to be reliable. Mild cases will get well under any treatment, or with no treatment. Seven cases Dr. Jacobi had treated with pilocarpine, and in at least one instance it had hastened the fatal termination, for pilocarpine, either directly or indirectly, debilitates the power of the heart. Dr. Jacobi had tried it, though feeling that the assertions of Guttmann were too sweeping. That a croupous exudation deposited upon a mucous membrane should be liable to be removed by increased secretion beneath it, appeared natural; but that diphtheritic membrane embedded in the mucous membrane and submucous tissue, with necrotic disintegration of the parts, could be thus swept away, was from the very beginning improbable.

RESECTION OF THE TARSUS IN SEVERE CASES OF CLUB-FOOT.

Dr. E. H. Bradford, of Boston, presented a paper on the above subject, in which he reviewed the literature of the subject, and gave the histories of two cases where he had operated.

The first patient was a girl, eleven years old, with severe equino-varus, the axes of the foot being at right angles with that of the leg. Tenotomy and mechanical treatment were tried for a month with but slight benefit. Dr. Bradford removed a wedge-shaped section of bone from the tarsus with a metacarpal saw, and with antiseptic precautions there were no constitutional symptoms after the operation, excepting that the temperature rose once to 101° F. The wound healed under the blood-clot, as occurs with a thorough antiseptic dressing, and in five weeks the patient was able to walk without a cane. She remained in the hospital for some time under observation, and was discharged with the foot nearly in a normal position.

The second patient was a boy, thirteen years old, with double congenital club-foot of aggravated type. The first foot was operated upon November 9th, and was sufficiently well to bear his weight by December 12th, and was entirely healed by January 19th. The second operation was performed January 9th, and by February 4th he was allowed to walk on both feet. He remained under observation until April 2d, when he could walk a mile without apparatus, and wearing ordinary shoes. The temperature rose to 102° F. on the second day of the first operation, but fell to the normal on the next day, and remained so. After the second operation, on the third day the temperature rose to 104° F., but fell after removing the drainage tube, which was obstructed, and there was no subsequent rise. The plaster-of-Paris bandage was made use of after the operation.

Dr. Bradford then described minutely the after-treatment in this case, and stated that there remained, after recovery, about 30° of motion, and that the boy could stand on either foot, or raise himself on his toes.

The temperature charts, the photograph, a tracing of the left foot, and a cast of the right foot before and after operation, of the second case, were exhibited.

Dr. Jacobi remarked that Dr. Bradford's cases were exceedingly interesting and instructive; and, as shown by the casts, could not have been successfully treated without just such a procedure as Dr. Bradford had adopted.

The Section then adjourned to meet on Thursday at 3 P.M.

Thursday, May 5th—Third Day.

MIDDLE-EAR DISEASE IN CHILDREN, IN THE COURSE OF THE ACUTE EXANTHEMATA,

was the title of a paper presented by Dr. C. J. Blake, of Boston, Mass. He first spoke of the frequency of the disease, as shown by the facts that 35.70 of all the cases of purulent inflammation of the middle ear occurring at the Massachusetts Charitable Eye and Ear Infirmary followed measles and scarlet fever, and of deaf-mutes examined by the writer 27.70 lost their hearing as the result of scarlet fever. In both exanthemata the inflammation affects the mucous membrane lining the middle ear, occurs during the acute stages of the primary disease, and runs its course quickly; hence its importance to those having to deal with diseases of children.

Dr. Blake then said that much might be done in the early stages to diminish the severity and shorten the duration of the inflammatory process, which, in children, owing to the greater vascularity of the mucous membrane and the readier solution of continuity of the tissues favoring ulceration, is usually more rapid than in adults.

In scarlet fever the aural complication may occur at any time, usually runs its course rapidly, and furnishes in a short time a well-marked acute purulent inflammation of the middle ear.

In measles there are two types, the first occurring early and corresponding to the acute catarrhal inflammations following "head-colds," the other originating primarily in the membrana tympani and accompanying the appearance of the facial eruption. The symptoms in that form occurring during scarlet fever are, rise in temperature, pain—at first occasionally, then constant—in very young children, shown by moaning, unrest, and a desire to press the affected ear against the pillow. These symptoms are, of course, due to increased pressure within the tympanic cavity from serous exudation, as is shown by the relief afforded by the use of the Politzer and douche, permitting the escape of a part of the fluid. The continuous pain later is often not similarly relieved, either because of serous effusion of the membrane itself, or more complete closure of the Eustachian tube.

Nature usually relieves the pressure by a spontaneous opening, but only after prolonged suffering and prostration on the part of the patient, or possibly serious injury to the transmitting structure of the middle ear. The opiate treatment is superficial. In the early stages, frequent gargling, and, if pain is complained of, the air-douche should be used frequently. Instillations of warm oils and poultices are objectionable, as they interfere with subsequent operative interference; if necessary, glycerine and warm water, two or three parts to one, and a dry cloth over the ear, are better.

In a later stage, if pus is present, the evident remedy is puncture of the membrane at its most prominent portion with a lance, suture needle, or saddler's needle.

Dr. Blake then spoke of measles. In the first form the remedies referred to in the early stages of scarlet fever are equally applicable here; if they fail, acupuncture and drainage are preferable to paracentesis, which may be done with a needle, and then a wick inserted, which serves the double purpose of withdrawing the serous fluid and keeping the lining of the canal dry. Syringing should be resorted to only when the discharge becomes mucopurulent.

The second rare form is characterized primarily by a congestion of the membrana tympani, without congestion of the tympanic mucous membrane, and is not relieved by the use of the air-douche. It is due probably to inhibition of the vaso-motor nerves controlling the tympanic branch of the carotid artery.

These cases either resolve spontaneously, or the conditions described in the first type of inflammation of the middle ear become established. Instillation, dry warmth, and acupuncture, may be resorted to with good effect. For general treatment the bromides are especially indicated.

The Chairman remarked that closing the mouths of infants and children, and simply blowing into the nose, is often a very valuable method of relieving severe earache, and that in a number of cases he had obtained most excellent results from this procedure, the cause of the trouble probably being a catarrhal affection of the Eustachian tube.

ADDRESS IN THE SECTION ON DISEASES OF CHILDREN.

Dr. A. Jacobi, of New York, the Chairman, after remarking that the sympathy and co-operation of the gentlemen who were interested in this department were necessary to insure desired success of the Section, continued his remarks, restricting them to the progress made in our knowledge of the acute contagious constitutional diseases (rubeola, scarlatina, variola, and typhoid fever), and the acute contagious infections of the mucous membranes, such as dysentery and diphtheria.

SCARLATINA.

Hajek regards the uræmia in scarlatinous nephritis as the result of disordered function caused by inflammation of the skin.

Mitchel reports scarlatinous dropsy, without albuminuria, in a man aged twenty-one.

Taylor reports a cases of right hemiplegia, occurring two weeks after the beginning of the fever, in a patient of five years. Autopsy revealed embolism of the middle meningeal artery, with extensive softening.

Cutter reports paralysis of the tongue after scarlatina, in a nursling.

Airy reports an epidemic in which, he believes, milk was the conductor of the contagion. There were thirty-five cases, and twenty-four of the patients were taken sick within thirty-six hours. The possibility that the driver of the milk-wagon carried the contagion cannot be excluded.

Lusch emphasizes the usefulness of the warm bath in scarlatina. Smith and Wick object to this plan of treatment.

H. Seeman reports favorably on the use of pilocarpin muriate in scarlatinous dropsy, and Praetorius believes that the remedy yields favorable results.

VARIOLA.

Gerrin Roze reports two cases of varioloid in children of nine and four months, who had been successfully vaccinated eight days after birth. Both recovered.

Vidal reports a case of congenital variola, and De Paul reports a case of the same character. In both cases the mother had been vaccinated.

TYPHOID FEVER.

A. Stephen reports 148 cases of typhoid fever in children, of which 48 were treated with cold water, and 100 with salicylate of sodium when the temperature rose above 102° F. The water-treatment reduced the temperature more rapidly than did the salicylate of sodium, but the fever returned more quickly than when the sodium was used. Pulmonary complications were not infrequent after the water-treatment had been energetically used for some time. Of the 48 cases 5 died, and of the 100 cases 6 died.

With reference to the effect of bathing in typhoid fever, Stephen appears to have made the same observations detailed by Dr. Jacobi some years ago in a lecture on typhoid fever, published in the MEDICAL RECORD for November, 1879: "Whenever circulation is deficient, particularly when the patients have been anæmic at the onset of the disease; whenever, after the cool bathing, the feet do not get warm as quickly as the rest of the body, the end for which the bath was given is not attained. In order to reduce the temperature of the body permanently, it is necessary that the circulation of the skin be restored very soon, and uniformly. If such be not the case, no radiation from the external surface of the body can take place, and an undue amount of heat is retained within the body. It may then occur that the surface is quite cool, while the temperature in the rectum is very high. In such cases, in order to reduce the temperature, I have had to plunge the patient into hot water for the purpose of restoring the cutaneous circulation. When, in such patients, cold water is to be used, the only proper mode of applying it is by packing or sponging. In these cases, care must be taken that only the trunk, besides the head, is made the subject of local treatment."

DIPHTHERIA.

J. Marx has studied catarrhal diphtheria in its relations to the more serious forms. He refers to an affection of the throat with but few local or general symptoms, which lasts only a few days, and which within that time may show its diphtheritic nature by the appearance of membrane. So far as preventive measures are concerned, these cases should be treated like the genuine ones, and should be isolated like the others. The mouth should be treated, but not with severe local applications—steam; injections into the nares of tepid salt water, 1–100; if much fever, salicylate of sodium; chlorate of potash in small doses, frequently repeated; and, if there is an exacerbation of fever in the afternoon, occasional doses of quinine will probably suffice.

A. E. Kelly reports acute affection of the joints in two patients, six and fourteen years old.

H. Adler reports a case of suffocation, in consequence of paralysis of the muscles of deglutition on the fifth day of the disease, in a patient seventeen years of age. A piece of bread was found lodged in the bifurcation of the trachea.

Dr. Jacobi then referred to several remedies which had been used, such as lac calcis, benzoate of sodium, and muriate of pilocarpin, speaking against the latter strongly.

Bosse had used large doses of *oil of turpentine* in twenty-three cases of children from two to twelve years old. Those from two to seven years were given in one dose two drachms, and the older children three drachms of the oil, without any additional mixture. Cold water was given afterward, *ad lib.* In no case did any inflammatory reaction occur. In all the cases the membrane disappeared within forty-eight hours. In only four was the membrane so firmly attached at the end of twenty-four hours that it was necessary to repeat the oil.

Amuschat has recommended cyanide of mercury, and he has used it in one hundred and twenty cases, of which only fourteen died. It was given in solution, 1 to 2 in 1,000 of water, and in teaspoonful doses. Favorable cases terminated within three days. In laryngeal diphtheria the remedy was found worthless.

Corsfelt recommends, instead of steam inhalation, frequent—every half-hour—gargling with hot water. If the patient cannot gargle, have him drink hot water or milk, or coffee or tea.

DYSENTERY.

Dr. S. C. Busey is of the opinion that convulsions, coma, and death during convalescence from dysentery, depend upon thrombosis of the sinuses of the dura mater; and therefore advises, when dangerous symptoms of acute anæmia make their appearance, to look promptly to proper support and stimulation of the patient.

RUBEOLA.

Dr. Jacobi concluded his remarks on rubeola by saying:

"Evidently the latest contributions to our knowledge of rubeola give weight to its classification amongst the acute contagious constitutional affections." . . . . "The description of the symptoms varies a good deal with the authors. These differences are best explained by the fact that mild cases of either measles or scarlatina may not present all their usual symptoms, and by the other fact that during the prevalence of an epidemic of rubeola there is, as a rule, a contemporaneous epidemic of measles and scarlatina, and also diphtheria.

"In such times cases of common nasal, pharyngeal, and laryngotracheal catarrh are very frequent indeed; thus, there have been but very few infants and children in our large northern cities but were affected in this manner. Thus it happens that there are many symptoms belonging to the mucous membrane of the digestive and respiratory tract which invariably complicate the slightest other affections. Thus it is, also, that many authors have looked upon these accidental complications as if they were genuine symptoms. The very best authors—for instance, Gerhardt—when they mean to describe roseola, depict mild or sometimes even several cases of measles, Nasal catarrh, conjunctivitis, facial œdema, and glandular swellings, belong to this class of symptoms, which, while they often occur in rubeola, do not belong to it by any means. The disease is very contagious. Its incubation lasts from two to three weeks, and is not attended with any fever. Now and then there are, during a period of from twelve hours to two or three days, prodromata, a mild increase of temperature, sometimes a catarrh of the mouth. The tongue is apt to show a few red marks along the

margin, mainly in its anterior portion. The eruption, according to what I have seen, does not—contrary to Gerhardt's observations—begin in the face, but on the trunk, or more frequently on the extremities, mostly on the thighs and knees. Head and feet are not often affected. It looks very much like that of measles, sometimes not rising above the level of the skin, sometimes, however, rising above it in the manner of an urticaria. It seldom lasts longer than three days, but relapses on the fourth or fifth day are frequent. Desquamation begins early, now and then on the third or fourth day. Relapses may take place while desquamation is undisturbed in some localities. The temperature seldom exceeds 102° or 103° F., becomes normal about the fourth day. The prognosis is absolutely good, and the treatment either none at all or expectant. The diagnosis, however, may be very difficult, and even impossible in an individual case, inasmuch as scarlatina and, particularly, measles are apt to be rife at the very periods of the rubeola epidemic, and their symptoms are complications too mild to be estimated at their full value. This fact, however, does not militate against the independent nature of rubeola, for it has never claimed that either measles or scarlatina can and must be recognized in every instance."

Dr. McDonald, of West Virginia, had recently treated a large number of cases which differed from measles, and which he had called roseola.

Dr. Selden, of Norfolk, in a long professional career, had never seen measles recur.

Dr. Atkinson, of Baltimore, had seen numerous cases of undoubted recurrent measles; so also had Dr. C. L. Stiles, of New York.

Dr. Rotch, of Boston, referred to recurrent cases, and said that reliance was not placed on the eruption alone, but on the general course of the disease, namely, a regular prodromal stage with coryza, conjunctivitis, and bronchial catarrh, followed by a characteristic eruption and a stage of desquamation, and that as these cases had been met with and reported by competent observers, there was no more reason why they should not be called a second attack of measles than when the same symptoms occurred in a patient for the first time.

Dr. William Lee, of Baltimore, expressed surprise at Dr. Rotch's statement, and said that, in his opinion, true measles never recurred, and that where a second attack was apparently present, close investigation showed that it was the diagnosis which was at fault, and that the eruption, although simulating that of measles, was really that of the roseola spoken of by Dr. Jacobi in his paper; he also inquired of Dr. Rotch whether he could distinguish the eruption of measles from that of roseola, and from the eruption which apparently followed certain articles of diet, as crabs.

Dr. Rotch answered that he would first say, in order that there should be no confusion of terms, that there was a true measles and a rubeola (the *rotheln* of the German writer), as stated by Dr. Jacobi, and that, so far as the eruption was concerned, it was often impossible to make a distinction; second, that roseola, which was usually a popular eczema, had nothing to do with the other diseases, and that in the great majority of cases the eruption caused by eating crabs was that of urticaria, which of course was easily distinguished from the eruption of measles; third, that he would again state that undoubted cases of recurrent true measles had been observed in Boston, where the disease is well-recognized and differentiated from rubeola.

Dr. Jacobi agreed with Dr. Rotch that the term rubeola should be used for this disease, which simulates measles and roseola, but was something different.

He then said that he had frequently seen cases in which what he considered the symptoms of true measles had occurred, and an exact recurrence of these symptoms years afterward, and that he called the second attack true measles, and considered that measles could recur two, three, or four times; and he would beg leave to repeat the old story: "It eats like a toad, it looks like a toad, it creeps like a toad; hence, why not call it a toad."

After some further discussion the Section adjourned.

Progress of Medical Science.

Function of the Cortex Cerebri.—In a lecture delivered at Baden-Baden, Professor Goltz, of Strasburg, describes the method he now employs in his experiments on the physiology of the brain. Formerly he used a stream of water to wash away portions of the animal's encephalon. Now he uses a dentist's saw. In this way he has succeeded in preserving the life of dogs when successive layers of the entire cerebral surface had been removed. Animals thus treated show no signs of muscular paralysis, and sensory impressions, though evidently dulled, are never completely destroyed. The most striking symptom of these animals is their great diminution of intelligence. Goltz describes them as drinking and feeding reflex machines. From these experiments he draws the inference that the cortex is the seat of ideas and conceptions (*Vorstellungen*), but takes no part in motion. If the gray matter is destroyed, movements are observed merely through a simultaneous irritation of the white substance.—*Medic.-chir. Rundschau*, January, 1881.

Pepsine as Solvent in Albuminous Obstruction of the Bladder.—Hollmann (*Nederl. Wickbl.* 18, p. 272) reports the case of an old man, aged eighty, suffering from retention of urine, in whom the introduction of a catheter failed to procure the desired result. It was found that the bladder contained coagulated albuminoid masses, mixed with blood. A few hours after the injection of about sixteen grains of pepsine dissolved in water, a large amount of a dark, viscid, fetid fluid readily escaped by the catheter.—*Med.-chir. Rundschau*, January, 1881.

The Origin and Significance of the so-called Spermatic Crystals.—Professor Fürbringer, of Jena, has recently made a study of the isolated components of the seminal fluid. He examined the contents of the vesiculæ seminales and the prostatic fluid in fifty-six bodies. The latter fluid was also examined in twenty living subjects. The following is a summary of his conclusions: 1. The spermatic crystals discovered by Böttcher, and identical with the so-called crystals of Charcot, are derived from the prostatic secretion. They represent phosphates of a new organic basic body (Schreiner). 2 The crystals which form in the prostatic fluid of the dead body in all respects resemble those found in the ejaculated semen. But for crystallization to take place in the isolated prostated secretion of the living body, it is necessary that a certain amount of phosphoric acid be added. The latter is supplied during life by the other fluids

making up the semen, and after death through post-mortem changes. 3. The characteristic odor of the spermatic fluid is due to the prostatic secretion, which contains in solution various derivatives of Schreiner's base. When these bodies enter into composition with the phosphoric acid to form the crystalline phosphates, *i.e.*, Böttcher's crystals, this odor is no longer perceptible. Hence, the secretion of the testicle itself does not give the semen as ejaculated its peculiar smell, and thus the medico-legal importance of this odor really goes for nothing. 4. The abundant presence in the ejaculated sperm of such crystals does not, as maintained by Ultzmann, argue its defective qualities. 5. The clinical significance of the detection of these crystals becomes most manifest in the establishment of the diagnosis of prostatorrhœa. In other respects the presence of such bodies merely denotes that prostatic fluid has been mixed with the secretion which contained them.—*Allg. med.-cent. Zeit.*, January 12, 1881.

Tannate of Quinine.—Dr. Hagenbeck, of Basle, Switzerland, in investigating the action of quinia on whooping-cough, was led to give the tannate a renewed trial. This salt, although for many years a well-known drug, was unable to supplant the sulphate, despite its very mildly bitter taste. Becker, in 1879, again recommended it, however, and Hagenbeck is the latest warm advocate of its use, especially in diseases of children. This author states that the former indifferent results were due to the use of inferior preparations. He has given the salt with good results, especially in cases of whooping-cough. But it was also employed in the treatment of typhoid fever, scarlatina, pneumonia, phthisis, and erysipelas. Children, up to one year of age, were given fifteen grains, those from one to three years old twenty-four to thirty grains, and older children proportionately larger doses. The whole dose was, as a rule, exhibited at once, or, sometimes, if the quantity proved too bulky, in short intervals of half an hour or so. It is a noteworthy fact that children swallow this medicine much more readily than either the sulphate of quinine or the salicylates. Alcohol in small doses, is a desirable thing to give immediately after the tannate has been swallowed. Its decidedly antipyretic action, though the remission is manifested rather later than with the sulphate, is plainly marked and unmistakable. Symptoms referable to the nervous system, such as tinnitus, deafness, excitation, delirium, or even collapse, were never observed. Moreover, the tannate appears to influence intestinal action favorably. Especially in typhoid fever, a mild astringent action on the bowels was noticeable. Hagenbeck does not believe that the tannate of quinine will, or even should replace the more powerful antifebrile medicaments, but he thinks that it will suffice in the milder forms of fevers, and that in severer types it may be advantageously combined with the more energetic antipyretics.—*Correspondenzblatt für Schweizer Aerzte*, January, 1881.

Muriate of Apomorphia as an Expectorant for Children.—Korrmann (*Pharm. Cent.*, No. 53, 1880) has employed this drug extensively in bronchial catarrhs and the capillary bronchitis of children, and now strongly recommends its use in all diseases of the kind. The dry cough of some such affections rapidly yields, and moist râles soon appear. In catarrhal pneumonia he has had equally good results with apomorphia. The salt is given in combination with a few drops of hydrochloric acid and ordinary syrup, in hourly doses. Children one year old get one-sixtieth of a grain, those three years of age one-thirtieth. At ten years he gives one-tenth, and at fifteen one-sixth of a grain.—*Allg. med.-cent. Zeit.*, January 19, 1881.

The Treatment of Organic Cardiac Diseases.—An experience of many years has led Jünzburg (*Wiener medicin. Presse*, January, 1881) to conclude that even old lesions may be amenable to treatment. He states, by the way, that it is unfortunate so many sufferers from cardiac mischief fail to seek medical assistance at a sufficiently early period. Of course, he admits that valvular insufficiencies and destructive lesions can never be really cured, but at the same time there can be no doubt but what the secondary symptoms due to such conditions may be successfully overcome in no small proportion of cases.

Digitalis and other cardiac remedies are serviceable only in the first stage of the malady, or in recent cases. A suitable internal and external regimen is of far greater value in the older cases. Direct cardiac treatment he discards as improper. He seeks rather to influence the skin, lungs, and liver, which have close relations with the vascular centre. In this way an indirectly beneficial effect is wrought upon the heart. As regards the skin, he recommends frictions, cold sponging, and warm baths. The lungs, he thinks, may be stimulated to better action by moderate open-air exercise. Stimulants he by no means interdicts, provided always that they be not taken in excess. Mild irritants may be used internally. Finally, diet is to be strictly regulated.—*Allg. med.-cent. Zeit.*, January 15, 1881.

Spencer Wells' Two Hundred Additional Cases of Ovariotomy.—At a recent meeting of the Royal Medical and Chirurgical Society, of London (*Lancet*, February 26, 1881), Mr. Spencer Wells contributed a paper summarizing the results of two hundred cases of ovariotomy, completing one thousand cases under his care. The mortality of the ninth series of one hundred cases was seventeen, that of the tenth, eleven. Among the entire number of one thousand patients, two hundred and thirty-one have died, and seven hundred and sixty-nine have recovered. But the mortality has steadily diminished from thirty-four in the first hundred to eleven in the last. Since the eight hundred and eighty-eighth case all the operations have been in private practice, and all have been done antiseptically, the result being a mortality of 10.6 per. cent. Mr. Wells inquired how far this lessened mortality was due to antiseptic precautions, or to other recent improvements in the mode of operating. Various modifications in each step of the operation were also described in detail.

At the close of this paper, the President, in a suitable address, conveyed the thanks of the profession and the public generally, to the illustrious author of this great work. In answer to a question from a member, Mr. Wells replied, that although formerly he used frequently to have cases with a temperature reaching 104°, or even 106° and 108°, now, in a whole year, he had not had one case with a temperature above 101°.

A Fatal Accident following Attempted Gastrotomy.—This case is reported by the assistant at Volkmann's surgical clinic, which forcibly illustrates the dangers attending surgical measures of the kind in question. The operation was undertaken on account of a formidable œsophageal stricture of cancerous nature. The patient was forty-eight years old and extremely emaciated, having for some time

been unable to do more than swallow small quantities of fluid nourishment. There appeared to be imminent danger of starvation, and accordingly an operation was at once undertaken. The stomach lay far back, and was apparently not quite empty. It was secured to the abdominal wall by twelve sutures, but was not at once incised. In the evening following this operation the patient seemed to be in fair condition. On the following day, however, he sank rapidly and soon died.

At the autopsy, a local peritonitis proceeding from a small amount of escaped stomach contents, was found. Since the stomach had not been incised, this matter must have escaped through the punctured wounds made in securing the ligatures.—*Centralblatt für Chirurgie*, January 22, 1881.

It is not conclusively shown that circumscribed peritonitis was the true cause of the fatal issue in this individual, since death took place thirty-two hours after the operation. In the full description of the case it is stated that the patient was not successful in his repeated attempts to vomit, but always complained of sharp pain about the wound after every such effort. Unquestionably stomach-contents thus escaped into the cavity of the peritoneum, and had the patient not succumbed to what appears to have been the shock of the operation, he would certainly have died of diffuse peritonitis. The sharp pain was evidently caused by the abdominal wound and stomach sutures, and not by the little patch of stomachal matter near the pylorus, which occasioned the insignificant amount of peritonitis found at the autopsy.

The Treatment of Constipation by the Swedish Movement Cure.—In order the more readily to convey a definite idea of the principles on which the Swedish movement cure is based, and the mode in which these principles should be carried into practical execution for the relief of chronic constipation, Dr. Benjamin Lee, at a recent meeting of the Philadelphia County Medical Society, stated that, in addition to the movements which afforded the introduction of oxygen into the blood, the rapid rotation of the entire trunk upon the pelvis promoted activity in the portal circulation and stimulated peristaltic action of the intestines; that, in order to relieve congestion of the liver and excite a healthy flow of bile, the patient should assume an attitude that would place the muscles of the right side strongly on the stretch, whilst the operator produced a rapid vibration of the parietes of the chest and abdomen immediately over the liver. Finally, the patient assuming a recumbent posture, thorough kneading of the abdomen is given, followed by pressure and vibration over the solar plexus. The circulation of all the abdominal viscera is thus stimulated, the passage of both chyle and fæces through the alimentary canal is aided, healthy secretion is promoted, undue accumulations of mucus are dislodged, and the great nervous centres of the organic system are roused into the highest state of activity. There are very few cases of constipation, however obstinate, which will resist a fortnight of this treatment daily, and many cases will yield in a week. The manipulation occupies about one hour.—*Medical and Surgical Reporter*.

On the Hygienic and Therapeutic Relations of House-Plants.—There seems to be some good reason to believe that individuals predisposed to phthisis are benefited by living in apartments where house-plants are cultivated. In the Philadelphia *Medical Times*, February 26, 1881, Dr. Ely McClellan has reported a case which seems to be corroborative of the views advanced by Anders. The patient was a young man about thirty years of age, whose life had been devoted exclusively to sedentary pursuits. His mother and five sisters had died of phthisis, but he, except for an occasional dyspeptic ailment, still seemed healthy; his escape from the disease which destroyed so many of his family is attributed by Dr. McClellan to the fact that he lives, and has lived for the past seven years, in apartments well stocked with thrifty plants.

Symmetrical Neuralgia in Diabetes.—M. Worms recently read a paper on the occurrence of neuralgia in the course of glycosuria, at the Paris Academy of Medicine. He thought that any contribution to a proper classification of this disease should merit professional attention. He had observed two cases of symmetrical neuralgia in diabetic patients. The sciatic and inferior dental were the affected nerves. He arrived at the following conclusions: 1, a special variety of neuralgia exists in conjunction with diabetes mellitus. It is characterized by a symmetrical occurrence in the two branches of the same pair of nerves; 2, until now it has been observed only in connection with the sciatic and inferior dental nerves; 3, diabetic neuralgia is apparently much more painful than the ordinary form of this neurosis; 4, it does not yield to the ordinary more or less successful treatment of neuralgia, such as the employment of quinine, morphine, bromides, etc. The intensity of the pain varies with the degree of the glycosuria, an aggravation of the former being associated with increased excretion of sugar. Finally, the writer expresses an opinion that this variety of neuralgia should be classed with the neuroses due to dyscrasia, such as gouty diathesis, chlorosis, and lead-poisoning. —*Archives Médicales Belges*, February, 1881.

Billroth's Operations for Cancer of the Stomach.—Abdominal surgery is making rapid strides in a forward direction. Conservatism has long since ceased to be the order of the day. What was regarded as a new, conspicuous triumph in this department has been proclaimed by Billroth, in the *Wiener medizinische Wochenschrift*, February 5, 1881. There the distinguished surgeon narrated his first successful case of extirpation of the pylorus for gastric cancer. The gratifying results of this initial venture have doubtless prompted the repetition of the operation in other apparently suitable cases. Two new instances of excision are now on record. Both operations were performed by Billroth, and both resulted in rather speedy death to the patients.

It may be instructive to briefly pass in review these three cases of resection of the stomach. The patient upon whom the first operation was performed was forty-three years of age. She had been quite healthy, having borne eight children. In October, 1880, she began to suffer from vomiting, and soon developed all the symptoms of gastric carcinoma, with stenosis at the pylorus. She consented to an operation only when constant vomiting and rapid emaciation had led her to believe she would die. The stomach was washed out with an ordinary tube preparatory to the operation. A movable tumor was distinctly felt through the attenuated abdominal parietes. An incision about eight centimetres long was then made over the site of the tumor. A nodular pyloric cancer was found to occupy rather more than the inferior third of the stomach. After separation of the parts from

the omentum and colon, the vessels having been tied, the stomach was incised one centimetre beyond the affected portion. An incision parallel to the gastric cut was then made in the duodenum, also one centimetre away from the infiltration. The intestine was then adapted to the opening left in the stomach by the completed removal of the neoplasm. About fifty carbolized silk sutures were used. The parts were cleansed and then replaced in the abdomen. Chloroform was the anæsthetic employed, the operation lasting one hour and a half. The reaction after the surgical interference was not great, alarming symptoms never appeared, and the patient is now among the living.

The second case (*Wiener medizinische Wochenschrift*, March 5, 1881) was that of a woman aged thirty-nine years. For seven months the patient had suffered from gastric symptoms. About seven weeks before the operation the symptoms had become those of cancer. Nevertheless, a positive diagnosis was not made. Billroth, therefore, proceeded at first to perform an exploratory incision for purposes of diagnosis. An ulcerated medullary cancer being found at the pylorus, a typical stomach resection followed the initial incision. The cancerous ulceration had led to a perforation of the anterior wall of the stomach, which in its turn had caused a circumscribed adhesive peritonitis. For this reason the organ was intimately united at this point with adjacent structures. More especially the anterior wall of the abdomen was thus firmly adherent. This circumstance very materially interfered with a rapid and smooth performance of the operation. A portion of this anterior wall had to be removed along with the excised tumor. On this account the operation was prolonged to two hours and three-quarters. In other respects the technique resembled that of the first case. Fifty-eight stomach sutures were employed. The organ was found to be considerably dilated, and it was therefore necessary to empty and cleanse it during the course of the operation. The excised portion embraced the entire circumference of the pylorus, and the part corresponding to the greater curvature was over ten centimetres long and six centimetres wide. Notwithstanding all this the patient did well immediately after the operation. After four days no symptoms of peritonitis, no elevation of temperature, or alarming pulse-rate had developed. On the eighth day, however, the patient succumbed to the effects of inanition. On the sixth day Billroth had concluded that the duodenum must have become bent upon the stomach, and accordingly he proceeded to reopen the abdominal wound in order to overcome this obstacle or establish a duodenal fistula. The stomach was again opened, and the passage into the intestine, although not blocked, was so bent upon itself as to have become a formidable obstacle to the propulsion of food. The entire organ was much dilated, and adhered to the diaphragm. The weakened condition of the patient rendering the attempted reclosure of the stomach inadvisable, its walls were merely fastened to the abdominal parietes, and a thick drainage-tube inserted into the duodenum. The latter served for the introduction of food, which was now retained. But the woman never completely recovered from the effects of this second surgical interference, which had lasted one hour. She died of exhaustion thirty hours afterward. At the autopsy no indications of peritonitis were visible.

The third and last case (*Allgemeine Wiener medizinische Zeitung*, March 15, 1881) was also a woman. She was thirty-six years old, and had shown symptoms of cancer of the stomach for about one year. A movable tumor was distinctly felt. In this instance the technique of the operation differed somewhat from that of the former cases. The wounds of the stomach and duodenum were united at a point nearer to the greater curvature of the stomach, and hence, lower down than before. It was thought that this would facilitate the passage of food from the stomach into the intestine. Moreover, as the posterior wall of the stomach was not readily accessible, the gastric sutures were applied from within. In other words, the edges were united by first piercing the mucous membrane. The peritoneal surfaces of the stomach were, however, again made to lie in contact. In this case the separation of the omentum from the stomach proved more difficult than in the first two patients. Besides, an adhesion between the pancreas and stomach had to be separated. Before closing the abdominal incision the permeability of the new pylorus was ascertained to be perfect. The excised portion was larger than in the two former cases, but the gastric dilatation was found to be less extensive. On the whole, this operation was easier of performance than excision by the former method. Nevertheless, the woman died of asthenia about twelve hours after the operative interference.

Electrolysis for Elephantiasis Arabum.—At a recent meeting of the Academy of Medicine (*Bull. de l'Acad. de Médecine*, March 1, 1881), M. Raynaud read a communication on the above subject, from two physicians at Rio de Janeiro. The writers of that communication had had constructed suitable needles, which were introduced into the affected members to the number of about three or five. They were interconnected by wires and then brought in communication with a battery (Trouve's apparatus.) Six elements were at first employed, and the number then gradually increased to sixty. Local anæsthesia was produced before insertion of the needles, and the latter were washed in antiseptic solutions. This, together with other precautions, constituted, according to the authors, the Listerian electrolysis. The success following this kind of treatment was said to be very gratifying.

Pulmonary Syphilis.—Five cases of syphilis of the lungs were made the basis of a study on this subject by Prof Gamberini (*L'Art Médicale*). The following conclusions were formulated: 1, the existence of simple syphilitic pneumonia is not yet a well-established fact; 2, gummy pulmonary syphilis does occur; 3, true tuberculosis may be associated with syphilis of the lungs and yet retain its distinctive pathological features; 4, syphilitic consumption presents only the symptoms of ordinary tubercular phthisis; 5, specific treatment is the best means of distinguishing between tubercular pneumonia and gummy pneumonia; 6, specific pulmonary lesions are not rare in the tertiary period of the disease; they may likewise occur as secondary symptoms; 7, laryngeal affections frequently precede or accompany syphilis of the lungs; 8, the symptoms during life often make a diagnosis difficult, and even a post-mortem inspection may leave some doubt as to the true nature of the lesion. Still it would appear that syphilis frequently leaves the apex of the lungs intact; 9, ordinarily the course of the disease is slow, a febrile movement is absent, and as a rule only one lung is affected.—*Archives Médicales Belges*, February, 1881.

THE MEDICAL RECORD:

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THE MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

THE meeting of the American Medical Association, at Richmond, Va., was not a notable one, either as to the number of delegates present or the importance of the subjects discussed. The attendance was reasonably good, but was not as representative, particularly as regarded the South and Southwest, as might have been expected. There was the usual proportion of delegates from this city and State, and from New England, but the delegation from Pennsylvania was largely in excess of any other district.

The social element of the meeting was a success, as might have been anticipated from the well-known hospitality of the city of Richmond, and particularly of its medical faculty. Indeed, it would appear that the attractions in this direction were sufficiently strong to turn the attention of members from the more sober business of the general session and the strictly scientific work of some of the sections. Still, considering all things, the sessions were well attended, and the interest in the legitimate business of the meeting was well sustained. The addresses gave evidence of careful preparation, and were worthy of the orators and the occasion.

One of the notable features of the general session was the discussion on the proposed amendment to the by-laws referring to the teaching of prospective homœopathic practitioners. The amendment to the by-laws was proposed two or three years ago, and was laid on the table until the present session. The reason for the previous action on the question was an obvious and simple one. It was the opinion of the more conservative members that the association was not prepared to take action on the subject. Nor does it appear that such an opinion would not still hold good in view of the final result of the vote. The substitute for the amendment was no better, so far as concerned the principle involved, than was the original proposition. We have no hesitation in saying that the action taken will not be endorsed by the majority of the profession of the country. Unless we are willing to admit that the teaching of truth is harmful, that education is dangerous, that true science can be misconstrued, and that the right will not always prove itself such, we are forced to acknowledge that the association has taken a step backward in its present course. It is, in truth, a lamentable confession of the lack of faith in the perpetuity of rational medicine. It is so clearly out of the province of the association to dictate to what purposes medical education may be used, that the action is absurd on its face. On the contrary, it is in perfect accord with the interest of the public and with the honor of the profession to use every means to properly educate any one who may wish to become a physician. After such an education the physician can use his knowledge as he may see fit. Deny him this right, and we not only hinder advancement, but descend to bigotry. Such a course is contrary to the spirit of our institutions.

If we desire to crush out of existence all irregular forms of practice, the safer way is to educate the prospective practitioners of the same up to the point of disbelieving in false science. If we are not able to do this, let us seek for more light rather than shut up what we have. As it is, the association by its course has not only done a stupid thing in voting as it has done, but has still further stultified itself by making a law which is virtually inoperative, for there is really no power to enforce it, either by legal, moral, or social measures.

The work of the sections was not very satisfactory. With one or two notable exceptions, the meetings of the sections were very ordinary ones. There was a lamentable lack of good material, and a corresponding lack of interest in the subjects discussed. Those chairmen of sections who took pains to secure good papers in advance, and who showed an interest in collecting the material for presentation, proved that such was the only way to guarantee successful meetings.

The founding of a section on dentistry is a measure the utility of which is open to some question. So far as it is the recognition of dentistry as a speciality in general medicine on the basis of a previous medical education, it is a matter of great importance to dentists in general. We have a right to assume thus much in view of the fact, that none but men who have received a regular medical education are entitled to membership in the association. The real utility of the measure will prove itself, however, by the number of members to be found who may be enough interested in its success to develop its resources.

The adoption of the rule that hereafter no members shall be eligible to election to office unless ac-

tually present at the meeting, is a good one, as it will secure the honors to such as take an active interest in the association and individually contribute to the success of its workings.

The discussion concerning the establishment of a journal for the association was taken up again this year. So far, no notable progress is made beyond referring the matter to a committee for report the ensuing year. Whatever may be the decision of this committee, it is quite evident that there is an increasing dissatisfaction concerning the present method of publication of the proceedings of the association. There is a growing belief, which we must acknowledge as well-founded, that papers are buried in the annual volume, and that there is a growing desire to have them promptly published in one or other of the medical journals of the country. But the more the subject is discussed, the sooner will the desired result be attained.

The choice of president for the ensuing year was an excellent one, and was a deserved compliment to the army. Surgeon Woodward has fairly earned the high distinction, and his corps as well as the association have reason to accept him as a thoroughly representative man.

Reviews and Notices of Books.

THE PRINCIPLES AND PRACTICE OF SURGERY: BEING A TREATISE ON SURGICAL DISEASES AND INJURIES. By D. HAYES AGNEW, M.D., LL.D., Professor of Surgery in the Medical Department of the University of Pennsylvania. Vol. II., 8vo, pp. 1066. Philadelphia: J. B. Lippincott & Co. 1881.

THE second volume of Agnew's Surgery comes to us equal in size with the first, and with the announcement that still another volume, presumably of equal dimensions, is required to complete the work. As a whole, the treatise promises to be a bulky one. Although it appears to have been the intention of the author originally to issue but two volumes, he has concluded to alter his plan. In some respects this may be an advantage to the student, while in other respects it may injure the sale and usefulness of the book. On general principles we believe that the alteration of the original design has struck the balance the wrong way. This second volume is better than the first, in that it treats of subjects which are more interesting in themselves and which have a wider practical bearing than those treated of in the first volume. The general arrangement of subjects is somewhat arbitrary, and hardly in keeping with the usual systematic arrangement of such works. Still, a well arranged and copious index helps to supply the means for ready reference. The volume opens with the discussion of the varieties and methods of treatment of the various dislocations. This portion of the work is well illustrated, as is also the case throughout its whole extent, many of the cuts being original and admirably executed. The diseases of the joints next claim attention, following which the subject of excision of joints is comprehensively considered and practically treated.

The chapters on the use of the knife, venesection, and general considerations regarding operations, are full of practical suggestions and will be read with interest by all. The article on anæsthetics contains nothing new, although the indications for the employment of anæsthesia are given with great clearness and cover every possible contingency. Our author does not express his preference for any particular anæsthetic, but rather impliedly favors ether as the safest, and the one to be used in case of any doubt.

The various amputations are given in detail, and the descriptions are clear. Although apparently an advocate for the musculo-cutaneous flap methods, he does not hesitate to give the mixed method fair treatment and detailed description. Notwithstanding the excellent reasons given for his preferences by the author, his opinions on this point are at variance with the majority of surgeons.

His remarks on shock, and traumatic fever, show a thorough, practical acquaintance with the subjects, and abound in interesting facts and deductions. The injuries and diseases of the genito-urinary organs of male and female occupy a large portion of the work. None too large, however, considering their importance and the thorough discussion which they receive at the hands of the author. Particularly may this much be said of stone in the bladder and its various methods of treatment. The surgical diseases of the spine bring up to notice the various appliances for fixing the vertebra until consolidation occurs. The surgical diseases of the mouth include those of the teeth, and give much information of value to such surgeons as are so situated that they are compelled to practice surgical dentistry. The description of diseases of the mouth proper is quite full, while diseases of the tongue claim an extra share of attention. As a whole, the work is an admirable one. The long experience of Prof. Agnew as a teacher shows itself in his treatment of the subjects contained in his volume. He has the happy faculty of bringing out salient points; of impressing his reader with the important facts to be noted; and of giving an individual and positive opinion as to their relative value.

As before stated, the volume is well illustrated. The cuts are well made. It is to be regretted, however, that the names of one or two instrument makers in Philadelphia are so obtrusively paraded in connection with the cuts of instruments they manufacture.

A SYSTEM OF ORAL SURGERY: BEING A TREATISE ON THE DISEASES AND SURGERY OF THE MOUTH, JAWS, AND ASSOCIATE PARTS. By JAMES E. GARRETSON, M.D., D.D.S., Dean of Philadelphia Dental College, etc., etc. Third edition, 8vo, pp. 916. Philadelphia: J. B. Lippincott & Co. 1881.

THE third edition of this work has been greatly enlarged, and bears evidence of being largely rewritten. Nearly two hundred cuts have been added. As it stands, it is the best written and most complete work on the subject in our language.

A SUMMER SCHOOL OF SCIENCE is to be established at Dartmouth College, under the general direction of Prof. Edwin J. Bartlett. Courses of instruction will be provided in botany, chemistry, mineralogy, physics and astronomy, and physiology. The excellent facilities afforded by the equipment of the college will make the opportunity for study a valuable one.

Correspondence.

PRACTICAL SUGGESTIONS REGARDING THE STUDY OF MEDICINE ABROAD.

To the Editor of The Medical Record.

Dear Sir—Ere long, many men having taken their degree will be thinking of pursuing their studies yet further in Europe, and not a few of the hospital men, having finished their term of service, will be eagerly looking forward from the not-a-little-wearying work in the hospital wards to a year or more of work and holiday in the old world. To such, I have thought, a few notes taken from the experience of one recently returned from a prolonged residence abroad, passed in medical study and in travel, might be of service. Will you allow me the use of the columns of your excellent journal to this end?

The question of expense—the "what will it cost?"—is a difficult one to answer, since it depends so much upon one's individual tastes and habits, and upon how closely one is willing to economize. The most economical way is for two whose means are about equal to go together, as two can ride in a cab as cheaply as one; in many restaurants one portion will do for two; a guide can be hired for two at the same price as for one; two can hire a superior room at as low a rate *pro capita* as one can secure an inferior one at, etc. The objection which most men have to a bedfellow does not hold as to Germany, for every one there has a narrow bed with feathers above and feathers below, all to one's self, a double bed being hardly known. Perhaps the best way to answer the question will be to consider it in regard to: 1, travelling expenses; 2, living expenses, that is for room, food, washing, etc.; and 3, university fees.

1. *Travelling expenses—The journey over.*—If one intends going direct to Germany, he can cross the ocean by the steamers of the North German Lloyd's Company to Bremen, or by the Hamburg line to Hamburg, or by some cheaper lines. Fares by the two lines mentioned: 1st cabin, $80; 2d cabin, $60. The accommodations are said to be good, and the meals satisfactory. Still, unless one is obliged to be very economical, or is very fond of the sea, this way of reaching Germany cannot be recommended. To France direct, steam, the French or General Transatlantic Company's ships to Havre, fare from $60 to $120. Table is said to be excellent. Most of the travel goes over England. Here the range of choice is wide. To Liverpool run the Cunard, White Star, National, Inman, American from Philadelphia, Guion, State, and the Warren lines, the last from Boston. The Cunard line has a great reputation for safety, as they say, "We have never lost the life of a single passenger." The White Star steamers are splendidly built, well appointed, powerful, and swift. They do all in their power for the comfort of their passengers. The steamers of the National line are very large, and carry a great amount of freight, as well as many passengers. Every line has its advocates. To Glasgow run the Anchor line, well spoken of. Fares on these, from $60 to $100, according to accommodation, excepting on the Anchor line, where it is $60 to $80, and the National line, where the highest fare is $70. The Cunard, White Star, and Inman have no second cabin. In fact, second cabin is never to be recommended. As to choice of stateroom, when possible take one as near midships as you can get it, or a little forward of same. Where there are both outside and inside staterooms, the first are to be preferred. If the trip is to be taken in the summer, apply several months ahead for your passage. On most of the lines return tickets good for a year or more can be had at reduced rates. Besides the passage money on all the steamers, the cabin steward and saloon steward expect a fee of from $1 to $2 50c. "Boots" expects half the steward's fee, and on the English lines wines are extra.

On the other side.—The custom-house will be the first experience of a foreign land. The examinations are extremely easy, the chief things sought for being tobacco and spirits. One will meet with dozens of custom-houses if he travels much. It is always well to open up one article of luggage ready for inspection, and the chances are that the other parcels will not be touched. Since the fact that *fees* are everywhere expected in Europe, we may as well discuss this subject once for all. In England the matter is not carried to quite so great an extent as on the Continent, but still one often hears the gentle hint, "Remember the waiter, sir;" "Remember the driver, sir." The individual fee should never be large, yet the aggregate in a year is considerable. Always have a supply of small change. The man who carries your trunk from the station or landing to your cab will expect something, in England from six to twelve cents, on the Continent from four to ten cents, or their equivalent. Waiters are always feed, and in some places, as in Vienna, they demand it as a right. In England they expect a penny on the shilling in the restaurants. In Germany, for bringing beer, one gives a few pfennigs; for waiting at meals it is not necessary to give more than fifteen or twenty pfennigs (four to five cents). At most of the hotels service is now charged for, so one need not give anything to the waiters, though better attention is secured by feeing. Boots and the porter (corresponding more nearly to the doorkeeper at the ladies' entrance in our hotels than any other servant) expect fees; the former is generally satisfied with twelve to twenty-five cents, according to the length of one's stay and the amount of work required of him; to the latter one need not give anything unless he has performed some service for one. In Paris and in Italy the cabmen expect a gratuity beyond their regular fares, and in Germany, also, if the cab is hired by the hour. Guides through palaces and galleries expect a fee of from ten to fifty cents, according to the size of the party or the swellness of the guide. In Germany the landlady expects her fee in the form of a Christmas present, and it is always well to keep on the right side of the housemaid by an occasional small donation. In fact one soon becomes accustomed to being regarded as a money cow to be milked by every one, but the prudent American can, with his usual coolness, check, and good sense, reduce the matter of feeing down to a fine point. The French call a fee a "pour boire," the Germans "ein trinkgeld."

The money with which one has to do in the different countries of Europe in which the student is likely to be has the following approximate values: In England—the "pound sterling" = $4.84, also spoken of as a "sovereign,' while the "guinea" is reckoned at 21s., though no such coin exists. There is also a half sovereign, gold. The "crown" is a 5s. silver piece, the "half-crown" is worth 2½s., the "florin" is worth 2s., the "shilling" is about equal to our "quarter," the sixpence and threepence complete the silver coinage. In copper coins we have

the "penny," equal to 2 cents, the "halfpenny," and the "farthing." In France, Switzerland and Italy, the "franc" (20c.) is the unit of currency, divided into 100 centimes. In Italy the "franc" is called a "lira," and as most of the money in circulation is paper, the "lira" being at a discount of ten per cent., making it equal to about 18c. The French gold coins are of the value of 100, 50, 20, 10, and 5 francs, the 20 franc piece being called a "Napoleon." Silver coins, 5, 2, 1, ½, and ¼ francs. Bronze coins, 10, 5, 2, and 1 centime, the 5 centime piece being often called a "sou." In Germany, the unit of value is a "mark," worth about 25c., and divided into 100 pfennigs. The gold coins are the 10 and 20 mark pieces. The silver coins are the 5, 3, and 2 mark pieces, the 3 mark being called a "thaler," and the 50 and 20 pfennig pieces. There are also nickel 10 and 5 pfennig pieces (groschen and halber groschen), and copper 2 and 1 pfennig coins. In Austria, the unit of value is the "florin," or "gulden," containing 100 kreutzers, and worth about 42 to 44 cents, since it is a depreciated coin. Nominal value 50 cents.

Railroading.—In England no checks are given for luggage. Tell the guard where you wish to go, and he will put it in the appropriate van, but it is well to see it there yourself. Arrived at your destination, the luggage is tumbled out on the platform, and every one claims his own, giving it to a porter to carry to his cab. Both in England and on the continent the luggage is weighed. In England it is rarely charged for, but on the Continent, on some roads, every pound must be paid for; on others, from twenty to fifty pounds is allowed, according to the class the owner travels by, and the overweight is charged for. All articles carried in the hand go free, and are taken into the cab, and placed in the rack over one's head. On the Continent the luggage is weighed and a number is stuck on it, a duplicate being given the owner when he pays for the overweight. On reaching his destination, the owner gives his number (a miserable piece of paper called in Germany a "schein") to a porter who gets the parcel and brings it to the cab. Luggage is called "gepäck" in German, "baggage" in French. The cost of travel by rail will depend upon whether one travels by first-class (Ger. erste; Fr. premier; It. primo), second-class (Ger. zweite; Fr. deuxième; It. secondo), or third-class (Ger. dritte; Fr. troisième; It. terzo). On some of the German lines there is a fourth-class. The Germans have a saying "none but Englishmen, Americans, princes, and fools ride first-class." The second-class German is fully as comfortable as the first-class in other countries; indeed, the difference between their first-class and second-class is that the former are upholstered in red plush and have a carpet on the floor, while the latter are finished in gray cloth and have oil-cloth or matting on the floor, a difference so slight as to be hardly worth paying extra for. In the other countries (Germany being used to include Austria), the second-class cars are not very comfortable, the seats being hard, narrow, and stiff. In England there is scarcely any difference on many lines between the first and second class, indeed on some lines only first and third class are run. On a few of the English lines, as the Midland, Pullman cars are run, and this is the pleasantest way to reach London by way of Liverpool. Sleeping cars are run on most of the great through lines on the Continent, are of the Mann pattern, and not very expensive, though one must buy a first-class ticket. In winter the cars are heated by means of hot soapstone bricks, and on some German lines by means of steam-pipes. It is advisable always to have a shawl or travelling-rug to wrap around your feet. As a rule, for short distances, a single man will be quite comfortable and save money by travelling second-class in England and France, and third-class in Germany, while for long distances and if with a lady, first-class in the former, second-class in the latter. In Italy, fleas and the dirty habits of the people render first-class always advisable. The rate of speed in England is from forty-five to sixty miles an hour; on the Continent, even the express trains do not exceed thirty miles an hour, excepting on some of the French through lines. Ticket offices close some five or ten minutes before the train starts, so it is advisable to be on hand fifteen minutes before the train leaves, since no one is allowed on without a ticket. Rates: In Germany, about 3½c. first-class; 2½c. second-class; 1¼c. third-class, per mile. In France, about 3½c., 2⅛c., and 2⅛c. In England, rates somewhat higher. In many cases, express fares one-third more than ordinary. The fare from Liverpool to London, first-class, is about £1 9s. (say $7); from London to Berlin, second-class, somewhere about $12, and to Vienna some $3 to $5 more.

Hotels.—In Germany, hotel living is cheaper than in England. French hotels come between. In all European hotels one pays for one's room and extra for everything else, though it is advisable to arrange, if possible, for room and attendance at so much. In some hotels a higher price is charged for a room if one does not take his meals at the house restaurant, while in others it makes no difference. The usual charges are about 37½ cents to $1 for room; 25 cents to 37½ cents for what they call breakfast, consisting, on the Continent, of coffee and rolls, in England of hot muffins, coffee, and cold meat; 50 cents to 75 cents for dinner; 12½ cents for attendance; and 12½ cents for each candle. One is apt to find more comfort and better attendance at an unpretending house than at the larger and more expensive ones. Excepting in Italy, the hotels, of whatever grade, are clean and respectable. In Germany the hotels are graded by law—first, second, and third class. Often proprietors call their houses second grade, in order to avoid paying a higher rate of taxation. We generally avoided the so-called first class houses, and always found comfortable quarters in the second grade. To a single man, who knows something of the language and is not over particular, even the third class houses will be found comfortable. In Italy, on account of the dirt and fleas, the hotels of the first grade are to be preferred. Never be afraid to ask for a cheap room, since such is the custom. If you pay for candles be sure and take them away with you; the proprietors expect this, and the lights will save you money at the next place at which you stop, for then you need not use their candles, and of course do not have to pay for them. In many German hotels they have a dinner at noon and one at six o'clock, consisting of about the same things, but the later one is more expensive. At dinner, wine is almost universally drunk, but if you are democratic there is no objection to ordering a bottle of beer. If you cannot exist on the usual coffee and rolls from breakfast till noon, it is well to order your steak, chops, or what you please, while dressing. I have found ordering overnight to be delusive. The average expense of hotel living need not exceed two dollars a day, and can be reduced to a dollar and a half without great inconvenience. Washing is done at any time, and usually promptly returned. If you expect to leave early in

the morning, pay your bill over night, as extras are apt to be tacked on. If you use Baedecker's guide-books, which are the best, you can select your hotel from them, as their information in regard to prices, etc., is always reliable.

Living expenses.—Having at last reached your university town, the first thing to be done is to seek for lodgings. On the Continent, except in one instance, I never was able to find an agency for rooms. Sometimes an advertisement may be found in the newspapers. Generally, one must walk the streets and look for placards hanging from windows and in doorways, bearing the legend, in Germany, "Ein schön möblirtes Zimmer zu vermiethen," or "Ein herrliches Zimmer zu vermiethen;" in France it runs "Chambre garnie a louer," while in London the sign is "Furnished Apartments." In the neighborhood of universities and hospitals there is always a fine choice of rooms. Prices vary. For six dollars a month a fair room may be had, while ten dollars should secure an excellent room with a small sleeping room off it. The landlady usually supplies the morning coffee and rolls at a fixed price per month. Heating extra. Service (blacking boots, brushing clothes, and running on errands, as well as taking charge of the room) is included in the price of the room. Many of the landladies will fleece an American when possible, so you must be on your guard, and it is advisable to make your agreement in writing. Restaurants, where fine cooking can be obtained, are always expensive. Fair meals can be had at moderate prices, as in Berlin, where a good dinner, with six courses, can be procured for twenty-five cents, beer four cents, and a fee to the waiter. In many restaurants one can take tickets for one month at a reduced rate. To do this ask for an *abonnement*.

Washing is cheap, costing about 30 or 40 cents a dozen. Unfortunately the bleaching is done by means of chemicals, to the detriment of the linen. Clothes are everywhere much cheaper than with us. The English tailors are good, material of the best, and prices about one-half what they are with us for the same grade. French and German tailors poor, the prices not being any lower, or as low as in London, and work poorer. Shoes, cost from three to five dollars for good ones in Germany, though cheaper ones can be had. Quality not extra. In London, quality excellent, but dearer than in Germany. Theatres in Germany are cheap and acting good. They are subsidized by the government. Seats from 12½ cents to $1. Abonnement prices for the season at reduced rates. Students matriculating at the universities admitted to certain seats reserved for students at about half price. Performances in smaller towns begin from five to seven P.M. This is an excellent way of acquiring the language. Concerts, in summer, free several times a week in the public squares, by the regimental bands. Private concerts, from 12½ cents upward. Music generally good.

University fees.—In some universities, as in Strassburg, one is compelled to matriculate and pay the fee. In Berlin matriculation is preferred, but can be avoided. In Vienna no American thinks of matriculating, and I believe that in Leipzig and some other universities one can study special courses without matriculating. The usual matriculation fee is twenty marks, or if the student has matriculated at some other university it is half that amount. The fees for lectures and special courses in the German universities vary from twenty to forty marks ($5 to $10) for the whole semester or term. There are some very special courses at a higher rate, but the above is a good average. In Vienna the prices run from ten to twenty florins ($4.50 to $9) for a six weeks' course, the average being about fifteen florins ($6.50), the tendency being for prices to increase. If one keeps his time full there, and ten hours a day can easily be occupied with almost as many courses, he must be prepared to spend some forty or fifty dollars every six weeks for courses alone. It is an expensive place in which to study. In London it is the custom for Americans to enter one of the hospitals as clinical clerk on the medical, or dresser on the surgical side, for three months. Fee, ten guineas at the London. Teachers of German generally want fifty to seventy-five cents per hour. It is a good plan to get some student to come and talk with you for an hour, for which he will take twenty-five cents, or else exchange with you for English.

What will it all cost? A single man should be able to study all he wishes, and travel quite extensively, living in comfort, for $1,000 a year. With the exercise of considerable carefulness, he can do a good deal on $600 a year, or less A gentleman with his wife can live comfortably and travel easily, with an eye on economy, for less than $2,000 a year. The more a man conforms to the habits of the people among whom he lives, the more cheaply he will live.

The medical schools.—If you intend studying in London, it would be advisable to apply by letter, some time before leaving America, to whatever hospital you select for a position. I believe that the London Hospital has most American students. The principal hospitals in London are: St. Bartholomew's, at Smithfield, large and well appointed, where, among other names known to us, is Mr. Holden; Charing Cross, Agar street, Strand, a small hospital, mostly run by Scotchmen; St. George's, Hyde Park Corner, where are Mr. Holmes and Dr. Barnes; Guy's, St. Thomas street, Southwark, one of the wealthiest, where are Dr. Pavey, Messrs. Bryant, Golding Bird, and others; King's College, Carey street, Strand, where are Dr. Playfair, Messrs. Lister, Soelberg, Wells, and others; London, Whitechapel road, is, I believe, the largest, where are Mr. Reeves, Drs. A. Clark, Hughlings Jackson, M. Mackenzie, and others; St. Thomas', Albert Embankment, architecturally the most admirable; University College, Gower street, where are Drs. Ringer, Walshe, Reynolds, Bastian, Fox, Maudsley, and Graily Hewitt, Messrs. Quain and Erichsen, Sir H. Thompson, and others. The usual visiting hour is 1 or 2 P.M., and if you are at hand at that time, the gentlemen will show you through the wards with the greatest kindness. The London Throat Hospital is on Golden square, and has for its guiding spirit Dr. M. Mackenzie; St. Mark's, the hospital for diseases of the rectum, presided over by Dr. Allingham, is, I believe, on City road. One of the curiosities in the way of London hospitals is the London Temperance Hospital, on Hampstead road, where no alcohol is used, even tinctures being excluded. The London *Lancet* issues a hospital number in September of each year, which it is advisable to have. My friend, Dr. S. R. Morrow, of Albany, N. Y., furnishes me very kindly with the following points: The fees at the London Hospital are less than at any of the others; place obtained by showing diploma from an American school of medicine, and paying ten guineas, which entitles one to a three months' dressership, or a six months' clinical clerkship, and also to perpetual attendance on the out-patient services. The holder of a clinical clerkship receives also a post-mortem clerkship, and has

no difficulty in obtaining two weeks' maternity service, with residence and board in the hospital.

Of the Parisian hospitals I did not see much, but can say that Prof. Charcot is to be found in the Hôpital de la Salpêtrière, Boulevard de l'Hôpital; the celebrated collection of wax models of skin diseases is at the Hôpital St. Louis, Rue Bichat and Rue Grange aux Belles; Hôpital des Enfants Malades, Rue de Sevres and Boulevard des Invalides; Hotel Dieu, the principal hospital, a magnificent building, on the Ile de la Cité, over the Pont Notre Dame. The Medical School is on the Rue de l'École de Médecine, Boulevard St. Germain.

The German universities are so numerous, and the distinguished men are so scattered about, that it would require considerable time and travel to study under all the great authorities. Vienna (Wien) attracts the greatest number of American students, and affords the best clinical advantages in Germany. But the courses are so short, and so much ground is gone over every six weeks, that unless one knows something of the language they do not for a month or so get the full worth of their money. This hurried way of teaching necessitates a certain degree of superficiality, and therefore is of most use to one who has had a certain amount of experience in the subjects taught. Unhappily, among the many who have made the reputation of Vienna, some are dead and some are superannuated. The great Hebra is dead, Sigmund only lectured once a week in the winter of 1879 and 1880, and Zeissl is so old that he needs to be prompted constantly by his assistant. A host of private teachers have sprung up about the hospital, and some of them are very poor. All the instruction is given in the Allgemeine Krankenhaus, Josefstädter strasse, in the Poliklinik building adjoining it, at the Kinderspital, and in a pile of rambling buildings almost opposite the Poliklinik building. The leading men are: *Surgery.*—Prof. Billroth, a poor speaker, for clinical surgery; Wölfler and Mikulicz (Billroth's first and second assistants); and Weinlechner for operative surgery on the cadaver; material plenty. *Medicine.*—Prof. Bamberger for clinical medicine; Dr. Kauders, his assistant; and Prof. Heitler on physical diagnosis. *Eye.*—Profs. Arlt, Stellwag, and Jäger for clinical instructors; Dr. Bergmeister, an excellent teacher of diagnosis of diseases of the eye; and Dr. Fuchs for ophthalmoscopy. *Obstetrics and Gynecology*—Profs. Braun v. Fernwald and Spaeth are the two clinicians; Drs. Schauta, Welponer, and Pawlik give operative courses on the cadaver, and touch courses in the wards; Dr. Bandl, at the Poliklinik, gives the best course on gynecology, and as he only takes a limited number of students, it is advisable to apply to him as soon as you reach Vienna. If one takes a course with one of the professors (most men do not attend their lectures), then takes one or more special courses with the assistants, and fees the nurses, he will probably have a good deal of obstetric practice in a few months, especially if those months are in the summer. *Diseases of Nervous System.*—The professors are Meynert and Rosenthal. My experience with one was unsatisfactory, and the other one is not very good. Dr. Weiss gives the best course of all in this line, and that is not saying very much. *Skin.*—The professors are Kaposi and Neumann, the first for cases, treatment and systematic instruction, the latter for diagnosis. Besides these, Dr. Hebra, son of the great professor, and Dr. Auspitz, at the Poliklinik, are well spoken of. *Syphilis.*—Profs. Sigmund and Zeissl. The former but once a week. The best course in 1879 and 1880 was given by Sigmund's assistant, Dr. Mraczek. *Diseases of Children.*—Prof. Widerhofer, at the Kinderspital, for cases; Dr. Monti, at the Poliklinik, for systematic lectures illustrated by cases. *Throat.*—Profs. Schrötter and Störk at the the hospital, the former the most popular; Prof. Schnitzler at the Poliklinik, highly spoken of, and Dr. Chiari. *Ear.*—Profs. Gruber and Politzer, at the hospital, are at swords' points, and ignore each other's existence; Dr. Pollak, their assistant, gives courses, and pitches into both. At the Poliklinik, Dr. Urbantschitsch is well spoken of. *Genito-Urinary.*—Dr. Ultzman, at the Poliklinik, gives a good course, and is much sought after by those desiring to learn German, as he speaks slowly and distinctly. *Pathology.*—Dr. Weichselbaum gives an abundant amount of material for the study of gross pathology. Dr. Chiari gives a good course in Pathol.-Histology. But Vienna is hardly the place for this study, nor for microscopy, although good instruction can be had in these branches; still it is eminently the place for the more practical branches of medicine. These are only a few of the host of instructors, the ones considered the best in their specialties. You will find notices of all the courses posted on the bulletin boards in the main and side doorways of the hospital, and in the entrance to the Poliklinik. The bank to which almost all Americans go is the Anglo-Austrian, on Strauchgasse. It is advisable for a man to go after his own letters to the post-office or bank, as the Vienna landladies are not always to be trusted.

Berlin.—At the Physiological Institute, on New Wilhelm's strasse, upon the banks of the river Spree, Prof. DuBois Reymond lectures on *Physiology*, and Prof. Kronecker gives a course in Experimental Physiology; *Physics*, Prof. Helmholz. At the Charité Hospital, Charité strasse, Louisenstadt: *Pathology*, Prof. Virchow; *Throat*, Dr. Fränkel; *Diseases of Nervous System*, Prof. Westphal; *Surgery*, Prof. Bardeleben; *Medical Clinic*, Prof. Frerichs; *Children*, Prof. Henoch; *Obstetrics and Gynecology*, Prof. Schroeder, who also lectures in the Obstetric Hospital, Dorotheen strasse. The best course in Gynecology is given by Dr. Martin in his private hospital, Elsasser strasse. *Electricity*, Dr. Remak, at his residence on Behren strasse. In the Surgical Hospital, on Ziegel strasse, Prof. Langenbeck gives his surgical clinic. The university has its main building on Unter den Linden, opposite the Emperor's Palace and Opera House. To matriculate, apply in this building to the Registrator, to whom you give up your passport, and by whom you will be started through the intricate matter of matriculation, going through which you will accumulate many papers, amongst which you will find an "Anmeldungsbuch." In this book, after you have received the right hand of fellowship from the Rector, and enrolled yourself in your proper faculty, write the names of the courses which you intend taking in the column headed "Vorlesungen;" find the "Quästor," to whom you pay your fees. This done, present the book to your different professors and teachers for their signatures. When you leave the university, go again to the Registrator, give up your Universitäts Kart, ask for your passport and an "Abgangszeugniss," the last to be presented at the next university you may visit, which will save you one half the matriculation fee. These remarks apply to other universities.

To Strasbourg students go for pathology, under Prof. Recklinghausen, and histology, under Prof. Waldeyer. These are at present the most popular

professors in Germany in their specialties. A more enthusiastic teacher than Reckinghausen it would be hard to find. The Anatomical Institute on Spital Wall strasse is new and well appointed. Waldeyer is very partial to Americans, and puts them in groups of four in little private laboratories, to which each man carries a key. Plenty of material is supplied, and on these two subjects alone one can work all and every day. The city is very dull, so that there is little to attract one's attention away from his work. Besides these, Prof. Hoppe-Seyler instructs in *Chemistry*, Prof. Kussmaul gives the *Medical Clinics*, and Prof. Lücke the *Surgical Clinics*. Matriculation obligatory.

Heidelberg.—There is a standing joke between here and Strasbourg that at the latter one learns to make elegant microscopical specimens, but knows little about them, while at the former he learns to know all about his specimens, but does not learn to make good ones. I do not think this is altogether true, but true it is that Prof. J. Arnold is an excellent instructor in *Pathological Histology*, and Prof Kühne in *Histology*. Prof. Jurasz instructs in *Laryngology*. The town is picturesque, and extends along a narrow strip of ground between the banks of the Neckar and the foot of Castle Hill. Its reputation for beer is of the best, and it is celebrated for students' duels and carousing.

Leipzig.—*Pathology*, Prof. Cohnheim; *Histology*, Prof. His; *Medical Clinic*, Prof. Wagner; *Ear*, Prof. Hagen; *Throat*, Prof. Hagen. The Hospital and Institutes for Pathology and Physiology are on Waisenhaus strasse.

Halle.—Here are said to be the best advantages for studying *Operative Surgery* under Prof. Volkmann, reputed the best surgeon in Germany. Here Prof. Graefe holds his *Eye Clinic*.

Munich (München).—*Pathology*, Prof. Buhl; *Surgery*, Prof. Nussbaum; *Medical Clinic*, Prof. Ziemssen; *Throat*, Prof. Oertel. An interesting old city, and a cheap place in which to live, but unhealthy.

Würzburg.—*Histology*, Prof. Kölliker; *Obstetrics and Gynecology*, Prof. Scanzoni; *Pathology*, Prof. Rindfleisch; *Ear*, Prof. v. Tröltsch. The facilities for pathological study said to be good.

Prague.—Students go here chiefly for *Obstetrics*, since the advantage of living in the Gebäranstalt (Obstetric Hospital) during term of service is afforded.

These are by no means all the German medical schools, but those where probably the best advantages are offered. The professorial list may be deficient, and as the professors are transferred from one university to another not infrequently, it is quite possible that you may not find them in the places mentioned.

Let me say, do not fear to go to Germany because you do not understand the language. Most all the professors and teachers understand English, and a knowledge of that language is widespread among the people. Unless you land in midsummer, do not stop anywhere to study German, but go directly to some university and begin at once to listen to lectures. In a month or so you will surprise yourself in finding out how much you can understand. Live with the people, and you will learn rapidly.

For a practical knowledge of medicine it is not necessary to go abroad, but if you can afford it go by all means, as specialties are to be studied much cheaper than at home, and clinical material is abundant. You will be shocked at some things, as in Wien, where I have seen, in the skin clinics, women nearly stripped before the class, and men stark naked, with female nurses in attendance. In the medical wards I have seen a poor, dying patient held up to allow a crowd of students to listen to her chest, while the death-rattle was almost audible. In Vienna, students and teacher go directly from operating on the cadaver, after a hasty washing of hands, not always with even a weak solution of carbolic acid, to deliver a woman in the lying-in wards. It is not surprising that epidemics of puerperal fever are by no means rare.

The winter semester (winter term) opens practically about November 1st, and closes about March 1st. The summer semester opens about May 1st, and ends about the first week in August. In Wien, courses are going on at all times.

Hoping that these imperfect notes may be of use to some one, I am, very truly yours,

GEO. T. JACKSON, M.D.

138 EAST TWENTY-SIXTH STREET, NEW YORK.

New Instruments.

A METHOD OF TREATING NASO-PHARYNGEAL AND LARYNGEAL TUMORS.

WITH A DESCRIPTION OF A NEW INSTRUMENT FOR THE SAME.

BY CH. R. UPSON, M.D.,

SURGEON TO THE DEPARTMENT OF NOSE, THROAT, AND LUNG DISEASES, ATLANTA HOSPITAL, ATLANTA, GA.

I THINK it is generally conceded by laryngologists, that none of the methods of treating naso-pharyngeal tumors hitherto suggested can claim to have been to any considerable extent successful. The forceps, the ecraseur, the ligature, electrolysis, and the cautery have each in its turn been recommended and tried for the removal of these growths, yet sooner or later they are found to recur, and while it does not surprise the surgeon, it renders the patient timid about submitting to a second operation which is liable to be attended with like results. Some months since a new method of treating naso-pharyngeal growths suggested itself to my mind, *i.e.*, by hypodermic injections of various substances—the same, in fact, as has long been practised by myself and others for the destruction of nasal polypi.

For this purpose I devised the instrument represented in the accompanying drawing, which in my hands has given the highest satisfaction.

It consists of an ordinary hypodermic syringe, provided with a long, hollow needle, which is passed through a silver canula properly curved at its extremity. The outer surface of the needle, for a short distance from its attachment to the syringe, has cut upon its surface a screw-thread, which is fitted with a traverse-nut, to regulate the depth of puncture of the growth. Two shanks, with

finger rests at one end, are passed through rings on the side of the syringe and attached at their other extremity, by means of set-screws, to the canula, to enable the surgeon to operate the instrument with one hand. The flat wings at the end of the syringe serve as thumb-rests. The tip of the canula is made to unscrew, and in its place can be fitted the fine spray-jet which accompanies the instrument.

With this jet, applications of any desired medicament can be made either to the pharynx or larynx.

The modus operandi of my instrument is briefly described. First charge the syringe with the desired quantity of the solution to be injected—I generally prefer acetic acid, gtt. x.—xv. ; then place the patient in a good light—either direct or reflected—draw forward and depress the tongue with a proper instrument, which may be intrusted to the patient to hold, or the tip of the tongue may be covered with a napkin, drawn forward, and held out of the way by the patient. After cautioning the patient to breathe quietly through the nose, introduce the rhinoscopic mirror below and a little back of the palate, and, as soon as you secure a good image in the mirror of the growth, introduce the canula with the free hand, project the needle the desired depth into the growth, move the thumb back from its rest to the piston, and slowly inject the contents of the syringe into the tumor.

The syringe was made for me by Messrs. Geo. Tiemann & Co., of New York.

Since its receipt—several months since—I have used it in three cases of naso-pharyngeal tumor, and in each case with satisfactory results, *i.e.*, the destruction of the growth. Of course I cannot at the present time say positively that the tumor will not recur ; but, judging from the success which has almost invariably attended the same operation in the case of nasal polypi, it is not at all unreasonable to expect like results from its use in naso-pharyngeal growths. At any rate, there is much in the simplicity of the operation to commend it to the laryngologist, especially as we may at least feel assured of as satisfactory results from its use as from any other operation. The instrument is also designed to be used for the removal of interlaryngeal growths, and lastly, it will be found useful as a pharyngeal and laryngeal aspirator.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from May 1, 1881, *to May* 7, 1881.

Middleton, J. V. D., Major and Surgeon. Granted leave of absence for one month. S. O. 78, Department of the East, May 2, 1881.

Caldwell, D. G., Capt. and Asst. Surgeon. Relieved from duty at Fort Frederick Steele, Wyo., and assigned to duty at Fort Sanders, Wyo., as Post Surgeon, relieving Asst. Surg. Kimball. S. O. 36, C. S., Department of the Platte.

Lippincott, Henry, Capt. and Asst. Surgeon. Having reported at these headquarters is assigned to duty as Post Surgeon at Fort Niobrara, Neb. S. O. 36, Department of the Platte, April 29th, 1881.

Kimball, J. P., Captain and Asst. Surgeon. Assigned to duty at Fort Sidney, Nebraska, as Post Surgeon, relieving Asst. Surgeon Moseley. S. O. 36, C. S., Department of the Platte.

Havard, V., Capt. and Asst. Surgeon. Relieved from duty at Presidio del Norte, to proceed to Fort Concho, Texas, await there the arrival of Captain Livermore, Corps of Engineers, and report to him by letter. S. O. 63, Department of Texas, April 28, 1881.

Moseley, E. B., Captain and Asst. Surgeon, assigned to duty as Post Surgeon, at Fort Fetterman, Wy. Ter. S. O. 36, C. S., Department of the Platte.

Reed, W., Captain and Asst. Surgeon. Relieved from duty at Fort Henry, Md., and to report to the commanding officer U. S. Barracks, D. C., for duty at that post. S. O. 76, Department of the East, April 29, 1881.

Burton, H. G., 1st Lieutenant and Asst. Surgeon. Relieved from duty at Fort Niagara, N. Y., and assigned to temporary duty at Fort Wadsworth, N. Y. H. S. O. 78, C. S., Department of the East.

Medical Items and News.

Contagious Diseases — Weekly Statement. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending May 7, 1881.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
April 30, 1881.	17*	23	197	32	67	106	64	0
May 1, 1881.	29	22	145	39	137†	84	59	0

* Two were emigrants.
† Sixty-five cases of measles from Colored Orphan Asylum.

Deed of the Wood Museum.—After stating the desire on the part of James R. Wood, M.D., to establish an anatomical and pathological museum in connection with Bellevue Hospital, said museum to contain his own specimens and such preparations as he may obtain by the offering of prizes, and after further stating that the Commissioners of Charities had resolved that the said specimens should be classified and arranged under the title of the Wood Museum of Bellevue Hospital, the text of the deed is as follows :

"Now, this indenture, made the thirteenth day of June, one thousand eight hundred and sixty-seven, witnesseth that I, the aforesaid James R. Wood, for and in consideration of the premises and of the sum of one dollar to me in hand paid, the receipt whereof is hereby acknowledged, have given, granted, conveyed, assigned, transferred and set over, and by these presents do give, grant, convey, assign, transfer, and set over to the Mayor, Aldermen, and Commonalty of the city and county of New York, all that collection of anatomical specimens, and specimens of morbid anatomy, the results of my operations and preparations, or which have been collected or obtained by me ; and all jars, bottles, and cases belonging to me, and in the second and third stories of the building known as the morgue, on twenty-sixth street, within the walls of Bellevue Hospital, in the city and county of New York, to have and to hold the same in the manner and for the uses and purposes and upon the trusts, and subject to the terms and conditions following, that is to say :

First.—The said collection shall be classified and arranged in cases in the second and third stories of the said morgue, or such other place in the buildings of Bellevue Hospital as the commissioners shall determine, and shall be called "The 'Wood' Museum of Bellevue Hospital."

Second.—The said collection shall be held, kept and preserved by James B. Nicholson, James Bowen, Isaac Bell, and Owen W. Brennan, the commissioners of public charities and correction of the city and county of New York, and by their successors in office, so long as said commissioners or their successors shall have existence in law; and in case the said commissioners or their successors shall cease to have existence in law, then and from thenceforth the said collection shall be held, kept, and preserved by such person or persons or body corporate as shall be nominated or appointed for that purpose by me or my legal representatives, and the then comptroller of city and county of New York; and in default of such appointment, then the same shall be held, kept, and preserved by the aforesaid Mayor, Aldermen, and Commonalty of the city and county of New York, or by such person or persons or body corporate as may be nominated or appointed for the purpose by them.

Third.—The management of the said collection shall, during my life time, be under the direction of myself and such advisory board as may be appointed by the aforesaid commissioners of public charities and corrections in the city and county of New York, or their successors, or by the person or persons or body corporate entitled to hold, keep, and preserve the said collection as hereinbefore expressed.

Fourth.—From and after my decease the management of the said collection shall be under the direction of my son, James R. Wood, jun., or such other person or persons as I may appoint, and such advisory board (consisting of at least four medical men) of good standing in the city and county of New York, as may by the aforesaid commissioners of public charities and correction or their successors, or by the person or persons or body corporate be entitled to hold, keep, and preserve the said collection as hereinbefore expressed.

Fifth.—The said collection shall be forever devoted to the promotion of medical science, and shall be held, kept and preserved, and managed, in accordance with the terms and conditions hereinbefore expressed, otherwise the same and entire control and management thereof is to revert to or be within the disposition of myself or such person or persons or body corporate as I may nominate or appoint.

In witness whereof I have hereunto set my hand and seal the day and year herein last above mentioned.

In presence of } Signed,
HENRY P. TOWNSEND. } JAMES R. WOOD. (L.S.)

STATE OF NEW YORK, } ss.
CITY AND COUNTY OF NEW YORK, }

On the seventeenth day of June, A.D. one thousand eight hundred and sixty-seven, before me personally came James R. Wood, to me known to be the individual described in and who executed the foregoing instrument and acknowledged to me that he executed the same.

C. T. HENRY,
Commissioner of Deeds, City and County of New York.

A HAPPY MEDICAL FAMILY.—Two regular physicians, one homœopathic and one eclectic, are serving amicably together as a committee appointed by the Connecticut Legislature to draft a medical practice act.—*Druggist's Circular.*

ASSOCIATION OF AMERICAN MEDICAL EDITORS.—The annual meeting of this body was held at Richmond, Va., on the evening of May 2, 1881. In the absence of the President, Dr. George F. Shrady, of New York, Dr. Octerlony, of Louisville, was called to the Chair. The address of Dr. Shrady was read by Dr. Carpenter, after which the thanks of the Association were tendered, and a recommendation made that said address be published in the MEDICAL RECORD. After the transaction of routine business, the following gentlemen were elected for the ensuing year: *President*, Dr. Landon B. Edwards, Editor of *Virginia Medical Monthly*, Richmond, Va.; *Vice-President*, Dr. Ralph Walsh, editor of *Walsh's Retrospect of Medicine and Surgery*, Washington, D.C.; *Secretary*, Dr. Dudley S. Reynolds, Editor of *Medical Herald*, Louisville, Ky.

THE ALUMNI ASSOCIATION OF THE COLLEGE OF PHYSICIANS AND SURGEONS held its annual meeting Wednesday, May 11th, and re-elected the present officers for the ensuing year. The Annual Dinner will be held this (Saturday) evening, May 14th, at Delmonico's. Dr. Weir will preside, and the toasts will be responded to by Messrs. John Jay Carter, G. W. Smalley, Rev. R. H. Mekim, Gen. Horace Porter, and Drs. Barker and Draper.

QUACK ADVERTISEMENTS IN RELIGIOUS JOURNALS.—It is pleasant to note that the familiar pictures of the lady who discovered the vegetable "womb-lifter," and of the gentleman whose strumous features are obscured by his infallible catarrh cure, have disappeared from several religious journals. The *Evangelist* and *Observer*, in particular, have of late confined their advertising business to a legitimate field.

THE WEST VIRGINIA STATE MEDICAL SOCIETY will hold its fourth annual meeting at Wheeling, on May 18th.

A WELL-REGULATED STATE.—The West Virginia Legislature has recently enacted laws to regulate the practice of medicine, *practice* of pharmacy, and *also that* of dentistry. It has also passed a bill making medical men privileged witnesses before the courts; and another to revoke the charter of the "Livingstone University of America," a notorious diploma-mill. There is also on the calendar a bill entitled "A Bill to Encourage and Regulate the Study of Practical Anatomy."

The State is to be congratulated on the progressive spirit its legislators have shown. Some credit must be due to the medical profession also for securing the passage of the laws in question.

THE STATE PHARMACEUTICAL ASSOCIATIONS of New York, New Jersey, Pennsylvania, West Virginia, and Ohio, hold annual meetings during the present and coming months.

ENFORCEMENT OF THE MEDICAL LAW.—Two arrests of irregular practitioners have been made in this city, at the instigation of the Censors of the Medical Society of the County of New York. The technical charges are those of perjury. The trials, which will take place speedily, will be watched with great interest by the medical profession, not only in this State but throughout the country.

THE JACKSONIAN PRIZE has been awarded to Mr. Cheyne, F.R.C.S., for an Essay on the History, Principles, Practice, and Results of Antiseptic Surgery. Mr. Cheyne took the Boylston Prize last year, for an essay on the same subject.

The Texas State Medical Association held its thirteenth annual meeting on the 13th ult., and it is described in the *Texas Medical and Surgical Record* as having been an unusually interesting and successful gathering. The paper above referred to was adopted as the organ of the society. A debate was held upon the subject of having a State Medical College under the auspices of the society, but no action was taken. A ball was held, and also a banquet. Dr. Kilpatrick, the retiring president, delivered an exhaustive address on the subject of the "Adulterations of Food and Medicine."

A curious monstrosity, known as the Texas Siamese twins, was exhibited. A mutual life insurance association was inaugurated. The society elected Dr. Ashbel Smith, President for the ensuing year, and adjourned, to meet at Fort Worth in April, 1882.

The Ownership of Prescriptions has been a matter of considerable discussion. It is settled by law, however, in Rhode Island. In that State the prescription belongs to the patient; the druggist is its custodian; and the doctor who wrote it has only the right to look at it. In Rhode Island, therefore, a physician can have no legal right to prevent the renewal of his prescriptions. The justice of this law is very questionable.

Grindelia Robusta in Asthma.—There have recently appeared some very strong endorsements of this drug as a most valuable agent in asthma. In a paper read before the King's County Medical Society, Dr. T. M. Rochester said that he had used the drug in over sixty cases of asthma. In all of these it produced relief. Sometimes this was permanent; very often it lasted for a long time. It always did some good. It seemed to act equally well in inflammatory and simple spasmodic asthma. Even in cardiac asthma, combined with other drugs, the best results were obtained. It is useful both in the attack and during the interval to ward off future attacks, but especially for the latter purpose. For the attacks, half drachm doses of the fluid extract are to be given every fifteen minutes until relief is obtained. In the interval it may be given in fifteen to twenty drop doses every four or six hours. This should be continued for from a week to ten days, when, except in very obstinate cases, the patient will experience relief for a period of six or eight months, or longer.

In addition to this testimony, we find in the *Therapeutic Gazette* a report on the use of the drug at the United States Marine Hospital at Portland, Me. Dr. Berry, acting assistant surgeon, says that the remedy was found very efficient in relieving attacks of asthma.

Nobert, the Eminent Physicist, is dead He was chiefly celebrated for his wonderful skill in ruling "test lines" with a diamond on glass. The first tests that he prepared contained rulings which numbered one hundred and twelve thousand to the inch. These were resolved by Dr. J. J. Woodward and photographed. Nobert then ruled other test lines, of which he claims there are over two hundred thousand to the inch. These lines have not yet, we believe, been resolved, and Nobert leaves them as his legacy to microscopists.

Ethics in Veterinary Medical Practice.—The question of ethics, which so constantly agitates the medical mind, is receiving attention from our veterinary brethren also. The *Journal of Comparative Medicine* comments upon the subject as follows:

It is the custom of some veterinarians to advertise themselves, with much exuberance of language, in various agricultural, sporting, or stock journals.

There is no code in veterinary medicine which directly forbids this, but it is looked down upon by our best practitioners, and justly, as being a thing unworthy of the profession.

We would remind persons who are inclined to do this sort of thing, that it is a practice which, in human medicine, by common consent, stamps the man as a charlatan. Veterinarians, therefore, who follow it, lay themselves open to the same imputation.

Advertising one's self is, of course, not an actual crime; but there is a rational basis to the feeling of the better men against it. A man who advertises his groceries or dry goods, advertises things which are quite apart from his own individuality. But a person who announces that he is the most skilful of surgeons in Dakota, or the greatest curer of spavins in all New England, or a graduate of more foreign and domestic colleges than any one else in the United States—such a person thrusts his personality upon the public in a most offensive way. He lauds himself, which is bad, at the expense of his brother, which is worse. There is also very likely to be something in such advertisements which is not strictly true. It is hard to draw the limits when announcing one's own praise. A question of morals, therefore, comes in here. Apart from this, it is perhaps only a question of good and bad taste, of decent modesty or vulgar pretension.

It is a credit to the veterinary profession, after all, that advertising exists as little as it does. We trust it will not increase. Its decline and absence will mark a growth in the scientific standing of veterinary medicine, and in the respect felt for it by its practitioners.

To those who contend for advertising, we would admit this. There may be occasions when the putting a plain card announcement in local journals is justifiable. Itinerancy among veterinary surgeons is at present, at times, almost unavoidable; and for these some card announcement is perhaps allowable.

The Mississippi State Medical Association held its fourteenth annual meeting at Winona on the 6th ult., the President, Dr. W. G. Hyer, in the chair. Over sixty members were present, and a large number of new members were elected. About a dozen papers were read, some of them being highly interesting. A resolution was passed urging the appointment of medical men as coroners instead of laymen, as is now done.

The following officers were elected for the ensuing year: President, Dr. B. F. Ward; four Vice-Presidents; Recording Secretary, Dr. Wirt Johnson, of Jackson; Corresponding Secretary, Dr. M. S. Craft, of Jackson; Orator, Dr. F. E. Daniel; Treasurer, Dr. G. K. Harrington. The Society adjourned, to meet the next year at Oxford.

The meeting is said to have been a pleasant and fairly successful one.

The Bad After-Effects of Opium are said to be much lessened by combining it with concentrated spirits of nitre.

Quinine from Coal-tar.—A firm in this city is said to have applied for a patent for manufacturing quinine out of coal-tar.

An Action for Libel brought against the *British Medical Journal* terminated recently in a disagreement of the jury, but the evidence was strongly in favor of the *Journal*.

Original Lectures.

TYPHUS FEVER.

By ALFRED L. LOOMIS, M.D.,

PROFESSOR OF PATHOLOGY AND PRACTICE OF MEDICINE IN THE UNIVERSITY OF THE CITY OF NEW YORK.

(Phonographically reported for THE MEDICAL RECORD.)

LECTURE IV.

At my last lecture I spoke to you of the preventive or prophylactic treatment of typhus fever; I propose to speak to-day of its medicinal, or curative treatment, as it is sometimes called. Typhus fever is ushered in by such violent symptoms, the patient is so severely ill during the first few days of the disease, that one is tempted to resort to heroic measures, and it was on this account that heroic antiphlogistic methods were at one time employed in its treatment. The flushed countenance, the suffused eyes, the rapid pulse, the hurried respirations, the intense pain in the head, and the high temperature, seem to indicate some of the measures which have been recognized as having power over inflammatory diseases. Consequently, typhus fever has been treated by bloodletting, by antimony, and by all those measures which have been classed under the head of antiphlogistics. Dr. Tweedie, who at the time of writing his work on typhus fever, probably had as large an experience in its treatment as any one, states that he had at one time for years treated typhus patients heroically by antiphlogistic measures, yet, during the last ten or fifteen years he had not seen a case in which he dared to resort to a single antiphlogistic measure.

It should be remembered that the cause of the active symptoms is a poison circulating in the blood, and that this poison acts primarily and principally upon the nerve-centres, and thus causes the urgent phenomena which mark the ushering-in stage of the disease; and it should be remembered, also, that as yet we know of no means of eliminating this poison from the body after its introduction; we know of no measure that will control the active process of the disease, or that will, to any great degree, mitigate its severity. Typhus poison cannot be bled out of the system; it cannot be purged out; it cannot be vomited out. When the characteristic phenomena of the disease are present the poison is already active, and it will continue to act until the time shall have been reached when it has finished its work. It is a self-limiting fever, and, as in all self-limiting diseases, we are powerless to shorten its duration, or to prevent its development after the poison has once produced its characteristic phenomena.

In considering the medicinal treatment of typhus fever, the first question which presents itself is, Have we not some agent that will neutralize this poison? At one time it was believed that the mineral acids had a neutralizing power over typhus poison, and it was accordingly so treated by those who held this belief. Of the different forms of mineral acids, the phosphoric was, perhaps, used most. I remember the time when we gave dilute phosphoric acid to all typhus patients; but experience has taught us that none of the mineral acids have power to neutralize the poison of typhus fever. Later on, carbolic acid, and other disinfectants were employed for the same purpose, more recently salicylic acid has been used as a neutralizing agent to the poison of typhus fever. None of these, however have stood the test of experience, and there are few physicians to-day, who have any faith in their neutralizing power. We do know, however, that when fresh air circulates freely about a patient with typhus fever the infectious power of the disease is diminished, so that an unprotected person may come near to the infected without contracting the disease. Fresh air, therefore, has power to neutralize the poison outside of the body; may it not have that power when introduced abundantly into the body; with this in view, patients have been made to breathe oxygen gas, with the hope that it might act as a neutralizing agent, and it is surprising how it often relieves the cyanosis, causes the dusky hue of the skin to disappear, and perhaps awakens the patient from a condition of coma; but this change is only temporary; the gas very soon loses its power to relieve these unpleasant phenomena of the disease; certainly it soon loses its power, if it has any, to neutralize the poison. I do, however, believe that a large amount of pure fresh air thrown about the patient, and inhaled, has the power, to a limited extent, of neutralizing the poison, and I believe this, not merely from a theoretical standpoint, but from clinical observation. I have seen many instances in which patients, taken from confined rooms in tenement houses on the third or fourth day of the fever, in whom there was a dusky countenance, a rapid pulse, a high temperature, a tendency to coma, and all the indications of approaching death, after being placed in tents on Blackwell's Island, where fresh air could circulate freely about them, within twenty-four hours lost their dusky, blue appearance, the pulse becoming less frequent, and they would arouse from their comatose state, and apparently start on the road to convalescence. Having seen this change take place in not one case only, but in many, I am led to the conclusion that it is due to the neutralizing power of fresh air over the poison; if I were called upon to designate the agent which I believed to have a neutralizing power over typhus fever poison, I should say fresh air; not such, however, as you get in a fairly ventilated room, however large the room may be; but that freedom of fresh air which one gets in tents. No substantial building has been constructed which can be so thoroughly ventilated as to give that free entrance and exit of fresh air which is found in tents. It is important, therefore, that typhus fever should be treated in tents.

There are two things which it seems to me of the greatest importance to be accomplished in the treatment of this fever, the first *is the reduction of temperature;* the second, *the sustaining of the heart-power.* Having placed our patients in tents twenty feet square, not more than half a dozen in each tent, the next thing to be done is to reduce the temperature. Now, there are two great antipyretics, viz.: the application of cold to the surface of the body and the administration of antipyretic doses of quinine.

In reducing temperature by applying cold to the surface in typhus fever, one needs to exercise the greatest care and judgment. There are three methods of its application: First, the cold bath; second, the cold pack; and third, cold sponging. The cold bath should be employed only during the first week of the fever, patients do not bear it well during the second week. If by the second day the temperature reaches 105° or 106°, place the patient in a bath, the tem-

perature of which is at least ten degrees below that of his body, and then gradually reduce it still slower by the addition of either cold water or ice to 68° F., some say as low as 60°. Having reduced the temperature of the bath to 70°, that of the patient will begin to fall, and it will continue to fall, sometimes rapidly, sometimes slowly, until it reaches 102° or 101°, the patient should then be removed from the bath and the surface dried, and the patient allowed to remain quietly in bed until the temperature again rises to 105° or 106°. Now, the application of cold to the surface of the body for the reduction of the temperature is no new chapter in the history of medicine. Dr. Currie, of London, employed it more than a century ago in the treatment of fever, and he demonstrated plainly that it could be used with success, the difficulty then being that there was no reliable guide as to the extent of the reduction. Sometimes he would reduce the temperature below the point from which rallying was possible, consequently the method was not extensively resorted to and fell into disuse. But now we have the thermometer, by which we can determine exactly the effects of the cold, which renders it safe to employ this powerful measure in the reduction of temperature.

While the body is in the cold bath, ice-bags should be placed about the head so as to get the effects of cold upon it as well as upon the body.

Now, if a patient with typhus fever have a very rapid pulse, a very high temperature, a flushed face, active delirium, the poison seeming to have, as it were, an irritating effect upon the nerve-centres, cold will, in the majority of instances, be well borne and be of service. If, however, the patient be dull, stupid, presenting evidence of great cerebral disturbance, that disturbance tending to a condition of coma, you will find that the effect of the cold bath is not favorable, it does not give relief, and may do great harm. And after the first week, when there is danger of heart-failure, when the temperature remains perhaps at the point which it reached on the third day, but the pulse runs up to 140° or 150°, and indicates great feebleness of heart-power, cold will do harm; if it be necessary to resort to an antipyretic, under such circumstances quinine will be found safer and of greater service than cold.

If, after reducing the temperature by the use of the cold bath it rapidly rise again, and the bath fails to control it, you will find that the antipyretic effect of the bath will be greatly increased and rendered more permanent by antipyretic doses of quinine.

If for any reason the cold bath cannot be employed, the cold pack may be of service. It is not so powerful for the reduction of the temperature as is the cold bath, nor is it so apt to do harm. The cold pack is applied by wrapping about the body of the patient a sheet wet in water of a temperature of 102° or 103°, and over this another sheet wet in ice-cold water, and as the outer one becomes warm, apply others until the temperature falls to the point desired. In this way you will be able, in the majority of instances, to reduce the temperature as low as by any other means, certainly as low as is desirable. For young patients the cold pack is preferable to the cold bath. The same is true regarding old people. Persons over sixty or seventy years of age do not bear the application of cold to the surface well. It is in young subjects that cold is most admissible and seems to act most beneficially as an antipyretic.

If quinine is used for its antipyretic effects, it should be given in large doses—twenty or thirty grains within an hour and a half—if it act antipyretically the temperature will begin to fall within three hours after its administration, and it will continue to fall for a period of five, six, or more hours, when it will remain stationary a short time and then slowly rise again, and after twenty-four or thirty-six hours it may be necessary to administer another antipyretic dose of the drug. Your object, in the antipyretic treatment of typhus, is to keep the temperature below 102° or 103°. If in any given case the temperature at no time goes above 104°, it will not be necessary to resort to any antipyretic measure. It is the higher grades of temperature that seem to do harm.

Sooner or later, in the severer forms of this disease, signs of heart-failure will begin to develop, as indicated by a feeble and irregular pulse; perhaps by distinct intermissions and by loss of the first sound of the heart. The question will then arise, What can be done to sustain the heart? This brings us to the use of alcohol. The alcoholic plan of treatment in this fever was adopted more than forty years ago. Before this time the profession starved fever. Under the teaching and experience of Graves and Stokes the starvation and depressing plan of treatment was abandoned, and the stimulating and restorative plan was commenced soon. As is always the case, the profession swung from one extreme to the other, and free stimulation was resorted to. Patients were stimulated from the very onset of the fever. When I first saw typhus fever it was the custom to stimulate patients *ad libitum*, the rule being to administer stimulants until the pulse was controlled, and to increase the quantity as the pulse became more and more irregular, and if it could not be controlled the stimulants were to be given in large quantities during the whole course of the fever. In the early part of my professional life I believed that if a typhus patient should die without free stimulation the one attending him would be responsible for his death. Gradually some of the more experienced of the profession became convinced that the alcoholic plan of treatment had been carried to excess. The quantity of stimulants administered to typhus patients then became less, but it was still very considerable. When typhus fever was treated in the wards of Bellevue Hospital, in 1861–62, patients who were severely ill received twenty or thirty ounces of whiskey in the twenty-four hours. This continued to be the rule until patients were removed to tents on Blackwell's Island, of which I obtained charge, having the desire to test the question whether stimulants were really indicated to the extent to which they had been used. I had for some time doubted their efficacy. Five hundred patients, of the same class that were treated in Bellevue Hospital, were treated in the tents under my charge, and I made a very positive rule that no patient removed to the tents should receive alcoholic stimulants. My house physician had had the fever, and was treated under the stimulating plan, and he believed in it, and when I proposed that we use no stimulants in our tents, he said, "That will not last long; the rate of mortality will stop it." Nevertheless, we tested it. The death-rate among the same class of patients in Bellevue Hospital was one in six, and I remember that on the first few days after we took charge of the tents, when patients were brought in in a comatose condition, with a mottled surface, a dusky countenance, great frequency and feebleness of the pulse, and a high temperature, my house physician said, "If we do not give this man stimulants he will be dead before morning." I remember dis-

tinctly two or three of the first very severe cases that came into the tents, and at my visit the next day after their admission I was astonished to find that the duskiness of the countenance had disappeared, and their general condition greatly improved, and continued to improve until complete recovery was reached. Now this, gentlemen, was going as nearly to the extreme in one direction as had been done in the opposite, and there was no excuse for it, excepting that if stimulants had been allowed in some instances we could not tell to what extent good results might be due to them, and the plan would not have been thoroughly tested. Doubtless there were cases in the tents which would have been benefited by stimulants, yet the death-rate there was only one in sixteen as contrasted with one in six in Bellevue Hospital. I would say, however, that I do not believe the improvement was due in so great a degree to the non-administration of stimulants, as to the fact that there was plenty of fresh air around the patients. They had ice, water, milk, and fresh air, and they got well. Now, stimulants are, unquestionably of benefit in typhus fever in old and feeble persons, but they are rarely, if ever, required in the young. Patients often recover from an apparently hopeless condition (in which the pulse is irregular and perhaps intermittent) without stimulants, and I am confident that stimulants have no power to sustain the heart's power, when the heart failure is due to the direct effect of the typhus poison; but when the heart becomes feeble from the high temperature, or from the ill condition of the patient prior to the attack of fever, stimulants will be of service. A man, for instance, who has been addicted to the use of alcoholic liquors, will, as a rule, require stimulants. It seems to me, from observations which I have made in typhus fever, that there are two causes of heart-failure: first, by the influence of the poison primarily upon the nerve-centres, causing a loss of nerve-power in the heart, or a disturbance which makes it feeble and irregular, in which case stimulants are of no service; secondly, heart-failure the result of high temperature. In this case, and in cases where heart-failure is due to the condition of the patient prior to the fever, I believe you will find moderate stimulation of service during the second week. When you have once commenced the administration of stimulants it is not always necessary that they should be long continued. There are chasms over which patients with typhus fever, in order to recover, have to pass. And you may, by the judicious administration of stimulants, carry them over, when otherwise they would sink; but here you must, as in all other cases calling for stimulants, exercise judgment. The longer I practice medicine the more firmly am I convinced that "brains" constitute the most important agent in the treatment of disease. There should be judgment to know just when and in what quantities to give stimulants, and how long to continue their use.

In subjects under twenty years of age, who are not of intemperate habits, stimulants are rarely, if ever, required. In the old and feeble there are times in the course of the fever when their use in moderate quantities seems to be called for. A copious, dark eruption, with petechial spots, with a coldness of the extremities, especially indicate the use of stimulants, but even in those cases their use must not be continued after the disappearance of the urgent symptoms which called for their use. If there is headache, active delirium, with scanty urine, a very high temperature, great restlessness, and a very rapid pulse, alcoholic stimulants will, in the majority of instances, not only be of no benefit, but actually harmful.

You will remember that I spoke to you of the importance, in administering alcohol, of watching carefully the effects of the first few doses; if you find the pulse becoming more and more frequent, the delirium more active, the temperature rising higher, greater restlessness, or deeper coma—in other words, if the cerebral symptoms are increased, you may be sure that stimulants are doing harm; if, on the other hand, the blueness of the extremities, the coldness of the surface, the darkness of the eruption, the brown tongue, the rapid pulse, and other evidences of great enfeeblement are lessened, you may be certain that your patient is being benefited by the use of alcohol. There are times in the history of many cases in adults and old persons at which perhaps a few doses only of stimulants are required to carry them over the critical point; but, as I said before, careful observation of symptoms, and cool, sound judgment in weighing their importance as bearing on the indications and contraindications of stimulants is called for as much, if not more, in typhus fever than in any other disease.

The treatment of special symptoms requires only passing notice. The two principal conditions that are likely to call for special attention are, as said before, high temperature and failing strength, both of these objects are accomplished, in the majority of instances, by free exposure to cool air, sponging the surface of the body with water, or the internal administration of antipyretic doses of quinine. Sleeplessness, however, sometimes becomes a very distressing symptom. When one is struggling with disease, the system being nearly overwhelmed with the poison, sleep is required even more than after violent physical exercise, and we all know how strongly prolonged physical exercise demands sleep; indeed, it cannot be avoided, and will be taken against the efforts of the individual to keep awake. If, then, in his struggles against the effects of the typhus poison the patient is kept awake for days and nights, his chances of recovery must be greatly diminished. It is for this reason that coma vigil, which is a kind of sleeplessness, is recognized as a most unfavorable symptom. It is wonderful how an abundance of fresh air will often produce sleep in these patients. I have seen patients in the wildest delirium, perhaps in a strait jacket on account of their violence, a few hours after they were placed in tents, drop off into a sound refreshing sleep. If, however, under the most favorable surroundings, sleep is not obtained, opium should be resorted to. There are no special contraindications to the use of opium in typhus fever, and it will, in the majority of instances, if given freely, produce sleep, at least to a sufficient degree to give rest to the body. Some have proposed the use of chloral in the place of opium; my experience, however, leads me to believe that chloral produces a depressing effect upon the already enfeebled heart; certain am I that it has not the same sustaining power over the heart which opium possesses, and it does not produce that perfect rest which can be obtained by full doses of opium. But in alcoholic subjects who, during the developing period of typhus fever, have delirium tremens, chloral may be of benefit, for it seems to have power to quiet the disturbances of acute alcoholismus when opium fails.

The subsultus and muscular tremor (a prominent symptom in some cases) will be more certainly relieved by hypodermic injections of sulphuric ether than by anything which I have used. In some

instances extreme muscular tremor and nervous depression seem to wear out the patient, and something is imperiously demanded which will give rest. The Germans have proposed the use, under such circumstances, of musk and camphor. I have used them quite freely, but have not obtained much benefit from them. I believe musk has no power whatever to quiet muscular tremor.

When the headache is very severe it can, in the majority of instances, be relieved by the application of cold to the head, and when it passes on to stupor or to coma the patient can often be aroused by applying a blister to the nape of the neck, after which he may go on to convalescence.

The proper regulation of the diet in typhus fever is, perhaps, of as much importance as the reduction of the temperature and the sustaining of the heart-power. The food should be fluid, and the digestive powers of the patient should not be crowded or overtaxed. Of all articles of diet milk is best; it most thoroughly nourishes the patient, and is most easily assimilated, but if you give it in too large quantities it oppresses the patient, and does harm rather than good. Just as much milk should be given as can readily be disposed of, and it should be administered at regular intervals. Half a goblet of milk may be given every two hours. It has not seemed to me that anything is gained by combining with it either meat juices, animal broths, or any of the farinaceous preparations.

Place your patients, then, in tents where there shall be a free circulation of pure air; give them freely of ice to cool the mouth; milk at regular intervals in such quantities as can readily be digested; reduce the temperature by the application of cold to the surface, and in most cases you will have done all that can be done for a typhus patient. When special symptoms become troublesome you may resort to the other remedies of which I have spoken; but please to remember this, that nothing can do more harm than the indiscriminate use of stimulation.

I have here some pathological specimens, which, although not connected with typhus fever, may prove of interest to you. You will remember that at our clinic in Bellevue Hospital, a week ago, we had before us an old woman whose surface was of a yellow hue, who was vomiting, whose face was œdematous, and whose abdomen was distended with fluid, who had been gradually losing flesh, and who was, in short, one of those "rounders" who are constantly returning to our large hospitals to be cared for. Here are her kidneys. One of them is a beautiful specimen of the small granular kidney. The capsule is adherent, the cortical portion is almost entirely obliterated, the medullary portion only is left. It is somewhat stained with bile, for you remember that she was jaundiced. Had both her kidneys been like this one she would not have been alive for us to see her the other day. The other kidney, as you see, is not so extensively diseased; it is in a condition to do a certain amount of work. You will notice that there is a loss of cortical substance; that the capsule is firmly adherent, and it presents the appearance of the earlier or commencing stage of the same process, known by the name of chronic interstitial nephritis. It is not, strictly speaking, a cirrhotic kidney. Although there is a large increase in its connective tissue, at the same time there are changes in the glandular structure of the organ. These are specimens of that form of kidney disease which you so often see in cases of chronic alcoholismus, where the subject lives past middle life. There is some hypertrophy and dilatation of the left ventricle of the heart. The stomach shows that intensely congested and tumefied appearance which is often found in chronic alcoholic gastritis. Its walls are thickened; in a word, a "rum stomach." It does not, however, present the appearance which is so often pictured in the temperance lecturer's plates, for they have a good deal of fire and brimstone in them. This stomach is changed in color; it is thickened and tumefied, and its mucous surface covered with tenacious mucus. The liver has undergone fatty infiltration and connective-tissue change; it is the seat of a cirrhotic and fatty degenerative process combined, and is such a liver as you are likely to meet with in old alcoholic subjects. It has lost its anatomical outlines. The surface is roughened, and it contains less than the normal quantity of blood. It has the firm, hard feel which is characteristic of the cirrhotic change met with in the so-called "hobnail liver," but it has not the hobnail appearance, although the changes which are characteristic of the hobnail liver have gone on to a considerable extent.

Here are some specimens from another patient, which are particularly interesting to us when taken in connection with the history. The spleen, you will notice, is soft and disorganized. The kidneys are enlarged, and at the time the autopsy was made they were intensely engorged. You notice they present the appearance of what is called the large white kidney. They are increased in size, the capsule is somewhat adherent, the cut surface is smooth, the cortical substance is entirely obliterated, and there is granular degeneration between the Malpighian pyramids; in short, it has the ordinary appearances of the large granular kidney. The patient was a girl, twenty-two or twenty-three years of age, who was brought into the hospital in convulsions. The convulsions were recurring at short intervals. They were readily controlled by the use of morphia, the first or second hypodermic injection checking them, I believe, entirely. During the four days that she was in the hospital her kidneys did not secrete a drop of urine. Such cases are rare. She first had convulsions, then passed into stupor, then into coma, and died from the direct effects of the urea upon her nervous centres. The disorganization of the spleen was due simply to the changes which take place in acute uræmia. During the last day or two of her life there was considerable tympanitis and tenderness on the right side of the abdomen, and rigidity of the abdominal muscles. The patient was in a state of stupor; we thought that there was a localized peritonitis, but we were unable to make a positive diagnosis. There was no evidence of injury to the abdominal walls. Here is the portion of the abdominal wall at the point of greatest tenderness. You notice that it contains between its muscles extravasated blood, and on the inner surface there are the exudations of peritonitis. There was no agglutination of the intestines; the peritonitis was localized, and confined to a portion covering the abdominal walls. The case should have been one for the coroner, for it was afterward learned that she had been kicked in the abdomen by her husband. Owing to the fact that there was such a condition of the kidneys and entire suppression of urine, it could not be said that the peritonitis was the cause of her death; yet, it must be remembered that localized peritonitis sometimes, by reflex action, gives rise to suppression of urine. As I said before, suppression of urine for three or four days is a rare occurrence. I remember to have seen one patient in whom no

urine was secreted for eight days, at the end of which time the patient died with acute uræmic symptoms, but in that case also, the autopsy showed that there had been peritonitis, which was not recognized during life. On thinking about this, I do not remember to have seen a case of suppression of urine of four or five days' duration in which there was not peritonitis. Yet you see peritonitis often enough without suppression of urine; but if there exist a condition of the kidneys which favors suppression of urine I am inclined to think that the reflex irritation caused by acute peritonitis would tend to cause complete suppression. I may say that peritonitis as the result of blows is not very common. One may receive a severe blow upon the abdomen without having peritonitis excited. This patient's condition was such as favors the development of peritonitis, for the uræmic state is a predisposing cause of serous inflammations.

Original Communications.

SUB-HYOIDEAN PHARYNGOTOMY

FOR THE REMOVAL OF THE EPIGLOTTIS FOR EPITHELIOMA, WITH ILLUSTRATIVE CASE.*

By CLINTON WAGNER, M.D.,

NEW YORK.

PROFESSOR OF DISEASES OF THE THROAT, UNIVERSITY OF VERMONT; SENIOR PHYSICIAN TO THE METROPOLITAN THROAT HOSPITAL; FELLOW NEW YORK ACADEMY OF MEDICINE, ETC.

J. U——, fifty-three years of age; occupation, chemist; large, well-developed; of excellent physique; florid complexion, called at my office for treatment on July 29, 1880. He gave the following account of himself to Dr. Howland, under whose treatment he temporarily placed himself: In February, 1880, he first experienced a sensation of uneasy tickling in the left side of the throat, and of something being lodged there. A few weeks later he suffered from pain, which was greatly increased during the act of swallowing. He had had no treatment but anodyne and astringent gargles from time to time. A laryngoscopic examination disclosed a large nodulated growth on the upper surface of the epiglottis, arising from the left side. The interior of the larynx, with the exception of slight hyperæmia, was quite normal in appearance. Dr. Whitfield, Ward of the Metropolitan Throat Hospital, also saw the case, and as there was a history of syphilis, contracted in early youth, he was given potass. iodid., grs. xv., three times daily, which was gradually increased to grs. cl. in the twenty-four hours. In addition, local treatment of gargles and sprays of carbolic acid, and brush applications of zinci chlor., grs. xx. to ℥ i., and occasional insufflations of iodoform.

I saw him for the first time on September 1st, the date of my return, and was informed by Dr. Howland that the growth had increased to three times its original size. The whole of the anterior surface of the epiglottis was covered by an angry-looking, nodulated, fungoid vegetation; on the left side, near the free edge, there was slight ulceration, which showed a disposition to extend.

No evidence of lung complication.

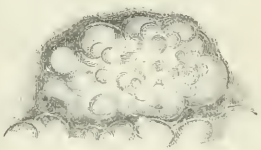
The rapid and marked aggravation of the symptoms, and actual increase in the size of the growth which followed the use of the iodide of potassium, together with the pain, which at this time became a very prominent symptom, especially during the act of swallowing, induced me to regard it as malignant. I informed him of my opinion, and discontinued the constitutional treatment.

Upon his second visit to me I proposed the removal of the epiglottis, but as the operation was unusual, and perhaps would involve life, I suggested that he should consult Drs. Lefferts and Lincoln, for the purpose of obtaining their opinion as to the character of the tumor, and the expediency of the operation.

Neither of the gentlemen agreed with me as to the malignancy of the growth, and suggested continuing for a while the anti-syphilitic treatment, and, in case of my concurring, they expressed a desire to examine him later. The tumor grew rapidly under the renewal of the treatment, and upon a second examination, after an interval of ten days, they agreed that the operation could no longer be prudently delayed.

On October 4th, the patient was admitted into the Metropolitan Throat Hospital for operation.

The accompanying woodcut, from a drawing made



by Dr. C. Heitzman, accurately represents the epiglottis as it appeared at that time. Ether was administered, and the epiglottis removed by a longitudinal incision extending from the hyoid bone, to the thyroid notch. Malgaigne recommends the transverse incision along the inferior border of the hyoid bone, through the skin, superficial fascia, and inner half of the sterno-hyoid muscles, claiming that the folds of the skin in this part hinder reunion of longitudinal wounds.

I then introduced my knife into the wound thus made, and severed the attachment of the epiglottis to the thyroid. By the action of the tongue, the epiglottis was drawn upward and forward, and I had great difficulty, by reason of the narrowness of the incision and the limited space it gave me, in recognizing the severed valve (covered as it was by growth) from the surrounding parts. It was so completely softened by destructive ulceration, that it easily tore when seized by the forceps. It became necessary for an assistant to force the epiglottis downward and backward by means of his index finger, introduced through the mouth. Respiration was suddenly suspended. I quickly passed through the incision and over the thyroid notch into the larynx, and between the cords, one of Schroetter's bougies, used in the treatment of laryngeal stenosis. By blowing through this, respiration was rapidly re-established.

The wound was closed by three sutures; no unfavorable constitutional symptoms were developed nor unusual shock followed, and he was able to take food without annoyance, except from an irritating cough.

On the third day a laryngoscopic examination was made. On what appeared to be a portion of the left glosso-epiglottic fold was observed a small nodulated mass resembling the tumor which had been removed. This increased daily in size, assuming to the eye the characteristics of the growth.

*Read before the American Laryngological Association, May 10, 1881.

On the twelfth day I determined to remove it. The longitudinal incision was laid open, and this I crossed by a transverse one extending along the inferior border of the hyoid bone, and dividing the inner half of the sterno-hyoid muscles, as recommended by Malgaigne. The two made a T-shaped incision, and gave a most excellent view of all the parts. The growth was thoroughly removed, and, by introducing the finger through the wound under the hyoid bone, and carrying it into the mouth and on to the superior surface of the tongue, the parts could be felt perfectly free of growth or any portion of the glosso-epiglottic folds.

A laryngoscopic examination, made several days after the operation, gave an excellent view of the interior of the larynx.

On the twelfth day the growth reappeared, starting apparently from what was its original site on the left side at the base of the tongue, near the glosso-epiglottic fold. It gradually extended upward and forward from left to right, attacking in its march the tongue itself, and, as it increased, it assnmed the general shape of the epiglottis.

The galvano-cautery was applied freely to the fungoid vegetations whenever they appeared, at intervals of from a week to ten days; slight bleeding always followed its application, but instead of arresting, it served to make the proliferations more luxuriant.

The cautery was discontinued about the middle of November, and the patient discharged from hospital, and there was every indication that the pharynx and interior of the larynx would shortly be attacked by the disease. He reported as an outpatient about once in ten days.

Early in December he was ordered Chian turpentine, one grain three times daily, in pills made according to Clay's formula. After taking this drug for about three months, the dose having been increased to grs. iss. three times daily, there seemed to be an actual arrest of the disease—certainly its destructive process was not so rapid; small portions of slough came away from time to time, revealing healthy-looking granulations. Whether or not this improvement could be ascribed to the drug, I cannot, in the face of the negative results from its administration by others, say; but the improvement, if such it really was, did not last long. Since early in April the disease has slowly, but steadily, advanced; and on May 7th, when I last saw him, a mass, as large as a walnut, at the base of the tongue completely shut from view the larynx; but, as far as I can determine, it is extending downward into the larynx, and has already attacked the pharynx; he has almost constant cough, pain, and dyspnœa; and, although he still takes sufficient food to maintain strength, dysphagia is a very marked symptom.

If called upon again to excise the epiglottis, I should prefer the T-shaped incision; neither the longitudinal nor high transverse alone allow of sufficient space for the removal of the valve, if swollen and thickened by disease. Excision of the entire organ *per vias naturales* is impracticable.

The special points of interest in this case are: First, diagnosis, which admitted of doubt by reason of the history of syphilis; this uncertainty was removed from my mind after a thorough trial of antisyphilitic remedies, the peculiar nodulated appearance of the growth was unlike any case of tertiary syphilis that had ever come under my observation.

Second, rapid recurrence of the growth after removal and apparent arrest of its progress through Chian turpentine.

Dr. C. Heitzman, to whom the growth was submitted for microscopical examination, made the following report:

"The mucous layer of the epiglottis is considerably widened, both the rete mucosum and the connective tissue increased in size. From the rete mucosum there are running into the connective tissue very large, peg-like elongations, branching and anastomosing. In every peg there are concentric nests of epithelia, greatly varying in size. The subjacent connective tissue is freely supplied with blood-vessels, and crowded with small, globular elements down to the perichondrium. The reticular cartilage is unchanged.

"*Diagnosis:* Cancer of epiglottis, of the variety termed epithelioma. The heavy infiltration of the connective tissue with small medullary elements indicate a very malignant, quickly growing cancer."

BIBLIOGRAPHY OF EXCISION OF THE GLOTTIS.

The following encyclopædias of surgical literature have been consulted, with the results annexed hereto:

Archives Générales de Médicine, from its foundation in 1823 to the present date, without the record of an excision of this organ.

Annales d'Oreille et du Larynx, from its foundation in 1875 to 1880, with a similar result.

Gazette Hebdomadaire, a complete register, without an instance of extirpation of the epiglottis.

Medico-Chirurgical Review, afterward the *British Medical and Surgical Review*, from its beginning in 1820 to 1877, with a similar result.

"Transactions of the Medico-Chirurgical Society of Great Britain," from its origin in 1809 to 1880, without an instance on record.

London *Lancet*, from its foundation in 1824 to 1881. In vol. i., of 1868, page 530, is a description, by Dr. Hermann Beigel, of two cases of "loss of the epiglottis without pain, or loss of speech, or inconvenience in deglutition." These will be alluded to by way of correction of Dr. William Porter's reference to them as cases of removal of the epiglottis in their proper place.

Schmidt's Jahrbücher, from its foundation to the present year, without a single recorded case of removal of the organ.

"Transactions of the Pathological Society of London," from their first volume in 1846 to 1879. These "Transactions" furnish many more data of fatal and recovered cases than any of the preceding; but they do not produce an instance of exsection of the organ. However, akin to it, is the description, in vol. xxi., page 51, March 6, 1870, by Dr. Morrel Mackenzie, of the removal of a "large sarcomatous growth from under-surface of the epiglottis," after a tracheotomy made seven weeks previously. Patient was a retired officer of the Indian army, fifty-one years of age, who had had troublesome cough, aphonia, and dysphagia. Twenty years before, patient had contracted syphilis, one of whose results was superficial ulceration and slight thickening of the left side of the epiglottis. It responded to treatment of iodide of potassium and local astringents. The growth was mammillated, pale, and of the size of a cherry; weighed fifty grains, was one and a fourth inch long by three-fourths of an inch wide. Patient recovered. The pathological interest in the case was the extreme rapidity of its production, and its probable dependence on the syphilitic repletion.

Dr. Prat, of the French navy, removed a growth from the under-surface of the epiglottis after the description of the operation by Malgaigne. This case is described by Mackenzie in his new work, at page 331.

In the *American Journal of Medical Sciences*, April, 1879, Dr. William Porter has an article on "Excision of the Epiglottis." Dr. Porter states three theses, one of which is, that removal of the epiglottis does not necessarily, directly or indirectly, threaten either the life or comfort of the patient. Evidence of its loss is given by its less distinct vocal sounds of "a" and "e;" the voice becomes rough and harsh, especially if the edge of the cartilage is irregular. Dr. Porter adduces the two well-known cases of Baron Larrey—that of General Murat and of the Egyptian soldier, both of whom lost the epiglottis by the direct passage of a musket-ball. He adduces a third case of Dr. Bauer, of Indian Territory, where the epiglottis was entirely ulcerated away. In this last case the voice had a hissing sound, and words were indistinct. He further details two other cases in his own practice, where syphilitic ulceration destroyed the entire epiglottis; in both, different qualities of voice were preserved, while in one the voice was normal. In a third case in his own practice, he found a tumor of the epiglottis, which had existed about five months. His experience, as to voice and swallowing, with his first two cases, led him to consider the propriety of surgical removal of the growth, which occupied fully three-fourths of the edge of the epiglottis. Prophylactic tracheotomy was unnecessary, as the larynx was under good control. The growth was removed *per vias naturales* with antero posterior angular forceps, having a cutting edge. The succeeding profuse granulations were checked with nitrate of silver, and the edge healed in a fortnight. Just before the operation, deglutition was very difficult, and six weeks subsequent to it there was no functional disturbance. The growth was Virchow's enchondroma. Cartilage cells in groups in a fibrous reticulum were everywhere to be seen. The growth extended through the mucous membrane, and was directly connected to the epiglottidean cartilage, but there was no degeneration of tumor substance. Dr. Porter incorrectly reports Beigel's two cases as cases of removal of the epiglottis (they were, as reported by Beigel himself, cases of ulceration of the whole epiglottis), and concludes, very properly, from his own and Beigel's experience that the removal of a benign or malignant growth, not involving adjacent parts, is both practicable and justifiable.

FUNCTIONS OF THE EPIGLOTTIS.

In connection with this case, I regard it fitting to allude somewhat in detail to the rôle which the epiglottis plays in deglutition and the formation of the voice. One of the best, as well as one of the latest, contributions to the literature of this department, is the essay of G. L. Walton on this subject, being a resume of his experiments in the laboratory of Dr. H. P. Bowditch, of Harvard Medical School.* He presents two theses. 1. The epiglottis is not essential to deglutition, even of liquids. 2. It is an important agent in the modification of the voice. Longet's experiments, taken from the *Traité de Physiologie*, tome i., page 106, are detailed—who concluded that the epiglottis played an important part in deglutition, especially of fluids. Magendie's experiments do not coincide as to results with those of Longet, and the latter affirms that Magendie's exsections of the epiglottis in the animals employed were incomplete. Walton removed, by the mouth, the epiglottis of six cats and dogs, and found that solids and liquids did not enter the larynx. He found, also, that too great a section of the lips (glasso-epiglottic folds) may induce cough. Moura says the lower one-third of the human epiglottis is necessary to deglutition, which he proved by drawing up and attaching the epiglottis to the tongue, when swallowing of liquids was impossible without cough.

As to the second thesis—that the epiglottis modifies the voice, it is well-known that this organ occupies different positions during vocalization, involving changes in *pitch*, *quality*, and *intensity*. Moura, Garcia, Magendie, and Czermak all attest to this. Merkel and J. Müller affirm that the pitch is lowered by the pressing down of the epiglottis on the larynx. It is an undoubted fact that defective voice has followed ossification and other lesions of the epiglottis; but at the same time it is a subject of pertinent inquiry, whether or no the diseased process has extended further than the epiglottis. As to *pitch*, Walton finds the epiglottis a "tremor," also a "resonating plate." Musical sounds are incomplete, unless the original vibrations are repeated by a solid body. This is seen in the violin and trumpet. Walton and Bowditch attached a human larynx to an air-blast, thus producing an artificial voice, and showed that every change of position of the epiglottis changed the pitch of the note. It is to be noted here, that when the epiglottis was stretched tense, the tone became very brilliant; and when it was pushed back by the tongue toward the laryngeal aperture, it became sombre. As to *intensity*, an increased blast of air produced an increased tension of the vocal chords; hence, an elevation of pitch, which is a well-known fact in physics.

In birds, the epiglottis is wanting, but their deglutition is unaffected by its absence; but how do singing-birds so well modify the voice without the epiglottis? In these animals there is a "lower glottis" at the bifurcation of the bronchi; at this point there is a membrana, to which Owen has given the name "membrana semilunaris;" this membrane ascends into the trachea, and ends in a free margin. It attains its highest development in singing birds, and, being vibratile, gives a thrill to the voice; hence its necessity, as a factor in the modification of the voice.

I desire to further adduce two pathological references to the functions of the epiglottis, and will then bring this lengthy paper to a close. In *Schmidt's Jahrbücher*, vols. cxxxvii. and cxxxviii., 1868, C. J. Eberth notes the autopsy of a woman who died from cholera, and in whom was a total defect of the epiglottis. Search for tubercular syphilis and kindred processes were in vain, as a cause of the defect. The protocol revealed nothing to show that in life the patient had suffered in any way from its loss.

In the "Transactions of the Pathological Society of London," vol. xiv., 1863, Dr. Gibb reports, May 19, a case of "total loss of the epiglottis with aphonia from ulceration of the larynx and pharynx." Epiglottis was wholly destroyed to its root, with adjacent ulceration of the aryteno-epiglottic folds. Astringent and soothing gargles, solution of nitrate of silver and iodide of zinc, restored healthy granula-

* Journal of Physiology, vol. i., Nos. 4 and 5.

tions, and the patient recovered voice and easy deglutition for both fluids and solids.

The operation was witnessed by Drs. Henry, Lincoln, Pooley, Ward, Peck, Howland, Hope, and several others.

To Dr. E. S. Peck, of the Metropolitan Throat Hospital, I am indebted for the exhaustive research into the bibliography of the subject.

ONE PHASE OF THE GERM THEORY.

By E. F. BRUSH, M.D.,

FELLOW OF THE NEW YORK ACADEMY OF MEDICINE, MEMBER OF THE WESTCHESTER COUNTY MEDICAL SOCIETY, ETC.

(Read at the Yonkers Medical Society, April 22, 1881.)

MR. PRESIDENT AND GENTLEMEN: With your permission, I propose this evening, in the words of the great English surgeon, Erichsen, "to drift into the general and hazy atmosphere of the germ theory;" not that I intend to make it more hazy, as seems to have been done at a recent meeting of the British Medical Association, where the discussion provoked the remark I have just quoted.

We find, at the present day, very heated disputes in the medical journals, and at meetings of medical associations, for and against the antiseptic treatment of wounds. Mr. Lister, who seems to be the father of antiseptic surgery as a branch of the germ theory, made, at the meeting above-mentioned, some observations to which I beg to call your attention, for they show with what little comprehension of the subject, men of the highest repute approach it.

Mr. Lister took antiseptically, from the jugular vein of an ox, a quantity of blood, which he distributed into a number of carefully purified and close-stoppered bottles, and kept for seven days at a temperature of 99½° F. At the end of this time, on opening the bottles, he found that there was no evidence of putrefaction. From this experiment he concluded that, "at all events, blood had not the power of putrefying per se."

It is strange that any surgeon should think it necessary to institute an experiment to prove such a fact. If blood had "the power of putrefying per se," what a terrible injury any extravasation of blood in any of the tissues would become!

Mr. Lister's apparatus of stoppered bottles, purified by heat at 300° F., is quite superfluous. The putrefactive plant will not grow in blood, or in any other fluid, until the blood or fluid becomes a fertile soil for the growth of *bacteria termo*, and until the said *bacteria termo* is sown in the fertile soil.

Blood of itself is alkaline. As long as it remains alkaline, *bacteria termo* cannot grow in it; it must reach a certain degree of acidity, as one of its conditions, before it becomes a fertile soil for the putrefactive plant. This degree of acidity is brought about by the agency of another germ, and the change is as follows: Blood, when drawn from any animal, necessarily receives some dermal scales. With these resides the lactic ferment, the lactic being, under favorable circumstances, the most rapid and short-lived of the ferments. Warmth is one of these favorable circumstances, and hence the blood, when freshly drawn, is the right temperature for the maximum activity, and the whole rôle of the plant has been played before the blood becomes cool. When it has become cool, it is in a condition fit for the growth of the putrefactive plant, as far as the elementary constitution of the fluid is concerned. But to produce putrefactive fermentation we must have, first, *bacteria termo*, then a proper temperature, and plenty of oxygen.

To prove the above statements, I will now call your attention to some specimens that I produce, and to some experiments I have made. Here is a bottle containing blood drawn from an ox last November. It was rapidly defibrinated, and in it was sown *saccharomycetes cerevisii* with some cane sugar. Since November it has been kept for six weeks in an open vessel, in a temperature varying from just above freezing to 70° F. It was then bottled and stoppered with a loose cork, as you see, and kept in the cellar, the temperature ranging about 40° F. You will observe that it has no unpleasant odor, but if anything a pleasant one. The taste, to one not knowing it was blood, is rather vinous and agreeable.

The next specimen I show you is a bladder, into which, some time last fall, while the weather was warm, I placed four quarts of freshly drawn, defibrinated ox-blood, mixed like the other. You will observe that there is only a small quantity left, the rest having escaped by exosmosis. During all this time no unpleasant odor of putrefaction has been developed, and the outside of the bladder is covered with a thick mould. Inside, if I may judge of the specimen before you from my experience with others prepared in exactly the same way, we will find the blood perfectly without odor or disagreeable taste, thick, and treacly. Let me here say that in drawing this blood, and in placing it in the vessels, no extra precaution was used; the animal was simply stunned by a blow, and the blood from the large vessels in the neck allowed to flow into a large receiving-vessel. Indeed, the only precaution used was to avoid cutting the œsophagus, lest any of the contents of the stomach should escape into the blood.

In these experiments you will notice, in the first place, that in the warm blood I sowed *saccharomycetes*, this being more abundant than *vibrio lactic*. It prevented the formation of the acid, instead of which alcohol was formed, thus making the fluid an unfit menstruum for the growth of *bacteria termo*. You will also perceive on the surface of the bladder a growth to which I will hereafter call your attention.

Before I go any further, let me make plain the position I take as to *bacteria* and all changes attributed to *bacteria*. I think that many of the microscopic germs—*bacteria, micrococcus vibrio, spirachæte*, and the like—have been studied in a wrong light. These germs are not generated spontaneously in the system, nor can they grow except in a soil suitable to maintain them. This is brought about in the fluids of the body by disease, modification of nutrition, and so forth. Take as an illustration *bacteria anthracis*. This is one of the most settled species of *bacteria*, and is laid down by many authors as the special cause of *pustula maligna* and splenic fever. Now, M. Gignol, in a paper read before the French Academy, stated that motionless *bacilli*, identical with those found in *pustula maligna*, will be found in sixteen hours or less after death in the blood of animals asphyxiated by means of a charcoal fire. Dr. Lewis, of the Army Medical Department of India, while searching for some other forms, sent for some rats. Twenty-seven of them were placed by the rat-catcher in a close earthen-vessel, and, naturally, twenty-six died. Dr. Lewis examined, within six to eight hours after their capture, the blood and spleen of twenty of these rats, and in every case found numerous *bacilli*, identical in all respects, morphologically, with *bacillus anthrasis*. In other words, *bacillus anthrasis*

is not a cause of disease, but appears in the blood when disease has rendered it fit for its growth therein.

By reasoning from the above facts, I have arrived at a theory respecting diphtheria. It is unnecessary to remind you of the clinical history of this disease; it is sufficient to say that at its invasion there is a profound constitutional disturbance. No microscopist has ever claimed to have found *bacteria* associated with this form until the membrane is forming or formed. This membrane, it is known, is never found in closed cavities, but always in places exposed to the action of atmospheric air and excluded from the light. I now return to the bladder already mentioned. You will notice the membrane formed on the exterior. This cannot exist without the presence of oxygen and the absence of sunlight and the food formed by a mucosa ferment, and thus in all these respects it resembles the diphtheritic membrane. This would lead one to infer that, if both exist under similar circumstances, without regard to the soil on which they flourish, the mode of treatment which prevents or extinguishes the one will also prevent or extinguish the growth of the other. I will explain what this membrane on the bladder is: it is known to microscopists as *mycoderma aceti*, and belongs to the group of *microbacteria*. It exists on the surface of alcoholic fermentations when the fermentation has subsided; in other words, it forms on the surface of vats as a dry, wrinkled, velvety membrane, and must have for its existence oxygen and an absence of sunlight. It grows and multiplies very rapidly, and, during its growth transforms the alcohol into acetic acid. When the whole amount of alcohol in the vessel where it grows is converted into acetic acid, it ceases to grow on the surface, it contracts, becomes heavier, and, finally, sinks to the bottom. It then is known as *mycoderma vini*, and lives on the acid which it had formed while existing on the surface.

Having made numerous experiments in alcoholic fermentation, I was led to conduct the process in bladders. I found, by the formation of carbonic acid gas, that the vinous fermentation could be readily conducted in a bladder; but some time after the process subsided, when the bladders were opened and the contents examined, I was astonished to find no alcohol. I knew that to obtain absolute alcohol it was only necessary to hang up commercial alcohol in a bladder, and the water would be eliminated by exosmosis. Here the reverse took place—the alcohol had been eliminated, the other fluids remained. In all cases where I had conducted the experiment in damp, dark places, alcohol was absent and the *mycoderma aceti* present. When I had conducted it in dry, light places, the alcohol was present and the *mycoderma* did not form. In the former case, therefore, the *mycoderma*, by its power of endosmosis, had extracted the alcohol from the bladder.

The food for this species of *microbacteria* always exists after primary vinous fermentation. To prevent its growth, atmospheric air must be excluded by hermetically sealing the vessel. Now, in diphtheria, we have the preliminary fermentation—that is, the fever and constitutional disturbance, which undoubtedly create in the system a food for the *bacteria diphtheritica*. It can only grow if it is sown in the soil thus prepared for its reception, and has a free supply of oxygen. As a mode of preventing its formation in the throat I should, if such a thing were possible, suggest the covering of the entire mucous tract which is exposed to the atmosphere, just as we cover a cut with collodion, and as the food for the germs exists in the system, I should allow it to be eliminated by abrading some part of the surface of the body and excluding it from the light.

This I simply advance as a theory, which I have derived from the successful prevention of destructive germs in vinous fermentations.

MOUNT VERNON, N. Y.

Progress of Medical Science.

THE TREATMENT OF EMPYEMA.—Dr. John E. Morgan (*Lancet*, March 5, 1881) advocates the following treatment for empyema. Into the chest-opening he inserts a canula, and allows it to remain forty-eight hours, the patient favoring the escape of the pus by position. At the end of that time the pleural cavity is thoroughly washed out with a carbolic acid solution, by means of a catheter and syringe. Afterward the pleura is sprayed through the catheter by means of Lister's apparatus. In protracted cases it is necessary to change the disinfecting solution as often as the one in use ceases to act beneficially. In place of carbolic acid, iodine may be used (half a drachm of the tincture to the ounce of water) or quinine, where there is much depression. When the discharge is offensive, permanganate of potassa answers well. Adhesions must be broken down and confined pus liberated. When this cannot be accomplished from within the chest, additional openings should be made through the thoracic wall, the site of the outlet to be determined by the thermometer. Dr. Morgan cites two cases in which he met with most satisfactory results. One was a case of long standing, where, from the age of the adhesions, he was unable to break them down. In this case he passed a long canula and trocar through the chest, pushing it out in the ninth intercostal space, then introducing a drainage tube. He prefers, where it is possible, to make but one opening, and to break down the adhesions from within. The patients daily inhaled compressed air from Seigel's pneumatic apparatus. In one case the patient was under treatment for twelve months, and after eighteen months the sinus was healed. In the other case the same result was reached in three months. Dr. C. McIvor Goyder in the same issue of the *Lancet*, calls attention to a method of respiratory irrigation, which has given satisfaction in the only case in which he has employed it. He inserts one end of a rubber tube into the aperture in the chest, and the other into a jar of disinfecting fluid, preferably Condy's, the patient, by position, favoring the escape of the discharges and approximation of the walls of the cavity, by lying on a ring water-cushion. The respiratory movements cause the fluid to enter and run out of the chest, passing in on expiration, and running out on inspiration, thus removing all the discharges. The fluid should be kept at 100° F., and changed hourly. The tube is to be cleansed daily with carbolic lotion. Dr. G. B. Ferguson also reports two cases (same issue) successfully treated by Fraentzel's method ("Ziemssen's Cyclopædia"). Through the opening in the chest a silver canula, large enough to admit two No. 8 Nélaton's rubber catheters, is introduced. A warm one per cent. carbolic lotion is then injected through one, and returned by the other, bringing with it the residual pus. This process was repeated twice daily. In his cases

he substituted, after a time, iodine water (tinc. iodine ℥ ijss. and aq. Oj.). In one case toward the close he used a five per cent. solution of common salt. In both, the discharge ceased and the sinuses healed entirely, the patients being restored completely in six and five months respectively.

Dr. John Lowe questions Dr. Moxhay's claim to priority in treating empyema by irrigation and aspiration, claiming to have used it himself and to have seen it used by others before Dr. Moxhay's article. He considers it essential to the results of the treatment that Lister's method should be fully carried out, and questions the desirability of draining off all the fluid at a single sitting.

Treatment of Nocturnal Pollutions by Arsenic.—Prof. Rosenthal, of Vienna, recommends the exhibition of Fowler's solution, in small doses, for the treatment of nocturnal pollutions and premature ejaculations, associated with an atonic condition of the genital organs. In addition, he suggests that the arsenical solution be mixed with equal parts of glycerine, when it will be found to be better protected against the reducing action of extraneous particles.—*Revue Médicale*, March 12, 1881.

New Method of Opening the Mastoid Process.—In the *Annales des Malad. de l'Oreille*, 1880, Bagroff describes a new method of laying open the mastoid process. It consists essentially of combining with the use of the gouge the employment of the galvano-cautery. After incision of the integument and laying bare of the bone, a first application of the galvano-cautery is made at the point of election. The heater is used until a blackish eschar becomes visible. This renders the bone friable, and it is now attacked with the gouge, a layer of calcined tissue being removed. Then the galvano-cautery is again applied, and so on alternately, the one after the other, until the opening is sufficiently deep. In this way the danger from lesions of the venous sinuses is avoided.

Bagroff also believes this method to be applicable to the removal of osteomata of the external auditory canal. After preliminary local anæsthesia, the cautery is applied over the most accessible portion of the tumor. After production of an eschar the chisel is used, and the operation continued as before.—*Revue Médicale*, March 12, 1881.

Treatment of Aneurism.—In the *American Journal of Medical Sciences* for April, 1881, Dr. L. A. Stimson collects the results of the treatment of aneurism by the elastic bandage and rubber tubing, either separately or combined, in a series of sixty-two cases. Fifty-two had been treated by Dr. Reid's method, and five by the repeated use of the bandage or tubing alternating with the intermittent use of the tourniquet or digital pressure. In these five the bandage was applied for a short time daily for many days, with no compression of the artery in the intervals, or with the tourniquet loosely applied. The fifty-two cases treated by Reid's method furnish twenty-eight cures, twenty-two failures, and two deaths. Twenty-four of the cures were obtained by a single attempt, and four by two attempts separated by an interval of from one to four days. The bandage was applied from fifty minutes to three hours, and in the majority of successful cases for about one hour. In the twenty-two failures, in twelve cases there were nineteen different attempts, in the remaining ten cases there were eighteen, the bandage being kept on once for three, and once for six hours. The method, even when rigorously employed, may be expected to fail in fifteen per cent. of the cases. Death occurred in two cases, in one with impending, and one with fully developed gangrene, from the size of the clot or its extension. There is record of only one case of gangrene following the use of the ligature, after failure with the bandage, in sixteen cases where this means was resorted to. The sphygmograph shows an increased intra-arterial pressure in other parts of the system while the bandage is on the limb, but no accidents have been reported from this cause. The second group furnishes four successes and one failure. In the shortest case the bandage was applied for sixty-five and thirty-five minutes, with intermediate and subsequent digital compression for fifty and eighty-five minutes. In the longest the bandage was applied four times for two hours each and the tourniquet in the interval, and subsequently to complete twenty-four hours. The third group furnishes three successes and two failures. Dr. Stimson considers the tubing to be the most efficient part of the treatment, and the principal benefit of the bandage to be that it renders a less severe constriction by the tubing sufficient.

Dr. Henry B. Sands, of New York, in the same issue, gives an interesting account of two cases of pelvic aneurism, in which he lays great stress on the value of rectal exploration as an aid to the diagnosis of aneurism in this region. He also advances the opinion that pressure on the great vessels may with safety be maintained for several consecutive hours through the rectal wall. He considers it safest, in cases where much difficulty is experienced in reaching the vessel by the usual method, to open the peritoneum rather than run the risk of bruising it by efforts at separation.

Acute Rheumatismal Œdema.—This variety of œdema, also described as rheumatismal pseudo-erysipelas, has been carefully studied by Ferrand, Farnet, Davaine, and others. An interesting case of this kind was recently seen at the Lariboisière, in the service of M. Proust. It was an instance of general acute rheumatism, complicated by the existence of patches of erythema and rheumatic purpura. The arms were the seat of large patches of acute rheumatismal œdema. During convalescence the patient suddenly died from intestinal invagination. A serofibrinous exudation into the meshes of the cellular tissue was the pathological change accountable for the symptoms. M. Comby, who reports the case, also alludes to the occurrence in acute rheumatismal arthritis of hot, red, and painful œdema, resembling certain forms of phegmon and erysipelas. This may occur in quite benign cases of rheumatism, and the exudation ordinarily disappears spontaneously.—*Journal de Méd. de Bruxelles*, January, 1881.

Explosive Combinations in Pharmacy.—In the London *Chemist's and Druggist's Almanac*, 1880, it is stated that the addition of chlorine or a chloride, iodine or an iodide, to ammonia, give rise to the formation of the chloride or iodide of ammonia, either of which is liable to violent explosion on coming in contact with phosphorus, iodine, arsenic, olive or cod-liver oil, turpentine, etc. The addition of iodine to the compound soap-liniment and compound camphor-liniment has produced an explosion, as also a combination of a concentrated solution of iodine and iodide of potassium. An explosion is also to be apprehended from a concentrated solution of the permanganate of potassa in alcohol. Bichromate of potassa in alcohol may cause ignition. Aqua regia

may cause explosions with alcoholates or essences. The mixture of tannin with dry chlorate of potassa or muriate of morphia is also dangerous. The addition of nitrate of silver to the essence of bitter almonds has also caused ignition. A mixture of the hypophosphate of lime with chlorate of potassa with the lactate of iron has been followed by an explosion. Tincture of the perchloride of iron and chlorate of potassa and glycerine in combination are also dangerous. Pills containing oxide of silver are liable to explode when they become warm. It is also dangerous to compound the golden sulphuret of antimony and chloride of sodium in pills. The mixture of glycerine or any other deoxidizer with easily reducible compounds is attended with danger.

The Changes in the Pulmonary Epithelium associated with Artificial Pneumonia.—Veraguth (*Virchow's Archiv*, vol. 82, 1880,) has made a study of the changes which are observed in the epithelium of the lung after the induction of pneumonic processes by artificial means. Rabbits were the only animals subjected to this mode of experimentation. The inflammatory action was excited by the injection of weak nitrate of silver solutions into the lungs through the trachea. From five to sixty hours after this manipulation the animals either died spontaneously or were killed.

The irritation proceeding from the injection results at first in hyperæmia and serous imbibition of the pulmonary parenchyma, as well as changes in the alveolar epithelium. The nucleated cells of the air vesicles swell up and assume the shape of large spherical bodies. At the same time their nuclei divide, and the protoplasm becomes turbid, or cloudy and granular, and in great part leaves the body of the cell to enter the alveolus. The non-nucleated plates lining the air-vesicles do not swell up, but assume a granular appearance. Very soon they are transformed into a finely molecular substance, in which the round bodies already mentioned lie imbedded. Both kinds of metamorphosed tissue-elements contribute their share toward a loosely adherent filling up of the air-cells.

If the irritation has been too severe, both the nucleated and non-nucleated elements become disintegrated into a finely granular detritus. After the lapse of twenty to twenty-four hours, the leucocytes begin to emigrate into the surrounding connective tissue and the air-vesicles. Some portions of lung-tissue are then found replete with these corpuscles, whereas other portions show a dense fibrinous deposit, resembling that of croupous pneumonia. The latter is derived as a product from the constituent elements of the blood. The disintegration of the non-nucleated cell-plates is a prerequisite for the occurrence of fibrinous exudation. Dr. Heitler has found in the initial stage of human pneumonia very similar changes. There too the pathological process is ushered in by a desquamation and proliferation of alveolar epithelium.—*Wien. med. Woch.*, March 26, 1881.

On the Ox-Aorta Ligature.—In the "Transactions of the Royal Medical and Chirurgical Society" (*British Medical Journal*, March 19, 1881) will be found the report of a discussion on the ox-aorta ligature, by Dr. R. Barwell. In it he claims superiority for this ligature over catgut, in that it needs no preparation, being simply cut from the fresh aorta and dried for use; like all soft connective tissues, also, it is gradually absorbed, and in this respect it has the advantage over the catgut. The latter, judging by the action of sutures, is absorbed in from forty-eight hours to two weeks. The ox-aorta furnishes a flat ligature by which any amount of pressure can be applied to the artery without injury to the coats. Dr. Barwell considers this an advantage. Several specimens were shown in which the arteries were occluded. Mr. Lister, however, states that the catgut prepared by his new method is fully equal to the aorta, and regards the division of the walls of the vessel as desirable.

Gout as a Tropho-Neurosis.—Dr. Dyce Duckworth appeared with a paper (*British Medical Journal*, March 26, 1881) in support of the trophoneurotic character of gout. His arguments are the analogies of gout with other neuroses. The suddenness of the attack resembles epilepsy, angina pectoris, neuralgic paroxysms, and other affections of a neurotic origin. The pyrexia and pain are paroxysmal as in other nervous disorders. Gout blends itself with affections of well-recognized neurotic character. Thus hemicrania is sometimes a distinct manifestation of gout, or may alternate with arthritic attacks in the same individual. Among the nervous symptoms observed in gout may be mentioned certain perverted sensations, as tinglings, numbness and paræsthesia, grinding of the teeth, severe muscular cramps, priapism, and a well-marked variety of insomnia; also gouty neuralgia, more commonly occipital, but found also in the heel, breast, tongue, and sciatic nerve. Among the strongest evidences of the nervous origin of gout, are the facts relating to the induction of the attack; in the majority of instances they are due to causes which depress nerve power, such as exhaustion of mind or body, excitement, rage or worry, sudden shock or injury, many of which are efficient to produce epilepsy, asthma, and other neurotic affections. There exists a remarkable relation between gout and glycosuria. In gouty families diabetes mellitus is met with in certain members; some have regular arthritic attacks; some gouts alternating with glycosuria. Dr. Duckworth is led to the belief that the nervous centres involved in the two disorders are not far apart, and are situated in the medulla.

Pathology of Gout.—In the same issue, Dr. Austin Meldon furnishes an article on the pathology of gout, in which he also adds the weight of his opinion, adduced from the study of a large number of cases, in favor of the nervous origin of the disorder. He believes urate of soda to be only a secondary factor of the disease; that uric acid and soda may be present in the blood in large quantities and for a lengthy period without producing gout. So long as they exist separately they are kept asunder by nerve-force. As soon as this nerve-force is removed by any cause, the two unite and produce the phenomena of gout; the irritation produced by the disease excites the nervous system to unusual activity, the heart is invigorated, and a greater or less febrile action is set up, the disease being arrested for the moment, but is followed by repeated attacks until nature restores the nervous system to its normal condition. He suggests, by way of treatment, to begin, when the patient is strong, with venesection, taking from four to eight ounces, and then a purge with colchicum, after which recourse should be had to tonics. He prefers phosphate of quinine, but sulphate of nickel, phosphorus, strychnia, or copper, may be used where quinine is not well borne.

THE MEDICAL RECORD:

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GEORGE F. SHRADY, A.M., M.D., Editor.

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REVELATIONS OF THE REGISTRY.

THE medical profession of this county are certainly under obligations to Messrs. Caswell, Hazard & Co., of this city, for their enterprise in publishing the list of registered physicians, compiled from the data on file in the office of the County Clerk, and copies of which have, we believe, been distributed to the profession. An examination of this list reveals some interesting and curious facts. We find, for instance, that the total number of names is about 2,400, of which 772 are of members of the Medical Society of the County of New York, and 157 are of members of the Homœopathic Medical Society of the County, the proportion of homœopaths to regulars who have fully complied with the laws of the State being about one to five. Of the homœopaths, 60 are graduates of regular, and 97 of homœopathic institutions. In addition, there are about 120 names suggesting eclectic paternity. These, together with the members of the two societies mentioned, being subtracted from the total registry leaves about 1,260, or more than one-half without declared or apparent doctrinal affinity, a state of affairs that to us was somewhat unexpected, and certainly is the reverse of desirable.

Of the total number, it would be important to know how many are illegally registered. This illegality may arise in the first place, in consequence of the assigned qualifications not being of a character to entitle the holder to register, as, possibly, for instance, "Licensed by copyright granted by the laws of the United States, 1866," "Balt. Coll. Dental Surg., 1880," the Buchanan diplomas, etc. Second, those whose registration is illegal through perjury. It may be noted that already one person has been arrested for this at the instance of the officers of the county society, and there is every prospect of a speedy conviction.

The profession are also under obligation, we think, to Dr. P. H. Curran, of this city, who, a few days since, personally initiated proceedings against an illegal practitioner, and succeeded with little difficulty in having him convicted and fined.

It must not for a moment be supposed that the published list includes the names of all the persons practising in the county. There are doubtless many who, not possessing the qualifications that entitle them to register, prefer to continue to practice clandestinely in the hopes of not being detected, rather than run the greater risk of a conviction for perjury by registering falsely. There are probably others, also, who have failed to register through carelessness, or through a spirit of obstinate obstructiveness to the common interests of the profession and the community.

An examination of the register reveals many additional facts that are of a disagreeable nature, some of which we shall take occasion to allude to later.

THE COMMITTEE ON HYGIENE OF THE MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

A CURSORY review of the work of the Committee on Hygiene of the Medical Society of the County of New York, during the past two or three years, is not without interest to such as are concerned in municipal reforms. It is true the results of the labors are not as gratifying as we might wish them to be, still they have served to arouse public attention, and thereby give a promise of better things to come. In any event the work of the committee should serve as an encouragement to that of similar organizations in all parts of the country.

The first great effort of the committee was its report against the filthy condition of the streets, which Dr. Judson suggested was the cause of various indefinable and obscure, but obstinate diseases. Dr. J. C. Peters, the worthy chairman of this committee, quickly called attention to the vast amount of street filth which was carried down into the receiving basins, culverts, and sewers, greatly increasing the amount of sewer-gas, and also of the filth in the docks, and rightly charged the increased sickness and mortality from sewer-gas to the negligence of the Street-Cleaning Department. Attention was also called to the foul air which steams up from the filthy streets and gutters into the air-boxes of our furnaces, and thence into the houses. The committee, full of zeal, expected the earnest and outspoken support of the Health Board, because the laws and legislature intended it should have a constant supervision of street cleaning, and by section 67, chapter 335, Laws of 1873, the inspector of street cleaning is required "to perform such additional cleaning as in the opinion of the Board of Health is necessary to keep the streets, avenues, and public places clean." The Board of Health also had ordinances, with the force of laws, forbidding the throwing of slops and garbage in the streets, and power to force the Street-Cleaning Department from allowing street filth to go down into the receiving basins. It also had laws against

allowing meat to be hung up on any part of the sidewalks. How lamentably the committee, the medical profession, and the whole public have been disappointed in these respects, is only too well known.

Next an attempt was made by the chairman of the committee to improve the condition of the Fourth avenue tunnel, by preventing and correcting the sickening odors which prevailed therein. A partial amelioration of the nuisance was secured only, after a year's delay. That much more is to be done before the tunnel is in a good sanitary condition, goes without the saying. We have noticed that tubs for manure have been placed on one side of the tunnel only, and that many of these have long become dilapidated, and that heaps of manure are constantly seen without tubs to put them in. The sweeping, also, is very imperfect. Much manure is packed down hard upon the rails, from which it is rarely or ever scraped, and gives rise to almost as much malodor as ever before. Besides, we are creditably informed by eye-witnesses that sewer water is still used to mix the whitewash which is occasionally put on quite lavishly; and we are not quite sure that the sewer of the tunnel is trapped at its entrance into the Fourth avenue sewer. These matters deserve the attention of the committee.

Next, Dr. C. C. Lee made a report to the committee about the foul condition of the shanty or squatter's block, between Sixty-seventh and Sixty-eighth streets, Third and Lexington avenues. The horrible condition in which it was left by the neglect of the Board of Health, and the determined struggle of Dr. Peters for its complete purification, are now among the principal topics of the day.

Then Dr. Billington made a report about the offence from the offal-rendering and fertilizer-making parties on the East River, between Forty-second and Forty-sixth streets. Dr. Peters called attention to the great manure and garbage dumps at Forty-sixth street and their malign influence upon the meats which are slaughtered in that neighborhood; also to the very foul condition of the streets between the slaughter-houses and the bad effects of the Hunter's Point and Newtown Creek smells have upon the meats in that neighborhood when the wind blows from the East. The effect of the New York nuisances is fully as great and more near and direct than those which come over the East River. But the Street Cleaning Department and the Board of Health seem determined to persist in their gross negligence. But we hear that the Governor and the State Board of Health will abate many of the New York nuisances, which have not been firmly grappled with by our local authorities. We hope the *Herald* report is not true, that the chemical talent of our officials is at the service of these nuisance-makers, for pay.

Dr. Peters was also the first to show that almost all smoke could be prevented, even from box and kindling wood and other factories, by simple care in stoking, even without the aid of patent smoke-consumers.

The foul condition of many of the stables, both private and livery, has engaged the attention of the Committee, and should have renewed attention by the Board of Health. The inspection of out-door privies has been found very remiss indeed.

Finally, Dr. Peters, has built up a most suggestive outline of what he calls civic malaria—so different from mere marsh malaria—which affects this and all other dirty cities; which adds itself as a foul air, septic malarious element to so many diseases; increases the sick and death rate; and which he gives us good reasons for supposing can only be overcome by the most vigilant and earnest, as well as skilled attention and co-operation of both the Street Cleaning Department and the Board of Health.

The Committee has done much good work in spite of great obstacles, but it must not relax its efforts until we have clean streets and good sanitary inspection and work.

THE SAD FATE OF PASTEUR'S HYDROPHOBIA GERMS.

Pasteur, it is well known, has made many valuable contributions to science; his careful, as well as ingenious, researches on fermentation and allied matters will continue to entitle him to the thanks of the profession. But of late he appears to have left the high road of true scientific investigation to err and wander in the alluring by-paths of speculative medico-philosophy. It was owing to the proclamation of his recent alleged discovery of the specific germ of rabies, that the Paris Academy has but lately witnessed unprecedented scenes of wordy warfare and hot contention. At one time debate became so angry, and withal so intensely personal, that wholesale duels seemed inevitable. It is not to our purpose to examine the various arguments brought forward by Pasteur and his followers on the one hand, and Colin with his supporters on the other. By a wise and frank avowal on the part of Pasteur himself, oil has at length been poured on the troubled waters, and the Gallic medical luminaries are once more free to grapple with other subjects and worthier themes.

It will be remembered that Pasteur had taken some saliva from the mouth of a child which had succumbed to rabies, and had inoculated rabbits and guinea-pigs with the same. All the animals subjected to this operation had died, and their blood was then found to contain abundant micro-organisms, which were supposed to be the true cause of the malady, representing the specific hydrophobia germs. A second series of animals inoculated with blood taken from the first, also invariably died. And their blood was likewise certain to contain the microphytes. This evidence was apparently convincing to Pasteur's mind, and he jumped at the conclusion that he had made a new and highly important discovery.

Now, however, in a letter read at the Academy, he acknowledges his hastiness with a commendable spirit of modest candor. It would appear that similar experiments, undertaken, however, with the buccal secretion of children having died of an indifferent malady, were followed by precisely similar morbid phenomena as were observed with the "rabid" saliva. The inoculated animals promptly died, and as promptly showed the identical micro-organisms found in the others. More than this, experiments of inoculation with buccal mucus from a perfectly healthy adult produced the same effects, and again the germs were present in unmistakable abundance.

With such unequivocal evidence, the new theory of course has met its well-earned doom, and the eminent Frenchman has doubtless learned a useful lesson. But the profession at large can also profit by this new illustration of the unprofitableness of hasty conclusions in all matters pertaining to our science. If the whole affair has a single redeeming feature, this consists of the fact that Pasteur so unhesitatingly, so honestly, and so simply has yielded to better evidence, a point upon which he at one time seemed to have staked his entire professional reputation.

American Medical Association.

THIRTY-SECOND ANNUAL MEETING,

Held in the City of Richmond, Va., May 3, 4, 5, and 6, 1881.

SECTION IN OBSTETRICS AND GYNECOLOGY.

DR. JAMES R. CHADWICK, of Boston, Chairman.

DR. JOSEPH TABER JOHNSON, of Washington, Secretary.

TUESDAY, MAY 3D—FIRST DAY.

DR. PAUL F. MUNDÉ, of New York, made some practical remarks concerning *the use of pessaries*, and gave an extended recapitulation of the rules governing the introduction and supervision of vaginal and vagino-abdominal instruments.

These remarks were followed by those made by DR. R. BEVERLY COLE, of San Francisco, *on the mechanical treatment of displacements and some of the diseases of the uterus*, and the two communications led to a general discussion on

THE USE OF PESSARIES.

DR. COLE regarded the Hodge pessary as the first invented which showed any knowledge of the anatomy of the female pelvic organs. The instrument devised by Dr. Albert H. Smith possessed the peculiarity of Simpson's, also Hodge's hard rubber pessary. The pessary which Dr. Cole exhibited had what he regarded as an important modification—namely, a spring support for retroversion, and the special advantage claimed for it was the lack of risk of producing inflammation, because of the uterus having to rest upon a rigid, unyielding surface. The spring modification had, in his hands, been very serviceable in the treatment of anteversion. Although Dr. Mundé had used the anteversion cup-pessary of Dr. Thomas successfully, it had utterly failed to accomplish the desired result in his hands. Dr. Cole also exhibited an intra-uterine stem galvanic pessary, which differed from that devised by Dr James Simpson, of Edinburgh—in whose instrument the current is limited to the point of union between the two metals at the centre of the staff—by having the two metals arranged as plates running longitudinally, insulated by an interposing layer of hard rubber, so that the current is distributed the whole length of the stem. In cases of *superinvolution* of the uterus Dr. Cole regarded this instrument as almost invaluable, and had succeeded in restoring the menstrual function, which had been absent for five years, and pregnancy followed. In a peculiar condition—which he called *atony*—a condition which he had not seen described—and in which the organ is flabby and soft, settles down upon the posterior wall of the vagina, makes a double curve, the first forward, the second backward, giving rise to great difficulty in introducing the sound, he had found the galvanic stem exceedingly useful.

Dr. Cole next exhibited a gas-cautery of his own invention. He advocated the use of *red*, instead of *white* heat for cauterizing the mucous membrane of the cervical canal in various conditions, as it was less liable to be followed by troublesome hemorrhage. He then demonstrated Simpson's method of making pessaries adapted to individual cases. Drop a piece of best sheet gutta-percha, five or six inches by one and a half or two inches, into hot water, and allow it to remain until it becomes thoroughly heated, and the evidence that it is ready to be manipulated is the fact that it rises to the surface of the water, having sunk when first introduced. When heated, remove from the water and roll it between the hands—keeping the hands constantly wet, after the manner of handling a mint-julep mixer, until the piece is brought into a roll of the desired size—somewhat thicker in the centre than at the extremities, if desired—when it can be doubled upon itself, the ends united, the whole then made to take any shape the physician may wish, and then dropped into cold water, where it will soon become inflexible.

The discussion was opened by DR. ALBERT H. SMITH, who agreed with Dr. Cole in the statement that it is as important to know when *not* to use as when *to* use a pessary. It did not follow because there was a pessary bearing his name that he was the advocate of the indiscriminate use of these instruments. Pessaries are largely used when they should not be employed. It is easy to introduce a pessary, but it is difficult to obtain one which meets the indications properly. In those cases in which old adhesions exist and the uterus has not its proper mobility, the use of a pessary cannot but do harm. It is a very easy thing to relieve a patient temporarily by lifting her uterus, and ignore the fact that what we wish is to remove the conditions present and giving rise to the uterine displacement. In many cases, proper treatment of the inflammatory condition existing restores the uterus to its proper position. He was ready to endorse the statement that his pessary failed in a very large number of cases. It is applicable simply in retroversion and prolapsus. Dr. Smith disagreed with Dr. Mundé, also with Dr. Cole, with reference to the utility of an anteversion pessary. He had found all forms of anteversion pessaries failures. He did not think that anteversion

is essentially a pathological condition. We cannot keep the uterus in an absolutely flexed position with reference to the bony wall in front. Any pessary that bears strongly upon the anterior wall of the uterus, produces more pressure upon the bladder and more severe vesical tenesmus than is caused by the anteversion itself. Anteversion is frequently associated with anteflexion, and with anteflexion we have dysmenorrhœa, uterine congestion, etc., independent of the fact that the fundus of the uterus is pressing forward. In such cases the anteflexion must be cured before an anteversion pessary is used, and when cured the patient is usually cured. With the stem pessary, he had cured very many of these cases, and he used the slender stem devised by Dr. Chadwick, and had had the same result as claimed for the galvanic pessary. He believed that the galvanic instrument acted in a mechanical manner simply. In any case in which the uterus has its natural mobility, when the sound can be introduced properly and easily, intrauterine stem pessaries can be used to remove the anteflexion or retroflexion, and in that manner the anteversion is removed to a very great extent and the patient relieved of the symptoms for the relief of which an anteversion pessary is proposed. He thought that, as a rule, anteversion pessaries are unnecessary.

With regard to Dr. Cole's cases of distorted, soft, flabby uterus, he had seen those remedied by the use of the stem pessary, which straightens the uterine canal and also stimulates into a healthy condition the body and the neck of the organ. *Superinvolution* of the uterus had not come under his observation, and therefore he had not had any experience in the treatment of such cases.

Dr. H. P. C. Wilson, of Baltimore, knew of nothing in gynecological practice that had done more good, and also more harm, than pessaries. One point which Dr. Mundé made should be dwelt upon, and that was to determine before attempting to use a pessary whether the uterus can go up or not; for much injury has been produced by introducing an instrument for the purpose of raising the uterus when it cannot be done.

Upon another point he differed with Dr. Mundé and agreed with Dr. Smith, and that was with reference to anteversion. He had never seen an anteversion pessary which he could use satisfactorily. In anteflexion he had seen much benefit afforded by the use of pessaries, and some had been cured, but he might use a great many before he could determine which would be the proper one in each case. He referred to a case in which Dr. Hodge's horse-shoe pessary effected a cure after all other instruments had failed. Dr. Wilson agreed with Dr. Smith upon another point, and that was with reference to anteversion itself. It was doubtful if the case would be benefitted or the displacement remedied by simply raising the fundus of the uterus up. He had not used stem pessaries for many years, for his experience in their use had been unfavorable, and his inclination and judgment was entirely against them. In old cases of anteflexion, where there is atrophy at the seat of flexion, he had derived more benefit from dividing the cervix backward to the vaginal junction and dividing the internal os backward and forward, than from any other means.

Dr. G. M. B. Maughs, of St. Louis, was very much disposed to think that those who understood an ordinary female vagina would understand the vagina in nearly all females. The main object of all lever pessaries depended upon the integrity of the perineal body. If that had lost its tonicity a great bow in the pessary is required in order to lift the uterus at all. He was surprised to hear Dr. Mundé say that in anteversion the object was to hold the fundus of the uterus up until the ligaments obtained their tonicity; for the great trouble was to hold it up until the ligaments were stretched. In retroversion the ligaments are relaxed, and we must hold the body of the uterus up until they regain their tonicity, but the opposite is true in anteversion. His plan of treatment for anteversion is to place a cotton plug so as to prevent the neck from being dragged back against the posterior cul-de-sac, and in that way prevent the fundus from falling forward, and he thus frequently succeeds in overcoming a difficulty which can not be remedied with a pessary. In retroversion Dr. Mundé had done well in calling attention to the necessity of first placing the uterus in proper position before introducing a pessary.

He agreed with Dr. Wilson that, in many cases of anteversion, the best thing to be done is section of the cervix. He used the intrauterine stem pessary with great fear. There were many cases in which if the abominable pestiferous uterus did not have a woman behind it he could manage it very well. The normal position is that of anterior curvature. It sometimes occurs that a slight increase over the normal causes great trouble, but in the virgin, anterior displacement is the rule, and retroversion is the rule in the multiparous.

Dr. Quimby, of Jersey City, regarded stem pessaries as especially dangerous. He had never used them satisfactorily. A slight displacement did not, as a rule, do much harm, and he was more and more inclined to discontinue the use of pessaries.

Dr. Mundé was unable to understand why anteversion does not produce symptoms, when lifting of the fundus of the uterus gives complete and prompt relief, and removal of the instrument, even for only a day, is followed by a return of the symptoms. He regarded Dr. Maughs' point with reference to the condition of the ligaments in anteversion as well taken. He did not remember a case of anteflexion which had been cured, but he had found that by using the cup pessary exhibited, changing it frequently, making the cup rise a little higher and higher, he had been able, in the course of a few months, to nearly straighten the uterus, and that it remained nearly straight so long as the patient wore the pessary. He had been unable to make his patients wear a stem pessary, the only instrument which will keep an anteflexed uterus in its proper position.

Dr. Cole said that he had not recommended stem pessaries except in two classes of cases—

First.—When there is simply *atony* of the uterus—no inflammation or irritation—and then the instrument was used with the view of producing irritation.

Second.—In superinvolution. He maintained that the galvanic stem pessary had been more successful in these cases, in his hands, than any other means which had been at his command. He would not introduce a stem pessary into an antoflexed or an anteverted uterus; in his hands the instrument had acted very badly in those cases.

The Section then adjourned.

Wednesday, May 4th—Second Day.

Dr. F. C. Larimore, of Mount Vernon, O., exhibited what he called

A UTERINE CALCULUS,

doubtless a fibroid which had undergone calcareous degeneration. The woman was seventy years old,

the mother of five children, the youngest being forty-two years old. Prolapsus uteri after the birth of the last child. During the last six months of her life she had constant escape of urine. The calculus weighed four pounds and one ounce, and filled the uterus entirely, which measured six and one-half by five and one-half inches. There was no true bone in the shell of the calculus.

Dr. Maughs had seen a similar case, in which the tumor was originally an intramural fibroid that became submucous, and subsequently underwent calcareous degeneration. The mass was very much smaller than the specimen exhibited, which Dr. Maughs thought was at first an intramural fibroid.

Dr. Dunlap, of Springfield, O., was unable to account for its original formation in the walls of the uterus if it was found truly in the cavity of the uterus, and surrounded by a mucous surface.

Dr. H. O. Marcy, of Boston, raised the question

DOES A UTERINE FIBROID HAVE A TRUE CAPSULE?

Dr. Dunlap remarked that his observation had been that they have a capsule, which he had regarded as having been formed from the connective-tissue in the muscular structure of the uterus. As the tumor grows, it presses upon the muscular tissue, which is destroyed, except the connective-tissue, which forms the capsule and extends without blood-vessels going directly through the capsule into the tumor.

Dr. Dunster, of Ann Arbor, Mich., remarked that Dr. Dunlap's explanation would be limited to those cases in which the original tumor was interstitial, and would not apply to those which were closely under the mucous membrane, or serous covering of the uterus.

Dr. Dunlap thought, on the contrary, that the capsule was formed much more readily when the tumors were in those situations than when altogether interstitial, because the tumor pushes directly out and the tissues for the capsule are already formed and at hand.

Dr. Marcy asked, How early is the capsule found? If the tumor is invested with a capsule early it is early within the reach of surgical interference.

Dr. Dunlap thought there was not so much connective-tissue in the investing substance at an early period as later; but, fortunately, there were but few cases in which surgical interference would be justifiable when the tumor was small; because so many of them are arrested in their growth, the patient living for years afterward.

Dr. John Bryne, of Brooklyn, had removed a very large number of fibroids, and in every instance he had carefully examined and had utterly failed to find anything deserving the name of "true capsule." There was an investing dense material, but he did not consider it as a true capsule.

Dr. A. H. Smith, of Philadelphia, thought with Dr. Byrne that it could scarcely be claimed that there is a capsule specially belonging to these tumors. An investing tissue is found, entirely distinct from the tumor itself, and apparently formed from the parenchyma of the uterus pushed before the growth. He was unable to see the force of Dr. Dunster's remark; for we can carry in the finger and peel out the tumor, or after making an opening over it, ergot may cause expulsion of the entire mass, and such results can be obtained when the tumor is not in immediate contact with the mucous membrane of the uterus.

Dr. John Morris, of Baltimore, regarded Dr. Dunlap's explanation of the formation of the investing material as the correct one, but he believed he was wrong in not giving the so-called capsule some nutritive power. For, when this investing membrane is cut, uterine contractions, independent of ergot, occur, and they can be strengthened by the ergot. He therefore thought that the investing membrane must have nutritive functions related to the tumor, although it contained no large blood-vessels.

Dr. Bryne was far from denying the existence of an investing membrane, but he believed it was formed as the result of the tumor pushing the uterine tissue outward and inward, and nothing more. It is generally loose cellular tissue, and commonly requires considerable force to break up the connection, so as to be able to remove the more dense central mass.

Dr. Erich, of Baltimore, remarked that there is a kind of capsule, whether a true capsule or not was not of much practical importance. Sometimes the investing substance is thick, again thin, and he had not discovered any large blood-vessels in a fibroid tumor. The practical question was whether or not interstitial fibroids are easily removed. If the tumors and the uterine tissue were directly united it would not be easy to remove them; but so long as they were not directly united to the uterus, enucleation was frequently practicable and also advisable.

Dr. Maughs thought that some uterine fibroids were capsulated. Small tumors have but little separation from uterine tissue, while large ones are quite well separated and can be enucleated.

Dr. Dunster said that the question of the existence or non-existence of a capsule was merely a war of words, because there was no agreement as to what a capsule is. If by a capsule a definite histological structure was meant, doubtless it would be admitted by all that uterine fibroids have no capsule; but it must be admitted that these growths have an investing substance.

Dr. Marcy said that the practical question was, Does the tumor separate easily from its uterine connections? He thought it did, and that the connective-tissue by which it is surrrounded is an enveloping capsule.

Dr. H. P. C. Wilson, of Baltimore, exhibited a set of

UTERINE DILATORS,

to be used in certain cases in which a small amount of additional dilatation was desirable. He had not used sponge-tents for five years. He had not experienced so much trouble from the first tent, but a great deal of serious difficulty from the use of the second sponge-tent. Other kinds of tents he used, and it frequently occurred that a small amount of dilatation additional to that secured by the tent was desirable, and to receive that and at the same time avoid the introduction of another tent, as well as to save time, he had employed the instruments exhibited, and with very satisfactory results—for example, in securing the requisite amount of dilatation for removal of an intra-uterine tumor. In abortion he thought it was the duty of the physician in all cases to remove the placenta as soon as possible, and not wait for it to come away, and therefore he anæsthetized his patients, made gentle dilatation and delivered the placenta at once, and in such cases he had found the instruments presented very serviceable. In puerperal convulsions and placenta prævia they could be used also with great advantage.

Dr. Cole, of San Francisco, was totally opposed to forced artificial dilatation of the cervix uteri with

rigid dilators, because there was an amount of damage done to the parenchyma of the uterus which was destined, in a large majority of cases, to result in active inflammation.

The worst cases of pelvic cellulitis he had ever seen were the result of forcible dilatation with unyielding instruments. He wished simply to say that his experience did not accord with Dr. Wilson's upon that point. He had heard, and also read much concerning the same results following the use of sponge-tents. Dr. Pallen, of New York, had made the same statement as had Dr. Wilson, that the use of sponge-tents is liable to result in septicæmia. He did not believe it. During the last twenty years he had introduced on an average two sponge-tents daily into the uterine cervix, and had not yet seen a case of septicæmia, with a single exception, and in that instance the woman went directly from his office and thrust herself into a cold bath.

Dr. Mundé admitted, as claimed by Dr. Cole, that the instruments presented by Dr. Wilson were powerful, but at the same time it did not necessarily follow that they should do harm. With similar instruments he had dilated the cervix probably one thousand times in several hundred different women, and had yet to see the first case of inflammatory action as the result. He had not used sponge-tents so freely as had Dr. Cole, nor did he believe it was proper to do so. In all cases in which a hyperæmic condition of the uterus existed, where the sponge or other tent has been used and you wish a little more dilatation, septicæmia was much more likely to be produced by the repetition of the tent than was local inflammation by the careful use of such dilators. He thought Dr. Cole's experience in the use of sponge-tents was exceptional. He had used the tupelo tent extensively, and a special advantage was that it did not become offensive. He had also used the Molesworth dilator, but it was not exactly reliable.

Dr. A. F. A. King, of Washington, D. C., thought that dilating the cervix for the delivery of the placenta after abortion, as Dr. Wilson has suggested, was done too frequently. Doubtless it made an impression to introduce an instrument and do something to save the woman from the dangers of septicæmia in consequence of retained placenta; but in very many, if not most cases a purgative, or an emetic, or making the woman sit up was equally effectual, and thus the dangers attending such instrumental interference were avoided.

Dr. Erich did not agree with the last speaker. Often there was too much done, but the other extreme should not be reached.

He was opposed to forcible dilatation from the beginning; for he was sure that serious damage was very liable to result. He preferred tents first. There were many cases in which none other than sponge-tents could be used at first, but these could be followed by tupelo, and afterward the small amount of dilatation required could be secured by means of the instruments presented by Dr. Wilson. Forcible dilatation from the beginning with unyielding instruments would very likely produce laceration of the tissue and inflammation was very liable to follow.

Dr. Warner, of Boston, thought about the middle ground was the proper one to occupy.

Dr. Battey, of Rome, Ga., thought that the tendency of the present age was too much toward mechanical and operative interference and too little toward the *vis medicatrix naturæ*. Opportune use of instruments in competent hands was justifiable and the criticisms were applicable to the head and the hands by which they are used.

Dr. Aldert H. Smith, of Philadelphia, said that according to his observation forcible dilatation with unyielding instruments had been very unfavorable. He was glad to say that he had never used forcible dilatation in such cases as Dr. Wilson had suggested, but, after being used by other skilful and competent practitioners, he had seen pelvic-cellulitis, abscess, septicæmia, and death follow as a result. He did not agree with Dr. Mundé that this instrument is especially adapted to the cases for which Dr. Wilson had advocated its use, for those were the very ones in which it was the most dangerous. The danger in rapid dilatation is not so much in the development of inflammation as the result of pressure, as Dr. Cole had maintained, because painful pressure can be produced consistent with the avoidance of inflammatory action, but the danger is in development of septicæmia. In all the cases to which Dr. Wilson had referred—polypus, abortion, etc.—discharge of broken-down tissue is very liable to be present, and the danger is that the instrument, in careful hands even, not indicating the degree of tension brought upon the tissues, is liable to lacerate the tissues and thus give opportunity for the entrance of septic material. Dr. Smith had not seen a case in which, with chloroform and external pressure upon the uterus, he had not been able to bring his finger to bear upon the contents of the uterus in abortion. He wished to defend the sponge-tent. Like any other instrument it might produce the greatest amount of injury, but the reason it had done so, as he thought, was because it had been carelessly used. It has not been properly disinfected, and has been pulled out too soon and left an open surface. He employs a sponge-tent with a large point, cylindrical to its end, covers the surface with moistened soap, gives it a thick coating of salicylic acid, introduces it quickly with strong forceps, and allows it to remain for forty-eight hours. It so used, he believed that it would produce but little trouble.

Dr. Maughs agreed with Dr. Smith in nearly every particular. He had used sponge-tents a great many years, and never had a case in which he felt uneasy concerning them. He dips the tent into glycerine with carbolic acid, introduces it, allows it to remain for eight hours, then removes it, and introduces another, and *does not introduce a third tent* at once, but waits a day or two; but if he wishes to enter the uterine cavity immediately he uses the water-bag dilator if the second sponge-tent has not produced sufficient dilatation.

Dr. Marcy spoke of the favorable results which he had obtained from the application of elastic tension in dilating the cervical canal (see Medical Record, vol. xvii., p. 634).

Dr. Wilson said that all instruments might do harm, but that fact could not be used as an argument against instruments when properly employed. Dr. Smith's objection that such dilatation as he proposed was liable to give opportunity for the absorption of septic material, he believed was equally applicable to the use of sponge-tents; for he had not seen a sponge-tent removed at the end of thirty-six or forty-eight hours, that was not stained more or less with blood, showing that laceration of tissue had occurred on its removal. His experience was different from Dr. Cole's, for he had never inserted a tent that did not give rise to pain, and any instrument which causes pain, said Dr. Cole, is liable to give rise to inflammatory action; and yet he was the advocate

of sponge-tents. The instrument was not designed for primary dilatation, but only for secondary dilatation, in cases in which the uterus is dilatable, and where a little more dilatation than that already given by other means is desirable.

Dr. Marcy exhibited samples of double irrigation and injection tubes, made of soft rubber, after which the Section adjourned.

Thursday, May 5th—Third Day.

Dr. Joseph Taber Johnson, of Washington, D. C., read a paper on

THE DIAGNOSIS OF PREGNANCY IN THE EARLY MONTHS.

The central point in the paper was the question: "Can we make a positive diagnosis of pregnancy previous to the occurrence of the audible sounds of the fetal heart and the detection of the fetal movements?" Dr. Johnson reached the conclusion that, there are no symptoms, digestive, nervous, mammary, pigmentary, vaginal, or cervical, disturbances or changes in blood or milk, distinctive during the first half of pregnancy.

Dr. Cole, of San Francisco, knew of none, and relied upon fetal heart-sounds, placental souffle, and pulsation in the funis. It might be impossible to get the latter, and the placental souffle might be simulated by pressure produced by a tumor.

The paper was further discussed by Drs. Dunlap, of Ohio; A. H. Smith, of Philadelphia; Paul F. Mundé, of New York; G. B. N. Maughs, of St. Louis; Erich, of Baltimore; Battey, of Rome, Ga., and the Chairman, but no positive symptoms or signs were elicited. The value of certain signs and methods of examination was fully discussed, and the bimanual examination seemed to be that which had afforded the most information.

Dr. Paul F. Mundé then demonstrated

AN INSTRUMENT FOR REMOVAL OF THE PLACENTA AFTER ABORTION,

and remarked that he believed it to be the proper plan of treatment to remove the after-birth reasonably soon if it did not come away spontaneously.

A long discussion followed, and was participated in by Drs. Maughs, Dunlap, Smith, Marcy, Johnson, Chadwick, Erich, and G. McDonald. The latter removed it with instruments if it could not be reached with the finger, as, often in his country practice, he could not reach his patients quick enough in dangerous cases.

The Section then adjourned.

SECTION IN PRACTICE OF MEDICINE.

Dr. Wm. Pepper, of Philadelphia, Chairman.
Dr. T. A. Ashby, of Baltimore, Secretary.

Tuesday, May 3d—First Day.

BLOODLETTING AS A THERAPEUTIC MEASURE IN PNEUMONIA.

Dr. W. C. Wile, of Sandy Hook, Conn., read a paper on the above subject, in which he urged the importance of the free use of the lancet in pneumonia. He referred to what he called a typical case of "acute catarrhal pneumonia," in which he was unable to adopt the treatment recommended until the disease had reached the second stage, but even then it was followed by the most decided benefit. A series of twelve consecutive cases similar in character, he reported with like favorable results.

Dr. John J. Lynch, of Baltimore, thought, from Dr. Wile's description of his cases, that a mistake in diagnosis had been made, as they were evidently croupous and not catarrhal pneumonia. It was also probably a mistake to attribute the rapid recovery to the bleeding, because croupous pneumonia most frequently ends in from two to eight days by sudden crisis, and Dr. Wile's cases would probably have recovered just as soon without the bleeding.

He hoped he would never see the day when the profession returned to the sanguinary method of treating pneumonia less than half a century ago, when the average mortality was more than twenty-five per cent., while by the modern, purely rational method, it was, in uncomplicated cases, not more than four to five per cent.

Dr. Whittaker, of Cincinnati, thought too earnest protest could not be made against the revival of venesection at this late period in the history of science. Pneumonia is now known to be a general disease with a local expression in the lungs, just as typhoid fever is a general disease with a local expression in the intestines. There could be no justification of venesection in pneumonia, except upon the theory of a local inflammation. That pneumonia is, however, not a simple local inflammation, is proved by well established facts.

Pneumonia prevails at all times and places, and occurs at all ages of life, like the various infectious diseases, and modern pathology has put pneumonia in the category of the acute infections. It would be impossible, therefore, to do anything but harm by the letting of blood at any stage of the disease. The essayist has, evidently, mistaken the crisis for a cure. As for *veratrum viride*, that dangerous cardiac sedative to which the speaker had alluded, it could do nothing but harm. What advantage is there in checking the force and frequency of the heat when this increase in force and frequency is only compensatory, and is to be favored rather than checked. Pneumonia is due to a poison entering the blood and affecting the whole body, and no amount of bloodletting could let it out, any more than we can drain out the impurities of a stream with a bucket. Our illustrious professor of surgery—may the lustre of his name never grow less—may succeed by the force of his genius in restoring venesection—the lost art, as he calls it—to a place in the domain of surgery, but in internal medicine it is hopelessly and irretrievably lost.

Dr. N. S. Davis, of Chicago, said he had practised medicine for nearly half a century, and for fifteen years had practised venesection after the regular sanguinary method, and must say that he had found the best results from bloodletting in pneumonia, *when discriminately employed*.

Dr. Brodie, of Detroit, believed that each case of pneumonia, like each case of any other disease, should be treated according to its own indications. Doubtless some cases of pneumonia were benefited by bloodletting, while an immense amount of harm would be done by treating other cases in the same manner. The careful judgment of the physician must be exercised concerning the requirements in each case.

Dr. J. A. Octerlony, of Louisville, Ky., offered some remarks in analysis and friendly criticism of Dr. Wile's paper. In the first place, he did not deny that cases are occasionally met with in which bloodletting is indicated and will prove beneficial, but he did not think Dr. Wile's cases sufficiently

numerous to establish a law, nor were they reported with sufficient care to make them available.

The first case, which Dr. Wile designated as catarrhal pneumonia, was evidently croupous pneumonia. Of the other cases he gave no account of the physical signs, and so had raised a doubt as to the diagnosis. The duration of his cases were not less, but greater than our knowledge of the natural history of the disease shows to be the rule.

In conclusion, he insisted that the writer had not proved his proposition, viz.: that pneumonia is a very fatal disease, nor that the mortality or duration of the disease have been diminished by venesection. On the contrary, it seems to be a well-established fact that pneumonia is a self-limited disease. The bloodletting plan of treatment used to give a mortality of 1 in 5; the purely expectant plan, 1 in 13. The plan of promoting the natural progress of the disease and supporting the strength of the patient gave a mortality of 1 in 36.

Dr. J. H. Claiborne, of Petersburg, Va., said that he did not think we could fail to go astray if we followed the teaching of those gentlemen who always recommended bleeding, nor could we fail to go astray if we believe those who tell us never to bleed. The middle course was safest, and we should be guided more by experience than by theory. There was no one method of treatment applicable to all varieties of pneumonia.

Dr. A. C. Post, of New York, said that, in his opinion, no dependence could be placed on statistics, as they were chiefly drawn from a class of patients found in hospitals, who had been badly clothed and badly housed and fed all their lives, and such statistics were not reliable guides. We must be guided solely by experience. He could not sympathize with the gentleman who expressed the opinion that the lancet could no longer be used in medicine, for he believed that, when properly and discriminately used, bleeding increased the rapidity of recovery.

Dr. H. T. Holton, of Brattleboro', Vt., said that theoretically he believed in the lancet in a certain class of cases, but that in practice he did not meet with such cases where the blood was being forced into the lungs so rapidly as to produce strangulation, as he was not called in time to see them in that condition.

Dr. I. N. Quimby, of Jersey City, advocated the free use of the lancet, when properly and timely used.

Dr. D. B. Whitney, of East Norwich, New York, when he first commenced practice, bled all cases of pneumonia, but since then he had to a great extent abandoned the use of the lancet. He thought the mortality had never been so great before as since the abandonment of venesection. He believed we did not bleed half enough.

Dr. Ariel Ballou, of Woonsocket, R. I., had never used the lancet—he regretted it; but had often failed to bleed, and regretted it very much.

Dr. John North, of Keokuk, Iowa, always carried a lancet; he had never lost a case of pneumonia, and had never yet bled one.

Dr. S. K. Jackson, of Norfolk, Va., thought it objectional to speak of bloodletting as a treatment of pneumonia; we ought to speak of it as an adjuvant or auxiliary. It was wrong to let it go abroad among the younger men that we had either advised against or for bloodletting.

Dr. S. D. Gross, of Philadelphia, believed that pneumonia was an inflammatory affection, and the lancet in such affections was applicable in young, robust, and healthy subjects. Bleeding was not applicable in *all* stages of pneumonia, but only in the commencement, when the disease was in its infancy—not later. We employ bleeding simply as an adjuvant, and under such circumstances we employ it wisely. If, however, we wait until consolidation has taken place, bleeding does harm, no matter what the form of pneumonia, whether croupous or catarrhal. If bleeding is performed in time, and on proper subjects, it is the great remedy in this disease.

Dr. H. F. Lyster, of Detroit, Mich., did not think the practice of venesection so good as the theory. We did not bleed in cerebro-spinal meningitis, because we knew we should lose our patients; but we used the supporting treatment. He asked what was the difference between the two inflammatory conditions? He was surprised at so much advocacy of the lancet in pneumonia, and would like to see it dispensed with.

Dr. H. A. Martin, of Boston, Mass., trusted that it might go out to the world thatthe American Medical Association sanctions the *occasional* use of the lancet, at least.

Dr. Wile, of Conn., in closing the discussion, expressed his gratitude for the courteous manner in which his paper had been discussed, and he accepted from the gentlemen their diagnosis of his cases. He felt delighted to learn that pneumonia was such a pleasant disease to treat as those gentlemen who proscribed the lancet seemed to think it. The cases he had reported were of the class, and the only class, he had met with in Connecticut. He did not wish to be understood as saying that the lancet was the only mode of treating pneumonia, but that it was the only way of treating those cases of pneumonia with which he had come into contact in Connecticut.

The Section then adjourned.

Wednesday, May 4th—Second Day.

Two papers on *pneumonia* were read, one by Dr. W. C. Darney, of Charlotteville, Va., and the other by Dr. Prentice, of Washington, D. C. The zymotic theory of the disease was advocated by the writers.

The papers were discussed by Drs. Osterlony, of Louisville, Bull, of Zanesville, O., McColl, of Lapeer, Mich., Whittaker, of Cincinnati, and others.

A paper, by Dr. Beverley Robinson, of New York, on

PULMONARY PHTHISIS

was read by title, and referred to the committee.

THE DIET AND HYGIENE OF ECZEMA

was the title of a paper read by Dr. L. D. Bulkley, of New York, based almost entirely upon the experience of the writer.

In regard to the true meaning of dieting in this connection, he did not intend thereby a starvation process, as too often supposed, with an idea of starving out the disease, but his definition of diet was as follows: "Such a regulation of the quantity and quality of the food and drink taken, its mode of preparation, and time and method of consumption, as shall conduce to the restoration and maintenance of health."

In the further development of the subject, he considered separately each element of this definition, calling attention to the errors constantly found in patients suffering from eczema. During the nursing period, too frequent feeding was a source of trouble;

the breast should not be given to the child each time it cried from the irritation of the disease. He also called attention to the very great importance of securing healthy breast-milk, and stated that attention should be paid even more to the mother than to the child; if she has constipation and dyspepsia; if her secretions from the bowels, kidneys, etc., are not normal, that from the breast was not normal, and could provoke disease in the child. Ale, beer, excessive use of tea in the mother, and other troubles, as even debility, could excite and continue the disease in the child. He also called attention to the error of feeding children at the breast, or those of older years, with the food of adults, and stated that he daily found the grossest errors of diet in eczema patients. The nurses, to whom so much is often committed, are from the lower walks of life, and know nothing of the laws of health. All these points must receive careful attention from the physician in order to obtain success in obstinate cases.

In the eczema of older life, the fat taken should be in healthy form, and its digestion secured, but pastry articles in which fat was burned were not desirable, and should be avoided in eczema. Ale, beer, and wine, were also interdicted; tea and coffee in great moderation were not injurious, but tea in excess he had frequently recognized as an element of injury in eczema patients.

Many other points were stated in regard to special articles of food, and also in reference to "its mode of preparation, and time and method of consumption," and stress was laid upon the necessity of all these homely subjects receiving the careful attention of the physician, inasmuch as the laity were grossly ignorant in the matter.

In regard to hygiene, attention was called to proper and sufficient exercise, bathing, etc., indeed, to every item which could in any way conduce to the health of the patient.

The Section then adjourned.

THURSDAY, MAY 5TH—THIRD DAY.

DR. J. T. WHITTAKER, of Cincinnati, read a paper on

THE TREATMENT OF DIPHTHERIA,

in which he maintained that the affection is first local and afterward a general disease; that it is only when the epithelial barrier is broken down that the blood and the body become infected. He maintained that the poison passes into the blood little by little, new quantities reinforcing the first instalments until the blood is supersaturated with the disease. The treatment therefore resolved itself into treatment of the poison at the local depot, and relative neutralization of virus in the blood. The efficacy of the antiseptics quinia, salicylic acid, and the benzoates was next detailed, with the experiments with the latter of Buckholtz and Graham Brown, whereby it was shown that saturation of the blood with the benzoates renders inoculation impossible. He next maintained that although we could not kill the germs of the disease in the throat, we could so condense its mucous membrane as to make it a dam to the influx of the disease. To effect this purpose he recommended the persulphate of iron in full strength, applied well up behind the velum palati. Though the persulphate of iron was one of the oldest recommendations of practical medicine in the treatment, the author believed its occasional in efficacy and present comparative disuse to be due to the dilution of the solution. The author knew very well the fallacy of basing conclusions upon experience, and mentioned the fact that he had never had a fatal case since the use of this treatment, and also stated that he had never seen any accidents incidental to the treatment.

DR. OCTERLONY, of Louisville, Ky., read a paper on

DYSENTERY,

in which he expressed his disbelief in the contagiousness of the disease, nor did he think that bacteria were always present in the evacuations. Neither did he think that it was due to malaria or scorbutus, though either one might complicate it. He thought dysentery might occur at any season; did not think that there is any clinical difference between catarrhal and epidemic dysentery. The tendency of the disease, when influenced by treatment, was toward recovery.

The first indication of treatment was to get the bowel into a proper condition to receive medication; second, diet; third, rest; fourth, demulcents; fifth, control of morbid processes.

ALBUMINURIA AS THE RESULT OF THE USE OF THE IODIDE OF POTASSIUM IN SYPHILIS,

was the title of a paper read by DR. I. E. ATKINSON, of Baltimore.

DR. OCTERLONY, of Louisville, believed that albuminuria was merely a symptom, and that it might occur in perfectly healthy persons.

DR. WHITTAKER thought that only temporary albuminuria would be produced by the use of iodide of potassium, and that, if it was permanent in syphilis, it was quite likely due to cirrhosis of the kidney rather than to the remedy.

DR. LYNCH had always used this remedy freely in the treatment of syphilis, had never seen a case in which it caused albuminuria, and was surprised to learn that such cases had lately been observed.

DR. DILLARD, of Lynchburg, entertained the same views as did Dr. Lynch.

DR. ATKINSON regarded the iodide of potassium as one of our most valuable remedies, and thought it was due to some idiosyncrasy that it gave rise to changes in the epithelium of the kidneys.

DR. H. A. MARTIN, of Boston, read a paper on

VARIOLA VACCINLÆ AND VARIOLA EQUINÆ IN MASSACHUSETTS.

The writer reported a case of variola equinæ, the seventh authentic case since the days of Jenner. He also reported a series of cases of cow-pox, which, so far as he knew, were the first reported cases in this country. He also offered a resolution, which was adopted and referred to the Association. [See report of proceedings of the General Sessions for Friday, May 6th.]

SOLUBLE COMPRESSED PELLETS: A NEW FORM OF REMEDY FOR HYPODERMIC USE, AND APPLICABLE TO OPHTHALMIC AND GENERAL MEDICATION,

was the title of a paper read by DR. H. AUGUSTUS WILSON, of Philadelphia. The excipient used in their manufacture was the sodium sulphate. The advantages claimed for this form of medication were: 1, the convenient size of the pellet; 2, their immunity from change; 3, their accuracy of contents and dose; 4, their certainty and rapidity of action; 5, that they may be used by the mouth; and 6, their adaptability to ophthalmic medication. The use of the pellets for more than a year for hypodermic,

ophthalmic, and general medication, had convinced him that their judicious use would tend to banish the changeable solutions and the equally inconvenient powders.

Dr. F. E. Stewart, of New York, read a paper on

THE MATERIA MEDICA OF THE FUTURE.

He maintained that the physician should know the methods of manufacture of drugs. The profession is under many obligations to pharmacy for the elegant preparations of drugs. It is the physician's prerogative to treat the sick, and to dictate how his medicine shall be prepared. The code of ethics of the profession prohibits prescribing medicines prepared from secret formulæ, or holding a patent on an instrument; but trade has so affected pharmacy by patents, copyrights, trade-marks, secret formulæ, etc., that a physician is obliged to stultify himself to gain the advantages of many of the improved forms of medicine. Either the code should be altered, or the methods of trade should be changed to meet the requirements of the code. If the patent system be admitted by the profession, the protection by law should be limited, and under the same restriction as applies to other trades, and the exact working formulæ made known; or else no druggist should be allowed to prescribe for the sick, and no physician should prescribe patent medicine whose nature was unknown.

After the reading of the paper,

Dr. Dunster offered a resolution, which was adopted and referred to the Association. [See report of the proceedings in General Session, Friday, May 6th.]

Dr. J. N. Upshur, of Richmond, Va., reported a case of

PARALYSIS OF MOTION IN BOTH UPPER EXTREMITIES.

The peculiarity in the case was the complete paralysis, except in the hands, with intense pain in the shoulders in any attempt to lie down, and inability to sleep. Epileptiform convulsions were present at the onset of the attack.

The Section then adjourned.

SECTION IN OPHTHALMOLOGY, OTOLOGY, AND LARYNGOLOGY.

Dr. Dudley S. Reynolds, of Louisville, Ky., Chairman.

Dr. Swan M. Burnett, of Washington, D. C., Secretary.

TUESDAY, MAY 3D—FIRST DAY.

Dr. George T. Stevens, of Albany, N. Y., presented

A PERIMETER

invented by himself.

THE RADICAL CURE OF NASAL CATARRH

was the title of a paper read by Dr. William C. Jarvis, of New York. He remarked that the persistence of the disease is due to the presence of hypertrophied tissue in the nasal cavities. This must be removed, and instruments are necessary to effect this result. The écraseur described in the Medical Record, April, 1881, is used in connection with the wire, which is very fine, but exceedingly strong, and made of the best steel. Transfixion needles, the latter of which are provided with metal handles, are made of various sizes. The pedunculated forms of hypertrophy can be removed with the écraseur alone, but sessile growths require both instruments. Dr. Jarvis stated that all the various forms of hypertrophy can be removed by means of these instruments. He cited a couple of cases, out of a number operated upon, as examples of the two operations. In one patient who had not breathed through the nose for fifteen years, and in one who had never breathed at all through the nostril, free nasal respiration was established. All kinds of nasal growths can be reached by means of the instruments, and there is no longer any necessity of resorting to caustics, cutting, and the galvano-cautery.

Dr. Joseph A. White, of Richmond, said that he had used the instrument mentioned by Dr. Jarvis, and had obtained excellent results. In one case in which the hearing was only two-fiftieths, the result was such as to produce perfect hearing on one side, and partial hearing on the other side, where organic trouble was added.

Dr. W. H. Daly, of Pittsburg, said the instrument was a very useful one. In his experience, deafness of greater or less degree has often been relieved by removal of nasal growths, and that, too, without treating the deafness at all. If the "central trouble" or hypertrophy be remedied, the result will be good. The galvano-cautery, used for a few moments at a time, is an excellent means of removing the growth in some instances. The finger is introduced into the pharynx as a support and protection. In some cases glacial acetic acid answers well as an application to the stump after the removal of the growth with instruments. Cases under his care have been watched for years, and have progressed favorably. In one case in which sessile growths were present, these were removed by the galvano-cautery, heated to a mahogany or cherry red. The apex of the growth disappears, gradually becoming hollowed out, and sound normal structure is left. The surrounding structures are not injured.

Dr. S. D. Risley, of Philadelphia, said he had been struck, after a long experience, with the connection between anral and nasal diseases. Deformities in the septum and turbinated bones produce trouble in the ear, after giving rise to hypertrophy and sometimes ulceration in the nose. Deflection of the septum to one side is one deformity giving rise to ear disease. Operative interference is not often needed. Iodoform, with alum or acacia, is an excellent application. In other cases, where no deformity exists, the rhinoscope will reveal a group of enlarged glands. These give rise to a viscid secretion, which irritates the surrounding structure.

Dr. W. T. Little, of Philadelphia, stated that we must not forget the effect upon the lachrymal canal of nasal troubles; it is an important one.

The Chairman remarked that the predisposing causes are very important, but had not been discussed. Do cases of cured catarrh stay well? and is not the local trouble secondary to constitutional causes?

Dr. W. T. Little remarked that traumatic causes must be considered. He had seen a child strike its nose and have catarrh. This occurred in a healthy person.

Dr. M. B. Carter, of Richmond, Va., said that one great cause seemed to him to be the change from the impure hot air of a room to the cold air without, and advises his patients to place a piece of cotton in the nostril on going into the open air. The oxide of mercury he has used with a great deal of benefit. The great point is the recurrence of the trouble, and it does frequently recur.

Dr. Daly thinks that a fair proportion of cases depend upon a constitutional defect, but many of those are pharyngeal catarrh. Subjects with slow and bad digestions are liable to this form. A smaller per cent. of nasal troubles are constitutional. The majority are in excellent health, and we must look upon the nasal disease as the result of repeated colds in the head. In such cases, temporary nasal stenosis takes place; this is relieved, but a slight thickening is left, which is increased by each subsequent attack. Subsequently, nervous tone is impaired and vascular action interrupted. The best way to deal with the patient is to tell him that the trouble can be cured, but that it will recur if he catches cold again. Of course he should consult a physician in that case, and be treated again. Dr. Daly has often seen the constitution improve after local relief.

Dr. J. J. Chisholm, of Baltimore, read a paper on

THE USE OF THE ACTUAL CAUTERY FOR SHRINKING THE CORNEA IN KERATO-CONUS.

After reading an article written by a French surgeon on puncture of the cornea with a needle heated to redness, he determined to put into practice the same plan, and selected a case of exophthalmic goitre, with eye complications, in which to operate. Objects before the operation could not be distinguished further than twelve inches. The heated needle was thrust suddenly through the cornea; no pain was felt, the anterior chamber was at once emptied, and atropia and cold water were used. No inflammatory reaction followed. As soon as the eyes were opened the patient read at six feet. The same operation was repeated on the right eye, and in eight months the cornea was flattened sufficiently to admit of an iridectomy. The paper was discussed by

Dr. Little, who had assisted Dr. Noyes, of New York, in tapping a conical cornea, and the result was very satisfactory.

The Section then adjourned.

Wednesday, May 4th—Second Day.

Dr. Carl Seiler, of Philadelphia, read a paper on

SYPHILITIC LARYNGITIS,

in which he stated that the affection could be diagnosed from non-specific inflammation by the peculiar discoloration of the mucous membrane and the symmetrical disposition of the inflammatory patches. There are frequent ulcerations of the larynx, which may be divided into shallow ulcers, in nothing differing from those seen in catarrhal laryngitis, and deep ulcerations, which were, in the author's opinion, due to the breaking down of the smaller or larger gummata in the mucous membrane. A diagnostic sign of syphilitic laryngitis was seen in the red lines and observed upon the velum palati. He recommended as treatment, beside the systemic, with iodide of potassium and mercury, and supportive, with tonics, etc., local touching of the shallow ulcers with solid nitrate of silver fused upon an aluminum probe, and the deep ulceration with acid nitrate of mercury (1 to 4) or the galvanic cautery.

Dr. Reynolds said that he thought constitutional treatment would do more good than any local measures. He was surprised at Dr. Seiler's statement, that the diagnosis of simple form syphilitic laryngitis was difficult. He did not believe that catarrhal inflammation could produce ulceration. There were three kinds of syphilitic ulcers: 1, the ulcer with inflamed base and everted edges; 2, pale or gray base with irregular margin and sharply defined scarlet areola; 3, ulcer, wholly unaccompanied with any evidences of inflammation, with sharply-defined outlines and gummatous deposits surrounding the margin. He thought that local applications could give no good results, unless restricted to such remedies as would give relief from pain. While not doubting the correctness of Dr. Seiler's observations, he differed with him in his diagnosis.

Dr. J. A. Stevens, of Hartford, Ct., thought the treatment much more satisfactory when both local and constitutional remedies were employed. He used nitrate of mercury (1 to 4) locally, with the internal administration of potassium iodide.

Dr. Ralph Walsh, of Washington, thought too much prominence was given to the iodide of potassium. He held the opinion that the shallow ulcer corresponded in its time of appearance with the mucous patch of syphilis, and the deeper ulceration with the tertiary stage. He always found enlargement of the cervical glands in specific laryngitis. He employed mercury internally, especially in the shallow ulceration, and iodide of potassium in the deeper forms. He thought Dr. Reynolds wrong in neglecting local medication, the combination of local and constitutional treatment giving the best results. Of the modes of administering mercury, he preferred inunction. General treatment should be supporting.

Dr. Seiler thought catarrhal inflammation could produce ulceration. The infiltration of the submucous tissue could break down and produce ulceration. In his paper he had taken it for granted that every physician would employ constitutional treatment in this disease. He claimed that local treatment lessened the amount of cicatricial contraction in the process of cure. The application of caustic served to coat over the ulcer and protect it. He claimed that there was involvement of the cervical glands often in non-specific laryngitis, while it was not a constant symptom in the specific form. He based his diagnosis mainly upon the carmine color of the mucous membrane and the symmetrical arrangement of the ulcers. If there was an ulcer upon one side of the larynx, there would be found a corresponding ulcer or focus of inflammation on the other side. He attached much importance to the red lines upon the velum palati, which were sometimes brought out by the irritation of an examination.

TWITCHING OF THE TENSOR TYMPANI MUSCLE A CAUSE OF TINNITUS.

Dr. Chisholm, of Baltimore, read a paper on the above subject, in which he referred to a rhythmical contraction, first brought to his notice by a muscular twitching in his left ear. It occurred during the heat of summer, and invariably commenced after dinner. The twitching, at first, was not of more than half an hour's duration. It did not affect the hearing. The next day after dinner the buzzing sound was resumed. This continued for four days in succession. The duration of the buzzing was gradually increased, until the last recurrence. The noise continued until lost at bed-time in sleep. Inflation of air, chloroform vapor, electricity, both faradic and continuous currents, did not in any way control the buzzing sound. The fluttering was felt at the drum-head, and analyzed as a rhythmical con-

traction of the tensor tympani muscle. The contraction and relaxation varied at times from 130 to 160 to the minute. The cause was ultimately found to be a glass of wine taken at dinner, in connection with the very hot weather. Omission of the wine stopped the noise, and its resumption at dinner renewed it. Other cases of a similar nature had come under Dr. Chisholm's observation. The muscular twitching was similar to the twitchings so often experienced in the muscular fibres of the eyelid, and which may be kept up for minutes, hours, or even days. There was no diminution of the hearing power, even while the noisy muscular contraction was greatest. Dr. Burnett had noted in his own case that when he made a strong contraction of his orbicularis muscle there was a peculiar sound in the ear of the same side. He at first thought it was the sound of muscular contraction conveyed through the bones of the head, but this was disproved by the fact that he could only produce the sound at certain times. He could always do it in the morning. He attributed it to contraction of the tensor tympani muscle.

BLEPHAROPLASTY.

Dr. Eugene Smith, of Detroit, described a successful operation for blepharoplasty, in which the graft was taken from the arm without any pedicle. A piece of skin one and a half by two inches was taken from the arm, and the cellular tissue and a portion of the true skin shaved off. This was then applied to the cut surfaces of the lid, being about one-fourth larger than the wound. The case progressed to a very successful termination, the motions of opening and closing the eye being perfect. Dr. Smith exhibited photographs of the patient before and after the operation. There had been no contraction of the lid for several months. The operation was performed in October last.

Dr. H. Augustus Wilson, of Philadelphia, reported a case operated upon by Dr. Levis, in which the graft progressed well for two weeks, and then sloughed, leaving the condition as bad as before operation. The skin of an amputated little finger was used in this case, but the cellular tissue was not removed. He attributed the failure to this fact.

Dr. Burnett mentioned a case where the contraction afterward was continuous, until it did away with all the good results of the operation. He thought this was the most frequent cause of failure.

Dr. Smith said he was thus particular in describing the operation, because he had twice before failed in the same. He attached much importance to shaving away all of the cellular tissue and a portion of the cutis vera, thus bringing the dermic cells in direct contact with the cut surface. He thought failure was generally due to want of care in preparation of the graft. Flap should always be one-fourth to one-half larger than the surface to be covered.

Dr. Reynolds described a similar operation performed by him in 1862. The first graft came away, causing severe hemorrhage. The second was successful, and the patient, a practising physician, is now doing well.

A paper by Dr. Lawrence Turnbull, of Philadelphia, entitled, 1, Otitis Intermittens, with Observations upon the Use of Quinine in Diseases of the Ear; 2, On the Importance of Ear Examinations in Effecting Life Insurance, was, on motion, read by title, and referred to the Committee on Publications.

The Section then adjourned.

THURSDAY, MAY 5TH—THIRD DAY.

The Section held an Executive Session, after which the subject of

ASTIGMATISM

was discussed by Drs. Reynolds, Risby, Burnett, Scott, and Daly.

A paper by Dr. Reynolds on Treatment of Nasal Polypi was read by title, and reported to the Committee on Publications, after which the Section adjourned.

SECTION IN STATE MEDICINE.

Dr. J. T. Reeve, of Wisconsin, Chairman.
Dr. R. G. Jennings, of Arkansas, Secretary.

TUESDAY, MAY 3D—FIRST DAY.

The Section was called to order by Dr. Jennings, who read a letter from The Chairman, in which he expressed his regret at not being able to attend the meeting of the Association on account of ill-health and imperatively pressing engagements.

The Section then adjourned, to meet on Wednesday at 3 P. M.

WEDNESDAY, MAY 4TH—SECOND DAY.

Dr. John S. Billings, of Washington, was elected Chairman *pro tem.*

THE NATIONAL BOARD OF HEALTH AND THE INTERNATIONAL SANITARY CONFERENCE OF 1881.

Dr. J. L. Cabell, of the University of Virginia, read a paper on the above subject, and gave the reasons which necessitated the calling of the International Sanitary Conference, which met in Washington January and February of the present year. The paper concluded as follows:

"There is, therefore, good reason for hoping that an international agreement may be arrived at between the States most frequently threatened with epidemic invasions. And, aside from this, the degree of attention which, as a result of the deliberations of the Conference, has been given to the subject of maritime sanitary police, cannot be without fruit in securing greater cleanliness, better ventilation of ships sailing on the high seas, and in general, an improved sanitary condition of these important instruments of commerce, which become so often the carriers of the most deadly contagion from the failure to use such precautions as sanitary license suggests, and as it is hoped will now be enforced among the maritime powers of the world."

Dr. C. F. Folsom, of Boston, read a paper on

THE RELATION OF THE STATE TO THE INSANE.

He argued in favor of establishing State Lunacy Boards.

One of the points made was, that a lunacy board should, first of all, embrace men with a thorough knowledge of insanity and its treatment. The chief duties of this board should be to secure proper care for the insane in private dwellings, where they are very much liable to neglect. Another point was, that they should require the commitment of lunatics to the asylum by necessary copies of the commitment papers, and otherwise looking into the cases, so as to be able to tell whether the lunatic should be retained for care or be discharged.

The paper was full of valuable information.

Dr. Grissom, of Raleigh, N. C., urged that, if

insanity is treated promptly, as other physical diseases are, it is comparatively curable. When insanity is recognized as a purely physical disease, and treated as such, more cures will be effected. The people must be educated to believe that to be insane is no cause for odium.

The Section then adjourned.

Correspondence.

ELECTRO-STATIC THERAPEUTICS.

To the Editor of The Medical Record.

Sir—In the *Medical and Surgical Reporter*, for March 12th, I called the attention of the profession to the value of static electricity in practice, illustrating my remarks by cases. The main intention of the paper was to show the superiority of the "Soepler" (which was described, and an illustration given) over the Holtz-Bertsch or Carre's machines, and its reliability under wet or dry climatic conditions, an essential characteristic of medical apparatus. The papers which followed in the Record, in four April numbers, from Dr. Morton, were extremely interesting, and his discovery and utilization of a "static induced" current, as he terms it, will doubtless prove of great value in therapeutics. I cannot, however, agree fully with him in the necessity for large double or quadruple plate machines as essential for quantity, or in the desirability of "long, thick, and straight" sparks. Static electrical applications require gravation, precisely as do galvanic or faradic ones, and few patients, would, to my mind, either require or submit to those suggested by Dr. Morton. When high tension and large quantity *are* requisite, this can readily be obtained from the small sizes of the Soepler through the instrumentality of a battery of Leyden jars, and I have no difficulty in producing in this manner a discharge fully as strong as is desirable, as has been demonstrated in actual practice repeatedly during some months past in my office. The cost of the large machines used by Dr. Morton will preclude their employment by many gentlemen who are not specially interested in electro-therapeutics, yet who would avail themselves (and greatly to the advantage of themselves and their clientage) of a moderate priced machine, such as a sixteen to twenty-four inch Soepler. That all needed power may be had from the latter I am sure, and that it is infinitely preferable to any other machine is certain, for it will work in any weather, and this a Holtz will not do, as I demonstrated to several friends repeatedly last week on wet and threatening days. I generally use No. 16 brass chain, encased in unvulcanized (black) rubber tubing, for conductors, but heavy brass wire is preferable, as affording less opportunity for escape. I was gratified to see Dr. Bartholow's letter in the Record of to-day, and trust he will do the subject full justice in his forthcoming work, which, with Dr. Morton's admirable brochure, will, I hope, wake up the profession to an agent long forgotten, but not the less valuable for this neglect. Although I have used static electricity freely for several years past, it was not until the "Soepler" made its appearance that uniform results could be depended on, and I wrote the article referred to without knowing that others were interested in that direction at the time.

William R. D. Blackwood, M.D.
246 North Twentieth Street, Philadelphia.

VERATRUM VIRIDE IN CROUP.

To the Editor of The Medical Record.

Sir—Referring to Dr. H. R. Bigelow's communication in your issue of April 30th ult., permit me to present as follows: At the meeting of the New York State Medical Society for the year 1868, I think Dr. Squibb, as one of the committee having in charge the revision of the Pharmacopœia new edition for 1870, presented and read a report of what changes the committee proposed to make, and among them was one to reject veratrum viride, because of its dangerous potency. I wrote the doctor, protesting against the rejection of the article, giving him my experience with it in the treatment of croup—both spasmodic and membranous—detailing several cases in confirmation, to which he replied in very generous terms. I have no experience with turpeth mineral in the treatment of croup, and I am frank to say I realize no necessity for any additional nauseant to the specific effect of veratrum viride; in fact I am unable to see when the good effect of emesis comes in unless it be to satisfy the excited parents and friends that the attending practitioner is "knowing what is necessary to save the patient." Candidly, Mr. Editor, I believe, from experience, that the successful treatment of croup, if seen in any reasonable time from the first attack, to be very simple; that fatal results are largely the exception when veratrum viride is intelligently used with hot vapor.

If fluid extract of veratrum viride is given in from one to two-drop doses—according to age—in from two to four hour intervals, one hour for the first two doses, with the temperature of the room at 75° to 80° well charged with moisture, and flannels enough to fill the neck out to even or more with the chin; coming out of water as near to scalding as possible and not scald, so held in place by the hand of the nurse, who should hold the child in her lap, as to allow the vapor to be freely inhaled, I invariably expect to see, after the third or at most fourth dose of veratrum, the pulse to subside down to 60, 50, or even 40, the patient in the meantime thoroughly nauseated and perhaps vomiting occasionally and when that condition has arrived, I know that I have won the victory over the grim monster—death.

I could give cases in detail, but will not take up your space. Suffice it to say that since I have practised the above plan, I have yet to see the first fatal case.

G. L. Halsey.
Unadilla, N. Y., May 3, 1881.

THE TERMINOLOGY OF TRANCE.

To the Editor of The Medical Record.

Sir: In the name of the psychology of the future, I implore experts and non-experts of every grade to unite in the attempt to stop this manufacture of new terms for trance.

Your last issue contains two new terms to express a state for which no new terms are, or have been needed; which indeed prays for the oblivion of fifty words of reproach that have been already cast upon it, and beneath which it halts and staggers, or advances with difficulty.

In this department of science, the call is not for words, but for ideas. Terms are not the sun, but clouds that shut out the light of the sun. For those who are already masters of this subject no term is desired except trance, which for ages in the past has

been used, and for ages to come will continue to be used, in science and out of it, to express this state. He who suggests a new term for the phenomena grouped under the trance, shows by that very suggestion that on this subject he is not a teacher or expert, but an amateur and inquirer, yet wandering very far from the kingdom of truth.

The word suggested by my friend Dr. Tracy is both philologically and euphonically better than the one that it would displace; but, as he intimates, we do not need either, for "agreeing with" is precisely what does not happen in induced or mesmeric trance; the subject in those experiments enters the state through the emotion of expectation, and he responds to the suggestion of the operator *mechanically*, as the steam-engine responds to the engineer, when he turns the valve and lets it run; and there is no more agreeing in the one case than in the other. In trance, a man, an organism, becomes a mechanism and responds mechanically to suggestions made to the body or to the mind; both mind and body in this respect obeying the same law. The operator has no power to control the actions of the subject after the suggestion is once given, except by giving a new suggestion; the subject runs on independently, as in a dream, no two performances being precisely alike. Thus in my experiment the other evening at the Medico Legal Society, one of the subjects seized some worsted that he supposed to be money, and ran out of the hall as far as two blocks before he was captured. I did not expect him to do either of these things, and I had no power to stop him, except by getting near and giving another suggestion.

About all of the fifty or sixty terms that have been invented to explain trance are similarly unscientific; they are based on imperfect or absolutely false ideas of the nature and rationale of trance, and would never have been suggested had the philosophy of that state been understood. In these subjects the mind responds mechanically to suggestion, just as the motor-nerves respond to irritation of pressure by the same law exactly, and there is no more agreeing with it in one case than in the other. Baid abandoned the term hypnotism before he died, and others would do well to do likewise, and at the same time not to imitate him by coining new words for a condition which they do not comprehend.

All new sciences must go through these struggles with nomenclature; when I began the study of electricity I found it overloaded and mystified by names without number, nearly all as erroneous and misleading as the terms "hypnotism, somnambulism" applied to trance; neurasthenia was similarly burdened by at least twenty unfortunate terms; likewise with writers' cramp and hay fever; just in proportion as we acquire mastership of these subjects, in that proportion their terminology disappears, and we settle down to the oldest, shortest, simplest, and easiest term that the world has used and is using.

An expert in trance needs no terms and will use none; a non expert who desires to make himself an expert will be clogged and confused by any terms that have been or can be suggested.

In a work on trance and allied states, on which I have been engaged for the past ten years and more, it had been my intention to devote a short chapter to the terminology, in which all this long and increasing list of terms would be hung up to dry; but if the manufacture goes on at the present activity (two new words a week), such a chapter would make a large book of itself. The very latest European literature on this subject, which is very extensive, shows a tendency to abandon all these terms, and to fall back on trance, where they started hundreds of years ago; and so far forth, Europe is wise.

This whole subject, which next to evolution is the supreme scientific question of this century, is now fully and permanently before the scientific world; this present excitement will not die out among psychologists until our knowledge of this side of the nervous system has been completely organized and diffused.

To those who are entering on the study of this theme, I would make the same suggestions that I yesterday gave to a physician, who called and requested me to point the true line of thought and research whereby he might make himself expert in this branch of science. I told him to first discipline his reasoning faculties, and specially recommended "Jevon's Principles of Science," "Whewell's History of the Inductive Sciences," and "Mill's Logic." All of these works are imperfect guides, and in the department of experimenting with living human beings they are good for nothing, but they are the best we have, and their perusal will greatly help one to prepare for the study of the profound questions of psychology.

GEO. M. BEARD, M.D.
161 MADISON AVENUE, NEW YORK, May 9, 1881.

MEDICAL CERTIFICATES.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: I have this morning received an advertising pamphlet extolling the virtues of a preparation called "Corr. Tinc. Avena," purporting to be a preparation from oats. This pamphlet, strange to say, contains certificates from several physicians as to the efficacy of the remedy. One of the physicians is a member and was recently an officer of the New York County Society, and this in spite of the recent by-law of the Society prohibiting certificates relating to secret and proprietary remedies. The remedy in question is a secret one, inasmuch as the formula for its preparation is not published, the mere statement that it is made from oats not relieving it from the ban. When will medical men have the good sense and self-respect to discontinue the giving of certificates to all sorts of nostrums, which simply serve to bolster up trade-interests to the detriment of those of the medical profession?

K.

SPONTANEOUS VERSION—CROSS-BIRTHS WITH CEPHALIC DELIVERY.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In the paper read by Dr. Taylor a short time since at the Academy of Medicine, on spontaneous version, no allusion was made to a very important branch of the subject, namely, that in which cephalic delivery occurs spontaneously in cases of cross-birth. In the teachings of the late Dr. Ashwell we were instructed that spontaneous version within the womb, by which one presentation should be made to move away absolutely to make room for another, was an impossibility; that in cases of arm presentation, the breech, if the child were small, might be forced down and so convert the presentation into a double one, the arm maintaining its original position. Of course, when the legs were brought away, the natural

elasticity of the child would bring it into the position occupied in an ordinary footling case. Dr. James Blundell seems also to have thought there was no real spontaneous version in arm presentation, so followed by breech descent, since the former maintained its original position. The cases of Dr. Denman and others cited, appear all to have been of this kind, and the children mostly quite small, not exceeding six pounds in weight.

The two cases recorded by me in 1861, in the second volume of the *American Medical Times*, are of an entirely different class, and appear to me to show very clearly the possibility of the alleged impossible. In the first of these there was a full term child, living at the commencement of the labor, and not below the average healthy size, certainly over seven pounds. When I first saw the patient the os was fully dilated and the left shoulder and belly presented, the left hand and part of the forearm projecting from the vulva. Here the umbilicus slowly moved away to the right, the head gradually came within reach from the left, the hand receding into the vagina as the labor progressed, and in the course of four hours the vertex became fairly engaged; in two more the occipit emerged from beneath the arch of the pubis, while as the face passed from the perineum the arm was found to lie across it, the back of the hand resting on the ear of the opposite side. Here was unmistakable spontaneous version. In the second case the right shoulder presented, the right hand and part of forearm projecting from the vulva. The position was that of reaching forward, possibly caused by an ignorant nurse pulling at the arm before my arrival. Here the delivery took place precisely as in the first; the descent of the head, however, was almost sudden, though when the vertex was once in position, its farther progress was slow, much more so than in the woman's other and more natural labors. Probably from the body rolling back, the withdrawal of the arm was greater than in the former case, the hand on delivery resting upon the middle of the face. Both children died in the birth.

These cases do not stand alone. Dr. Richardson, of the Northern Dispensary of Philadelphia, in vol. xii. of the *Medical and Surgical Reporter*, mentions one reported by Velpeau, in which a shoulder presented and where the child was spontaneously delivered by the vertex. He also cites a case of his own in which the elbow presented, the right hand subsequently protruding, and where delivery took place by the head; the child, however, weighed only five pounds, not being by several weeks at full term. Dr. F. V. White, of this city, informed me that during his hospital service he had a case of arm presentation and sent for his colleagues. He had to wait some time, and on their arrival he found to his surprise that the head had come down into position. It is reasonable to infer that other unreported cases have occurred, perhaps even some in which, if left alone, the head might have come down, but where, failing to reach the legs, the accoucheur, following the rule, has resorted to embryotomy.

I venture to suggest that in these cases the position of the child probably differed from that of those in which delivery took place by the breech. For instance, in cross-birth occurring in a full grown child, the legs being doubled up as usual in front of the abdomen, the efforts of the womb to force down the head on one side, and the nates on the other, will antagonize each other, while by their joint action they tend to jam down the shoulder and chest more tightly. Here assistance becomes imperatively necessary. Let us suppose, however, the legs of the fœtus extended upon the pelvis, in which case they would lie beyond it, the position of the child would be one of being bent backward on itself. In such a case, the mechanism of these labors could be readily understood. The head on the left side would be the only part on which the womb could make efficient downward pressure; the body on the right side would offer no salient point to act upon. The spine, already curved, would, on contraction of the upper part of the uterus, yield and curve farther, tending to throw the legs to the opposite side, the contraction of the lower part would tend rather to lift the body and with it the shoulder, while the *vis a tergo* exerted by the head would push the whole forward and so version would occur in a very simple way. When the head became engaged, progress would be naturally slow, losing the force exerted by the nates, through the spine on it. Should this view of the position of the child and mechanism of labor prove correct, points of considerable practical importance would be involved. Suppose for instance, on introducing the hand into the uterus, and along the belly of the child, the fingers could reach the genitals without finding the legs, we should reasonably conclude that they were lying beyond the pelvis, and consequently extended upon it. In such a case considerable effort and force would be necessary to bring them down, if we could accomplish it at all, and then with possible injury to the mother; while on the other hand, if we were to wait a reasonable time, we might expect such a change in the position of the child as would render certain the descent of the head after a little more patience. Be this as it may, the matter of cephalic delivery in cross-births deserves more attention than it has hitherto received at the hands of obstetricians, in connection with the subject of spontaneous version, especially as bearing on the rules for delivery. Finally, a still more remarkable case of spontaneous version is reported by Mr. Hyslop, of Haverford West, England, in the *London Medical Gazette*, in which the head and arm were jammed in the pelvis, and where, by a violent effort of nature, the head ascended, the legs and breech descended, and a full grown living child was quickly expelled. See Braithwaite, vol. iv., page 226.

EDMUND S. F. ARNOLD.

Obituary.

DR. M. J. DE ROSSET,

NEW YORK.

THE death of this eminent medical gentleman is announced as having occurred in Wilmington on the first day of the present month, at the residence of his father, Dr. A. J. De Rosset, after a long and painful illness.

Dr. De Rosset had the advantage of an honorable name, and all that wealth and paternal solicitude could confer in the way of maintenance and education. He was gifted with talents of a high order, and he cultivated them with rare industry and conscientiousness. After some years spent abroad, he entered upon the study of medicine in this city, and was graduated with honor at the College of Physicians and Surgeons in 1859, and subsequently served a term of eighteen months on the house staff of Bellevue Hospital.

The civil war breaking out at about this time, he returned to his home in North Carolina, and was soon after appointed assistant surgeon in the Confederate service, and was subsequently appointed full surgeon and inspector of hospitals at Richmond.

At the close of the war, in which he distinguished himself by his humanity, his courage, and his professional skill, he settled in Baltimore, devoting himself chiefly to the study and treatment of diseases of the eye and ear.

In connection with this specialty, he assumed the chief editorial responsibility of the *North Carolina Medical Journal*. It was in this position, in an especial manner, that his literary qualities and his mental status were exhibited to advantage. A brilliant writer, a generous and judicious critic, strong and fearless in the advocacy of views and measures he conceived to be right, and fearless in the condemnation of what he believed to be wrong, in matter or in spirit, he wielded an influence of no mean importance in behalf of the best interests of the medical profession in his State and county.

In 1878, desirous of a larger field of practice, he came to New York. Here his rare intellectual and literary attainments, united with his general social nature and cultivated address, won him favor professionally and socially, and he was rapidly advancing into the front rank of his specialty when stricken down by the disease which finally terminated his existence.

Dr. De Rosset, in the few years he was resident among us, made himself beloved and honored by all who knew him, and his memory will be cherished as of those who act well and honestly their part in this life, and leave behind them the fragrant odor of a pure and earnest life.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from May 8, 1881, to May 14, 1881.

R. H. Alexander and C. T. Alexander, Surgeons, and Asst. Surgeon R. H. White, are detailed as members of a board to meet at West Point, N. Y., June 1st proximo, to examine into physical qualifications of members of the graduating class and the candidates for admission to the Academy. S. O. 109, A. G. O., May 12, 1881.

King, William H., Colonel and Surgeon. His extension of leave of absence on account of sickness, granted him November 9, 1880, from A. G. O., still further extended six months on account of sickness. S. O. 105, A. G. O., May 7, 1881.

McParlin, T. A. His promotion to Asst. Medical Purveyor, with the rank of Lieut.-Colonel, vice Cooper, deceased, confirmed by the Senate, May 7, 1881.

Bache, D., Major and Surgeon. Relieved from duty in Department of California, to proceed to Philadelphia, Pa., and report by letter, on arrival, to the Surgeon-General. S. O. 104, C. S., A. G. O.

McClellan, Ely, Major and Surgeon. To report to the Medical Director of the Department for duty until further orders. S. O. 56, Department of the Columbia, April 26, 1881.

Hartsuff, A., Major and Surgeon. Relieved from duty in Department of the East, to take effect June 1, 1881, then to report in person to Commanding General, Department of the Missouri, for assignment to duty. S. O. 104, A. G. O., May 6, 1881.

Middleton, J. V. D., Major and Surgeon. Relieved from duty in Department of the East, to take effect June 1, 1881, then to report in person to Commanding General, Department of the Missouri, for assignment to duty. S. O. 104, C. S., A. G. O.

Brown, J. M. His promotion to Surgeon with the rank of Major, Vice McParlin, promoted, confirmed by the Senate, May 10, 1881.

Brown, J. M., Capt. and Asst. Surgeon. Relieved from duty at Fort Garland, Col., and assigned to duty at Fort Lewis, Col. S. O. 86, Department of the Missouri, May 3, 1881.

Hubbard, Van Buren, Capt. and Asst. Surgeon. Relieved from duty in Department of California to proceed to New York City, and on arrival report by letter to the Surgeon-General. S. O. 104, C. S., A. G. O.

Gardner, W. H., Capt. and Asst. Surgeon. Relieved from duty in Department of the South, to proceed to Washington, D. C., and report in person to the Surgeon-General. S. O. 104, C. S., A. G. O.

Koerper, E. A., Capt. and Asst. Surgeon. Relieved from duty in Department of the Platte, to proceed to Philadelphia, Pa., and on arrival, report by letter to the Surgeon-General. S. O. 104, C. S., A. G. O.

King, W. H., Capt. and Asst. Surgeon. Relieved from duty in Department of Dakota, and, on expiration of his present sick leave of absence, to report by letter to the Surgeon-General. S. O. 104, C. S., A. G. O.

De Witt, C., Capt. and Asst. Surgeon. Relieved from duty in Department of the Platte, to proceed to Philadelphia, Pa., and on arrival report by letter to the Surgeon-General. S. O. 104, C. S., A. G. O.

Maus, L. M., Capt. and Asst. Surgeon. Relieved from duty in Department of Dakota, to proceed to Washington, D. C., and report in person to the Surgeon-General. S. O. 104, C. S., A. G. O.

Shannon, W. C., Capt. and Asst. Surgeon. Now awaiting orders in New York City, to report in person to Commanding General, Department of the Platte, for assignment to duty. S. O. 104, C. S., A. G. O.

Shufeldt, R. W., 1st Lieut. and Asst. Surgeon. Relieved from duty in Department of the Platte to proceed to Washington, D. C., and report in person to the Surgeon-General. S. O. 104, C. S., A. G. O.

Cunningham, T. A., 1st Lieut. and Asst. Surgeon. Now awaiting orders at Danville, Va., to report to Commanding General, Department of the South, for assignment to duty. S. O. 104, C. S., A. G. O.

Perley, H. O., 1st Lieut. and Asst. Surgeon. Relieved from duty in Department of Dakota, to proceed to Detroit, Mich., and report on arrival by letter to the Surgeon-General. S. O. 104, C. S., A. G. O.

Cochran, J. J., 1st Lieut. and Asst. Surgeon. Relieved from duty at Fort Lewis, Col., and assigned to duty at Fort Garland, Col. S. O. 86, C. S., Department of the Missouri.

Bushnell, G. E., 1st Lieut. and Asst. Surgeon. To proceed to Fort Yates, D. T., and report to the Commanding Officer of that post for duty. S. O. 81, Department of Dakota, May 6, 1881.

Birmingham, H. P., 1st Lieut. and Asst. Surgeon. To proceed to Fort Riley, Kan., and report to Major E. B. Beaumont, 4th Cavalry, for duty with troops about to take the field in Colorado. S. O. 90, Department of the Missouri, May 7, 1881.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending May 14, 1881.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
May 7, 1881.	29	22	145	39	157	84	59	0
May 14, 1881.	49	11	186	18	111	116	58*	0

* Four of these cases were emigrants.

PROSECUTING UNLICENSED PHYSICIANS.—The County Medical Society has already two cases before the courts of persons who have been found practising medicine without having a diploma or license. The evidence is very clear in the first case, and it remains to be seen whether the law will hold.

The second case is that of a "Dr." Gustave Ferner, of Forsyth street, who was arraigned before the justice on the 9th inst. for practising medicine without a license, in violation of the law of 1880.

THE ALUMNI ASSOCIATION OF THE COLLEGE OF PHYSICIANS AND SURGEONS has recently issued a catalogue of graduates from 1807 to 1880. The whole number of graduates is 3,694; alumni, 3,584; honorary degrees, 18; ad rundem, 2.

A STATUE TO CLAUDE BERNARD has been voted by the Municipal Council of Villefranche.

DR. CHAS. K. MILLS has been appointed Lecturer on Mental Diseases in the University of Pennsylvania.

LEGISLATIVE NOTES.—The "Plumber's Bill" has passed the Assembly.

The Senate has passed a bill authorizing the Board of Health to quarantine any tenement-house or other habitation in New York City whenever it deems it necessary to prevent the spread of contagious or pestilential diseases.

The same body has passed a bill appropriating $50,000 to prevent the spread of contagious diseases among cattle.

The following bill has become law:

An act authorizing the New York Orthopedic Dispensary to establish and maintain a hospital.

THE BILL AUTHORIZING A NIGHT MEDICAL SERVICE in Brooklyn has been signed by the Governor. The new law is similar in scope to that in this city.

A NEW CITY HEALTH COMMISSIONER.—Dr. E. G. Janeway's term of office as Health Commissioner having expired, the Mayor has sent in the name of Dr. Woolsey Johnson for confirmation as his successor.

A NURSE'S TRAINING-SCHOOL has been organized in connection with Mount Sinai Hospital. A home for the nurses has been secured near the hospital.

DR. CHARLES MCGILL died in Chesterfield County, Va., on the 5th inst. Dr. McGill was prominent during the war as a surgeon in Lee's army, and manager of a hospital in that connection. He was in the seventy-fifth year of his age.

THE STATE BOARD OF HEALTH re-elected its officers at a meeting in Albany on the 10th inst. The Hon. Erastus Brooks was added to the Committee on Drainage, Sewerage, and Topography. No other change was made.

COLLEGE OF PHYSICIANS AND SURGEONS—COMMENCEMENT.—The seventy-fourth annual commencement of the College of Physicians and Surgeons, took place on the evening of May 13th, at Steinway Hall. The degree of Doctor of Medicine was conferred upon one hundred and twenty graduates by the President of the College, Prof. Alonzo Clark. The address to the graduates was delivered by the Rev. Dr. Taylor.

The Cartwright prize of the Alumni Association, $500, was awarded to Dr. Henry, of Philadelphia, the subject of the prize essay having been "The Hæmatocycometer in the Examination of Blood and Milk Globules." The Joseph Mather prize of $100 was obtained by Dr. E. Evetsky, who wrote the prize essay on "The Physiological and Therapeutical Effects of the Secale Cornutum." The three special Harsen prizes for proficiency at examinations, of the value of $500, $300, and $200, were gained respectively by Henry Koplik, A.B., H. L. Taylor, Ph.B., and T. B. Van Alstyne, M.D.; and the Harsen clinical prizes of $150, $75, and $25, with medals and diplomas, were carried off by W. D. Dietz, W. B. Crosby, and Edgar A. Mearns. The following members of the graduating class gained examination honors: H. W. Berg, A.B.; T. W. Bickerton; R. H. M. Dawbarn; Alexander Duane, A.B.; Henry Koplik, A.B.; J. L. Kortright, A.B.; J. W. Martin; H. L. Taylor, Ph.B.; T. B. Van Alstyne, M.D.; and George Trowbridge, A.B.

DR. A. T. DOUGLAS, on the occasion of his removal from Rondout, N. Y., to New London, Conn., was the recipient of a complimentary dinner from his professional brethren of the former place. An elegant cane was also presented to him.

A MEDICAL COLLEGE IN TROUBLE.—A dispatch from Detroit says: "The recent troubles in the Detroit Medical College, leading to the resignation of Dr. T. A. McGraw, the president, were temporarily adjusted by the president withdrawing his resignation after the trustees had acceded to his wishes. Thereupon the trouble immediately arose afresh because nine of the thirteen members of the Faculty resigned today."

THE NEW YORK ASYLUM FOR LYING-IN WOMEN held its fifty-eighth anniversary on April 21st. During the year 94 births occurred in the asylum, and 496 confinement cases were attended to at the homes of the patients by the district physicians. Four thousand five hundred and one cases of confinement have been attended to in the asylum, and 17,242 cases at the patients' homes, since the foundation of this charity.

ERGOTINE IN COUGHS.—According to a writer in the *British Medical Journal*, two or three grains of ergotine injected hypodermically is very efficacious in relieving cough.

A NEW FRENCH SCIENTIFIC JOURNAL.—The Minister of Public Instruction has determined to publish a new scientific journal, under the title of *Revue des Sciences*. It is to be printed at the national printing office, and is to be sold as cheaply as possible. A number containing about one hundred pages will appear every month. Prof. Milne Edwards is to be the editor of the *Revue*.

Original Communications.

REMARKS ON AMPUTATION OF REDUNDANT SCROTUM FOR THE RELIEF OF VARICOCELE.

Illustrated with New Instruments to Facilitate the Operation.

By M. H. HENRY, M.A., M.D.,

late surgeon-in-chief state emigrant hospitals, ward's island, n. y., etc., etc.

(Read before the New York Academy of Medicine, April 21, 1881.)

Ten years ago I published an article * on amputation of redundant scrotum in the treatment of varicocele. I gave a terse account of the disease, my own personal experience and my impressions of the value of this operation based on the experience of many distinguished *confrères* who entertained views similar to my own of the value of this procedure. In that article I described a new instrument and gave the result of three successful operations—rendered so, I believe, by the use of this instrument. My own experience at that time covered a period of some fifteen years. My subsequent opportunities I shall speak of farther on. During the past ten years extraordinary opportunities have been afforded me of observations on the extent and existence of varicose veins and varicocele in private and public practice. If the publication of these observations does no more than attract a little additional attention on the part of my *confrères* to the value of this operation for the treatment of varicocele, I shall feel that I have been, at least, compensated in my effort to place the same before them. In my former article—published in 1871—I shared the opinion of most authorities that varicocele was an affection of frequent occurrence. It was estimated that about ten per cent. of all male adults suffered from this disease. My own personal experience during the past ten years leads me to very different conclusions. Let me state why. As chief surgeon of the Police Department of New York, I have for many years examined with my colleagues, applicants for appointment on the force. The result shows the following: during the years 1876–80—five years—1,978 applicants submitted to thorough examinations, and of this number 41 were rejected for varicocele, and 61 for varicose veins of the lower extremities; 7 of the 41 cases of varicocele had also varicose veins of the legs. No one was examined who was not of age, nor—so far as it was possible to ascertain—beyond thirty years of age. These restrictions limit the examinations to the age in which, according to all standard authors, varicocele is most likely to occur and be developed to its greatest extent.

This will, to many, seem a small percentage of cases for the large number examined, and it might, without reflection, lead to the belief that the examinations were not very rigid. They are; but it is accounted for in the fact that the applicants are mostly men of the lower working classes, and of robust health, and of more than ordinary good physique. It affords evidence that varicocele is an affection confined, to a great extent, to persons of feeble or impaired constitution, or delicate habit of body—excepting those cases where it suddenly follows an injury or severe strain. This view is sustained by the experts in venereal diseases. The percentage is, at least, one in ten of those suffering from this class of affections, especially of those suffering from syphilis and old cases of stricture and gonorrhœa. During my term of service as surgeon-in-chief of the State Emigrant Hospital, covering a period of more than seven years, cases of varicocele were rare, notwithstanding the service was very large. From January 1873, to January, 1880, in my division, 10,227 patients were treated. This number included cases covering the whole range of surgery and surgical diseases. I am unable to give any reliable statistics. The records were so imperfect, and the assistance afforded me so inadequate, that it was impossible to utilize for reference this interesting field of observation. I believe, however, that the only cases of varicocele called to my attention were in the venereal wards, and coexistent with some other disease.

In the reports of the surgery of the Pennsylvania Hospital, published in 1880, among "the more interesting cases from 1873 to 1878," I find an account of only six cases of varicocele. Five were treated by ligation of the veins, and discharged cured. There is no report of any subsequent examination of any of these cases.

Before referring to the pathological features of varicocele, and the operation I advocate for its relief, let me detain you by stating what we understand as varicocele: it is a term applied to a morbid dilatation of the spermatic veins. The enlarged veins hang down below the testicle, and reach upward into the inguinal canal, and, when very voluminous, conceal the gland, encroach on the septum, and extend to the other side of the scrotum. The dilatation is not confined to the veins exterior to the gland, those of the organ itself are frequently varicose, and enlarged veins may often be distinctly seen ramifying between the tunica vaginalis and tunica albuginea. All surgeons are so familiar with the general features and views entertained of the causes of the disease that we need scarcely repeat them in this paper; but in order to appreciate the benefits of and the indications for the operation, it is necessary to consider the pathological changes which take place in the various structures composing the spermatic veins and scrotum.

The main changes that take place in the veins are: 1st, the elongation of the vein; 2d, its tortuosity; 3d, the loss of the function of its valvular apparatus; and 4th, the loss of resiliency of the veins, which is of various degrees of intensity. This loss of resiliency is due to certain structural changes which take place in the walls of the vein, consisting of a thickening of their coats by proliferation of their connective-tissue elements, following which there occurs fatty degeneration of the muscular elements, which, later on, may increase to a complete calcific degeneration.

In taking these changes into consideration it will readily be seen that the various cases met with present phases varying in proportion to the extent of the progress of the pathological changes—namely, those in which there is very little loss of resiliency, in which the varicocele would be slight, and those in which there is an absolute and entire loss, in which case the varicocele would be exceedingly large. As a result of this varicose condition of the veins, greater or less atrophic changes may take place in the testicle. These changes which take place in the veins

* The American Journal of Syphilography and Dermatology, vol. ii., p. 220.

react on the scrotum, which gradually becomes enfeebled, lengthened, sometimes thinned and redundant. This redundancy, which is probably due to an atony of its dartos muscle, may consist of walls of scrotal tissue of normal thickness, but from clinical observation I think I am warranted in stating that there is thinning of the scrotal walls in the majority of cases; the intensity of this condition is in direct relation to the extent of the varicosity. It may be well to mention in this connection, that in many cases, particularly where this thinning of the scrotal walls exists, there is frequently a decided enlargement of the superficial scrotal veins. To relieve these complex conditions existing in varicocele, of which I have given this short sketch, many operations and appliances have been advocated by various authors in the works on surgery.

It may be well to remember that in some cases, after the veins have attained a certain size, they seem to accommodate themselves, to a great extent, within the distended scrotum, and cause little or no acute pain. Even in these favorable cases, however, acute symptoms are likely at any time to manifest themselves and set up, under unfavorable conditions, all the distressing and painful features of the most inveterate forms of the disease. Aside from the distress caused by the "dragging sensation" and pains in the back, the loins and thighs, the inconvenience of chafing in warm climates, and the annoyance to those constantly on their feet, is of no small account, and calls for surgical interference promising relief.

The aims of most surgeons have been mainly to find some palliative to relieve this morbid condition; others have exerted themselves to establish a treatment that promised a radical cure.

Among the many appliances that have been advocated at different times I have found none that have afforded the relief claimed by their authors. The plan suggested by Mr. Wormald is simply a temporary palliative. He proposed to contract the scrotal bag by drawing the most dependent portion through a ring made of soft silver, covered with washleather, and then preventing its escape by pressing the sides of the ring together.* This could not possibly afford more than temporary relief, or during the continuance of the applied instrument.

Mr. Curling† states that relief, from this contrivance, is sometimes afforded, some preferring it to a suspender; but such was not his experience. The ring, he found, was "equally annoying to the patient's feelings, and cannot always be steadily fixed so as to answer the purpose intended." In a case related to Mr. Curling by Mr. Coulson, "the patient compressed the ring so tightly as to cause a slough of the integuments, which, having separated, was followed, fortunately, by such contraction of the part as to raise the testicle and afford relief from the uneasy symptoms of the complaint." I have met with a similar result following a case of sloughing due to a phlegmonous erysipelas.

In the use of a truss with the pad pressing on the external ring to diminish the calibre of the spermatic veins, and advocated by Mr. Curling, only a small number are relieved after using the instrument for many months. It is a complicated instrument, and the great difficulty in keeping the pad nicely adjusted to the proper spot, the general inconveniences experienced in wearing a truss, and the small chance of a radical cure, certainly offer little temptation to surgeons to advocate this measure of treatment.

* Holmes' Surgery, vol. iv., p. 613.

† Ibid., On Diseases of the Testis, Fourth Edition, p. 533.

The method of slinging up the testicle, suggested by Mr. Morgan, of Dublin, is exceedingly irksome to the patient, and scarcely offers more advantages than the apparatus and methods I have already mentioned.

I am daily more than ever convinced that the best appliance yet suggested for temporary relief is a good, clean, nicely fitted suspensory bandage, and I know of none better than those made of perforated vulcanized rubber cloth, with a good, strong, elastic band and simple tape-fastening. Care should be exercised to get one that fits well—not too tight, nor too loose. They seem to exert a very gentle pressure, and at the same time support evenly all the parts; besides these advantages, they can be easily cleaned with a sponge or damp cloth.

All the operations heretofore suggested for the radical cure of the disease have had for their object the occlusion of the veins. Very little can be said in favor of the complex operations proposed by the French surgeons. Those of MM. Ricord and Vidal, of obliterating the veins by ligature and *enroulement*, besides being attended with danger, are, in a large proportion of cases, of little or no benefit; and even when the obliteration is perfect, it is too often associated with complete atrophy of the testicle. The injection in the veins of persulphate of iron, advocated a few years ago, and more recently that of a solution of carbolic acid, deserve mention; but there is danger of exciting phlebitis. A French surgeon, M. Dubrueil, proposed a modification of Vidal's operation of obliterating the veins by the application of the galvano-cautery. He claims that by this operation phlebitis is avoided.

Mr. Henry Lee,* of London, recently advocated the removal of a portion of the anterior skin of the scrotum, and subsequently dividing the veins which are to be obliterated. All the steps of the operation are conducted through the wound made by the removal of the skin. The veins are temporarily compressed to prevent hemorrhage, and then divided. The cut orifices of the veins are sealed with the black hot cautery, which, if of proper temperature, is allowed to adhere to them for five or six seconds. The ligatures and needles used in compression are then removed, and the edges of the skin brought into apposition from below upward by carbolized sutures.

Union by first intention takes place more or less perfectly, and the patient is allowed to follow his avocations in three or four days.

Mr. Pearce Gould described an operation he had performed eleven times—passing a loop of platinum wire around the spermatic veins subcutaneously, and then connecting it with a galvanic *écraseur*, making it burn its way through the veins. He states that two cases were incomplete, but that nine were successfully cured. Mr. Lee, in some subsequent remarks, said that *his object in interfering with the scrotum was to prevent any return of the varicocele.* If Mr. Lee's operation is to effect a radical cure—which he claims—of the varicocele, by obliterating the veins, and the removal of the redundant scrotum is of no service, I fail to see how his interference with the scrotum, such as he describes, will prevent any return of the varicocele. I allude to these suggestions because they emanate from a distinguished surgeon, who seems to have ignored the results of those who have advocated the removal of the scrotum for the relief of enlarged spermatic veins.

* At a meeting of the Royal Medical and Chirurgical Society. Lancet, January 15, 1881.

In the removal of a redundant scrotum in the manner I shall describe, for the relief of varicocele, no more than ordinary skill is called for. The success of any delicate surgical operation depends mainly on the care and management before, during, and subsequent to the operation. I have ventured to allude to many little details because I am fully impressed that they bear a most important relation to the chances of success.

Success in any operation depends on attention to details. Failures are too frequently the result of neglect of these so-called trifles. Cases of minor surgery have frequently—by neglect of details—been converted into cases of major importance.

DESCRIPTION OF INSTRUMENTS.

The instrument which I have called scrotal forceps, or clamps, consists of two parts (Fig. 1). The main part of the instrument has two double-curved blades, made of steel, about ten inches long, sufficiently heavy to give strength and admit of pressure without injury when in contact with the tissues. The handles are large enough to admit of a good grasp without cramping. That part of the instrument below the joint is curved as nearly as possible according to the natural lines of the raphæ, from the upper anterior part of the scrotum down to and under the scrotum, so that it embraces, when placed in front of the scrotum, the entire and exact portion which it is desired to remove. The coapting surfaces are evenly notched to prevent the tissues from slipping, affording a more secure hold on the soft parts, with less pressure and less injury than smooth surfaces. The blades are only thick enough to give strength, without leaving too much tissue in front.

FIG. 1.

The handles are curved so that, while they maintain a direct median line they do not interfere or press on the genital parts. The double spring, besides giving additional security and compactness, renders them, to a great extent, self-acting, easy of manipulation, and that, at times, of very great consequence, ability on the part of the operator to perform the operation without the aid of additional assistance.

The screws in the handle and at the end of the blades afford a complete and perfect hold of the parts to be removed. They are not adjusted until the operator is perfectly satisfied that he has embraced the exact portion to be removed in front of the blades.

The extra blade is made of steel, nickel-plated, and is maintained in the right anterior surface of the clamp by two small pins that fit in grooves cut in the clamp. It is easily inserted with a little pressure, and removed as easily by pressing downward and forward; it is then dislodged by slightly raising the extreme end. The extra blade, when in position, leaves a fenestra to afford the surgeon the facility of inserting all his ligatures, should he prefer it, before dividing the parts. The thickness or amount of the tissue left in front of the main blade and between that and the extra blade, which is the guide for the part to be removed, is ample to assist union, and if the division is a clean one, and the stitches are close and evenly inserted, the pressure and tension is so slight, or rather, divided over the entire cut surfaces, that there is little probability of ulceration through the stitches before union has taken place.

When the part has been removed the extra blade is displaced, leaving a free border exposed in front of the main blade about a quarter of an inch in thickness. In a few minutes the whole wound can be stitched without any inconvenience. The clamp is, of course, not removed until this is accomplished.

Besides the clamp, the only instruments necessary are the scissors or scalpel, needles, with either silk or fine silver wire for sutures, a few acupressure needles, a few *serres-fines*, silver pins, and some adhesive plaster.

For the removal of the redundant portion I prefer scissors to the knife. I am inclined to think the hemorrhage is apt to be less and the cut edges heal more readily by first intention. I cannot give any positive explanation for this, but such is my impression. When the double layers of the scrotum are tightly compressed between the blades of the clamp, it forms a very dense, tough substance, and requires a pair of very strong, sharp scissors to cut through. It is as dense as cartilage. A strong pair of scissors will, with some extra effort, serve the purpose; but, to insure an easy and clean removal of the part, I use a cutting instrument which I have named cartilage-scissors (Fig. 2). I have dispensed with the rings. These scissors can be grasped and handled with the utmost ease. By the aid of the springs on the inner sides of the handles they are self-acting so far as opening the blades. They are curved on the flat side. They are not only useful for this operation, but will, I think, be found to serve better, and are handled with greater facility, than any other scissors, wherever a cutting instrument is needed for cartilage or other dense or thickened tissues.

FIG. 2.

Before the operation, the patient should have free evacuation from the bowels. If there is any tendency whatever to looseness, it is advisable to give an opium suppository. Before any anæsthetic is administered the patient should be carefully examined, and the forceps applied while in a standing position; this will afford the surgeon the best opportunity to decide the exact portion of scrotum to be removed. If this precaution be taken, there is no danger whatever of his removing too much tissue. I am satisfied there is much more danger of his not cutting off enough. The patient being placed in a recumbent position, his thighs well separated with folded towels, the forceps are applied by placing the blades in front and under the anterior portion of the scrotum, and held in a direct median line. The end of the forceps being close to the perineum, the scrotum is then engaged between the blades of the forceps. Care must, of course, be exercised not to include anything more than the scrotum. As soon as they are

adjusted and the proper amount of tissue to be removed engaged between the blades, the screws should be tightened and the part removed.

I find that by carrying the incision very low down, to the lowest and most pendulous part of the scrotum, it affords the easiest egress for any little portion of blood or serum that might collect there, and at the same time prevent, or at least lessen, the chances of an abscess. While I have never met with any such complication, I am nevertheless aware of the possibility of such an occurrence.

I use the ordinary interrupted suture; it affords advantages over the running stitch, should it subsequently be found necessary to divide one or two stitches in case of hemorrhage, or in case of severe œdema. If the interrupted suture be used, each stitch being independent of its neighbor, affords facilities under these circumstances which I think are of no small value. The stitches should be close together. I have used silver pins and the figure of 8 ligature—the same as practised in cases of hare-lip—in three of my operations. They all did well.

Teats, or angular points, are sometimes left at each end of the wound, which may prove, at times, annoying and unsightly; this may be avoided by a slight rounding of the corners when the part is removed.

Should any vessel be divided requiring special attention, the application of a small acupressure needle will be found most serviceable. If the bleeding occurs on or very near the border of the incised parts, I apply a *serre-fine* or acupressure needle.

In persons of a feeble or debilitated constitution, diffuse hemorrhage may occur, as in any surgical operation. This is best treated by the local application of ice or of a solution of the persulphate of iron. In persons of a true hemorrhagic diathesis the operation should not be performed.

It has been suggested that there was danger of a retraction of the dartos muscle in amputation of the scrotum; this, I think, cannot possibly occur if the forceps are used with ordinary care. Even if such an accident should take place, the spasmodic action—for it is scarcely more—can be easily overcome by the application of iced cold water.

The treatment following the operation is very simple: a few strips of india-rubber adhesive plaster are fastened around the testes to assist in maintaining the cut edges of the scrotum in perfect apposition and to prevent any dragging on the stitches; a broad strip of adhesive plaster is then placed under the most dependent part of the scrotum and fastened on either side of and above the pubis. The wound should be kept perfectly clean and sponged three or four times daily with a weak solution of carbolic acid and water. Should any untoward symptoms manifest themselves, they would, of course, be treated on general principles.

When the wound has entirely healed, and the patient able to go about, I have been in the habit of advising the use of a suspensory bandage for some time. This precautionary measure is, I think, of decided benefit, allowing, or rather assisting, the enlarged veins to recover from their morbid size and condition.

The main objections urged against this treatment by persons who have never witnessed any of the good results of the operation, is the fear of erysipelas. I have never seen any complication of the kind follow the operation, nor do I believe that there is any greater tendency to excite any phlegmonous inflammation in this operation than there is in any other surgical procedure in other parts of the body. The adoption of Lister's apparatus and method of after-treatment would, doubtless, lessen the risk in the estimation of those who resort to it in their operations.

I was first led to perform this operation because it was suggested by Sir Astley Cooper,* who published five cases which he regarded as successful in their results, and an additional case with some extraordinary features—submitted by Mr. Key—who was also in favor of this operation, and preferred it to that of ligation of the veins. The difficulty in the performance arose from the want of a proper clamp. The one I presented ten years ago has met, I am pleased to state, with universal approbation. I have now performed the operation fourteen times during the past ten years without any unpleasant results. My cases have ranged between the ages of nineteen and forty-five. The varicoceles were all on the left side, excepting in one instance, when both sides were involved. Nine of the fourteen cases healed perfectly by first intention. The remaining five healed partially by first intention and subsequent granulation. Those that healed by first intention made perfect recoveries within a week. The longest period of confinement in any of my cases was fifteen days. This was the case of a young gentleman of feeble constitution, who had led an irregular course of life for some time before the operation. I operated in his case in February, 1878. The following year he called on Sir James Paget, and directed his attention to the results of the operation. That distinguished surgeon assured him it was a success. I had an opportunity of examining this patient about three months ago. The result was all that could be desired. In another case, operated on in May, 1872, I examined the patient in January last, and the result was equally satisfactory. My cases were mainly from other parts of the country, and thus I am unable to give particulars of the results. I am led to think they were successful, because I enjoined them to let me know if at any time they felt that the operation was not satisfactory to them.

In June, 1870, I assisted a surgeon of this city, who removed the redundant scrotum for varicocele, from a lad fifteen years of age. The want of a proper clamp rendered the operation a tedious and unpleasant one; there was no union by first intention, and for some time the case looked very unsatisfactory. By chance I met him April 7th, of this year. I examined him and found the result to be a good one. He was perfectly satisfied.

In 1863, a gentleman, twenty-seven years of age, consulted a surgeon of this city for relief from severe suffering, due to a varicocele of left side. The veins were ligated by Ricord's method. The pains in the back and thighs continued with the same severity, with the addition of more intense irritation and swelling along the course of the spermatic veins and in the inguinal region. This proved such a serious annoyance that, in 1864, he submitted to amputation of the redundant scrotum. I was present at the operation. The surgeon removed a large section entirely from the bottom and most dependent part, forcing the testes up high, so that when the patient assumed the erect posture the testes bulged out in front of the penis, and became an additional annoyance. A third operation was performed—the removal of a section from the anterior surface of the

* Cooper: On the Structure and Diseases of the Testis, London, 1841.

scrotum, along the median line. He was relieved of his suffering, with the exception of the irritation and swelling in the course of the spermatic veins in the inguinal region. In 1870 he consulted another surgeon, who pronounced that he had a hernia. Under his advice he wore a truss for one year. In 1871 he sought the advice of another distinguished surgeon, who assured him he had no hernia, and confirmed his own impressions that his suffering was due solely to the ligation of the spermatic veins. He continues the use, more or less, of a suspensory bandage. April 14th, of this year, I had an opportunity of examining him. The scrotum presented a normal appearance, and the spermatic veins were no longer any source of annoyance. He stated that he felt perfectly well, and said that if asked which operation he thought most advisable, he assured me the removal of the redundant scrotum would be his choice.

He said that he would, under all circumstances, condemn ligation of the veins.

I give the details of this case because they furnish evidence of a practical character, after a lapse of sixteen years from the time the first operation was performed, and additionally, because they are given by an educated gentleman of much more than ordinary intelligence. One well-established clinical fact from such a source is of more value than a hundred expressions of opinions without foundation.

Conclusions.—1. Varicocele is a disease that may occur at any period from boyhood to middle life. 2. It occurs mainly in early manhood. 3. It is not of such frequent occurrence as generally believed. 4. It is mostly met with in persons of delicate or impaired constitutions, or in those who have become enfeebled by disease or venereal excesses, or both. 5. In robust persons it may follow a severe strain, or direct injury in the region of, and along the course of the spermatic veins. 6. It is sometimes complicated with disease of the testicle, hydrocele, and hernia. 7. A correct diagnosis is easily made with ordinary care and attention. 8. Ligation of the veins is not without risk and danger to life, and does not offer any decided prospects of a radical cure. 9. Ligation of the veins does at times cause loss of virility, and atrophy of the testicle. 10. The obliteration of the veins by the galvano-cautery has, so far, proved only a substitute for the ligation of the vessels. 11. Amputation of the redundant scrotum offers, at least, as good a prospect of cure without any chance of injury to the glands, and without risk to life. 12. Union by first intention becomes as nearly as possible a natural sequence. 13. Dangers from hemorrhage and inflammation are reduced to a minimum. 14. The operation with this instrument is easy of accomplishment.

427 Fifth Avenue, New York.

The Tennessee State Medical Society met at Nashville on the 5th ult., Dr. W. B. Clark, Vice-President, in the chair. After passing resolutions endorsing the just-enacted law for the registration of births, deaths, and marriages, the society adjourned, to meet again on the 10th of May succeeding.

Abating Nuisances.—In accordance with the recommendations of the State Board of Health, Gov. Cornell has issued a proclamation stating that the various smells produced by the manufactories on Newtown Creek are dangerous to health, and must be abated by June 1, 1881.

CONTRIBUTION TO THE PATHOLOGY AND TREATMENT OF EMPYEMA.

By JOSEPH SCHNETTER, M.D.,

NEW YORK.

A purulent exudation settling in the most dependent part of the pleural cavity, and not confined by adhesions, is called a free empyema. The quantity of the exudation and the space occupied in proportion may be quite variable, and in extreme cases we may find the entire cavity not only filled with the exudation, but distended to such a degree that the surrounding parts and neighboring organs are displaced. If an exudation takes place over some larger or smaller part of the lung, confined by adhesions of an older or more recent date, we call it a circumscribed or sacculated empyema, and distinguish several varieties according to their situations.

An exudation of that kind, situated between some part of the surface of the lung on one side, and on the corresponding part of the costal pleura, is properly designated as a circumscribed pulmo-costal empyema. On any portion of the surface of the lung, and to a variable extent, such sacculated or circumscribed empyemas may be found, either single or two or more, either communicating or contained in distinct compartments. I have even found in one case such an empyema on the upper lobe of the lung. The adhesions are either old ligaments, as remnants of previous pleuritic inflammations, or formed from an effusion of plastic lymph preceding the formation of pus.

In other cases the exudation takes place in the interstices of the lobes of the lungs. If by previous inflammations the lobes are united only on the surface of the lungs, an exudation may be deposited between the deeper surfaces of the lobes. Such empyemas are called interlobar. They could be overlooked in post-mortem examinations, even when the lungs are taken out of the pectoral cavities, and on incision they may impose upon the inexperienced observer as abscesses.

Sometimes we find the circumscribed empyema, under the above described conditions, between the upper surface of the diaphragm and the surface of the base of the lung. Such empyemas we may call pulmo-diaphragmatic. If the empyema is confined between the inner side of the lung on one, and the mediastinum on the other side, the empyema is mediastino-pulmonal.

This variety should not be confounded with abscesses in the areolar connective tissue contained between the two membranes, including the mediastinal space.

Two or more of these different varieties may be combined in the same individual, or may occur with a free empyema. These points in the pathological anatomy of the disease should be kept in mind for the better understanding and appreciation of the case to be reported.

The following case will only be reported in its most prominent but essential features, as it was of long duration, and offered at times no especial symptoms of interest.

Hermann S——, a lad of eighteen years, born in the United States, of German parents, although of the usual development for his age, had not enjoyed good health since childhood, as he frequently suffered from digestive disorders and chronic constipation. He was of a nervous, melancholic disposition. His present trouble dates from November 20,

1879. I was requested to see him at the residence of his parents in this city, on the above day, and found him affected with a bronchial catarrh equally distributed over both lungs. Fever quite insignificant. In spite of perfect rest and the usual remedies prescribed under similar circumstances, an improvement could not be obtained. Bronchial lobular pneumonia in several parts of both lungs, with increased feverish symptoms, set in and continued for twelve days. The temperature would sometimes run up to 103°, but pain was not much complained of. On December 3d, under a more frequent respiration and slightly increased pain on the left side, an exudation was discovered in the left side to the extent of three inches in height, which rapidly rose up from day to day, till the whole left side was completely filled with the distention usual to large exudations.

During the formation of the exudation on the left side, the catarrhal symptoms and pneumonic affections on the right had almost completely vanished. As the fever ran always high—temperature fluctuating between 102° and 103°—and as the patient was constantly bathed in perspiration, the diagnosis of a *purulent* exudation was made, and verified by aspiration with the hypodermic syringe. In a consultation with Professor A. L. Loomis, about the middle of December, forty-two ounces were taken from the cavity by means of an aspirator. The heart's impulse before the operation, under the right nipple, moved not quite two inches nearer to the sternum, but could still be felt on the right side of it. Respiratory murmur, in character neither vesicular nor bronchial, was perceptible, and the percussion-sound was very sonorous all over the affected side. The respiration, as was expected, was greatly relieved, and the fever was diminished for a few days; soon, however, the same functional disturbances reappeared, and the physical examination revealed an exudation as large as previous to the aspiration. January 3, 1880, I made an incision of two inches in the intercostal space, between the seventh and eighth ribs in the axilla, while the patient was under the influence of sulphuric ether, administered by my friend, Dr. Lange. The quantity emptied was about the same as in the first operation. The pleural cavity was washed out with a two and a half per cent. solution of carbolic acid, a drainage-tube was inserted, and a dressing of several layers of aseptic gauze applied. The relief was only temporary; the heart kept its position as after the aspiration; the temperature was continually high, sometimes reaching 103°. Every day a quantity of purulent matter oozed out, and the cavity was cleaned with carbolic acid. The patient suffered considerable pain in his side, and required the use of hypodermic injections of morphia. His digestion, up to this time moderately good, was greatly disordered, and, in spite of the most nourishing food and stimulants, he wasted away.

I had to look for an explanation, that, in the absence of any pathological symptoms in the right side of the chest and in any other organ, the fever continued the same, and the heart kept its position to the right side of the sternum. The physical exploration of the diseased side gave the usual results under such circumstances, a very loud and sonorous or tympanitic percussion-sound all over. My opinion was that, besides the free exudation in the left pleural sac—a circumscribed empyema—one or more of the above-described varieties might cause all the trouble. Therefore I thought of the possibility of finding out a method by which I might be able to diagnose the actual condition of the disease. By a method hereafter to be described I succeeded, as I believe, completely. If the collapsed lung could be inflated, I expected to find, by the physical examination, the suspected complication.

I proceeded in the following manner: the drainage-tube was inserted through the incised and already somewhat contracted wound to the depth of two inches, and a piece of about three to four inches left outside of the chest. This tube was tightly surrounded by several layers of sticking-plaster, and above this a thin layer of cotton and collodium, so as to make an air-tight enclosure of the tube. Over the drainage-tube was slipped a spring clamp. Everything being ready, the patient was told to take a full breath, and during this act of inhalation the elastic drainage-tube was tightly compressed between the fingers. Then the patient was told to forcibly exhale, and during this act the tube was for a moment opened and then instantly closed. This mode of procedure was continued, and with every successive exhalation the hissing sound caused by the ejected air got weaker, and finally could not be heard. Then the spring clamp was closed and secured by a piece of tape. The result of the examination surpassed my expectation.

All along on the left side of the sternum, to the extent of one and a half inches in breadth, there was a distinct, diminished sonorousness passing into complete dulness near the fifth and sixth ribs, where the extent of the dulness reached two and a half inches from the sternum to the left side. That this dulness was not owing to the position of the heart could be distinctly proved by its impulse, which still continued on the right side of the sternum. There was considerable dulness also high up in the region of the axilla. Auscultation gave a very distinct vesicular murmur, and in several places a friction-sound. The symptoms of pneumothorax previously existing had been promptly replaced by the above symptoms.

As the patient complained most of pain on the left side of the sternum, and especially in the region of the heart, and of a severe pain in the shoulder, my conclusion was that a sacculated empyema between the mediastinum and the lung, and probably a circumscribed exudation between the surface of the lung and a corresponding part of the costal pleura, were the cause of the continued fever, etc.

Under these circumstances it was a grave question what could be done to relieve the patient of these enclosed purulent accumulations. After a long consideration of the subject it occurred to me that I might resort to an experiment not yet tried, consisting in the use of septic decomposition, for the purpose of destroying the adhesions or membranes enclosing the sacculated effusions. In justification of this seemingly dangerous expedient, I should say that it is certainly not mere theory to suppose that pathological deposits or structures will much more readily undergo a disintegration than physiological tissues, and in my case I had reason to expect that the adhesions or agglutinations might be of a recent date, consisting mostly of plastic lymph.

It is further a well-known fact that the human system is able to endure a certain amount of septic infection, having the power of ridding itself of the same. If the symptoms of general infection should be threatening, which could be ascertained by the thermometer, I would at any time have had the means of arresting a too high degree by the exhibi-

tion of disinfectants. It is, furthermore, a well-known experience that serous cavities, if covered by plastic exudation, are not very prone to absorb deleterious material.

Therefore the cavity was opened again by removing the spring clamp occluding the drainage-tube, and disinfection discontinued. The temperature, which, as already mentioned, was all the time high, now kept almost continually below 102° to 103°, and when higher, was considered an indication for disinfecting the cavity. January 21st a quantity of purulent or ichorous matter, much larger than I was in the habit of seeing every day, of a different consistence and color, and of a most offensive smell, was evacuated. The patient felt great relief from his pain in the shoulder, and it subsided considerably for some days.

I must remark that I occasionally inflated the lung and kept it in this state from one to three days, as experience has shown that a lung too long kept in a collapsed state will, after a certain time, become unfit for respiration.

Evacuations, such as the one above described, took place four times, viz., on February 10th and 18th, March 15th and 19th. With the last evacuation disappeared a most obstinate pain on the left side of the sternum, in the neighborhood of the fifth and sixth ribs, and the dull percussion changed to a sonorous one. The temperature ranged now usually between 100° and 100½°.

When we had arrived at this stage of the disease the patient was in the highest degree of emaciation and exhaustion, caused not alone by his poor digestion and assimilation, but by a bad habit, for which I must blame myself and his parents. As already mentioned, there was at times considerable pain, for which hypodermic injections were administered. As the patient, a spoiled child, refused a strange nurse, his parents had to be instructed in the use of the hypodermic treatment, and yielded to his clamorous desire for morphia as often as he wanted it—the more so as they had given up all hope of his ever getting well, and only wished to comfort him as long as he was alive. He was mostly kept on the juice of meat, and strong wines, milk, and brandy, and this had to be forced upon him. Although the left lung could be easily inflated and kept so for five to six days, no progress in the diminution of the cavity could be observed.

If the tube was opened, the lung would collapse and air rush in. There was every five to six days an accumulation of five to eight ounces of purulent matter showing little decomposition. His general week condition had to be held accountable for this lack of recuperation. On April 8th the patient suddenly had a chill in consequence of a draught in his room; temperature, 102°; coughing, pain in the right side. The right lung, having thus far continued in a perfect state of health, showed in the lower lobe the symptoms of incipient pneumonia. The fever grew quite alarming, and the infiltration occupied the whole lower lobe. The respiration grew very laborious (40 per minute).

I had grave doubts whether the patient would recover from this new, and, under these circumstances, almost fatal complication. The left lung was, therefore, kept continually inflated, and performed its function admirably. Quinine, of course, was given in large doses. Morphine could not be dispensed with. After six days the inflammation yielded to the treatment.

During the summer of 1880 there was no remarkable accident. The pleural cavity was cleansed and disinfected every three or four days, and the lung reinflated. We had at times difficulty in keeping the plasters tight, as perspiration would loosen them very often.

There was no progress in the diminution of the cavity; the general health, digestion, etc., as bad, if not worse, than ever. The overdosing with morphine, despite all my remonstrances, was continued by the parents, till I declared that the patient had to be removed from his home to a hospital, or a reliable nurse engaged, who was to be under my exclusive orders. The parents and patient finally acceded to my demand, and a nurse was found who carried out my directions. It was an almost gigantic task to wean the patient from his morphine, by force and gradual diminution of the dose. In proportion to the diminished doses of the drug, desire for food returned, the bowels acted, the color got better, the patient gained flesh and strength, and symptoms of improvement in the diseased parts appeared. The secretion of purulent matter diminished, the quantity of liquid for washing out the cavity grew smaller.

While writing this, the quantity of pus secreted in the still open cavity is not quite one ounce. Physical symptoms of a larger cavity no longer exist. Lately, Lugol's solution of iodine has been injected, and there is hope that the cavity will close in a few weeks. The left side is somewhat sunk in; there is still, of course, a somewhat diminished sonorousness in the lower regions of the chest, but the vesicular murmur and pectoral fremitus were perceived all over the left side. The heart has been completely restored to its normal position.

Although the duration of the disease, from its beginning to the present stage, was an unusually long one, it would be unjust to find the cause in the mode of treatment. There were complications of a rare kind in the saccated exudations, in an intervening pneumonia, in the obstinate digestive disorders and consequent poor nutrition, in the bad habit of using to excess the hypodermic injections, to which latter I may ascribe a loss of six months.

If my view of the way purulent exudations heal by the operation of incision be correct, I think the inflation of the lung on the diseased side, in the way above described, should be tried more frequently and in uncomplicated cases; and I feel convinced that the results, not only in regard to recovery, but even the time consumed during treatment, would be most favorable.

If after the incision of an intercostal space the pectoral cavity is left open to the entrance of air,

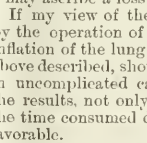

Fig. 1.

a, mediastinum; *b*, lung (outlines dotted); *c*, bodies of vertebræ; *d*, rib or intercostal space.

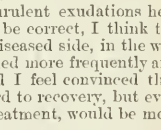

Fig. 2.

a, *b*, *c*, *d*, as in Fig. 1; *e*, connective tissue; *f*, angle between lung and rib.

the lung, so far as it is not adherent, will be contracted and be contiguous on one side to the mediastinum, and on the other to the bodies of the spinal column. The re-expansion of it, if the case should take a favorable turn, I imagine to be ef-

fected in the following way: there will be a development of conuective tissue between the adjacent parts of the lung and the mediastinum on one side, and on the spinal column on the side, in the shape of Fig. 2.

If the development of connective tissue has reached the angle *c* in Fig. 2, the sides of which are formed by the surface of the lung and the inner surface of the ribs or intercostal spaces, it will go on from this angle, and when shortening draw the surface of the lung over to the ribs and intercostal spaces, as represented in Fig. 3.

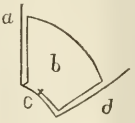

FIG. 3.

If this process of formation and retraction of connective tissue goes farther on, it is easily understood how a collapsed or contracted lung may be expanded, and become pervious to the air again. In most cases the intercostal space will narrow somewhat and diminish the pectoral cavity, and so help accomplish the approach between lung and pleura, as experience has shown.

This process is a very slow one, and as the lung may, by being contracted too long, become unfit for complete expansion, it must necessarily be often incomplete.

If the inflation of the lung be effected, and all the purulent exudation and fibrinous deposit usually adherent to the whole surface of the pleural cavity be removed, the surfaces of the lung, and the costal pleura, become in intimate contact. The connective tissue will then develop, and by connecting both surfaces will prevent a fatal collapse of the lung, if there should be a necessity to open the chest again after a reaccumulation of an exudation.

This new way of treating empyema does not easily apply to cases occurring in early childhood, because a co-operation of the patient is desirable, although I consider it not quite impossible.

Professor Boeltz, of Tokio, Japan, and his assistant, Dr. Kashimura, have lately recommended a method of operating for empyema which, by its simplicity and safety, seems to be preferable to any other method in uncomplicated cases. (See No. 3, *Berliner klinische Wochenschrift*, 1880.) Its main features consist in the tapping of the chest by means of a trocar, and the subsequent washing out of the cavity with a solution of thymol.

Several successful operations have been performed by means of an instrument contrived for this purpose. The method has been applied with equal success in Europe. It is conceded that the method is only applicable to uncomplicated cases, and even in such it may occasionally fail of a favorable result, as I believe. I do not see how the contents of the cavity will be drawn off through a canula, if there be an accidental obstruction by some shred. Besides, there is, in my opinion, another objection, which, although based on theoretical assumptions, will be worthy of consideration. After every therapeutical success we should not rest satisfied with the immediate result. It is a well-known fact that empyema, and even effusions of a sero-fibrinous condition, if the absorption proceeds somewhat slowly, are frequently followed by tuberculosis. While acting as clinical assistant, over thirty years ago, in Germany, I often had occasion to see this unfavorable result, even in persons of strong constitutions, without any hereditary disposition. Since practising in New York it has been my good fortune to see this termination, out of a large number of pleuritic effusions, only twice. One case was neglected, and medical advice was asked after a duration of ten weeks. Tuberculosis followed five years later. There was no constitutional inclination in this case. The second case occurred to a lad, eighteen years of age, with a strong phthisical habitus.

His mother was lying in the last stage of consumption at that time, and two sisters had previously died of phthisis. On inquiry, I learned from professional friends that their observations coincided with my own; so I concluded that pleuritic effusions are apt to terminate more favorably in this country than in some parts of Europe. Although the fact that tuberculosis will often follow pleuritic effusions is long known, we only owe to the more recent clinical, anatomical, and experimental researches a knowledge of the way how this fact may be explained. Inflammatory infiltrations and exudations, if not absorbed within a certain time, will get inspissated and undergo what is known as a cheesy metamorphosis; after a shorter and longer time this mass, so altered, may become softened and be broken up into a detritus, which, in some way, getting into the circulation, will give rise to tubercular disease. If an empyema or fibro-serous effusions should be operated upon in the way proposed by Professor Boeltz and Dr. Kashimura, it is evident that the more solid parts of the purulent exudations, shreds, clots, membranous deposits, which have settled in the lowermost part, will remain in the pleural sac, and may in after-times give rise to the accidents above mentioned. Those who have the opportunity to make clinical observations on a higher scale should therefore be mindful of the subsequent fate of the persons treated by different methods, and it might be proven by statistical researches, whether my theoretical apprehensions are confirmed by facts. In conclusion, some points concerning the technical performance of the expansion of the lung may be mentioned.

When I first made the experiment, I used a strong flexible india-rubber drainage-tube, and inserted it to the length of two inches or more into the cavity. It soon appeared that this large tube and the long piece projecting inside of the chest caused considerable pain to my patient. I therefore exchanged it for a soft catheter (Nélaton's No. 16, English scale), and inserted it, with the end cut off obliquely, to the depth of half an inch.

If the physician himself attends to the cleansing of the cavity and the expansion of the lung, the method may answer the purpose to his satisfaction, for he can by auscultation ascertain if the lung is inflated and the air removed from the cavity. But if the procedure be left to a nurse, we cannot expect that it will be done in a proper way. I have devised, therefore, the following method:

The tube being inserted and properly surrounded with sticking-plaster and collodium, an instrument invented by Dr. Van Buren for washing out the bladder is inserted into the drainage-tube. This instrument consists of a metallic canula three inches long, to which another of the length of one inch is joined at a right angle. There is a stop-cock, which allows the current to be diverted from the larger canula to the smaller lateral one. To this lateral canula a small-sized india-rubber tube of two to three feet in length is attached, and the distal end is sunk in a solution of carbolic acid or thymol contained in a wash-basin standing at the bedside of the patient. One end of the larger canula is, as already mentioned, inserted into the drainage-tube,

and the other is put into an india-rubber tubing connected with a fountain-syringe or any kind of reservoir. All connections being air-tight, a carbolic or thymol solution is sent into the pleural cavity by raising the reservoir containing the same. The cavity being filled, the stop-cock is turned, cutting off the pleural sac from its communications with the reservoir. Now, the contents of the cavity—pus, injected carbolic or thymol solution, and a quantity of air—will flow out through the lateral canula and the small india-rubber tubing attached to the same. As soon as the discharge ceases, this small tube is compressed between the fingers while the patient is taking a strong inhalation, and opened at the following exhalation, by which the air is expelled in the shape of larger or smaller bubbles. This is to be continued till no more bubbles make their appearance in the wash-basin. On examination it will be found that the lung is inflated and no more air in the cavity. The drainage-tube is then closed with a spring clamp, and the apparatus for injecting removed.

This expansion of the lung has been repeatedly demonstrated to Dr. Charles Buchler, Dr. O. Huebner, and Dr. Edward L. Harris, of this city.

18 West Thirty-eighth Street.

FALLACIES OF EXPERIMENTS WITH CURARE.

Its Effects on the Motor Nerve Endings.

By THOMAS W. POOLE, M.D.,

Lindsay, Ont., Canada.

It is commonly asserted, as if it were a well ascertained fact, that the effect of curare (urari or woorari) is to paralyze the terminal endings of the motor nerves in the muscles; and, as a consequence, the inference is drawn that when, after curare, a muscle contracts to the direct application of electricity the experiment is performed upon the muscle alone without the intervention of nerves. The following analysis of the authentic experiments on this subject leads to a contrary conclusion, as the results will show.

Experiment.—If a drop or two of a solution of curare be introduced beneath the skin of a frog's back "in a short time the frog will be found perfectly motionless, with the respiration arrested, but the heart still beating" ("Handbook," etc., p. 398). ("Occasionally, when death is rapid, convulsions occur." In man the drug has produced mydriasis, diplopia, strabismus, etc. (Stillé and Maisch). These effects, including the arrest of respiration, point to an action of the drug *on the motor centres.*)

If now the sciatic nerve be laid bare and electrified, provided the frog "has been thoroughly poisoned," no muscular contractions will follow in the muscles to which this nerve is distributed, however strong the application of the current ("Handbook," etc.). Why? Because the *trunk* of the sciatic nerve shares in the paralysis affecting the motor centres, and is in such a condition that it can neither receive impressions nor transmit them.

If the *muscles* of the frog's leg be now exposed, and the electrodes applied to any of them, contraction will follow. Why? Because the terminal branches of the nerve are still "irritable," and, consequently, are in a condition to be acted on by electricity in the usual manner.

This is a very natural and rational explanation, and is in strict accord with physiological principles; for, according to Valli, "the vitality of motor nerves is more in their ramifications than in their origins," a proposition which is confirmed by Nyston's law (M. Meyer's "Electricity," p. 66), which may be rendered by the phrase of Dr. Foster's, employed by him elsewhere, that "the extreme muscular nerve-branches are the last to die." But the above conclusion is not the one arrived at by Dr. M. Foster, who, as we shall see in future experiments, holds that here it is the terminal nerve-branches which are paralyzed, and that the nerve-trunk maintains its irritability. At present, however, what he infers from the above experiment is, that "the effect of urari is to destroy (or suspend) the irritability of nerves but not that of muscles" ("Handbook Phys. Lab.," p. 399). I shall have to revert to the facts of this experiment again, and at present leave them to the reader.

Experiment.—The next experiment of Dr. M. Foster relates to illustrations of the varying intensity of the curare paralysis, as it affects the sensory, motor, and central nervous system, permitting or suspending reflex action. It shows that, with a moderate dose of the poison, the sensory nerves and nervous centres preserve sufficient of their power of action to respond to pinching, etc., by certain movements; but with subsequent or stronger action of the poison, the central nervous system is paralyzed. There is a fallacy in the details of this experiment which, though it has no bearing on the special inquiry here being made, may as well be pointed out. The experiment is conducted by tying "a thread very tightly round the abdomen of a frog so as to check entirely the flow of blood to the lower limbs," but this thread is so applied that the three principal nerves on each side of the back, which go to form the sciatic nerves, are excluded. "The nerves thus form the only means of communication between the hind limbs and the trunk, the vascular communication being entirely stopped" (Ib., p. 399). These nerves being thus entirely free from compression and in full continuity with the spinal cord are just as favorably situated for receiving a paralyzing impulse from the cord as are the motor nerves connected with the cord higher up. Why should they not be equally paralyzed as the nerves leading to the anterior extremities, for example, seeing both are equally susceptible to receive impressions from the cord? Dr. M. Foster, however, explains some of the reflex movements referred to above, as depending on the different conditions of "the poisoned motor nerves of the fore limbs and trunk," and "the unpoisoned motor nerves of the hind limbs," an explanation which seems entirely gratuitous under the circumstances, more especially as the presence or absence of the peripheral blood-supply can only indirectly, and very slowly, affect the ultimate nerve-fibrils, the sheaths of which are not penetrated by blood-vessels (Dr. Carpenter).

Experiment.—The succeeding experiment is important. Here the *right* hind leg of a frog is so ligatured above the knee that the circulation is arrested, leaving the sciatic nerve free to establish nervous communication between the lower part of the leg and the rest of the body. The frog is then poisoned with curare. The effects are "complete absence of spontaneous movements, except, perhaps, some feeble stirring of the right lower leg." The electric current applied to the right lower leg (the one ligatured), or to any part of the body, "*may* produce movements of the right lower leg, but in no other part of the body."

"If the two sciatic nerves are laid bare along their whole course, it will be found that stimulation [electricity], however strongly applied to the left sciatic nerve, produces no contractions whatever in the muscles to which its branches go [as in the first experiment], while stimulation, however slight, of the right sciatic nerve, whether applied above or below the level of the ligature, produces contractions in the muscles of the right lower leg and of none other."

Dr. M. Foster holds that "the whole of the trunk of the right sciatic nerve, being supplied with poisoned blood, has been as much subjected to the influence of urari as the left sciatic. Nevertheless, while the trunk of the left sciatic seems to have entirely lost its irritability, that of the right seems to have suffered very little indeed. The difference (he says) really is, that the left sciatic cannot manifest its irritability because *its branches are all poisoned;* the right can, by means of those branches which have been removed from the influence of the poison-bearing blood." He then concludes that, "with moderate doses of urari, *the small branches appear to be poisoned*, and to have lost their irritability, while the trunks are still intact" (Handbook, p. 401).

The fallacy here is in the assumption that when the entire blood-vessels, lymphatics, and sensory nerves are compressed by a ligature, so as to arrest the circulation, the processes of absorption, etc., go on above the ligature in the thigh, just as in the limb left to its normal conditions. The difference is really very material, as a little reflection will show. The blood already present in the arterial trunks of the thigh, from the moment the ligature is tightened, cannot advance, cannot recede, and until it can do either, the entrance of poisoned blood from the general circulation (except in minute quantities for a restricted local circulation) is practically impossible. It is not, therefore, a proper conclusion that the right sciatic nerve has been as much supplied with poisoned blood, and with this, as much subjected to the influence of curare as the left sciatic, in the limb of which the full force of the circulation had been present. Dr. Foster concludes that the nerve-trunk of the left sciatic was unpoisoned; that its irritability remained intact. If this were true, there is greater reason for concluding that nervous life of the sciatic of the ligatured limb was active, and was able, on the application of electricity, to evoke contraction of the lower muscles through its terminal nerves, which, as has been seen, took place.

But it has been stated that "the left sciatic nerve," though "intact," "cannot manifest its irritability because its terminal branches are all poisoned." This does not so appear. The terminal nerve-branches were evidently not paralyzed in the first experiment, though the entire limb was equally subjected to the influence of the poison, and the sciatic nerve-trunk there and here equally failed to respond to electricity. The proof that the terminal nerves were not poisoned in the first experiment is that the muscles contracted to the direct application of electricity, and, as Dr. Foster states, "a muscular contraction is a token of an impulse passing along the nerve" to the muscle. If these terminal nerves had been paralyzed they could not transmit this impulse, no matter how "intact" the nerve-trunk might have been, because "a nerve deprived of its irritability can neither receive impressions nor transmit them." Thus there is proof that the terminal nerves were not paralyzed in the first experiment, and if not, then they were not paralyzed in the left leg in the last, for the conditions are precisely similar, the blood-stream having full freedom in both.

Nevertheless, it is not here pretended that the terminal nerve-fibres are never paralyzed in curare-poisoning. There is good reason to believe such to be the case in certain instances of rapid, fatal poisoning by curare, in which the muscles pass into tonic, or clonic spasms of much severity (Dr. Pereira, etc.). Here it is to be presumed that the intra-muscular nerve-endings *are* paralyzed, and the muscle promptly set free. A result which does not occur when the influence of the poison is confined to the central nervous system and its motor trunks. When spasms and convulsions *do* occur in the course of curare-poisoning, is the impulse which passes along the nerve to the muscle of a stimulating or paralyzing character? In death, during the convulsions of curare-poisoning, could so profound a paralyzer, by any possibility, assume the rôle of a stimulant to nerve function? Surely not. But it could maintain its usual character, and by paralyzing the terminal nerve-plates and endings, set free the "property of contractility in the muscle," with the consequent production of spasm and convulsion, the occurrence of which is well authenticated (Pereira, Stillé and Maisch, etc.).

Experiment.—The next experiment is thus related: "In a fresh, strong frog, dissect out the gastronemius, or any other single muscle, dividing both insertion and origin, and ligaturing the blood-vessels, thus leaving it connected with the rest of the body by its nerve only. Poison the frog with urari. It will be found that stimulation [by electricity] of the nerve-fibres supplying the muscle, at any part of their course, whether close to the muscle or in the sciatic trunk as far away as possible from the muscle, will produce contraction of the muscle, though all the other motor nerves of the body seem to have lost their irritability."

"In a similar way it may be proved that if only the portion of the nerve immediately next to the muscle be kept from the influence of the poison, however much the rest may have been subjected to the influence of the poison, the muscle may be thrown into contraction by stimuli applied to any part of the the course of the nerve. The *presumption is*, that urari acts on the extreme ends only of the nerve, possibly the end-plates" ("Handbook," p. 401).

This is a very striking experiment, and if the eminent physiologist who has recorded it had faith in it, it ought to have led to something more than a "presumption" of the correctness of his conclusion. Now, so far as the uninjured limb is concerned, this experiment is but a repetition of the first, and the remarks made before are applicable here. The sciatic nerve-trunk of this limb fails to respond to electricity as before; but whether the direct application of the electrodes to the muscles would produce a contraction, as in the first experiment, is not stated.

What is peculiar about this experiment is the different behavior of the sciatic nerve-trunk of the separated muscle from "all the other motor nerves of the body." Here it appears to have preserved its irritability, as it did in the last experiment, in which it has been seen that there are special conditions favorable to its doing so. Are there any such special conditions here which impair the value of this experiment? There are such conditions present.

When a gastronemius muscle is cut away from the leg of a living frog, in the manner prescribed, the first result (not stated by Dr. Foster) is a marked

contraction of the muscle, which presents a series of annular sulci, and soon shortens so as to measure scarcely three-fourths of its former length. This contraction having attained its maximum, as it does within an hour, it will be found that a faradic current which throws the other (attached) muscles into violent tetanus, produces but slight effect on this gastronemius, and fails to produce any further permanent contraction. Now such a primary result as this contraction of the muscle (the like of which is familiar to the surgeon), must seriously compromise any conclusion to be based upon the subsequent behavior of the muscle when subjected to the after influences of curare and electricity.

Who can estimate how much of these after-effects are due to this early tendency of the muscle to pass into contraction when isolated from its bony attachments? How far are the results modified by the nervous shock and the general abnormal condition into which the vital activities of the limb are thrown by such a serious mutilation in a living animal? It may be said that these latter conditions of shock, etc., ought rather to further paralyze the nerve, and, by depriving it of its vital activity, render electricity impotent to influence the muscle in the manner it is said to do. But may not these same conditions have prevented the nerve from receiving the influence of the curare, and in this way have left sufficient of its life "intact" to enable it to transmit the influence of the electricity to the muscle? This is all the more probable from the fact that absorption is largely under the control of nervous influence (Dr. Burdon-Sanderson), and also since the period for the operation of the curare would be contemporaneous with the period of shock, and since the latter might be expected to have in great part passed away as the time arrived for the application of electricity. In this view of the case, which seems a very rational one, the continued "irritability" of the nerve and the response of its muscle to the electric current would be fully accounted for.

The foregoing considerations regarding this experiment and a previous one present in a strong light the very numerous sources of fallacy which lie in wait for the experimenter on living tissues. They also serve to show how little reason there is to dogmatize regarding quasi-scientific conclusions, which are often unproven, and sometimes entirely erroneous and misleading.

A striking example of the truth of this latter statement, which first shook my confidence in the assertions thus put forward in the name of science, is to be found in the error, authoritatively promulgated, regarding the effects of pithing on the vascular system. So far from this operation resulting in a general dilatation and relaxation of the vascular system, the experiment really proves that it is only the venous system which is thus dilated. The entire arterial system is found as contracted and empty as it is possible for it to be, the blood having been driven from the arterial into the venous system, which is distended and engorged accordingly (see MEDICAL RECORD, September 13, 1879). Such gross inaccuracies as this are not creditable to their authors, who appear to have arranged the facts not as they are, but as they *ought to be*, in deference to preconceived ideas and the theory of the day.

The first experiment with curare proved, as fully as any physiological fact can be proved, that the ordinary effect of curare (or urari) is to paralyze the motor nervous trunks and to spare the terminal nerve-branches. The after experiments are tainted by too many sources of fallacy to prove anything definitely; but even as they stand they admit of a rational explanation in full accord with the results of the former experiment.

It is, therefore, a duty to medical science to decline to accept the "presumption" that the ordinary effect of curare is to paralyze the motor nerve endplates and terminal filaments until other and reliable proof is offered in its behalf. Wherever these nervous appendages and nerves are really found paralyzed, the contraction of the muscle will be found present as a contemporaneous fact.

THE RHYTHMIC ACTION OF THE HEART.

By L. R. WEAVER, M.D.,
PROVIDENCE, R. I.

It has long been admitted that the sympathetic ganglia situated upon the heart evolve the force which excites its rhythmic contractions. When a nerve-centre discharges this force, which is likened to electricity, it is excited to do so by some stimulus. In the human being this stimulus is the oxygen in the arterial blood, which is brought in contact with the nerve-substance by the capillaries. The idea has been advanced by Paget that these local cardiac nervous centres send forth their energy rhythmically because of a periodicity in their nutritive changes, by which they alternately accumulate and set free the nervous influence necessary to produce the muscular contractions, but no reason is assigned for this periodical nutrition.

The coronary arteries branch off from the aorta at an obtuse angle, and run in an almost opposite direction from it, and the resistance to the passage of blood is greater in these coronary arteries during a contraction of the heart. When the heart contracts, the arterial blood is sent with force into the aorta, onward, in the direction of the least resistance (the branches of the coronary arteries being compressed in the muscle), and the aorta distends. During the relaxation of the heart, the walls of the aorta, owing to their elasticity, recoil, and the reflux of the blood closes the semilunar valves, the pressure is removed from the cardiac vessels, and the blood again flowing in the direction of the least resistance enters the coronary arteries. On reaching the capillaries it nourishes the muscle and the ganglia. This chemical change constitutes the natural stimulus, evolving heat and the discharge of nerve-force or electricity, which causes the heart to contract upon its contents, for during this time its cavities have been filling up with blood from the venous trunks.

This circle of action is thus complete, and the requirements for the healthy action of muscle (as given by Marshall) are fulfilled, viz.: "In order that a muscle should contract properly, its temperature must be at a due elevation, its supply of blood must be sufficient in quantity and of proper quality, and its nutrition amply provided for in the intervals of contraction. Arterial blood is essential to the healthy maintenance of muscular contractility."

CREMATION OF AN ITALIAN PROFESSOR.—Dr. Ferdinand Colletti, Professor of Therapeutics at Padua, died a short time ago. He was cremated at Milan with high honors. He was one of the early champions of cremation.

CASE OF A COLLOID TUMOR WITH AN UNUSUALLY LARGE CYST.

By TALBOT JONES, M.D.,

ST. PAUL, MINN.

Early during the last month Drs. Humes, Slagle, and Satterlee, of Winnebago City, Minn., sent me for examination, by the microscope and otherwise, a large colloid tumor which they had a few days previously removed from the body of a patient. The history of the case is briefly as follows: Wm. B., aged fifty-eight years, was a native, a farmer, and had always enjoyed excellent health. No predisposition to disease through heredity. He first applied for treatment during October, 1879. Complained of pain in the back, frequent desire to micturate, with a feeling of weight and oppression in the region of the bladder. He was relieved of this and was not again seen till March, 1880—five months later.

There was a recurrence of his former troubles, and in addition new symptoms developed. Distressing nausea, vomiting and kindred dyspeptic troubles were now complained of. The bowels were much bloated, and sharp, darting pain experienced. A month later these symptoms, increased in variety and intensified in degree, caused a careful physical examination to be made. A small tumor was discovered in the left hypogastric region, and a little below and to the left of the spleen. It was not painful, was somewhat movable, had rather a smooth outline, and had a fleshy feeling to the touch. This mass was evidently within the abdominal cavity; was not adherent to the abdominal parietes, but was probably attached to the intestines and mesentery.

The patient was rather anæmic, though he did not present a decidedly cachectic appearance. From this time on the tumor, which had hitherto developed but slowly, took on an increased activity, and it grew with great rapidity.

The patient was seen by physicians in Mankato, Chicago, and Montreal. He also presented himself before the Minnesota State Medical Society at Albert Lea, during June, 1880. Several of us examined him at that time. Nothing could be done for him. Having learned the prognosis of his case, he resigned himself to his fate and took no medicines save opiates to relieve pain.

On January 29, 1881, he in some way over-exerted himself, and there developed as a result some peritonitis. However, he did not die until two months later, and then from inanition and exhaustion, for he had for some time been able to take but little food.

A post-mortem examination held on the day following his death resulted as follows: Abdomen enormously distended from the unciform cartilage to the pubes, and quite fluctuating upon palpation. No discoloration of the skin. No jaundice. The peritoneum was exposed and presented a very dark, ulcerated and gangrenous appearance. The gall-bladder was greatly distended with bile. Heart somewhat smaller than normal, though there was no evidence of valvular disease. The spleen upon section was shown to be normal, as was the liver, and there were no adhesions to these organs. The lungs and kidneys were also in a normal condition. There were extensive adhesions, extending in various directions, to the stomach, bladder, and entire alimentary canal. The latter was very much discolored and presented here and there numerous nodular masses more or less incorporated with the neoplasm. Notwithstanding careful dissection, a large cyst, with firm adhesions to the tumor, ruptured and discharged its liquid contents amounting to about three gallons.

The fluid consisted of a heavy, dark, sanguineous and extremely offensive fluid. The residue, a broken-down carcinomatous mass, involving chiefly the omentum and mesenteric glands, was then removed and weighed fifteen pounds. The large cyst extended from the left to the right side of the abdomen, and it was immediately under the liver that rupture of the sac occurred. A careful microscopic examination showed the neoplasm to be a species of alveolar cancer. There were observed large open meshes in the arrangement of the fibres of its stroma.

The gelatiniform substance in the interstices of the fibres presented flat, oval, and rather large cells with distinct nuclei, around which were a number of concentric laminæ resembling somewhat an oyster-shell or an onion upon a transverse section. Many of the cells were mononucleated, and all of them presented the delicate concentric lines.

The cells were quite uniform in size and shape—being large and round or oval.

The case is interesting chiefly on account of the extensive adhesions and the unusually large size of the cyst, which sprang from the anterior surface of the morbid mass.

The origin of the tumor was undoubtedly in the omentum or mesenteric glands, from which, indeed, the large majority of colloid tumors originally have their starting-point.

The lymphatic glands were not enlarged in this case—a fact which rather lends support to the theory of those pathologists who deny the malignancy of this variety of tumors.

Dr. A. E. Senkler of this city examined the tumor with me.

Progress of Medical Science.

Treatment of Ectropion by Transplantation of the Skin.—The current number of the *Buffalo Medical and Surgical Journal* contains an article by Dr. Lucien Howe on "Treatment of Ectropion by Transplantation of the Skin." He gives an interesting account of a case so treated by himself with satisfactory results. Comparing his observations with the experience of others, he infers the advisability of strict attention to the following points. The surface of the wound should be clean and free from fat. Its base should be even. There should be as little hemorrhage as possible at the moment of transplantation. The flap should be at least one-third larger than the wound, its inner surface clean and also free from fat. It should be handled with great care, and secured in its new position without delay. The edges should fit evenly and be secured firmly, and the parts kept warm and dry for at least twenty-four hours. The advantages of the method are that a second scar is not produced in attempting to rectify the deformity as by the Indian operation; there is no pain caused by keeping the arm immovably fixed; and the edges of the transplanted flap can be adjusted with the greatest nicety.

Heatonian Method for the Radical Cure of Hernia.—In the same issue, Dr. W. H. Heath appears in an article in which he speaks with great

favor of the Heatonian method for the radical cure of hernia. He judges from his observations that it has not been resorted to as often as its simplicity, absence of danger, and the hopes of final success would merit. Dr. Heath has employed it in twelve cases, with one failure, which he thinks was due to carelessness on the part of attendants, and one accident, in which he deposited the irritant in the areolar tissue of the cord. He considers nine of the cases as permanently cured; two are still under observation. There were no bad symptoms in any of the cases, and little, if any, suffering. Two of the cases were seen and examined some six months after, and in both the inguinal canal was perfectly closed, and the protrusion had never appeared after the patient left the hospital. One of the men had been subjected to a pretty severe test, having worked as a coal-heaver on a steamer.

One Hundred and Ten Cases of Emmet's Operation.—In the *St. Louis Cour. of Med. and Col. Sci.*, Dr. P. V. Schenck, in a paper on the results of Emmet's operation, from one hundred and ten cases observed in his own practice, arrives at the conclusion that the operation should be an immediate one. The fatal results of the operation are few. Emmet reports two in two hundred cases. Goodell one in fifty-four. Engelmann, Baker, and Marcy each one case. In Dr. Schenck's one hundred and ten cases there were no ill results, although the patients were not placed under the preparatory treatment, on which, in the opinion of some authorities, the success of the operation depends. Perfect union was obtained in all but five, and in only two cases did no union take place. Dr. Schenck gives abstracts of eight cases in illustration of the results of the operation.

Gastrostomy in Stricture of the Œsophagus.—In the same issue will be found a paper by Dr. T. F. Prewitt, on "Gastrostomy in Stricture of the Œsophagus." It is accompanied by a table of fifty-nine cases. Dr. Prewitt considers the great difference in mortality from the operation in cases of this class, when compared with the same operation for the removal of foreign bodies, to be due to the exhausted condition of the subject. It is his belief that it can be greatly lessened if the operation be performed early. In a large percentage of fatal cases, even though union had taken place, no peritonitis existed, and death was due to exhaustion. Gastric fistula is not incompatible with long life. Of the forty-nine cases tabulated, forty were malignant, twelve cicatricial, three syphilitic, and in four the nature of the stricture was not given, but was almost certainly malignant. Of these cases, operated upon for malignant disease, the patients lived from fourteen days to six months, and one patient is still living comfortably. In the cicatricial variety six recovered, as also one where the stricture was of syphilitic origin. In but seven of the whole number is peritonitis stated to have existed. Exhaustion alone is assigned as the cause of death in the large proportion of cases.

Primary Tuberculosis of the Larynx.—Dr. J. Solis Cohen has reported in the *Archives of Laryngology*, April 2, 1881, an instance of tuberculosis, which commenced in the epiglottis, invaded the tongue, the anterior palatine fold superiorly, and the supraglottic tissues inferiorly, and was associated with secondary tuberculosis of the lungs and lymphatic glands. There was no local lesion in the infraglottic portion of the larynx, or in so much of the adjacent portion of the trachea as was removed from the subject. The local laryngeal lesions progressed but slightly after the analogous manifestations were developed in the lungs, these manifestations commencing on the same side as the laryngeal lesions. The exciting cause was thought to have been exposure to intense cold. The patient was a young man, for several years a driver of an ice-wagon. His great complaint was of intense pain in deglutition, but the voice was good, nutrition apparently unimpaired, general strength well conserved, temperature normal, and pulse ninety per minute. There was neither cough nor anything abnormal on physical exploration. Laryngoscopic inspection showed an irregular racemose ulcer upon the thickened edge of the epiglottis; on the left side a second ulcer, of like configuration, occupied the left glosso-epiglottic ligament and extended to the base of the tongue. The supra-arytenoid eminences were enlarged and clubbed, and were overlaid with a pale pultaceous deposit. The ventricular bands were deeply congested and tumefied, so that they quite concealed the vocal bands, which, from the character of the voice, were presumed to be normal. The aspect of the parts was unmistakably that of tuberculosis. The disease progressed steadily, anodyne inhalations of benzoin and conium affording temporary relief from time to time, and local applications of morphia obtunding sensibility sufficiently to permit the deglutition of milk in small quantities. Five months subsequent to the onset of the disease, physical exploration of the chest for the first time revealed dulness at the left apex, with bronchial respiration, the sounds being still normal on the right side. Pulse, 108; temperature, 99°. Within a week, this dulness extended over the upper lobe of the lung, and the opposite side began to be dull on percussion. Respiration became progressively impeded, and the patient then took to his bed. He died seven months after the date of the first symptoms. At the autopsy, tuberculous deposits were noticed in spots on the pleura of the left lung. Incisions also revealed several small cavities in the upper lobe of the left lung, together with cheesy deposits. No cavities were found in the right lung, but there were tuberculous and cheesy deposits, though less well marked than in the left lung. A few caseous glands were observed in the cervical region of the left side. The larynx exhibited much the same lesions as had been observed at the latest laryngoscopic examinations, save that the entire free portion of the epiglottis had been destroyed by ulceration. Microscopic examination, by Dr. Seiler, presented the usual changes due to deposits of tubercle. A longitudinal section of the larynx, carried through the epiglottis, ventricular bands, vocal bands, and the first ring of the trachea, exhibited ulcerations of the mucous membrane. The submucous connective tissue was largely infiltrated with a small-celled product, which showed in many instances a tendency to the formation of depôts with cheesy centres. In some of these deposits adenoid tissue could be demonstrated. At the lingual extremity of the glosso-epiglottic fold, a large cheesy mass was observed, surrounded by a collection of small cells. The glands and follicles showed a proliferation of their epithelium, and many of their ducts were filled with granular débris. The lymph-spaces around the glands were likewise infiltrated with small cells, and the blood-vessels showed the same infiltration in their walls. The perichondrium, cartilages, and muscular tissue appeared normal.

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GEORGE F. SHRADY, A.M., M.D., Editor.

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MEDICINE AND POETRY.

THE skill and genius which will make didactic poetry pleasing is very rarely found. Virgil, in trying to teach agriculture, and Wordsworth, in expounding morals, have shown how near the greatest poetic minds can come to being commonplace. The attempt to blend any branch of medical science with poetry is perhaps the hardest task of all. The structure of the animal organism is complex and wonderful, and the forces that play in it are delicately and beautifully adjusted. But they are too close to us and too familiar easily to strike the imagination.

There have been a number of physicians who have ranked very high as poets. But they have carefully refrained from mingling poetry with medicine. Vaughn and Cowley in the seventeenth century, Akenside, Smollett, Goldsmith, Keats, Aikin, and Blackmore in the eighteenth, all had more or less of medical education and knowledge, but they showed little signs of it in their poetical writings.

In the whole range of medical literature older than the present century, we have found but two attempts at what might be called medical poetry. These are the poem of Fracastorius, "De Syphilide," published at Geneva in 1620, and Dr. Armstrong's "Art of Preserving Health," a work which is not yet a hundred years old. To this should be added, perhaps, the "sweet tetrandrian, monogynian strains" of Erasmus Darwin, in his "Botanic Garden," since it appeared quite at the beginning of the present century.

The poem of Fracastorius is certainly unique in literature, though it can scarcely claim any other especial merit. The author, who also wrote poetry that was not medical, treats his subject in true epic style, and sings ("*canere incipium*") the history, symptoms, and evil effects of the "Gallic Sickness," in three books of Latin hexameters. The Regimen Sanitatis Salerni is a work in poetic form, and is one of the most famous of medical treatises, but it is rhyme and not poetry. Corbolicensis, a professor at Dresden in the twelfth century, wrote a series of "Carmina Medica," the different subjects being "De Urinis," "De Pulsibus," etc. But these are almost entirely didactic in character, and the same may be said of several other poems written upon the properties of various drugs, and upon botanical subjects.

When, therefore, Dr. Armstrong attempted at the same time to teach the art of health and to please the imagination, he had a novel task, as well as a difficult one, before him. Fortunately, perhaps, for him, the artificiality which characterized Pope and his followers still clung to the poetry of the time, and was still admired by the critics and reading public. At the same time the influence of Gay and Thomson had made descriptive poetry popular, and a departure from the heroic metres of Pope allowable. The machinery of mythology and the easily flowing English blank verse could also be used. For these reasons, as well as on account of its real merits, Dr. Armstrong's poem acquired considerable popularity. Such a work could not be written at the present day; or, if written, would probably be laughed at by most persons. But, read as a poem of the eighteenth century, there is much in it to admire. The various subjects of the Air, Diet, Digestion, Exercise, the Passions, etc., are presented with great skill, and their discussion is relieved by lines of vigorous description, by bold thoughts, and elevated sentiments. The force of one of his descriptions may be especially appreciated at this time of street-cleaning agitation. He bids the searcher after health

> "Fly the rank city, shun its turbid air,
> Exhaled to sully heaven's transparent dome
> With dim mortality. . . .
> It is not air
> That from a thousand lungs reeks back to thine,
> Sated with exhalations rank and fell,
> The spoil of dung-hills and the putrid thaw
> Of Nature."

In the same connection the genealogy of *Quartana*, the Goddess of the Chills, may be read with interest. She is a person

> "Who on a rustic throne of dewy turf
> With baneful fogs her aching temples binds . . .
> . . . A meagre Fiend,
> Begot by Eurus, when his brutal force
> Compressed the slothful Naiad of the fens."

The poetry of Darwin touches nearly every science, and includes, therefore, to some extent, physiology and materia medica. A tribute is paid to Digitalis, which, for some reason, is portrayed as "bright Digitalis," with "ruby cheek, white neck, and raven hair." She "waves her serpent-wreathed wand" over a very bad case of Bright's disease with general anasarca, and

> "Warms with rekindling bloom the visage wan,
> And charms the shapeless monster into man."

Darwin's "Botanical Garden," comprising the "Economy of Vegetation" and the "Loves of the Plants," contain some very bold and a few very pleas-

ing descriptions. One of these Horace Walpole considered the sublimest passage in any author with which he was acquainted. But the reader will find that, on the whole, the imagery is forced and the descriptions prolix and tedious. "Flimsy Darwin's pompous chime" is the criticism which Byron once gave upon it.

Coming down to the present time, no one, we think, has ever made so direct an attempt to turn physiology into poetry as Dr. Abraham Coles* has done in a work which we have recently received. He has touched upon a large part of the subject of physiology in a poem of fourteen hundred lines In a very modest preface, the author claims for his work rather a didactic than a poetic value. He expresses an enthusiasm in having a virgin field for his efforts, and believes that even a present failure on his part would argue nothing against the poetic possibilities of the theme. We somewhat doubt "the grand poetic possibilities" of physiology, but we gladly concede very striking merits to the effort of Dr. Coles. His verses show a cultivated mind, fine literary skill, and they often ring with genuine poetic feeling. He has not the vigorous imagination or descriptive power of Armstrong, but there is an undertone of deep earnestness in the poem which often kindles the author into real eloquence. He is evidently enamored of his subject, and filled with the purpose of showing that the microcosm, man, illustrates the glory and power of his Maker. He has carried out this purpose in a pleasing manner.

THE EUCALYPTUS GLOBULUS IN THE ROMAN CAMPAGNA.

A WRITER in *Chambers's Journal* has recently given an account of what the eucalyptus globulus has done for the Roman Campagna. That desolate and malarious spot has had some impression made upon it at last by the trees in question. At the Monastery of the Three Fountains, kept by Trappist monks, a veritable oasis has been created. This had been a perfectly barren place, and so rank with malarial exhalations, that even the few monks who lived there in the daytime were obliged to sleep at night in Rome. At the sacrifice of some lives and a great deal of labor, a large number of the eucalyptus trees have been brought into successful cultivation with the most beneficial results. The government, recognizing the value of the work, has very recently granted the Trappists a tract of land for further reclamation, and have allowed them the assistance of convict labor.

The eucalyptus is a tree which has several very remarkable peculiarities. Its growth is extremely rapid. In four years it reaches the height of twenty-five feet, and eventually, in the warmer climates at least, becomes two or three hundred feet high. Its leaves are peculiarly arranged, the flat surfaces being placed vertically. This allows a more rapid evaporation of water. The avidity with which water is taken up by the roots and thrown off by the leaves is most remarkable. In two hours one square yard of leaf surface will give off nearly four pints of water, this being two or three times the weight of the leaf. By this process the poisonous moisture in the soil is distilled and purified.

The antimalarial influence of the plant may be due in small part also to the volatile oil secreted by the leaves. In one hundred pounds of leaves there are from three to six pounds of this oil. Under the influence of air and moisture, peroxide of hydrogen is generated. By the oxidation of the oil, also, a camphoraceous substance is produced. The effect of these reactions is more or less to purify the air.

The Campagna is still, for the largest part, barren and uninhabitable, but the Trappists have shown the possibility of reclaiming some of it, and have demonstrated the efficiency of the eucalyptus in securing the result.

It would be well for sanitarians in this country to renew their attention to this tree. The drawback here is that it cannot be cultivated, without great care, in any but the warmer climates. Winter temperatures, below 23° F., will generally kill it. It has been grown, however, in Edinburgh, and, apart from its susceptibility to cold, it is a sufficiently hardy tree.

THE DECLINE OF THE BIRTH-RATE.

AMONG many other matters of interest brought forward on the occasion of the recent annual meeting of the Medico-Chirurgical Faculty of Maryland, was that treated of in the address of Professor Goodell. Although the subject is by no means a new one, it will bear more discussion than it usually receives. It is one of the problems of advancing civilization, and its physical as well as its moral aspect constantly claims the attention of the physician. No attempt need be made to prove that our young ladies are being educated in a manner that is ruinous to their general health; that, having been fitted to enter society, they are, as a rule, unable to perform the functions of maternity. The menstrual derangements of boarding-school life are the inevitable results of the forcing process of brain-culture which is carried on at the expense of physical well-being. It is not difficult to understand, in view of these facts, why so many females who graduate with honors are confirmed invalids at the time when they need the full measure of health and vigor for the discharge of their marital obligations. Neither is it necessary to state that such females are never mothers of large and healthy families. These influences upon the present decline of the birth-rate are obvious enough; but, as Dr. Goodell very forcibly asserts, they are not the only ones to be considered in at-

* The Microcosm, and Other Poems. By Abraham Coles, M.D., LL.D. New York: D. Appleton & Co. 1881.

tempting to explain the prevalence of small families among what are considered the higher classes of society.

THE PENNSYLVANIA AND MARYLAND STATE SOCIETIES.

THE reports of the two State societies in our present issue will give a fair idea of the activity of these organizations. The meeting of the Medico-Chirurgical Faculty of Maryland was signally successful in bringing out the contributions from some of the best men of the State, and in giving a thoroughly representative character to the association. We are glad to learn that still greater improvements are contemplated in its organization, and that effective measures are to be taken to give a more practical turn to its workings. The address of the orator, as already stated, was on an interesting topic, and was one of the noticeable features of the session.

The Medical Society of Pennsylvania very properly endorsed the health bill now before the Legislature of that State. An interesting and suggestive fact was the presence of a number of female delegates from the Montgomery and Delaware County Medical Societies. The resolution involving the placing of a female superintendent in the Warren State Hospital was lost. The appointment of a committee to prepare a schedule of subjects and requirements upon which the county society examiners should examine all those desirous of entering a preceptor's office for the study of medicine, was a measure of great importance, and is an earnest of the endeavor of the society to meet the growing demands for higher medical culture. A number of practical scientific papers were read, as will be seen by our full report elsewhere.

MUMPS AND ORCHITIS.—Dr. Samuel B. Robinson, Assistant Surgeon U. S. Army, writes from Fort Missoula, Montana Ter.: "In support of the assertion made by Dr. Skelly, in the RECORD of March 26th, that there *is* danger of orchitis succeeding mumps, the following is pertinent: I have professionally attended ten cases of mumps during the recent epidemic which has prevailed in this vicinity. Of these ten cases, five were followed by orchitis. If it be objected that this does not represent anything like correctly the proportion of cases of parotiditis in which orchitis followed, since uncomplicated cases of mumps might not apply for treatment, I admit that it is too great; but in garrison, when all cases are certain to be seen, the ratio was one-third, and in the vicinity (the population being so small that such things are generally known), the proportion was not less."

THE SANITARY COUNCIL OF THE MISSISSIPPI VALLEY has finished a session at Evansville, Ind. It discussed the proper measures for the prevention of epidemics the coming summer. It approved the inspection service and other measures adopted by the National Board of Health. It requested the Louisiana State Board of Health to invite the National Board to appoint inspectors, to be stationed at New Orleans, Eadsport, and the Mississippi quarantine station.

Reports of Societies.

MEDICAL AND CHIRURGICAL FACULTY OF THE STATE OF MARYLAND.

Eighty-third Annual Meeting, held in Baltimore, April 12, 13, 14, 15, and 16, 1881.

(Special Report for THE MEDICAL RECORD.)

THE hall of the faculty being considered inadequate for the accommodation of the profession who were generally invited to attend the sessions, the Johns Hopkins University generously tendered the use of the principal lecture room of that institution, which was accepted.

TUESDAY, APRIL 12TH—FIRST DAY.

The faculty was called to order at 12 M. by the President, DR. H. P. C. WILSON, A.M., M.D. After the calling of the roll of members, and reading of the minutes of the last special meeting (held in honor of the Sesqui-Centennial Celebration of Baltimore, in October, 1880), the President delivered his address. The subject was "Some of the Claims which the Medical and Chirurgical Faculty has on the Whole Medical Profession of Maryland, as well as on its Members."

PRESIDENT'S ADDRESS.

He began by alluding to the ties that bound the members to the Society, in which the fathers and grandfathers of many of them had worked and toiled for the advancement of professional interests until the last days of their lives. He also referred to past members of the society, to the vicissitudes and changes to which it had been subjected, and to its present very prosperous condition. The address was principally devoted, however, to suggestions relating to the formation of local societies throughout the State; to the cultivation of greater harmony and union among the members of the profession; to greater zeal in contributing to the work done by the profession; to the acquisition of a fire-proof library building; and the building up, upon the nucleus already established, of a first class library, which would be worthy of the intelligence and standing of our Maryland profession. For carrying out the last-named object, he proposed the formation of a joint stock company, who should issue shares of stock low enough for all to invest in them. The address closed by the proposal of resolutions intended to promote the carrying out the suggestions made in it.

The reports of the Corresponding Secretary and Treasurer were then presented, the former urging the great need of a proper Medical Register in the State, the latter showing the assets to be $7,144.38; amount received during the year $1,380.46; cash balance on hand $474.38.

The Board of Examiners recommended for membership twenty-one gentlemen, to whom nine were subsequently added.

PROF. JOHN W. MALLET, M.D., LL.D., F.R.S., of the University of Virginia, and PROF. WILLIAM GOODELL, A.M., M.D., of the University of Pennsylvania, were also, upon their recommendation, elected as honorary members.

The Library Board reported 2,744 bound volumes in the library, and an average increase of nearly 100 volumes per month; also over 100 medical journals regularly received.

The Committee on Publication reported that five

hundred copies of last year's Transactions had been printed and distributed in this country and abroad.

The Committee on Memoirs reported, with a short biographical sketch, the death of Dr. William H. Keever.

The Committee on Ethics reported the work done in their department during the year.

REPORTS ON SURGERY AND MATERIA MEDICA.

The report of the Committee on Surgery was made by the chairman, Dr. O. J. Coskery. Among the important surgical operations embraced in the report were a successful amputation of the hip-joint, by Dr. Rusk, of Baltimore, in which the patient left the hospital well at the end of the third week; the successful removal of a sarcoma the size of a child's head, from the neck of a negro, by the reporter; the unsuccessful operation, also by the reporter, upon a young woman for strangulated hernia—the patient dying of peritonitis on the third day afterward. He exhibited a patient with a depressed fracture of the right frontal bone, from a blow on the head. The bone was still loose, but was getting firmer. He reported the satisfactory use, in Baltimore, of Dugas' splint for fracture of the clavicle. The plaster-of-Paris splint he had used in thirty-four fractures of the lower extremity, with excellent results.

Dr. Archibald Atkinson reported for the Section on Materia Medica and Chemistry. He devoted his attention mainly to new drugs brought into notice during the past year, and whose merits or history seemed to entitle them to mention. Among these were crude petroleum, chian turpentine, chaulmoogra oil, iodoform (in mucous inflammations), night-blooming cereus, cascara amaro, iodide of starch, defibrinated blood, salicylate of sodium (in purulent cystitis), nitro-glycerine, sclerotic acid, nitrite of amyl (in chloroform-poisoning), etc.

Dr. J. Shelton Hill made a supplementary report on the beneficial effects of boracic acid in mucous inflammations. He had been induced to extend the use of this agent to the treatment of inflammations of the mucous membranes generally, from the favorable recommendation of the agent in conjunctivitis by Dr. Theobald, and its effects were striking and most favorable.

In the discussion of the report, Dr. Michael said that he had used the cascara repeatedly in secondary syphilis, with negative result.

Dr. William Lee eulogized guarana in sick headache.

Dr. Liebman spoke of the relief of symptoms in phthisis from the use of crude petroleum.

Wednesday, April 13th—Second Day.

ISOLATING A MAMMALIAN HEART.

Prof. H. Newell Martin, of the Johns Hopkins University, detailed the steps by which he had succeeded in "isolating a mammalian heart." This had been done in the frog, but never in a mammal before. The heart of the former differs from that of mammals in having no vessels proper in the heart-substance. The animal selected for the experiment was the dog. The problem was how to keep up circulation in the coronary arteries. The animal was first narcotized, and then tracheotomy was performed to allow of artificial respiration. The various steps of the experiments were given in detail, showing how the vessels, etc., were divided, until the heart was completely separated from the rest of the body, except the lungs, and, although rigor mortis set in in the rest of the body, continued to pulsate regularly for five hours; after this fluctuating, yet continuing to pulsate irregularly for several hours longer. The opportunities afforded by these methods of observing the effects of heat and cold, of drugs, and even of fever, upon the heart-pulsations, were pointed out. Dr. Martin hoped to be able, in time, to separate the living heart from the lungs also.

THE FUNCTIONS OF THE SEMILUNAR VALVES OF THE AORTA.

Dr. W. T. Sedgwick, also of the Johns Hopkins University, followed in an address upon the function of the semilunar valves of the aorta. Thebesius, in 1708, brought forward the view that these valves, in opening out for the passage of the blood from the heart, close completely the orifices of the coronary arteries. This was forgotten, however, until Brücke recalled attention to it in 1850, since which it has been generally accepted by physiologists. Professor Martin suggested the practicability of examining the circulation in the heart during life, and this had been successfully carried out upon the dog. A canula was passed into a branch of the coronary artery—a very difficult and tedious operation—and the blood-pressure in that vessel examined; this operation was much facilitated by stimulating the vagus nerve, by which the action of the heart could be held in abeyance for a half-minute or more. The registering by means of monometers of the blood-pressure in the coronary vessels, compared with that in other vessels—the carotid, for instance, showed that the blood-pressure in the former is equal to that in the latter, whilst the pulsations in the two are synchronous. These things could not exist if the current view (Brücke's) was true, but only upon the condition of the non-closure of the coronary orifices by the valves.

REPORT OF SECTION ON PRACTICE.

The report from the Section on Practice, by Dr. McSherry, was devoted chiefly to a consideration of the pathology of the tubercle. The views of Laënnec and the great writers who have followed him were quoted and discussed, and the conclusion reached was that Laënnec's view was erroneous; that, whilst the nature of the tubercle-granule was still in dispute, it was true, nevertheless, that inflammation was essential to give it effect; that without inflammation, in other words, there was no consumption. The importance of prevention was urged, especially the necessity of separate beds. Antiphlogistic agents were recommended as appropriate in the treatment, and especial stress was laid upon counter-irritants. In proof of the value of the latter, cases were related in which the disease was arrested by a seton in the arm, and by an attack of small-pox.

The report concluded with the history of a case of movable or floating kidneys, in which the patient could hardly be convinced she was not pregnant.

A NEW POINT IN THE DIFFERENTIAL DIAGNOSIS OF CARDIAC AND PERICARDIAL MURMURS.

Dr. John S. Lynch read a supplement to the report, in which he drew attention to "A New Point in the Differential Diagnosis of Cardiac and Pericardial Murmurs." The difficulty arises only when the friction-murmur is produced at or near the apex of the heart. Under this condition, cause the patient to inflate slowly the lungs; we perceive the friction-murmur to become progressively more intense, and

when the inspiration is complete, by making the patient hold his breath the murmur will be steadily maintained at its maximum intensity. On expiring, it decreases gradually until the minimum is reached at the completion of expiration. It never, however, entirely disappears. The explanation of this phenomena, he claimed, was to be found in the expansion of the lungs and the stretching of the pericardium in inspiration, by which the walls of that sac were approximated more closely to the heart. The author stated that he had had ample opportunities of confirming the reliability of this sign during the year and a half in which he had given attention to it.

REPORTS ON GYNÆCOLOGY.

Dr. A. F. Erich made the report from the section of Obstetrics and Gynecology. After giving a brief *résumé* of the work done by Maryland physicians, as reported in the societies and published in various journals, he devoted himself particularly to the subject of rupture of the perineum. He claimed that no one had succeeded by the operations hitherto in vogue in producing a normal perineum, which was due to the ignorance of the anatomy and pathology of the part. He proposed a new operation, which he had practised with most satisfactory results in one case, and which consisted in applying superficial sutures and elevating the floor of the vagina, and attaching it to the highest point of the denuded cicatrix.

UTERINE DILATORS.

Dr. H. P. C. Wilson presented—as a supplementary report—a uterine dilator, which he had invented for the purpose of dilating the cervical canal in cases of retained placenta, placenta prævia, intra-uterine fibroid, puerperal eclampsia, etc. It consisted of two long blades, one fitting into the other. The handles were connected by a screw, by which they could be opened to any extent desired, and maintained at that point. It was a very powerful instrument, and should be used with care. Previous dilators were objected to because they opened at the point, and sponge-tents were considered dangerous.

Dr. Wm. T. Howard exhibited two uterine dilators (introduced very recently by Drs. Harry Sims and Ellinger respectively, and presenting a close resemblance to that of Dr. Wilson). Dr. Wilson stated that he was not aware of their existence until that moment. He also exhibited some tupelo-tents, with commendatory remarks. He would be afraid to use the instrument of Dr. Wilson for purposes of dilatation, for fear of subsequent septicæmia. In reference to Dr. Erich's remarks upon rupture of the perineum, he said that success depended upon who operated. He quoted the last edition of Dr. Thomas' works to show that he was almost always successful, and he said that, in his own experience, he had rarely failed for several years.

The report was also discussed by Drs. Browne, Williams, and others.

STRICTURE OF THE ŒSOPHAGUS.

Dr. John R. Uhler exhibited a patient suffering with a stricture of the œsophagus, the cause of which was not apparent. The first symptom was a slight hemorrhage nine months ago, with difficulty of swallowing and regurgitation of food shortly after eating, since. This difficulty had increased so much that for ten days at a time he had been unable to ingest anything, and at most times the entrance of both liquid and solid food was impossible, and starvation was threatened. Rectal injections were made use of, but more lately injections into the stomach itself by means of a long flexible tube, and a Davidson's syringe. In this way one hundred and twenty feedings had been given the patient of milk, beef-tea, etc., with great satisfaction to the patient, who was an elderly gentleman. A half-gallon of milk was injected in the presence of the faculty.

THURSDAY, APRIL 14TH—THIRD DAY.

The annual oration was delivered at 12 M. by Professor Wm. Goodell, of Philadelphia, on

THE DANGERS AND THE DUTY OF THE HOUR.

Dr. Goodell said that this subject had suggested itself to him as a suitable theme for his address, during his holiday travels last summer. He was then struck by the scarcity of children, and on inquiring the cause of it was informed that the wives did not wish to have them. Then the notices of several divorces and wife-murders attracted his attention in the daily papers. The scene of a stalwart husband patiently waiting on a delicate, exacting, and childless wife, completed the chain of ideas.

The dangers of the hour, he declared to be *the faulty system of female education, the decay of home life, etc., and the unwillingness of our women to become mothers.*

In view of the important functions that woman has to discharge, and the demands upon her strength and endurance by ovulation, parturition, lactation, and maternity, he claimed that at least the education of the body was as important as that of the brain. He repudiated the intellectual equality of the "higher culture" champions, as productive of a stunting of the trophic and reproductive centres, whilst the intellectual are subjected to a forcing process that destroys the equilibrium of the system. Brain-cramming begets a sickly race. Many diseases originate in the recitation-room. So common is menstrual deficiency in the boarding-schools, that the impression has gained ground that some drug is secretly given in order to lessen the laundry-work. Several cases of nervous exhaustion, and even insanity, in graduates of female boarding-schools, had come to his personal knowledge.

Of a graduating class of forty-odd, of which the speaker had knowledge, fully one-quarter were ruined in health. Brilliant scholarship and ill-health are very commonly associated. The speaker traced the further development of the girl under the high-pressure system, until she leaves school and enters upon the dissipations of society. Marriage ensues, and then comes the extra demands of wifehood and maternity to prove her unfitness for the duties to which she was destined by her Creator. As a consequence, the husband may be driven to unfaithfulness; unhappiness and even divorce may be the result. Her ill developed organs are unfitted for the work which they are called upon to do, and she is unable to nourish the child which she has with such difficulty and pain brought into the world. She wilts under the strain and remains ever after an invalid. The publicity of our system of education takes away the modesty of our girls, and unfits them for the repose and privacy of *home*. The family idea is being supplanted by individualism and selfishness. The publicity of her early life renders excitement a necessity to her existence. To be a true woman, she must now *surmount* her education.

The greatest "dangers of the hour," however, are

criminal abortion and the prevention of conception. The author explained how these were fostered and encouraged by the artificial wants, pleasures, the luxury, indolence and extravagance of modern life. Even ministers and physicans were found countenancing these evils. The very low standard of morality prevailing in reference to these subjects is to blame for much of the disease and ill-health, and early breaking-down of our women. There are no harmless ways in which gestation can be interrupted or conception shunned. Attempts at prevention of conception lead to engorgement, hypoplasm, and disorganization of the pelvic organs, and the speaker had noticed a relationship between the occurrence of ovarian tumors and these attempts. The increase in the number of cases of divorce was instanced by the statistics, which amounted to one in twelve marriages in New England, and proved so formidable an evil that a Divorce Reform League has been instituted there. The number of separations without divorce, and of cases in which divorce had been refnsed, are to be also taken into consideration. All this domestic infelicity is to be traced to the interruption of those relations which depend upon sex, either from the physical disqualification of the woman for their maintenance, or from her efforts to render them ineffectual, or the restriction she places upon their exercise. The patriotic side of the subject was likewise dwelt upon, and the fall of Greece and Rome traced to the ignoring the sacred ties of marriage and of family. It is possible for our own country to suffer a similar fate.

To reform these abuses, to elevate the sexnal conscience, to train np healthy women, and to teach them that wifehood and motherhood are her true missions upon earth, is the duty of the hour, and the physician can contribute to these ends in various ways.

Woman is not capable of the same amount of brain-work as man. Health and high intellect are rarely associated in the former, and they themselves apply the term "unwell" to the menstrual periods.

Not only attention was needed to the intellectual training of girls, but also to their carriage, their clothing, their diet, sleep, posture, exercise, bowels, and catamenia.

Home-life was to be encouraged by preaching the gospel of child-bearing, by banishing free-love ideas, and by strengthening the sanctity of marriage. He proposed the issuing of tracts upon these and kindred subjects by the society.

Dr. James A. Stewart, of the Section on Sanitary Science, made a report, in which he discussed the questions of air, ventilation, food, and drinking-water, the last more particularly in reference to the supply of Baltimore City. A discussion followed in which the necessity of *natural* ventilation was insisted on by several members.

Dr. Richard Gundry read a report from the Section on Psychology, in which he dwelt upon the psychical manifestations of disease.

Friday, April 15th—Fourth Day.

EXPERIMENTS WITH HUMAN SALIVA.

Dr. Sternberg related some interesting experiments made with human saliva. He had found that his own saliva injected to the amount of one drop under the skin of a rabbit, caused death in forty-eight hours. Post-mortem examination revealed diffuse cellulitis at the site of puncture. The microscope, with very high powers, exhibited the presence of immense numbers of round, spherical bacteria, in the saliva, and in the serum from the cellular tissue and blood of the animal. On injecting the latter fluids, they were found to possess the same deadly qualities to the third remove. The experiments were repeated several times with the same results. The saliva of other persons was not found to be possessed of these fatal qualities, nor were all animals affected by his own. Filtering the solution of saliva through filtering paper, also boiling it or adding a solution of carbolic acid, destroyed the septic properties of the saliva. He injected his blood into a rabbit with negative result. The saliva had an alkaline reaction. By the culture process he had demonstrated that the bacterium (*bacillus septicus*) was the cause of the death of the animals submitted to experiment. The bacteria was shown under a magnifying power of eight hundred diameters. Dr. Sternberg stated that for two years he had been engaged in working over septic material.

RELATIONS OF PERIPHERAL CIRCULATION TO CARDIAC PULSATIONS.

Dr. F. T. Miles, of the Section of Anatomy, Physiology, etc., spoke of the relation of the peripheral circulation to the pulsations of the heart, and related some interesting cases appearing to show that the peripheral circulation is as much under the influence of the vaso-motor nerves as under that of the heart itself.

Dr. Conrad confirmed the statements of Dr. Miles. Such cases are always accompanied by emotional disturbances.

REPORT ON OPHTHALMOLOGY.

Dr. Samuel Theobald reported from the Section on Ophthalmology, etc. His paper was of a decidedly practical character. He endeavored to simplify the therapeutics of eye diseases by a classification of remedies employed in this department into four divisions, as 1, astringents (embracing also boracic acid and yellow oxide of mercury); 2, atropia; 3, constitutional remedies; 4, optical errors class. The first class is adapted to all conjunctival affections, except diphtheritic and phlyctenular conjunctivitis. The most important agents of this class are sulphate of zinc, alum, and nitrate of silver; atropia may be combined with these if necessary. Boracic acid is antiseptic chiefly, also anodyne. The speaker had not used over four grains to the ounce; if this does not succeed, he adds to the solution gr. j. sulph. zinc to the ounce. The yellow oxide of mercury is used with vaseline, gr. j.–ij. to ʒ j.; of this a little is introduced between the lids once daily.

The second class, atropia, is employed in affections of the cornea and sclerotic. In iritis, the strength need not usually exceed gr. iv. to ʒ j., although the speaker had used gr. viij. to ʒ j. in extreme cases. Boracic acid may be added or the mercury may be applied simultaneously.

The third class is adapted especially to syphilitic and rheumatic affections. In syphilitic iritis mercury is certainly useful, and in scrofulous ophthalmia one or two doses of calomel and rhubarb at the beginning of the treatment is beneficial.

The fourth class involves the use of lenses, and being confined chiefly to specialists, was simply mentioned.

This completed the reports of sections, and was followed by the reading of volunteer papers.

TREATMENT OF FRACTURES OF THE LOWER EXTREMITIES.

A paper was read from Dr. S. W. Simmons, and a splint exhibited for the treatment of fractures of the lower extremity. It was a modification of Prof. N. R. Smith's anterior splint, the chief difference being that it was straight instead of being bent at the knee, it being intended that the limb should be suspended in a straight position. The wire was one-third only as heavy as that in the anterior splint; the upper part of the wires was tubular, so that the lower part could work up and down (being fixed in any position desired by a little screw), and thus the splint shortened or lengthened according to the circumstances of each case. The splint could also be made wider or narrower at pleasure by straightening or bending the cross-wires. Two perpendicular suspending cords were employed, being attached to a longitudinal bar or pole suspended above the patient; a foot-piece parallel with the sole of the foot, by attaching to which and to the sides of the leg long pieces of adhesive plaster, extension was to be obtained. Side-pieces of leather, applied to the thigh, were stated to be necessary adjuvants to the apparatus. The author claimed that the anterior splint, of which his was an improvement, did not exert extension, and quoted Gross' and Hamilton's opinions that extension could not be made with the limb in the flexed position.

Dr. Tiffany believed that the anterior splint does make extension. As an evidence, he pointed to the slipping of the bandage. Since the mould in which the limb lies is an adaptable one, this slipping makes no difference. In fractures of the thigh the upper fragment is drawn upward and outward by the psoas and iliacus muscles, and hence it is necessary to give to the anterior splint a corresponding inclination; this cannot be done with the limb straight, as Dr. Simmons proposes. Reducing the fracture is not necessary. He simply adjusts the apparatus to the limb and leaves it thus, confident that in twenty-four hours apposition of the fragments will have taken place. The simplicity of the instrument, the ease with which it can be made by any blacksmith, the readiness with which it is applied, the natural position and comfort which it secures, and the satisfactory results which follow its proper use, make it the best instrument at our command for the treatment of fractures of the thigh.

Dr. Richard McSherry related the case of an officer who received a compound comminuted fracture of the thigh from a gunshot wound in the late war, who suffered inexpressible agony in all the various apparatus which the skill of his attendants could suggest, but who was immediately and entirely relieved on having his limb put up in an anterior splint.

Dr. Michael, whilst agreeing in the excellency of the anterior splint, yet did not think it could produce any extension.

Dr. Coskery thought it highly improper to keep a patient suffering from a simple fracture of the thigh on his back for one week, or even for forty-eight hours. He indeed went so far as to say that he regarded such treatment as a justifiable cause for a suit for malpractice. By means of the plaster-of-Paris splint, or even starch bandage, we can get patients out of bed in forty-eight hours. The plaster-of-Paris splint had been applied in seventy-two cases of compound fracture, forty-four of these being of the thigh, and the results were incomparably superior to any to be obtained from other methods.

Dr. R. Winslow read a paper on Hepatic Abscess. He said that Listerism had revolutionized the operation for this affection.

Saturday, April 16th.—Fifth Day.

SUICIDE.

Dr. G. Lieman read a paper on Suicide. He claimed that it was always due to a morbid condition of the mind, possibly not revealed by any obvious signs preceding the act; but often when the attempt fails the mental trouble manifests itself. By statistics he showed that it was on the increase; that different nations showed preferences for certain methods of committing the act peculiar to each; that the most highly civilized nations and the most highly educated classes are the most frequent subjects of it, whilst it is almost unknown among savages and the ignorant; that cold climates do not favor its occurrence, as had been maintained; that it was most frequent during the summer; that about three males commit suicide for every female; and that the Germans are its most numerous victims.

The question of insanity in suicides was discussed at some length, Drs. Conrad and Joseph T. Smith maintaining the affirmative, and Drs. Arnold, Tiffany, Michael, Williams, and McSherry the negative.

Dr. W. A. B. Sellman then presented a gynæcological table.

Under miscellaneous business, some important matters were acted upon, among others an increase of the annual membership fee to $8, the appointment of a reception committee to receive the delegates and members residing out of the city, and providing them with private accommodations during their attendance upon the annual meetings; the formation of county medical societies; the appointment of a committee to devise means for procuring a fire-proof library building; the appointment of a committee to wait upon the trustees of the Peabody Library, to urge them to make appropriations for the purchase of medical as well as other scientific works for that library, etc.

THE FIRST MEDICAL DIPLOMA ISSUED IN AMERICA.

A ceremony of peculiar interest was the presentation of the diplomas of Dr. John Archer and a certificate of membership in the American Philosophical Society of Dr. George Buchanan, who were both incorporators of the Medical and Chirurgical Faculty. The medical diploma of Dr. Archer constituting him a Bachelor of Medicine has an especial interest, from having been the first issued in America. It was granted in 1768 by the College of Medicine of Philadelphia.

ELECTION OF OFFICERS.

The election of officers was then entered upon, which resulted in the choice of the following: F. Donaldson, M.D., President; A. H. Bayly, M.D., and I. E. Atkinson, M.D., Vice-Presidents; W. G. Regester, M.D., Recording Secretary; G. L. Taneyhill, Assistant Secretary; J. E. Michael, Corresponding Secretary; J. Gilman, M.D., Treasurer. Executive Committee: H. P. C. Wilson, M.D., L. McLane Tiffany, M.D., P. C. Williams, M.D., J. C. Thomas, M.D., Christopher Johnston, M.D.

After the appointment of the committees, delegates to other societies, sections, etc., the faculty adjourned.

MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

THIRTY-SECOND ANNUAL MEETING,

Held in Lancaster, Pa., May 11, 12, *and* 13, 1881.

DR. J. T. CARPENTER, OF POTTSVILLE, PRESIDENT, IN THE CHAIR.

(Special Report for THE MEDICAL RECORD.)

THE usual routine business was transacted, and the reports from county medical societies, delegates to neighboring societies, officers, and committees were received. An interesting fact was the presence of a number of women physicians, who were received as delegates from the Montgomery County and Delaware County Societies. Among the resolutions presented, the most important were that in regard to the State Hospital for the Insane, at Warren; that endorsing the State Board of Health Bill at present before the House of Representatives; and that appointing a committee to prepare a schedule of subjects and requirements upon which the County Society Examiners should examine all those desirous of entering a preceptor's office for the study of medicine.

FEMALE SUPERINTENDENTS FOR INSANE ASYLUMS.

The first, which involved the placing of a female superintendent in the Warren State Hospital for the Insane, as has been done at Harrisburg and Norristown, reads as follows:

Resolved, That the society does respectfully, but earnestly, protest against any action in relation to the State Hospital at Warren, or any other to be hereafter founded, which involves a retrograding from the principles recognized, by placing the female insane patients under the sole control of a male medical superintendent, or making the female medical officers subordinate to, or dependent upon, or controllable in any way by such superintendent, or by any plan of organization other than one placing a woman practitioner in unrestricted and absolute authority over the medical, moral, and physical treatment of the female patients in State hospitals for the insane.

The resolution was lost.

The second endorsed the bill for creating a State Board and regulating the practice of medicine, which was published in abstract in the RECORD a week or two since.

The third ordered a committee to be appointed for the purpose above mentioned. The committee consists of Dr. O. H. Allis, of Philadelphia, Dr. John B. Roberts, of Philadelphia, Dr. William M. Findley, of Altoona, Dr. Traill Green, of Easton, and Dr. William B. Ulrich, of Chester.

A number of amendments to the Constitution and By-Laws were also acted upon.

A number of scientific addresses and papers were read, and referred for publication in the annual Transactions of the Society.

MANAGEMENT OF THE INSANE.

The address in surgery was on "Conservative Surgery" by Dr. S. M. Ross, of Blair County. The address of the President, Dr. J. T. Carpenter, considered "The Management of the Insane." The defects in the American system, he said, were twofold. First, the aggregation of different classes of patients in the same institution, curable and incurable, acute and chronic; second, the defective organization of American insane hospitals, because, being without any central supervision, every local board of trustees does what seems good in its own eyes. No regular system controls all the State institutions, and the most diverse policy may be carried out in the different hospitals of Pennsylvania. Other changes necessary were named, as the necessity of superintendents being relieved from all the distractions of business affairs; the training of assistants by clinical teaching, who should be in proportion of one to every fifteen or twenty patients for acute cases; and the appointment of a board of consulting physicians to every insane hospital.

ADDRESS ON HYGIENE.

The address on Hygiene by Dr. Benjamin Lee, of Philadelphia, discussed "Certain Matters Connected with the Purity of the Atmosphere, especially in Large Cities," and referred to the proper method of keeping the streets clean, as done in many foreign cities, and described proceedings by which the air in our houses might be kept purified. The address in Mental Disorders was read by Dr. S. S. Schultz, of Danville, whose experience at the Danville Asylum made the paper a practical one.

The address in Medicine had been assigned to Dr. J. Solis Cohen, of Philadelphia, and that in Obstetrics to Dr. S. T. Davis, of Lancaster.

The voluntary papers also contained much of scientific interest. Some abstracts are given below.

LOCAL TREATMENT OF DISEASED CERVIX IN PREGNANCY.

"The Importance of Local Treatment in Congestion and Inflammation of the Cervix Uteri in Pregnancy," by Dr. Jacob Price, of Chester County, contained interesting points, and elicited a good deal of discussion. The frequency of cervicitis during pregnancy, and its potency in causing the obstinate sick stomach and general ganglionic depression, was strongly urged. The importance of relieving these symptoms, and their bearing upon the safety and comfort of the patient, was shown by the recital of cases. Five fatal cases of the sick stomach of pregnancy within the knowledge of the author, and heretofore unreported, were detailed.

The practice of the author for many years had been, in all cases of protracted sick stomach of pregnancy, to institute vaginal examination, and never without discovering marked evidence of congestion or inflammation, and occasionally of ulceration. The redness, tumefaction, and unusual mucous discharge were generally promptly relieved by the local and general treatment instituted. The only case that went on to a fatal result, in spite of this treatment, was one in which Bright's disease, as well as extensive peri-uterine cellulitis (not acute) were present from a very early period of the pregnancy. In this instance the vomiting was immediately checked by local treatment. The application used most frequently by Dr. Price was iodine, crystallized carbolic acid, and tannin, each two drachms, dissolved by the aid of heat in an ounce of concentrated glycerine. It is applied freely by a dossil of cotton-wool to the vaginal portion of the cervix, and sometimes a short distance up the canal of the cervix; then a tampon of cotton, saturated with concentrated glycerine, is introduced into the vagina, and kept in position by a large tampon of dry cotton-wool.

The very copious watery discharge caused by the osmotic property of glycerine relieves the congested vessels, and powerfully assists the action of the astringent and alterative applied. Two cases were de-

tailed by the speaker, which in previous pregnancy had suffered all through from sick stomach, unfitting the patients for household duties, and in one case threatening life. These were promptly and permanently relieved by the treatment instituted.

Vaginal injections were sometimes directed by Dr. Price, but were not considered as safe and reliable as the applications by the physician himself.

DISEASES OF LACHRYMAL PASSAGES.

"Affections of the Lachrymal Passages: their Nature and Treatment," by Dr. S. D. Risley, of Philadelphia. Attention was given only to the drainage system, which was frequently the site of inflammation, resulting in obstruction or constriction, which might occur at any point between the puncta and nasal end of the bony duct. The influence of the retained tears in causing conjunctival and corneal disease, and in disturbing the refraction of light by the cornea, was insisted upon. The unfavorable prognosis regarding results from treatment of lachrymal obstruction was not justified by the facts, since a large number of cases were readily and permanently cured, and all cases benefited by judicious treatment. The bad results were due to a failure to diagnosticate the part of the drainage system constricted, and to too harsh treatment. The introduction of the style was obsolete. Many cases were cured by simple dilatation of the punctum and canaliculi without slitting, after the method of Bowman. When the constriction was in the nasal duct, this was necessary. In probing the duct, the rule was to introduce a probe sufficiently large to pass tightly, and allow it to remain until grasped firmly by the stricture. The theory for the probing, in Dr. Risley's opinion, was not to dilate, break, or cut the stricture, but to get the advantage of stimulation by pressure; the thickened mucous membrane being subjected to vigorous pressure between the probe and the bony walls of the duct. He objected to the use of large probes, since their use was based upon the theory of dilatation, or tearing forcibly the stricture, and experience had shown that the subsequent constriction, after a few months, was closer than before the operation. He showed a number of dry skulls in which the bony duct, even with the soft tissues absent, were not large enough to admit the larger sized probes of the Theobald series. Cases of retained tears, especially those due to obstruction below the sac, should not be neglected, since they were always liable to attacks of purulent inflammation of the lachrymal sac.

PATHOLOGY OF SHOCK.

"Indications Calling for Active Treatment in Typhoid Fever," by Dr. J. L. Crawford, of Indiana County, was read; and also "Contributions to the History and Use of Katalysine Spring Water at Gettysburg," by Dr. J. W. C. O'Neal, of Adams County.

"Pathology of Shock," by Dr. C. C. Seabrook, of Dauphin County. This was the most scientific and elaborate paper presented.

Opening with a detailed account of the early and recent theories of shock, and the symptoms witnessed during its existence, Dr. Seabrook described his method of experimentation upon frogs and rabbits, and gave his deductions as to the pathology of the condition. He had demonstrated, by a number of experiments, that an injury to any one of these animals induced conditions analogous to those observed in man. He took frogs to represent the cold-blooded series of animals, and operated as follows, obtaining the same results on curarized and non-curarized subjects: The animal was fastened on the stage of a microscope, and the tongue or a web fixed under a power of not over two hundred and fifty diameters. A limb was crushed with a pair of forceps, without disturbing that under the microscope. The first series of experiments was to determine the effect on the circulation. With the receipt of injury there was an almost instantaneous contraction in calibre of arterial and venous capillaries, which was quickly succeeded by considerable dilatation and increased rapidity of blood-current; as the dilatation became excessive there was slowing, even to stasis. The second series was modified, by dividing the spinal cord just below the origin of the brachial plexus, and crushing a limb connected with the cord below the section, and another connected above the section. The crushing of the inferior limb produced merely a capillary dilatation, with slowing; while the crushing of the superior extremity was followed by instant contraction, quickly succeeded by excessive dilatation, with at first increased rapidity of current, and secondly, stagnation. The conclusions are these: That the impression made by an injury to a limb is conveyed to the cord, and along the cord to that centre which controls the tonicity of the blood-vessels—the vaso-motor centre; that this impression to this centre has first a stimulant, and secondly a depressant effect; that this centre is at some point above the brachial plexus; and that there are ganglia scattered throughout the length of the cord, which exercise the same function as this centre, only modified in degree, as is evident by the dilatation which succeeded an injury to a limb connected with the cord below the section. Subsequently, repeated sections were made from above downward, to determine the locality of this vaso-motor centre, which was found to exist in or about the upper third of the lower half of the medulla oblongata. Rabbits showed that the same results occurred in warm-blooded animals. The question to be determined next was: Does the causation of the changes observed belong to the accelerator-nerves of the heart, to the cardio-inhibitory centre nerves, or to the vaso-motor centre nerves? Sections of pneumogastrics, cord and sympathetic were done to solve this query. Numerous carefully performed experiments in these lines, with various modifications, led the author to these conclusions:

First.—The impression produced by an injury is conveyed by different nerves to the medulla, and then apparently paralyzes the vaso-motor centre in preference to all other centres, and destroys either its susceptibility to impressions, or the power of generating impulses; and the blood-vessels under its control dilate, because of the lack of stimulus necessary to the maintenance of the equilibrium of their calibre.

Second.—The heart is slightly influenced, if at all, through the inhibiting centre or nerves; and then always secondarily to the vaso-motor (except when some branches of the pneumogastrics are injured).

The elaborate and original paper concluded by showing the manner in which the clinical symptoms of shock are produced by vaso-motor paresis.

REST IN NERVOUS DISEASES.

"Rest in Nervous Disease," by Dr. John Curwen, of Dauphin County. The author took the ground that, as most of the diseases of that class were of an asthenic type, it was necessary to attend very carefully to the nutritive functions; that absolute rest was, in the majority of cases, required in the

early stages, and graduated exercise in the latter; that men in health should take half a day, or a whole working day, as often as once in a fortnight, and give that to relaxation and recreation, in place of taking a month or more at a time, and then giving themselves up to travel and pleasure to such a degree as to receive little benefit; that every man should have something outside of his regular work, as a diversion, on the principle that change of work was rest to the mind; that literary men and students should be careful to take regular moderate exercise, so that the blood should not be diverted from the lower spinal cord by too great an amount sent to the brain, on account of the peculiar manner in which the arteries of the cord were distributed from the brain; that special care should be taken to ascertain what the exact condition of all the organs was, and relieve any diseased or disordered action by proper medication and hygienic measures; that while rest for the general system was in all cases demanded, special rest was often required for particular organs, and that this must be given in such a manner as best to subserve the welfare of the individual; that stimulants must be avoided as much as possible, and the physician must feel his way cautiously and gently to the employment of such means as will most surely and freely relieve all diseased conditions; and that it was always better to err in the direction of too much rest than of too little.

PRELIMINARY EDUCATION.

"The State Medical Society and the Preparatory Education of Medical Students," was the topic of Dr. Traill Green's paper, who insisted on the importance of students being examined by the County Society Examiners before entering a preceptor's office.

PARASITES OF THE HUMAN BODY.

"Parasites of the Human Body," by Dr. R. H. Milner, of Delaware County. This paper called attention to the occurrence of trichina and tape-worm in the flesh of the hog, and urged strict sanitary examinations. The paper was mostly composed of well-known facts. It suggested better systems of feeding and rearing hogs; the necessity of good cooking; and the use of sulphurous acid as internal treatment in cases of trichina poisoning. Drs. Seiler and Leffmann called attention, during the discussion, to the fact that beef and other meats could also give rise to parasites. The dangers of the raw-meat cure were also suggested.

CHRONIC LARYNGITIS.

"Chronic Laryngitis," by Dr. Carl Seiler, of Philadelphia. He first considered the causes of this common affection, which he designated as a disease of civilization, and named among them impure air, deranged digestion, and the inhalation of irritating dust. He next described the symptoms and the appearances of the larynx as seen in the laryngeal mirror, without which, he said, the diagnosis could not be made, and stated that in most cases of chronic catarrhal laryngitis a fissure, abrasion, or ulcer was seen in the interary tenoid-commissure, which gives rise to both the cough and the hoarseness. A brief outline of the proper treatment of the affection was then given by the author, and it was insisted upon that general systemic treatment alone, without the aid of topical applications to the larynx itself, was of little value, and patients, even when sent to a warm climate during the winter, were not benefited; but that if they received local treatment they made a rapid recovery, more rapid than could be expected in the cold and changeable climate of our section of the country.

SCARLET FEVER.

"Scarlet Fever Epidemic of Hollidaysburg," by Dr. C. Irwin, of Blair County. The author gave some notes on the early history of the relation between scarlet fever and measles. In the recent epidemic, adults were not much attacked, but seemed to suffer from as high a percentage of mortality. Hollidaysburg is not unhealthy in situation, and has a population of about five thousand. Five hundred cases occurred within a few months. Statistics showed that the cases treated by different physicians exhibited about the same proportion of mortality, and even the cases under homœopathic treatment, or under no distinct system, showed no greater mortality. The sulpho-carbolate of sodium seemed to have some prophylactic action, but most of this kind of treatment utterly failed. Tonics and stimulants seemed to be the sheet anchor. Hot baths were found very useful, and elaterium was also a great aid. Tincture of iron and potassium chlorate were *utterly useless*. Albuminuria was nearly always present in the cases observed during this epidemic.

HYGIENE.

"Hygiene in its Relations to the Medical Profession," by Dr. I. N. Snively, of Franklin County. The general importance of hygiene was pointed out, and, as an illustration of the special value, a case of scarlet fever occurring at a summer hotel was detailed, in which disinfection prevented the spread of the fever among many other children. Diphtheria also must be met by hygienic measures.

Attention should be called to the regulation of factories and workshops, and to the adulteration of food. Physicians may be the means of carrying disease, and should take every care to avoid such results.

EAR DISEASES IN RAILROAD EMPLOYES.

"Diseases of the Ear in Railroad Conductors, Locomotive Firemen, and Engineers," by Dr. L. Turnbull, of Philadelphia. Dr. L. Turnbull, Aural Surgeon to Jefferson Medical College Hospital, read a paper upon the diseases of the ear in locomotive firemen, conductors, and engineers. There are a number of persons who are naturally insensible to sounds above a certain pitch, just as there are some who cannot distinguish between different colored rays of light of high refractive powers: hence there is a Daltonism of the ear as well as of the eye. The analogy existing between the ability to recognize colors and that of discriminating between different musical tones has been frequently observed. These facts and conclusions were published by Dr. Turnbull in the *Boston Medical and Surgical Journal*, May 29, 1879.* At the session of the International Otological Congress, held in 1880, at Milan, Prof. S. M. Moos, of Heidelberg, raised the question concerning the deafness or defects of hearing of railroad officials, as has also been raised concerning their color-blindness and defects of vision. He affirmed, after statistical examinations of a great number of stokers and railway engineers, that these employés are more subject than others to certain affections of the ear, and to such an extent, that the safety of travel-

* The Limit of Perception of Musical Tones by the Human Ear. By Laurence Turnbull. Second Series, pp. 124. Cambridge, 1879 (Reprint).

lers is endangered by it. He concluded his paper by recommending that all such employés should be examined as to their hearing prior to engagement. In his numerous inquiries and examinations of engineers, conductors, and firemen, including those attached to stationary engines as well as locomotive, it was found, as a rule, that not so large a number was affected with profound deafness as Dr. Moos has stated, but in many cases partial deafness, from loud sounds, dust, and cinders getting into the meatus and filling it up temporarily, was found. It was especially the case with those making long trips, as for instance on the Union Pacific Railroad across the plains. Again, the lining of the meatus becomes diseased from the dryness and heat, which produces a rapid desquamation of the skin of the ear with loosening of the epithelium, which, mingling with the particles of dust and cerumen, produced pressure and caused deafness, which it was very difficult to remove. In compiling statistics, it must be remembered that American locomotive engineers are much more protected than the European, from the fact of our engines being provided with cabs, whilst foreign ones are open and the men exposed to the weather, not even having roofs over their heads.

The following resolution was offered in connection with the subject:

Resolved, That the Legislature of the State of Pennsylvania be requested, at its next annual session, to pass a law requiring all railroad employés to be examined on their acuteness of hearing, by means of the voice, watch, clock, bells, whistle, etc., before taking charge of any train on any railroad in the State of Pennsylvania.

After a discussion upon the paper, the whole subject was referred to a special committee for consideration, of which Dr. Turnbull, of Philadelphia, the author of the paper, was made chairman.

TREATMENT OF HYDROCELE BY INJECTION OF CARBOLIC ACID.

"Treatment of Hydrocele, and Cystic Tumors in General, by the Injection of Carbolic Acid," by Dr. R. J. Levis, of Philadelphia. Dr. Levis claimed for his method more certainty in producing the proper plastic grade of inflammation necessary for the obliteration of the sac, and that it is painless and free from danger. He has pursued this plan for some years in the Pennsylvania Hospital, in the Jefferson College Hospital, and in private surgical practice, with satisfaction and success. Carbolic acid is used for the purpose in as nearly full strength as is possible, dilution being only necessary to produce fluidity of the crystals. It is injected, after the tapping, by a syringe with a long nozzle, which passes entirely through the canula. From forty to ninety grains are injected, according to the size of the cyst.

EXTIRPATION OF OVARIES FOR INSANITY.

"On Extirpation of the Ovaries for Insanity," by William Goodell, of Philadelphia. Since Listerism has made abdominal operations and exploratory incisions so successful, oöphorectomy, or extirpation of the ovaries, has been placed on a firm basis as an operation, not for intrinsic disease, but merely to bring on the climacteric. The disorders of menstrual life, for which the ovaries have been successfully removed, are fibroid tumors of the uterus, chronic pelvic peritonitis, persistent ovaritis and ovaralgia, ovarian epilepsy, dysmenorrhœa, menorrhagia, etc. Some forms of insanity should be added to this list. Ovarian insanity would be a good term for that form of mental disorder which is associated closely with menstruation. During the interval between the menses, the patient may be wholly sane or quite controllable. Since the verdict of the profession is largely in favor of the removal of the ovaries for many physical derangements dependent upon menstruation, the same remedy should, *à fortiori*, be tried for these mental derangements, which plainly arise, or seem to arise, from the same source. The circumstances that an insane woman is liable to transmit the tendency to her children; that her death is really a relief to the family, and that she is no more a member of the body politic, lessen very greatly the objections to an operation which is frequently performed for physical troubles of much less gravity. The operation would tend to restore the woman to her family and society, and would prevent her having insane offspring. A case operated on in 1878, by the vaginal incision, was not at once followed by relief of the insanity, but the patient continued having the menstrual molimina, though the catamenia were effectually stopped. In about fifteen months, however, the efforts at menstruation stopped, and the patient has since had no mental disturbances. In 1880, another case was operated on by the vaginal incision, but as the ovaries were adherent and could not be brought down, the abdominal incision was resorted to. The patient was promptly and greatly benefited in mind and body. A third case was relieved for a time, but relapsed. As a rule, Dr. Goodell recommends the abdominal incision.

Papers on "Catarrhal Inflammation of the Pancreas," by Dr. R. G. Curtin, of Philadelphia; "Why Deformity so Frequently Follows Fracture at the Lower End of the Humerus; Why Fractures Just Above or Below the Knee are so Dangerous," by Dr. Oscar H. Allis, of Philadelphia, were also read.

OFFICERS FOR 1882.

The next meeting of the Society will be held at Titusville. The officers for 1882 are: President, Dr. Jacob L. Ziegler, of Lancaster County; Vice-Presidents, Dr. Joseph A. Reed, of Alleghany County, Dr. W. S. Roland, of York County, Dr. G. W. Houston, of Chester, Dr. William Weidman, of Berks; Permanent Secretary, Dr. W. B. Atkinson; Recording Secretary, Dr. G. Thickston, of Erie; Corresponding Secretary, Dr. O. H. Allis, of Philadelphia; Treasurer, Dr. Benjamin Lee, of Philadelphia.

INEBRIETY.—Lewis D. Mason, M.D., of Brooklyn, N. Y., writes: "In your issue of the RECORD of May 7th, there appears among your editorial articles one on inebriety. You have been pleased in it to notice a paper recently published by me, and one which has had an extensive circulation through the medium of the *Journal of Inebriety*, and also as *a reprint* from that journal. I am sure that when you gave my address as Hartford in the article under consideration, it was an oversight on your part. Your surmise with regard to the class we treat—namely, that the wealthier class chiefly compose our patients—is not correct. The 'poorer classes' are received into our institution; especial provision being made for this class of persons in this county. You reflect on the fact that statistics of cures are not given. The reason for this is, that a large proportion of the cases under consideration were patients *then under treatment*.

"From the character of the paper, many facts are necessarily excluded that might be considered in a more general article."

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, April 21, 1881.

FORDYCE BARKER, M.D., LL.D., PRESIDENT, IN THE CHAIR.

THE LIBRARIAN acknowledged the reception of forty-seven bound and numerous unbound volumes, since the last stated meeting.

The Statistical Secretary, Dr. F. V. White, reported the deaths of Elias S. Nichols, M.D., Joseph S. Monell, M.D., and Max Herzog, M.D.

THE SECTIONS OF THE ACADEMY.

The Secretary read the following resolution from the Council:

Resolved, That the work of the sections be restricted to such as is referred to them by the Academy.

Laid on the table.

DR. BRYSON DELAVAN then read a

MEMORIAL OF OLIVER WHITE, M.D.,

and on motion was granted the privilege of publishing it elsewhere than in the Transactions of the Academy.

DR. L. ELSBERG then read a paper entitled

THE GALVANIC ACCUMULATOR (TROUVÉ'S POLYSCOPE) FOR STORING DYNAMICAL ELECTRICITY FOR CAUTERY AND ILLUMINATING PURPOSES.

The idea involved is the storing up of galvanism in a box, so that it can be used at any time, to suit the convenience of the operator, for galvano cautery purposes. Dr. Elsberg presented briefly the principles of electro-physics, and endorsed the doctrine of wave propagation of the vibrations of electricity. He also gave a *résumé* of the literature of the subject, so far as it relates to the galvano-cautery, the success of which has been based upon Ohm's law—namely, that the total internal is equal to the total external resistance in all properly constructed batteries. Among the reasons why the galvano-cautery is not used more frequently than it is, are the facts that the apparatus ordinarily used is somewhat difficult of adjustment, and very frequently disappoints the operator; that strong acids are necessary; and that considerable special care is necessary to keep the machine in proper working order. The chief cause for the enfeeblement of current which they exhibit is the decomposition of the water in the liquid in which the plates are immersed.

The apparatus exhibited was intended to overcome these difficulties, and was Trouvé's secondary jar, consisting essentially of two pieces of sheet-lead, rolled up, and separated by strips of india-rubber. The outside coil is connected with the copper wire, and the inside one with the other pole of the battery. The coils are immersed in a jar containing water acidulated to ten per cent. with sulphuric acid, and tightly packed at the top to prevent evaporation. The jar is then placed in the accumulator or box, and the poles attached in the ordinary manner. When the accumulator is attached to a battery, the acidulated water is decomposed, and when the rolls of sheet-lead are connected, the water is reproduced and this alternate action can be maintained without limitation. To the accumulator is attached a single or double rheostat, by which the current can be so easily regulated that the finest platinum wire can be heated to incandescence without fusing. The instrument exhibited had been connected with an ordinary Daniels battery during the afternoon, and was capable of heating an ordinary cautery knife (probably 25 or 26, American scale), for fifteen or twenty minutes. Illuminators were also attached, by which the mouth, vagina, and other cavities could be illuminated *without heat*.

DR. G. M. BEARD remarked that the instrument illustrated what had long been desired, namely, an apparatus for utilizing the decomposition which takes place in all batteries. Edison had devised a machine to be operated on a large scale, and upon the same principle, and his generator was cool instead of hot. The possibility of securing such a desideratum had been denied by Crooks and others, but certain obstacles had been overcome, and success had been assured. Dr. Beard then spoke of the basis of medical electro-therapeutics, namely, *electro-physics*. All the advance which had been made during the last one hundred and fifty years had been in electro-physics. It was the physicist and not the physiologist who had aided the physician in this department. He also referred to the theory of wave propagation, so clearly stated by Dr. Elsberg, and believed that it was that which was generally accepted, at least by all the younger physicists.

DR. A. D. ROCKWELL thought that the instrument was a remarkable illustration of the growing possibility of utilizing and restraining electricity, and it seemed that it would quite probably supersede the ordinary apparatus for many operations. One of the recognized difficulties in using the older machines was to heat fine wire to the desired degree without fusing it. Some two or three years ago he had occasion to study for the best method of preventing polarization, and then found that moving the elements to and fro gave the best results, and a plan for moving them on wheels was devised.

DR. PIFFARD remarked that the size of the wire which could be heated was very important. There was no question but what the apparatus exhibited would supersede all others for minor operations, but how it was to succeed for major operations remained unsettled. For the latter, batteries now in use could heat a No. 22 wire, Brown & Sharpe's gauge, twenty inches long, and maintain the requisite degree for more than half an hour. The wires exhibited were too fine for other than minor operations, and he asked Dr. Elsberg concerning the heating capacity of the apparatus exhibited.

DR. ELSBERG said that a wire from a half to one and a half millimetre in diameter (about No. 26) could be kept hot for twenty minutes. The capacity for heating, of course, depended entirely upon the size of the accumulator.

DR. BIRDSALL remarked that he had observed some difficulty in heating fine wire, and preventing fusion, and this difficulty had been especially experienced by Dr. McBride, who had used the accumulator quite extensively. The failure, perhaps, might be due to lack of care in the details of adjustment. He did not understand that anything was gained in saving the polarization current.

AMPUTATION OF REDUNDANT SCROTUM FOR THE RELIEF OF VARICOCELE.

DR. M. H. HENRY read a paper on the above subject, which appears in the present number of the RECORD.

DR. FRANK H. HAMILTON said that, in the main, the remarks made by Dr. Henry were, in his judgment, sound. In all that pertained to pathology and relative frequency of the affection he thought he was

correct. He had mentioned, however, only a few of the great variety of methods which have been employed in the treatment of varicocele, the majority of which have been regarded as ordinary methods. The use of the cautery was as old as Celsus, and from his day up to the present the variety of methods resorted to for obliterating the veins was very great, each gentleman claiming that his method was safe while all others were more or less dangerous. Destruction of the veins has proved generally insufficient, as have any attempts to destroy varicose veins in the lower extremities—the experience of most surgeons being that such operations have been abortive or complete failures. Since Sir Astley Cooper recommended eblation of the scrotum as a palliative method of treating varicocele it has gradually come into use as an ordinary method of treatment for radical cure. As to the precise method by which it should be done, Dr. Hamilton did not agree with Dr. Henry concerning the advantages claimed for the clamp. Dr. Henry's statistics showed that it was scarcely dangerous, but Dr. Hamilton preferred a method which is entirely devoid of danger. He related the history of a case which showed that the use of the clamp is attended with danger. Dr. Henry's instrument was employed, secondary hemorrhage occurred, the scrotum sloughed, and the patient had a very tedious recovery. The danger from secondary hemorrhage after using the clamp Dr. Hamilton regarded as not inconsiderable. For the scrotum is exceedingly vascular, the dartos muscle is liable to retract, and from the arterioles profuse bleeding may occur. He believed that Sir Astley Cooper's method is far preferable. A large number of ligatures may be necessary, but secondary hemorrhage is prevented. He should disapprove of the clamp altogether.

Dr. C. A. Leale stated that he had been taught, and subsequent experience proved, that a very large proportion of young men suffering from varicocele could be promised that a surgical operation was not necessary, and that, by the use of a suspensory bandage and a resort to hygienic measures, a cure in most cases could be effected; but that there are instances where an operation ought to be performed for the relief of the distressing backache and frequent weariness, no experienced surgeon could deny. Dr. Leale cited as illustrative one such, when the scrotum depended six inches and the left testicle was surrounded by a mass of enlarged veins, which after ordinary exercise became very painful and caused the patient to lose all ambition for life. Dr. Leale, after reviewing all accessible authorities on the subject, decided on the following original procedure:

The patient was placed under the influence of ether, and by pinching up the scrotum an incision was made into the tunica vaginalis sufficiently large to admit a guide, when the opening three inches in length was made toward the external ring, the same as for the operation of ordinary castration; the enlarged veins were now brought fairly into view, and all excepting what were deemed necessary for the returning circulation were held over the fingers of his assistant; these were then firmly tied as they emerged from the external ring, and also about half an inch from their insertion into the testicle. All the intervening portions between the ligatures were removed, resembling a mass of worms about half an ounce in weight; the ligatures near the external ring and those near the testicle were brought together to give in healing additional support. A portion of the scrotum, the size agreed upon before the operation, was now removed, and the testicle carefully wiped off with a soft linen towel to remove coagula; the incised edges of the scrotum were united by interrupted sutures, leaving a point at the centre through which the silk ligatures on the veins made their exit. The patient was kept quiet for ten days, no phlebitis occurred, nor any unfavorable symptom. He then returned to his ordinary duties. A year after the operation he was examined and found perfectly cured, and on advice married; his wife before the end of three years had presented him with a son and daughter, and at the end of six years, when Dr. Leale examined him, no atrophy of the testicle existed and the cure remained complete.

Dr. Henry, in closing the discussion, said that Sir Astley Cooper's had been mentioned by only a few Continental surgeons, and that English surgeons condemned it up to this date. His own operation had been adopted in this city by Drs. Mason, Sayre, Otis, and Schwedler; Dr. Hutchison, of Brooklyn, and Dr. Gross, of Philadelphia, had given an illustration of the instrument in his book and had spoken highly of it, as also had Dr. Ashhurst. The best book ever published in the English language on diseases belonging to this class, Bumstead and Taylor, contained a description of the instrument and the operation, and those authors spoke of both the operation and the instrument as the best which has yet been suggested.

The Academy then adjourned.

Correspondence.

THE COMMITTEE ON HYGIENE OF THE MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

To the Editor of The Medical Record.

Sir: Among the work attempted to be done by the Committee on Hygiene, you have forgotten its endeavors to prevent the reservoir on Fifth avenue, between Fortieth and Forty-second streets, from being torn down, for the present at least; and also the repeated suggestion that it should be turned into a filter-bed for a portion of the water of this city; in the hopes of demonstrating that other filter-beds for the whole Croton water supply of the city were not only required, but would be built. Any one who will look at the illustrations in *Harper's Weekly*, for May 28, 1881, will see the necessity of some means for the effective purification of our drinking-water; to say nothing of the *Herald* reports, which have been proven to be absolutely true. More than two years ago I suggested this matter to the Board of Health, but my note was never answered. I then took it before the Board of Public Works, but without avail. I lastly brought it again to the attention of the Board of Health, and received for answer that it would be very difficult for me to prove that malaria was caused by the condition of the Croton water. This I had never claimed, although I believe it; but had merely asserted that the water was so impure that it required filtering before being served to the public. The influences in force for the removal of the reservoir are: the inhabitants who live around it, who wish the ground occupied by it converted into a public park; one of our largest and wealthiest real estate owners, who has a senator of his own at Albany, and desires to improve his property in the neighbor-

hood; another State senator who lives near by; and one of our railroad kings who resides opposite.

Those who oppose the removal are the New York Municipal Society, the Hon. Judge Fancher, the fire insurance companies, who naturally are in favor of a special water-supply in case of a fire in the neighborhood; and the Committee on Hygiene, which wishes to see the difference between filtered and unfiltered water tried on a large scale. There is no doubt now that the carelessness about the head-waters of the Croton River and its tributaries is very great—inexcusably great—and the Board of Health has not added much to its reputation for care and accuracy by endorsing this vile fluid. *Nostoc* was declared to be the principal source of contamination, and nostoc, or more properly *nostock*, we find defined as *viscida materia gelatinæ similis*, vulgo, *stella candens, i. e.*, viscid matter resembling gelatine or slime, and coming from a plant called stella candens—a foamy or frothy stellate plant. The cabalistic word nostoc is probably derived from two words, meaning disease-producing, or the production of filth. However this may be, it was seen growing in large quantities in the pools on the foul squatter block between Sixty-seventh and Fifty-eighth streets, Third and Lexington avenues, after the place had been disinfected, and before it was covered by the foul earth from the north hill of this unwholesome place.

In all the work which the Committee of Hygiene has undertaken it has met with much the same indifference and neglect, and generally with active opposition from almost all the public authorities responsible in the matters, besides from powerful corporations and influential citizens.

I think the Committee of Hygiene is fairly entitled to much of the credit which may grow out of the better street-cleaning bill which we may soon be blessed with, although the Sanitary Reform Society entered heartily into the enterprise when the ground was fairly broken; then came the Committee of Twenty-one, next the Academy of Medicine and the mass meetings of citizens and physicians, all, most ably supported by the whole press of this city, and the Senate of this State, but finally blocked for a time by the so-called Stalwart Republicans, whose great leader has now, it is to be hoped, fallen, to be followed by the speedy defeat, it is expected, of all his satellites in the Assembly at the next election.

I have no fault to find with the strictures you have made about the incompleteness of the work of the Committee on Hygiene, but I trust that this statement of the almost insurmountable character of the obstacles it met with in quarters where it least expected it will prove an ample excuse.

I must add, however, that the Sanitary Reform Association and the Committee on Hygiene were mainly instrumental in calling the State Board of Health to this city to aid in the removal of nuisances which our local officials could not or would not remove.

Respectfully,

J. C. PETERS.

THE SEA-SIDE SANITARIUM at Rockaway Beach is about to be opened for the coming season. In the past five years of its existence it has taken over forty thousand children to the sea-side for a week. The institution will now hold two hundred and forty-five weekly inmates, besides two hundred daily visitors. One hundred dollars will send fifty sick children and their mothers to this sanitarium for a week. It is a most deserving charity.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from May 15, 1881, to May 21, 1881.

KEENEY, C. C., Lieut.-Col. and Surgeon. When relieved by Surgeon Baily, to await orders at San Francisco, Cal. S. O. 112, C. S., A. G. O.

BAILY, E. I., Lieut.-Col. and Surgeon. To report in person to the commanding general Military Div. of the Pacific and Dept. of California, for assignment to duty as medical director of the Dept. of California, relieving Surgeon Keeney. S. O. 112, A. G. O., May 16, 1881.

MCPARLIN, T. A., Lieut.-Col. and Asst. Medical Purveyor. When relieved by Surgeon Clements, to proceed to San Francisco, Cal., and assume charge of the medical purveying depot in that city, relieving Capt. Henry Johnson, medical storekeeper. S. O. 112, C. S., A. G. O.

CLEMENTS, B. A., Major and Surgeon. To be relieved from duty at Willet's Point, N. Y., June 1, 1881, to proceed to New York City and assume the duties of Attending Surgeon there, relieving Lieut.-Col. McParlin. S. O. 112, C. S., A. G. O.

BILLINGS, J. S., Major and Surgeon. To proceed to London, England, as a delegate to the International Medical Congress, to meet there August next. He will also visit, on public service, such points in Holland, Belgium, Germany, and elsewhere, as may be deemed necessary by the Surgeon-General of the Army. S. O. 110, A. G. O., May 13, 1881.

TREMAINE, W. S., Capt. and Asst. Surgeon. His leave of absence on account of sickness, granted him January 20, 1880, from this office, further extended six months on surgeon's certificate of disability. S. O. 112, A. G. O., May 16, 1881.

MEACHAM, F., Capt. and Asst. Surgeon. Relieved from duty at Fort Hamilton, and assigned to duty as post-surgeon, Fort Wadsworth, N. Y. H., relieving Asst. Surgeon Burton. S. O. 90, Dept. of the East, May 20, 1881.

PATZKI, J. H., Capt. and Asst. Surgeon. When relieved by Asst. Surgeon Cuningham, to proceed to St. Augustine, Fla., and relieve Asst. Surgeon Gardner from duty as post-surgeon. S. O. 45, C. S., Dept. of the South.

WORTHINGTON, J. C., Capt. and Asst. Surgeon. Assigned to duty at Fort Wayne, Mich. S. O. 86, Dept. of the East, May 14, 1881.

CUNINGHAM, T. A., First Lieut. and Asst. Surgeon. Assigned to duty at Jackson Barracks, La. S. O. 45, Dept. of the South, May 14, 1881.

BURTON, H. G., First Lieut. and Asst. Surgeon. Assigned to temporary duty at Fort Hamilton, N. Y. H. S. O. 90, Dept. of the East, May 20, 1881.

BRECHEMIN, L., First Lieut. and Asst. Surgeon. Relieved from duty at Fort Meade, D. T., and assigned to duty at Fort Yates, D. T. S. O. 84, Dept. of Dakota, May 10, 1881.

BENHAM, R. B., First Lieut. and Asst. Surgeon. His seven-days' leave extended twenty-three days. S. O. 84, C. S., Dept. of Dakota.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending May 21, 1881.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
May 14, 1881.	45	11	186	18	111	116	58	0
May 21, 1881.	34*	10	151	27	157	114	42	0

* 3 were emigrants, 2 were second admissions, and 1 from New Jersey.

QUARANTINE MATTERS.—The States of Texas and Mississippi have already begun to put vessels in quarantine arriving at their ports.

A committee of the Sanitary Council of the Mississippi Valley reports that in its opinion the past winter was so severe as in all probability to have killed the yellow fever in this country. What is needed now, therefore, is the strictest possible quarantine. It does not consider the quarantine at the mouth of the Mississippi to be strict enough, and appeals to the President for help in perfecting it.

A STREET-CLEANING BILL has at last passed both Houses, and is probably at date of issue a law. The bill is a compromise, but seems to be, on the whole, a satisfactory one. A new street-cleaning department is established which is directly responsible to the mayor. It is empowered to build or buy barges, to erect crematories, etc. The bill does not interfere with, but rather enlarges the powers of the City Board of Health.

SUIT FOR MALPRACTICE.—A suit for malpractice is now pending against Dr. Lewis H. Sayre of this city. The charge is that he administered an overdose of nux vomica, which produced permanent injury to a female patient, thereby preventing her from following her ordinary vocation. The prescription consisted of pulv. aloe Soc., ℥ jss., ext. hyoscyamus and ext. nux vomica, each ℥ ss., divided in thirty pills, with directions that one should be taken every four hours, if necessary. The patient took four of these pills. The testimony thus far shows that four pills were taken in less than the prescribed time, and that a train of symptoms were developed which the patient regarded as due to the medicine—the allegation being that they were produced by the nux vomica. Medical evidence has been given to prove that the symptoms were due to hysteria rather than to the drugs administered.

AMERICAN ACADEMY OF MEDICINE.—The Council of the American Academy of Medicine will meet in New York, Wednesday, June 1st, to consider applications for membership, and to make preparations for the annual meeting of the Academy in New York, in September next. Richard J. Dunglison, M.D., Secretary, P. O. Box 2386, Philadelphia.

PROPHYLAXIS.—*The Cincinnati Lancet and Clinic* says that the physicians of Nashville have petitioned the Common Council to prohibit the tolling of bells for funerals, as the tolling has had a very depressing effect on the rest of their patients.

THE CONSUMPTION OF OPIUM.—Mr. D. C. Robbins, of this city, writes: "The discrepancy between Dr. H. H. Kane's figures in regard to the importation of opium *into* the United States, and the annual report prepared for the Chamber of Commerce, can be readily explained. Dr. Kane has taken the total import *to* the country, while I have very properly reported only the amount entered for consumption and passing the custom-house under a specific duty of one dollar per pound.

"New York is a commercial port, and it will be noted that we receive in transit for shipment to other countries, more especially to the West Indies, Mexico, Central and South America, a larger amount of opium than is consumed in the United States.

"As the error the doctor has fallen into is an important one, I must request the favor that you will publish annexed statement received from the statistical department in Washington, to which I beg to call your attention, as also to the interesting fact that the government receives nearly double the amount of duties from opium prepared for smoking —which article is almost wholly consumed by Chinese residents—than it does from *gum opium*, which is so extensively used in a great variety of preparations, as a medicine and toxicant, by our fifty millions of population.

Statement of the Quantity and Value of Imported Gum Opium and Opium Prepared for Smoking Entered for Consumption in the United States, with the Amount of Duty Collected thereon, during the ten years from 1871 *to* 1880, *inclusive.*

Fiscal Year ended June 30.	Gum Opium.				Opium Prepared for Smoking.			
	Pounds.	Values.	Rate of Duty.	Am't of Duty.	Pounds.	Values.	Rate of Duty.	Am't of Duty.
1871	52,929.25	$344,683.00	$2.50 per lb.	$132,323.13	12,554.00	$113,675.00	100 per cent.	$113,675.00
1871	105,689.31	574,291.00	1.00 "	105,689.31	25,270.60	259,699.00	$6.00 per lb.	151,623.63
1872	189,254.50	769,750.00	" "	189,254.50	49,375.00	525,596.52	" "	296,250.00
1873	152,770.38	724,797.00	" "	152,770.38	53,059.00	581,676.20	" "	318,354.00
1874	170,706.02	945,232.00	" "	170,706.02	55,343.75	556,844.00	" "	332,062.50
1875	188,238.75	953,429.00	" "	188,238.75	62,774.66	662,666.00	" "	376,647.93
1876	228,742.28	913,078.00	" "	228,742.28	53,189.42	577,288.51	" "	319,136.50
1877	230,102.09	997,692.00	" "	230,102.09	47,427.94	502,662.27	" "	284,567.70
1878	207,752.24	712,624.00	" "	207,752.24	54,804.78	617,160.20	" "	328,828.65
1879	278,553.90	929,894.00	" "	278,553.90	60,647.67	643,774.00	" "	363,886.02
1880	243,211.31	858,255.25	" "	243,211.31	77,196.00	773,796.00	" "	463,176.00

JOSEPH NIMMO, *Chief of Bureau.*

TREASURY DEPARTMENT, BUREAU OF STATISTICS, *May* 12, 1881.

"The consumption of opium in the United States, outside of our Chinese residents, cannot be considered as extraordinary or particularly noteworthy."

Original Communications.

NOTES ON SOME OF THE HOURLY VARIATIONS IN URINE.

By WILLIAM PITT MASON, C.E., M.D.,

ASSISTANT IN CHEMISTRY, RENSSELAER POLYTECHNIC INSTITUTE, TROY, N. Y.

THE data for the construction of the following curves were obtained from hourly examinations of the urine of a presumably healthy man, weighing one hundred and thirty-six pounds, and represent averages taken from seven hundred and fifteen observations. No attempt was made to weigh or strictly limit the amount of food ingested, the object having been to obtain average normal results, at the same time, the daily quality and quantity was fairly constant, consisting largely of animal food, with few vegetables and no fruit. The one cup of tea taken at supper constituted the only marked diuretic.

Food and drink between meals were interdicted, and all use of tobacco stopped. The hours for meals were as follows: Breakfast at eight A.M.; dinner, one P.M.; supper, six P.M. The examinations were made during cold weather (winters of 1879–80 and 1880–81), thus eliminating any error in hourly amount that might arise from undue perspiration.

As to daily exercise during periods of examination, no great amount was taken in the open air, yet the necessity of being constantly on the feet while engaged in active laboratory work, rendered the habits far from sedentary. Sunday observations were also recorded and will be mentioned in place, but were not employed in the construction of the plates.

The curves were plotted from results obtained from one individual, said results having been checked by readings taken at intervals from other sources; moreover, the observations were not taken for a great number of days consecutively, but were grouped with intervals of many days between, whereby fairer average results were secured.

Although the co-ordinates of the several plates appear on the same scale, no common value for equal measurements is intended; the plates are separate and distinct so far as that is concerned, the said arrangement was adopted merely as a convenience in drafting.

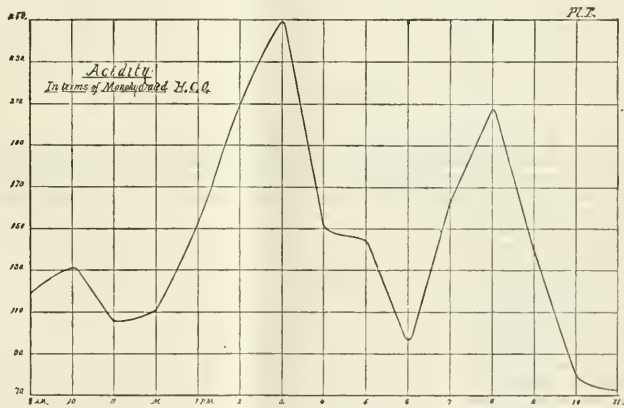
ACIDITY.

The curve representing the hourly variations in the acidity of urine, as shown in Plate I., was calculated from volumetric determinations made in terms of deci-normal oxalic acid solution, the actual saturating agent having been a weak solution of sodic hydrate.

The usual method, as given by Thudicum, of noting complete saturation by use of the two litmus papers, was discarded as cumberous and inaccurate, and phenol-ptalein $C_6H_4(CO.C_6H_4.OH)_2$ substituted as an indicator. No difficulty was experienced in thus obtaining close readings, nor did the coloring matter interfere with the pink tint. No attempt was made to separate the acidifying principles, the *total* acidity and hourly variation in same being all that was sought.

The ordinates of the curve represent milligrams of monohydrated oxalic acid.

In his late work on "Chemical Physiology," Dr. Vaughan gives three tables representing the hourly acidity for as many days. Whether or not the determinations were originally quantitative, it does not appear; but the qualitative form which they assume in his treatise renders them of less value than they otherwise might have been. The simple statement, for instance, that urine reacts "acid" at both eight and eleven P.M., without note of the *amount* of acidity in each instance, being necessarily incomplete.



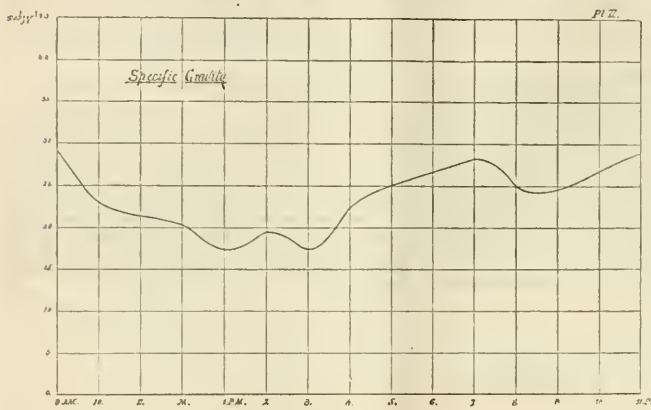
In glancing at the results as plotted in the curve, we find there records at variance not only with the above author, but also Drs. Roberts and Bence Jones.

Dr. Vaughan finds that in every case the urine becomes alkaline during the latter part of the forenoon. The curve in Plate I. shows a marked *decrease in acidity* during those hours, but not one of the many observations from which the averages for calculation of the curve were taken, showed the least evidence of alkalinity. This last remark does not hold good for Sunday observations (which same do not appear upon the plate), for in them neutral and alkaline reactions were common. We are thus forced to "bar out" alkaline reaction for those actively engaged, irrespective of the hour at which the test be made.

Dr. Bence Jones observed that "after a meal the acidity of the urine gradually decreased for a while until often it became neutral or alkaline." By the observations given in the plate the direct reverse is

recorded. The acidity *increases* for two hours after each meal, and *then* falls toward its corresponding minimum.

By a glance at Plate III. it will be noticed that the *volume* of the urine increases after each meal, particularly so after dinner; now, if the examinations above referred to were not quantitative, if no estimation of the total acidity were made, why



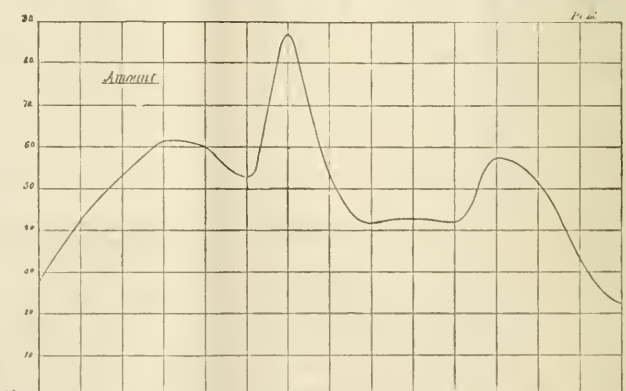
naturally the results obtained after meals would record constantly diminishing *intensity* of acidity on account of constantly increasing volume. In examining Plate I., it must be remembered that it indicates total acidity, without regard to intensity of action upon test paper.

Speaking of samples taken during the evening, Dr. Vaughan says: "Not only did the secretion remain acid, but its acidity increased." That some slight increase in intensity of reaction takes place there can be no doubt, owing to the rapid decline in the curve of volume (see Plate III.), but nevertheless the total value of acidity falls, and falls rapidly, reaching at eleven o'clock a lower level than it touches at any previous hour. In fact, the acidity curve during the hours of comparative inactivity preceding bedtime stands more in keeping with Dr. Vaughan's own "conclusions" than does his expression of his personal observations made during the same period, for he says: "Exercise increases the acids of the body, and consequently the acidity of the urine." Also, "That exercise in the open air increases the acids of the body is supported by clinical experience." That the reverse should obtain during the confined and quiet evening hours was to have been expected, and such is the expression of the acidity curve.

SPECIFIC GRAVITY.

The specific gravity determinations (see Plate II.) were made with special urinometers, prepared by John Tagliabue, 66 Fulton street, New York. Each instrument represents but a portion of the usual scale, the divisions being thus widely separated. Close readings may be thus obtained and differences of a quarter degree readily noted. It might be in keeping to remark here, that in using these urinometers, great care should be employed in preserving standard temperature, and that each instrument should be carefully wiped and laid aside for a short time before being again used. Moreover, the urinometer should be placed in the urine carefully, and never allowed to "dip" below the level of repose.

Beyond noticing that the usually accepted specific gravity of 1020 appears somewhat too low, nothing



seems necessary to be said concerning the plate; it stands self-explanatory.

AMOUNT.

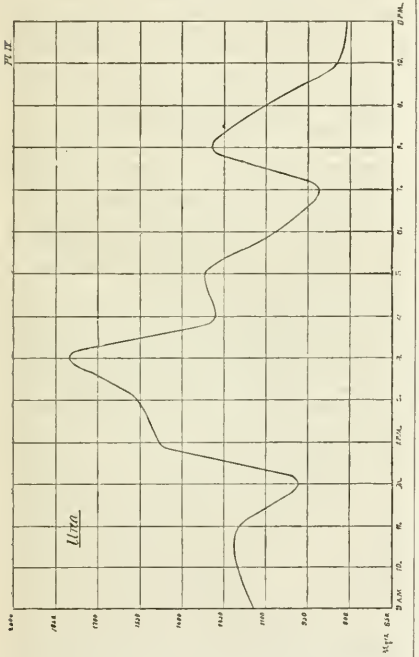
The variation in hourly amount (see Plate III.) was in every case estimated in cubic centimetres, and so represented on the plate, due care having been taken to keep the temperature at 15½° C. during each observation.

It will be seen that there is a general tendency toward increase in amount until two hours after the mid-day meal, from which hour the ordinates lessen until bedtime. As Dr. Vaughan says, "in noting this we only write another line in that great volume of facts which demonstrate the plant-like life of man. The light of day is necessary to the full activity of the organs of digestion, absorption, and excretion."

Two other maxima are recorded, each depending upon a previous meal: the first, prolonged in its ascent and sustained in its ordinate value, is doubtless largely due to full organic activity; the other, rapidly culminating and as quickly falling, is probably owing in great measure to the tea ingested at supper time.

UREA.

The curve on Plate IV., showing the hourly variation in number of milligrams of urea excreted, is not intended to indicate the exact relations existing between the quantities of ingested and egested nitrogen, but simply what results from conditions such as those specified in the introductory note, which conditions may be considered as fairly average.



The method used for the urea determinations was that not long since established by Dr. George B. Fowler, depending upon loss in specific gravity after decomposition by sodic thiochlorite (see *New York Medical Journal*, vol. xxv.), the only precaution necessary in its use being to allow considerably more time for the decomposition than the author of the method calls for, several hours being required in some cases.

The nearly mid-day maximum noticed in this curve is deserving of the same comment as is attached to similar maxima upon the other plates, viz.: it is a direct function of organic activity. A similar explanation will suffice for the low value of the ordinates at 11 P.M.; in fact, none other could be admitted, for the lack of exercise cannot be considered as the depressing element, since Professor Haughton has shown that ordinary muscular exertion and excretion of urea are not functions of each other.

TROY, N. Y.

THE STIGMA OF MAIZE IN PYELITIS AND CYSTITIS.

By SAMUEL C. BUSEY, M.D.,

WASHINGTON, D. C.

In the January number, 1880, of the *Medical News and Abstract* appeared a synopsis of a paper by Dr. Dufau, entitled "The Stigma of Maize in Diseases of the Bladder," in which the value of this new drug in the treatment of cystitis, gravel, and other affections of the bladder was so highly extolled that I determined to give it a fair trial; but failing to secure either of the preparations recommended, the attempt was not made until late in February, 1881. Subsequently to the above publication, Dr. Vaulthier communicated, in the August number of the *Archives Méd. Belges*, the favorable results of his experience with the same drug in the treatment of "all the affections of the bladder, whether recent or chronic."

My first trial of the drug was in the following case of pyelitis. The gentleman had had during the two preceding years several attacks of renal colic. The last attack occurred in September, 1880, and was followed by continuous and increasing ill-health, the symptoms of which referred to some disturbance of the genito-urinary apparatus, but were indefinite. He occasionally sought medical advice, but did not submit to regular and systematic treatment until the latter part of October. The progress of the case is fully exhibited by the various analyses of the urine, by Dr. G. N. Acker, which will be given in the order of date.

"October 19, 1880.—Sp. grav., 1015; reaction, acid; albumen, small quantity; sediment heavy and white; numerous leucocytes; few red blood-corpuscles; epithelium from kidneys, tubes, and pelvis; few from bladder; no casts or crystals."

From the above date he was under constant observation and treatment, but attended regularly to his business, which was laborious and active. There was no improvement. The second analysis shows a marked aggravation of the disease.

"*Analysis*, December 7, 1880.—Sp. grav., 1015; reaction, neutral; albumen, one-eighth; numerous leucocytes, some with large nuclei; young epithelial cells; some red blood-corpuscles; epithelium from pelvis of kidney, ureters, and bladder; no casts.

After this date he was treated with tannic acid, after the method of Traube, with rectal suppositories of opium and belladonna to allay pain and frequency of micturition, which deprived him of the necessary sleep. His diet was regulated, and though permitted to go daily to his place of business, he was admonished that exercise was detrimental.

"*Analysis*, February 5, 1881.—Sp. grav., 1017; re-

action, acid; albumen, one-eighth; sediment, heavy, white; not much coloring matter; sediment composed of leucocytes, urethral, pelvic, and bladder epithelium; a few red blood-corpuscles."

Two months' treatment with tannic acid had failed to produce any beneficial effect; in fact, the analysis indicates a less favorable condition. The amount of sediment had increased. The acid treatment was continued, and an infusion in wineglassful doses every four hours of uva ursi ʒ j. and lupulin ʒ ss. to the pint of water, was added. On the night of February 17th he had a very copious hemorrhage. The next day he was ordered to bed. Treatment suspended. I had determined to try the stigma of maize, and was awaiting its arrival.

"*Analysis*, February 21, 1881.—Color, light yellow; sp. grav., 1020; reaction, acid; albumen, large quantity; phosphates and chlorides, normal; heavy white sediment; leucocytes, in large quantity; some red blood-corpuscles; large amount of vesical, urethral, and pelvic epithelium."

On February 22d, the treatment with the fluid extract of the stigma of maize was commenced, at first in doses of one drachm every six hours, then four hours, and, finally, after several days' use without any observable effect, every two hours. The quantity of urine increased and ran up to sixty-four ounces a day. The amount of sediment diminished, and micturition became less frequent. The following analysis shows a marked improvement:

"*Analysis*, March 8, 1881.—Sp. grav., 1020; reaction, acid; albumen, small quantity; chlorides, diminished; phosphates, normal; sediment, one-tenth; numerous leucocytes, very few red blood-corpuscles, epithelium from pelvis of kidneys and bladder diminished; crystals of uric acid, oxalate of lime, and triple-phosphates."

With occasional variations in the frequency of the doses of the maize, the treatment was continued. The interval between the doses was increased when the amount of urine passed was excessive.

"*Analysis*, April 4, 1881.—Sp. grav., 1015; reaction, acid; albumen, small quantity; urates, small quantity; phosphates, normal; few leucocytes, very few red blood-corpuscles, epithelium from pelvis of kidney and bladder greatly diminished. In an eight-ounce vial of pale yellow urine the white sediment barely covered the bottom of the bottle."

The decided improvement since the 22d of February may have been due as much to the rest in bed as to the stigma of maize. He appeared so nearly well that I allowed him to leave his bed and sit up on the 8th of April, and for several days he continued to improve. On Thursday, 14th inst., he complained of intense pain immediately preceding defecation, deeply seated in the perineum, which he ascribed to "the piles." The pain was continuous when in the sitting posture. Micturition was very frequent and accompanied with a scalding sensation along the course of the urethra, which continued, gradually subsiding, for about ten minutes after each evacuation of the bladder. A rectal examination disclosed an acute prostatitis. He was again put to bed. Leeches were applied to the perineum, followed by hot fermentations and a hot sitz-bath morning and night. At this date, April 20th, he seems to be doing well. The urine remained unchanged, apparently, from the analysis of the 4th inst. During the entire course of the disease his bowels had been kept in a laxative condition, sometimes employing alkaline waters, at other times the formula known as Chelsea Pensioner.

A few days after the hemorrhage on the night of February 17th, he was seized with orchitis attacking the right testicle, and there remains, even yet, sufficient evidence of its effect to mar the symmetry of those organs.

The second case in which the drug was employed occurred in a lady suffering with cancer of the uterus. The vesical irritation and tenesmus were so constant that the poor patient could not sleep, notwithstanding the large doses of morphia which were taken at regular intervals to relieve pain. Her urine was densely loaded with mucus and pus. She was entirely relieved after several days' use of the fluid extract. Previous to its administration I had tried various remedies which I had been accustomed to use in such cases, without any lasting effect.

The third case was a lady who, for a year previous, had suffered with vesical irritation and frequent micturition. The analysis of her urine exhibited the following condition:

"Sp. grav., 1027; reaction, very acid; albumen, small quantity; color, yellow; sediment, red in color; urates, increased; numerous leucocytes; numerous uric acid crystals; bladder epithelium in large quantity."

She was entirely relieved, and continued well for about a month, when there was slight return of the symptoms. The medicine was resumed.

Case fourth occurred in a young lady who, for several years, had suffered from frequent and painful micturition. The pain was sometimes so intense as to cause her to scream.

"*Analysis of urine.*—Color, straw clear; sp. grav., 1037; reaction, very acid; albumen, none; sugar, none; urates, increased; sediment composed of urates, mucus and epithelium, urate and oxalate of lime crystals; vaginal and bladder epithelium in large quantities, mucus."

She was greatly improved after a moderate use of the drug, and, probably, would have been entirely cured if the treatment had been continued. But, as so frequently happens with young girls, as soon as the intense suffering was relieved, the treatment was abandoned. She is again under treatment.

The foregoing cases were all under treatment at the time of obtaining the drug, but with intermitting and partial success. Since, the two following cases have been treated with the same drug:

One was a lady who had suffered for an indefinite time with subinvolution of uterus, metrorrhagia, and laceration of the cervix. She represented that the desire to "pass water" was so frequent during the sleeping hours that it was impossible to secure a quiet night's rest. Her statement was, that the night previous to my first visit she had been compelled to get up every half-hour, passing at each time a very small quantity. She was entirely relieved. A week afterward there was a slight return, which yielded again to a few doses.

The second case was a lady, who stated that she had suffered for two years with "congestion of the right ovary," and had been treated for that affection by various external lotions, and the internal administration of anodynes. I failed to recognize any enlargement or tenderness of the ovary, but did discover a retroflexion of the womb. She described a pain, which recurred every night after having retired, accompanied with a desire to evacuate her bladder. The pain was felt along the course of the right ureter. She was compelled to empty her bladder once every hour during the night, but not so often during the day. In this case the relief was not so-

prompt as in the preceding, but there was a gradual abatement of the vesical irritation and frequency of micturition. In addition to the use of the stigma of maize, the womb was adjusted, and retained in position by pledgets of absorbent cotton, saturated with carbolized glycerine.

All these cases exhibit the beneficial effects of the drug, but I am not prepared to assert its curative influence with the confidence of Dufau and Vaulthier. It is a certain, but mild diuretic, when given in full doses at short intervals.

A CONTRIBUTION TO THE

CARDIO-SPHYGMOGRAPHIC HISTORY OF AORTIC OBSTRUCTIVE LESIONS.

By A. T. KEYT, M.D.,

CINCINNATI, OHIO.

In the *Cincinnati Clinic* of April 19, 1879, I published a case as "A Contribution to the Sphygmographic History of Aortic Obstructive Lesions." The patient has since been under the care of Dr. H. T. Lowry, who kindly permitted me in January last to examine her case again, and assisted me in taking another series of tracings. April 8, 1881, the patient died, and a post-mortem examination of her heart was had. The case, for the purpose in view, is now complete, and is deemed of sufficient interest to warrant its full presentation.

The following is reproduced from the publication instanced: "Mrs. T——, aged sixty years, has suffered for several years from organic heart disease. She is thin and incapable of active exercise, but by going carefully usually attends to her ordinary household duties. Well-marked signs of hypertrophy of left ventricle. Action of heart strong, with jogging impulse and regular rhythm. Systolic murmur, greatly emphasized at second right interspace, where also slight undulation and thrill are perceived. The murmur propagated upward along course of aorta, faint in other directions; at apex audible, but faint; audible in back. First sound well heard at apex but supplanted at base by murmur. Second sound distinct. No diastolic murmur. Radial pulse to fingers firm, slow, and prolonged. The clinical history admits of only one diagnosis: aortic obstruction without aortic reflux, and coëxisting hypertrophy of the left ventricle. The tracings shown were obtained at one sitting, July 16, 1878. The case, though evidently not one of extreme obstruction, from its well-marked features is well suited for sphygmographic study.

"The cardiograms present an individuality of form which at once arrests attention. The systole is sustained as if the ventricle were laboring against an obstacle, and is slowly changed into diastole as if its work were not completely finished. The most striking feature is the great prominence of the auricular wave. One interpretation only can be given this phenomenon, viz., that it denotes hypertrophy of the left auricle. The tracings alone reveal this important feature of the case.

"The tracings of the carotid pulse, No. 48, and of the radial, No. 49, are characterized by sloping ascents, rounded tops, and imperfect delineations of the secondary waves. They show also, high amplitude—notably of the carotid pulse—and high arterial tension. So while the first features indicate impediment to the exit of blood from the ventricle, the latter demonstrate that the arteries notwithstanding are well charged at each systole.

"The time-difference, as shown, between the heart and beginning of the carotid pulsation, is .0833= one-twelfth of a second, and that between the heart and beginning of the radial is .1666=one-sixth of a second; which are correctly normal. But it will be observed that the interval between the heart and summit of the pulse is much greater than normal.

"The type of pulse-trace instanced is constant in material aortic constriction, and the degree of deformation marks the amount of impediment to the passage of the blood. The type, however, may be simulated in the pulse below an aneurism or other source of arterial obstruction located beyond the aortic root.

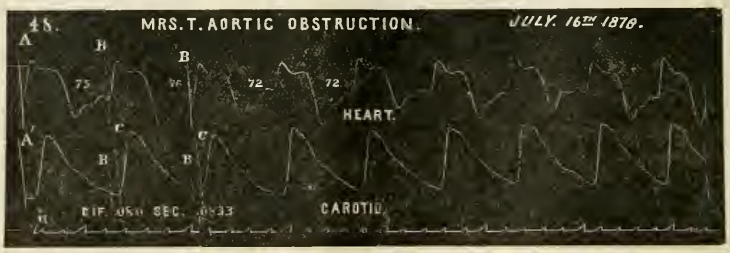
"The sphygmographic indications of ordinary aortic obstruction may be formulated thus: Heart's pulsation with sustained systole; arterial pulsation with sloping ascent and rounded or flattened top; interval between beginning of cardiac systole and beginning of arterial pulse normal.

"A remarkable showing in this case remains to be considered. In No. 50, while the cardiogram conforms to the others, except in the greater modification induced by the respiration, the carotid trace presents a wholly different type from that of No. 48; and especially will it be observed that the carotid follows the cardiac pulsation at the very long average interval of .2275 second, which is about three times the time-difference of the other record. This is the only registry of the kind obtained among several observations, the others agreeing closely with No. 48. There was no fallacy. What is the explanation of this extraordinary change and contrast? It has been demonstrated that mitral regurgitation causes abnormal delay of the pulse. It is not difficult to conceive that under favoring conditions an *intermittent* reflux through the mitral valve may take place; and that in this instance, under the action of the hypertrophied ventricle and the mean-time sufficiency of the mitral valve, the ventriculo-arterial blood-pressure is at intervals increased to the point of preventing closure of the mitral segments, which then permit of reflow until the blood-pressure in front is reduced to the status at which the valve again becomes competent. Under the conditions, the behavior of the mitral valve would be analogous to the safety-valve action claimed for the tricuspid.

"The alternative explanation applies a theory before advanced. It is that the changed aortic valves, although in this case usually yielding with sufficient promptness, at times become *fixed*, so to speak, and require additional time and force to open them. However, it is far easier to conceive of an intermittent patency of the mitral valve than of an intermittent fixing of the aortic valves. The mitral regurgitant theory also receives support from the existing auricular hypertrophy; for although this condition arises as a more remote effect of aortic obstruction, it is the natural and direct result of mitral reflex. Again, the peculiar and striking change of form of the carotid pulse can be accounted for better on the supposition of mitral insufficiency than on that of aortic fixing. On the other hand, in favor of the alternative theory, is the positive evidence, aside from the sphygmographic, of the existence of aortic lesion, and the negative evidence, save the sphygmographic, of the supervention of mitral reflux. It may be, however, that an apex systolic murmur, had it been listened for, would have been heard while the peculiar record was being

made. On the whole, I am disposed to accept the theory of intermittent mitral regurgitation in explanation of the recorded change in form and time of the carotid pulse."

The following are the notes of the examination, January 20, 1881.—Action of heart vigorous, but less jogging than formerly; loud rasping basic murmur, systolic in time, with marked accentuation at second right interspace, where are perceived also a feeble impulse and thrill. Second sound of the heart at aortic site covered by a feeble, short murmur; at pulmonic site normal. Heart changes its rhythm from forty to seventy per minute; at times its action is intermittent, impulse strongest in fifth interspace outside the nipple line. Pulse prolonged; varies markedly at intervals in amplitude, force, and rhythm. Graphic observations were taken simultaneously, in repetition, of the heart and carotid, and of the heart and radial arteries, of which results are shown in Nos. 88, 89, and 90.



The reader is asked to carefully compare the following tracings with the former ones.

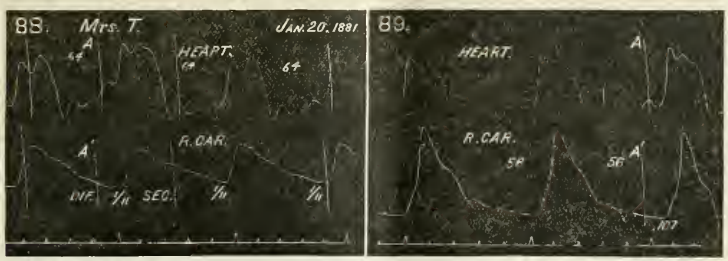
The autopsy was conducted by Dr. A. B. Isham, assisted by Dr. Lowry and myself. These are the notes: General anasarca and ascites, pericardium filled with serum, heart much enlarged, all its cavities and great veins distended with blood; left ventricle greatly hypertrophied, walls an inch thick; left auricle not enlarged; right auricle dilated and hypertrophied; right ventricle dilated and hypertrophied; aorta and pulmonary artery both dilated; the mitral, tricuspid, and pulmonary valves normal, except expanded proportionate to the cardiac hypertrophy; aorta in some degree atheromatous, yet presenting a smooth structure above the valves; aortic valves the seat of extraordinary changes. Of normal extent, they carried on their upper surfaces enormous masses of rough calcareous matter. Two were united by their borders for nearly half their extent, leaving a triangular space, and forming a rigid septum, which contracted the arterial opening to about one-third the normal size. The third valve, though heavily loaded, was pliable at its attached border, and performed the office of opening and closing this contracted orifice. The calcareous mass on this valve measured three-eighths of an inch through its thickest part; the sinus behind was dilated so that it had room to play. Of the conjoined valves, the calcareous mass over one filled up the space between it and the aorta, and measured five-eighths of an inch through its middle; the mass over the other was disposed in chains extending between it

and the aorta. The under surfaces of the valves were smooth, except opposite the attached borders, where calcareous tubercles presented.

This valvular disposition included a most remarkable feature. The third or functioning valve would move on its attachment, rising and falling *en masse*. Ordinarily, when down, it overlapped by a little the rigid border of the opening; but when pressed from above it would sink below the rim, and remain there as if locked, until pressed from below, when it would rise with a spring.

In the light of the sequel and post-mortem developments, the case can now be reviewed with peculiar interest and profit. The second graphic examination gave results in consonance with those of the first, although separated by an interval of two and a half years; so I concluded that the diagnosis first arrived at was still sustained. The only real difference in the physical signs was the development of diastolic murmur over the aortic site, but this did not indicate to my mind the existence of aortic insufficiency to an extent worthy the name. The tracings showed the beginning of the arterial pulse in normal or delayed time, whereas had the valves been patulous, the pulse would have begun distinctly earlier than normal. The autopsy proved this item of the diagnosis correct. Undoubtedly the murmur was due to the friction of the refluent blood against the rough deposits, during the time the clumsy valve was falling into position. The form of the traces plainly indicated the presence of aortic stenosis, but not in an extreme degree, for the pulse was shown to be, at times, ample and tense. And this was the exact state of the orifice as proved post-mortem. The traces unmistakably indicated the presence of auricular hypertrophy, and this was confirmed post-mortem, but as respects the right auricle, instead of the left, as assumed. In this is the impressive lesson, that hypertrophy of the right auricle, as well as the left, may produce a high auricular wave. And in view of the coexisting right ventricular hypertrophy, it may be considered probable that the cardiac traces were produced entirely by the right heart. This view is supported by the strict conformity to the same type of the heart traces, notwithstanding the marked changes in the pulse traces. It may be remarked, however, that the ventricles always begin to contract synchronously, so the beginning of the ascent, in any event, marked the beginning of left ventricular systole.

The traces indicated the intermittent operation of some factor which caused for the time a remarkable change in the time and form of the pulse. This change is strikingly shown in comparing No. 50 with No. 48, and has been fully described in the first account. The conditions of the aortic valves, found after death, afforded a full and complete explanation of this remarkable sphygmographic phenomenon; and it is interesting to note that the alternative explanations previously offered included the true one, and that the process there pictured was exactly that which in reality was taking place. The mechanism was this: Ordinarily the heavy valve which guarded the constricted orifice duly rose and fell, permitting the slowly rising pulse to begin within normal time after the beginning of ventricular systole. But at intervals, under vigorous strokes of the ventricle and large volumes of blood sent forth into the aorta, in connection, perhaps, with impediment in the capillaries, the arterial blood-pressure would become so enhanced that the valve, in diastole, would be forced below the rim and so locked or fixed in position. The next systole would require unusual time to raise the intra-ventricular blood-pressure to the point of dislodging the valve; when dislodged, however, the latter would rise with a spring and be carried wide open by the accumulated pressure behind, and the column of blood



would enter with unusual quickness, to be cut short, however, by the termination of systole. Thus the pulse-trace would change in time from accustomed normal to great abnormal delay, and in form from accustomed slow ascent and rounded top to quick ascent and pointed top. After a few beats the usual *régimé* would be restored, the change brought about by the reduction of arterial pressure following the comparatively small volumes of blood sent into the artery at each systole.

In conclusion, the case well illustrates the rich and positive aids to cardiac diagnosis afforded by the graphic method. By this method alone could the amount of aortic stenosis have been so nearly approximated. By this method alone could the rare and peculiar form of aortic valvular obstruction have been in any sense made known. By this method alone could have been settled the question, raised by the presence of aortic diastolic murmur, as to competency or patency of the aortic valves. And by this method alone could have been determined the auricular hypertrophy, albeit it failed to distinguish the affected auricle. Besides the method joined the other signs in the determination of left ventricular hypertrophy, and gave a permanent record of the variations of the pulse in amplitude, celerity, tension, and rhythm.

THE INTERRUPTED GALVANIC CURRENT IN THE TREATMENT OF SCIATICA.

By A. D. ROCKWELL, M.D.,

ELECTRO-THERAPEUTIST TO THE NEW YORK STATE WOMAN'S HOSPITAL, ETC.

At the last meeting of the American Medical Association, Dr. Gibney reported thirty-two cases of sciatica treated by the strong galvanic current, in which very excellent results were obtained. In my remarks upon the paper, however, I held that cases of sciatica were in their nature and manifestations so diverse, that it was impossible to hope for uniform results from any one method of electrical treatment. In some instances strong currents, especially where there is so much sensitiveness that slight pressure causes pain, may very decidedly aggravate the distress and do more harm than good. In regard to the whole subject of neuralgic pains in various parts of the body, I have often observed that in those cases where pressure proves painful, mild continuous galvanic currents are most effective; while in those conditions in which firm pressure over the affected part causes no pain, and often relieves, the faradic current is indicated. During the past severe winter, sciatica has been very prevalent, or so it would seem from the unusual number of cases that I have been called upon to treat. Some have yielded to one method, some to another, and several have proved most intractable. In the details of their management, however, nothing has been found especially worthy of comment, that has not been before recorded, except in one case. In this, powerful interrupted galvanic currents effected a prompt cure, after the failure, not only of all other methods of electrical application, but also after the ineffectual use of the actual cautery, external applications, and internal medication.

Taking into account the length of time the disease had existed, the ravages that resulted, and the harsh method through which relief followed, the case was to me of unusual interest.

CASE.—Miss J——, aged twenty-eight years, came to me October 2, 1880, with the following history: In December, 1879, a year previously, she awoke one morning with a sensation of pain and stiffness in the right hip, and on rising, found that she could walk only with difficulty. The pain increased so that at intervals it was very severe, but at no time during the course of the disease, had she been entirely unable to move about. Nothing seeming to afford positive relief, she spent the following summer at Richfield Springs, where she slightly improved, but on returning to the city in September, she soon found herself even worse than before. My examination revealed the fact that while she was quietly seated the pain was not great, but on attempting to rise it was excruciating and the stiffness very great.

After moving about a few moments, this stiffness in a measure wore away. The hip in the region of the gluteal muscles had atrophied in a most extraordinary manner. The left hip, although sympathizing with the pain, was plump and full, but in the right the nutrition had been so impaired that in the hollow thus formed, the convex surface of a small dinner plate would fit admirably. The pain was about equally diffused over the hip, in the groin, and half way down the thigh.

Firm pressure over the affected parts caused no pain, on the contrary, decided relief accompanied the act, and in bed it was impossible to sleep in any other position than on the right or diseased side. Acting on the experience of the past, that in such cases the faradic current was the most serviceable, I attempted its use for some weeks. Benefit followed, but it was only temporary. In an hour or so the pain and stiffness would be as great as ever. The constant current was tried, the galvano-cautery, etc., but at the end of two months, the patient had not improved in the slightest. It then occurred to me that if the operation of stretching the nerve could prove so efficacious in certain cases, as had been reported, why might not powerful galvanic shocks be utilized for the same purpose. I immediately made the trial, beginning with eighteen cells. While no special benefit immediately followed, the pain and stiffness were at least not aggravated, as I feared they might possibly be.

The strength of the current was increased every day, until finally forty cells were used. The muscular contractions that followed were quite violent, but the results that followed in the course of a week surpassed expectation.

The pain and stiffness rapidly decreased, and rest in bed was possible in any position.

At the end of a month, all pain and stiffness had vanished, and, with the exception of a certain weakness in the leg, the patient considered herself quite well.

I apprehend that but few cases of sciatica call for such really heroic treatment as this; injury rather than benefit would in most instances follow; but in passing in review quite a number of cases of this disease in which treatment availed but little, I quite firmly believe that a certain proportion of the number might have been speedily benefited by the method of procedure detailed in the preceding case. In the future I should not hesitate to make use of it freely in suitable cases. Such cases I should describe as associated with pains, more of a dull and aching than of a sharp and darting character, where firm pressure and vigorous rubbing is not disagreeable, and frequently affords relief, and in which neither the continuous galvanic current, nor the faradic current, from which most would be expected, avail anything.

ON FILTH AND SEMI-FILTH DISEASES.

By JOHN C. PETERS, M.D.,

NEW YORK.

I HAVE coined the name semi-filth diseases, in order to cover a large class of disorders which may arise from other causes, but in which filth is only too often a large factor.

The great sources of filth in large cities are dirty streets and gutters; the large quantity of filth which is washed down into the receiving basins and sewers with every rain-storm; and the fouling of dock-grounds and water by the contents of the sewers. There is every reason to believe that more filth in the shape of garbage and slops gets into the sewers from filthy streets and gutters than from water-closets and kitchen sinks, and that a very large proportion of sewer-gas is thus caused by filthy streets and gutters. Next in order is the vile odor from out-door privies, many of which are without any ventilation, having neither windows nor chimneys. The health authorities are only too often remiss in their attention to these nuisances. London has one water-closet for every five inhabitants. It is not at all uncommon to find water-closets, even in otherwise good houses, without windows or other means of ventilation, except by the door only, which must, of course, be kept closed when in use. Dirty cellars and foul air streaming up from the gutters into the air-boxes of almost all houses, are other sources of household sickness. The stables of great cities are only too often in a filthy condition, and in this they are very rarely inspected by the health authorities. The smokes and smells from gas and ammonia works, from offal-rendering establishments, and the making of fertilizers, are pregnant sources of discomfort and disease. It is, perhaps, not commonly known that the fertilizer-making establishments, which cause so many mal-odors in this city, use ground bones, blood, all the offal and scrap, and the contents of the bowels of slaughtered cattle. These are first boiled, then dried, and much foul gas from them is not consumed, but escapes from the chimneys, and are generally attributed to Hunter's Point.

Foul air must first attack the throat, air-passages, and lungs. Diphtheria has often been traced to sewer-gas, but much more commonly arises from foul streets, gutters, drains, receiving-basins, etc.

Although it and membranous croup are often apparently excited by cold, yet they more commonly arise from cold taken in foul air, and must be regarded as partial or semi-filth diseases. In 1880, 72 deaths occurred from diphtheria in January; 77 in February; 65 in March; 81 in April; 76 in May; 62 in June; 89 in July; 97 in August; 125 in September; 199 in October; 234 in November; 214 in December. So that they have some other factor besides cold, and that probably is filth.

Consumption is generally regarded as a chronic catarrhal pneumonia, most often caused by cold and insufficient clothing; but in 1880, there were 402 deaths in January; 375 in February; 412 in March; 394 in April; 365 in May; 351 in June; 385 in July; 380 in August; 376 in September; 408 in October; 339 in November; 450 in December. The deaths are so evenly distributed through every month in the year, that there must be some other cause than exposure to cold, and that cause is probably the inhalation of foul air. Bowditch gained great credit for apparently proving that consumption arose from moist ground; but foul moist ground is probably a greater factor, and the inhalation of foul dust and dirt is not far behind it in deleterious effects.

Pneumonia, also, is generally attributed to exposure to cold and wet; but in 1880, 261 deaths occurred in January; 248 in February; 266 in March; 375 in April; and 340 in May. So that it also has another factor than mere cold, and that doubtless is the inhalation of foul air. It is true that only 163 deaths occurred in June; 127 in July; 108 in August; 134 in September; but in those months the city is largely depopulated, 205 deaths are recorded for October; 266 for November; and 349 for December.

From bronchitis, 106 deaths are recorded in January; 122 in February; 140 in March; 138 in April; 131 in May; and 102 in June; so that bronchitis has other causes than taking cold, and foul-air bronchitis and pneumonia are well-known diseases.

Typhoid fever is generally accepted as a filth disease; typhus fever arises from the over-crowding of filthy people, and is at least a semi-filth disease. Cholera is a well known filth disease; and cholera infantum arises as much from foul hot air as it does from spoiled food or mistakes in diet, and is at the very least a semi-filth disease. Yellow fever is now generally admitted to be a filth disease, prevalent only in dirty cities and places; and all malarious diseases are necessarily foul-air or filth diseases.

Civic malarious diseases, arising from the combined influence of foul ground and subsoil, foul streets, gutters, drains, receiving basins, cellars, back yards and privies, and other baneful influences, are certainly filth diseases. Pure, fresh air and free ventilation are necessary in the treatment of all diseases, and foul air increases the malignancy and mortality of all infectious and contagious diseases, including small-pox, measles, scarlet fever, diphtheria, whooping-cough, typhus and typhoid fever, and many others.

These positions are so true, as to be regarded as axiomatic by all except exceedingly old-fashioned medical men or obstinate officials. Let the Street-Cleaning Department give us clean streets, gutters, and receiving-basins; and the Board of Health give us wholesome out-door privies, clean stables, control noxious trades far better than it does, and abate the loathsome smokes and smells which abound here, and then the death and sick rate will rapidly fall. The unhealthy condition of the city may be very equally charged upon the negligence of both these departments.

Puerperal diseases are attributed to other causes besides taking cold, yet we find 40 deaths recorded in January, 1880; 32 in February; 37 in March; 49 in April; 42 in May; 24 in July; 24 in August; 37 in September; 21 in October; 20 in November; and 45 in December.

The acclimatization to filth is a curious problem. Some people become accustomed to it, and thrive as well upon it as others do on tobacco and whiskey; but 3,469 children died of diarrhœal disease in 1880; and no less than 14,690 children died under five years of age. The great majority of these lived not only in poverty, but in filth. The deaths of children in filthy cities reaches enormous proportions, and those who survive may thrive like rose-bushes and potato-plants in manure-heaps.

VACCINATION.—A brief article on this subject appears in the *North American Review*. It is from the pen of Dr. Austin Flint.

MURIATE OF PILOCARPINE IN DIPHTHERIA.

By W. P. WATSON, A.M., M.D.,

PHYSICIAN FOR DISEASES OF CHILDREN AT THE CENTRAL DISPENSARY, JERSEY CITY, N. J.

I HAVE thought it proper to report the following case of diphtheria, treated according to Guttmann's plan, for, if pilocarpine is of any service in the treatment of this much dreaded disease the sooner we become aware of it the better for our reputations as well as for our young patients. The profession has been slow to adopt this treatment, and, with reason, for during the past few years, specifics after specifics have been brought forward, but only for a briefly brilliant existence, as each have failed, almost wholly, to justify their highly extolled curative powers. Theoretically, Guttmann's plan would seem to be *the* plan. By it we obtain the two principal objects sought by all methods of treatment, viz., *elimination of the blood poison* and *support of the system*. The former is attained by the pilocarpine, and the latter by the accessory remedies. The stomach, intestines, and kidneys retain their normal condition in so far as to perform all their functions, *sine qua non*, for the successful treatment of this disease. And just here the question may arise, does pilocarpine prevent the presence of albumen in the urine of diphtheritic patients? We cannot formulate rules from one case, but it may be worthy of note, that almost daily examinations of the urine of this patient failed to reveal albumen present. If further experience confirms this observation, have we not a drug worthy of trial in scarlatina through all its stages, accompanied, of course, by appropriate sustaining remedies? It is to be hoped that every physician, treating cases of *true* diphtheria or scarlatina by this plan, will report his results, be they *pro* or *con*, for only in this way can we approximate its comparative value.

March 30, 1881, I was called to see Anne M——, four and a half years of age, a well-nourished, previously healthy child, who on the Sunday previous complained of sore throat, whereupon her mother gave her some "throat-powder,"* which I had used in case of an older brother suffering with follicular tonsillitis the previous week. This soon relieved her throat, and the following day (Monday) an eruption appeared over body and limbs, and on account of which I was called in on Wednesday, as previously stated. I found her suffering with rubeola, for which I prescribed ammon. carb., gr. ijss., every two hours. At this time there was considerable congestion of the faucial region. (The throat-powder was discontinued on Monday previous.) I heard nothing more of the case until the following Saturday evening, when the mother called at my office and said, Anne's throat was very sore, and that since morning she could not swallow anything, not even water, and when she tried the latter "it ran out of her nose."

Sunday, April 3d.—On visiting the patient at eight o'clock in the morning I found her in a small, ill-ventilated back room of a filthy three-story tenement-house, reclining on pillows in a rocking-chair, pale, not taking notice of anything, eyes partially closed, lips and nostrils excoriated, and from both dirty sanious discharge was oozing. When aroused she would moan and then sink again into the semi-conscious state. On examining neck I found it reddened from irritant (bacon and red pepper, which mother had applied), submaxillary glands swollen and tender to the slightest pressure. On opening the mouth I found the tongue covered with grayish white fur, tonsils, soft palate, and fauces completely covered with a dirty grayish yellow membrane, around edges of which the mucous membrane was of a darker color than elsewhere. The mucous membrane lining cheeks and roof of mouth of a dull red color. Breathing, not through nostrils, but with mouth agape. Temperature (per rectum), 103.5°; pulse, 147; respiration, 38. Ordered muriate of pilocarpine, gr. $\frac{1}{64}$, in Guttmann's formula, every hour, to be followed in five minutes by ʒj. sherry wine, and to drink milk and beef-tea when thirsty. 8.30 P.M.—Temperature, 103.2°; pulse, 142; respiration, 34. Mother says that first dose of medicine was partially regurgitated through nostrils; but at the next hour, and subsequently, she swallowed all liquids taken into her mouth. Neither perspiration nor salivation.

Monday, April 4th, 7.30 A.M.—Temperature, 103.2°; pulse, 134; respiration, 24 (the latter taken while patient was sleeping). Rested quietly during the night. Taken medicine hourly, as well as about four ounces of milk and great deal of water. Perspiration quite free, and expectoration of considerable stringy grayish yellow mucus. Membrane in throat not so dense, and along its borders seems to be loosening up. Oozing from nostrils has ceased. 7.30 P.M.—Temperature, 105.3°; pulse, 156; respiration, 37. Taken about twelve ounces of milk. Not much perspiration to-day, but expectoration same as during last night. Increased dose of pilocarpine to gr. $\frac{1}{48}$, to be followed by ʒjss. sherry wine.

Tuesday, April 5th, 7.30 A.M.—Temperature, 103.8°; pulse, 148; respiration, 31. Very restless up to three o'clock, after which rested well. Taken about eight ounces of milk during night. Expectoration profuse; no perspiration. Sub-maxillary glands still swollen, but not tender on pressure. Membrane in throat apparently hanging in flakes. To have ammon. carb., gr. $1\frac{1}{4}$, in sherry wine, and suppositories containing quinine sulph., gr. v., and pulv. opii., gr. $\frac{1}{12}$, each every four hours. 9 P.M.—Temperature, 103°; pulse, 105; respiration, 31. Had two suppositories and taken beef-tea, which she had previously refused, and milk.

Wednesday, April 6th, 9 A.M.—Temperature, 103°; pulse, 142; respiration, 30. Very restless up to four o'clock, since which time she has rested well. Expectorates great deal, as before. No perspiration. Very much less membrane in throat, and that, too, hanging in shreds. 9 P.M.—Temperature, 104.7°; pulse, 156; respiration, 24. Milk and beef-tea taken freely during day.

Thursday, April 7th, 9.30 A.M.—Temperature, 102.7°; pulse, 115; respiration, 35. Rested well during night, since 6 P.M. Suppositories have contained same amount of quinine, but only $\frac{1}{24}$ gr. pulv. opii. 9 P.M.—Temperature, 103.5°; pulse, 156; respiration, 31. Increased dose of pilocarpine to gr. $\frac{1}{32}$, followed by sherry and ammon. carb.

Friday, April 8th, 9.30 A.M.—Temperature, not taken; pulse, 140; respiration, 30. Rested very well during night. Appetite good. Neither perspiration nor very much expectoration. Scarcely any membrane in throat. 8.30 P.M.—Temperature, 103°; pulse, 140; respiration, 28.

Saturday, April 9th, 9 A.M.—Temperature, 103.2°; pulse, 140; respiration, 40. Perspiring very freely

* ℞ Potass. chloratis, ℥iv.; pulv. alumin., ʒj.; ac. gallic., ℈j.; ol. gaultheria, gtt. xx.; sacchar. albæ, ℥iij. M.

this morning. Urine passed frequently, and in larger quantities than usual. Only two small patches of membrane visible in faucial region. 9 P.M.—Temperature, 102.7 ; pulse, 130; respiration, 36. Marked perspiration during day; not so much expectoration. Urine free, but not so much as during the night.

Sunday, April 10th, 9 A.M.—Temperature, 103° ; pulse, 142; respiration, 36. Rested well during night, but very peevish when awakened to take medicine. Excoriations on nostrils and lips almost healed. Just after examining throat she expectorated several pieces of tenacious, yellowish white membrane, after which throat seems entirely free from membrane. Reduced dose of pilocarpine to $\frac{1}{8}$ gr. Other treatment unchanged. 8 P.M.—Temperature, 102.8° ; pulse, 140; respiration, 30.

Monday, April 11th, 8 A.M.—Temperature, 102.5° ; pulse, 140; respiration, 36. Rested well last night. Appetite good. No membrane in throat. 9 P.M. —Temperature, 102.7° ; pulse, 140; respiration, 35.

Tuesday, April 12th, 10 A.M.—Temperature, 101.7° ; pulse, 130; respiration, 31. Rested well last night. Appetite good. Wishes to get up. Discontinue the pilocarpine and give ℥v. Goodell's iron mixture every two hours, and plenty of nourishment.

Wednesday, April 13th, 11 A.M.—Temperature, 101° ; pulse, 130; respiration, 28. Playing around the room. Looks and acts well, excepting the anæmic appearance. Glandular enlargement almost wholly disappeared.

Saturday, April 16th, 11 A. M.—Temperature, 100° ; pulse, 121; respiration, 26. Mother says, "She's as well as ever." Suppositories, sherry and amm. carb. discontinued yesterday. To continue iron as above three times a day. During the treatment patient's bowels moved every day, and her appetite actually increased from the very commencement.

Reports of Hospitals.

NEW YORK HOSPITAL.

A Case of Remarkably Low Temperature, 90.6°, in the Rectum.

Reported by Dr. Walter Mendelson,

HOUSE PHYSICIAN.

On April 24, 1881, a patient, Charles A——, was brought to the hospital by ambulance. The following history was obtained from him several days after admission: He was a German, married, forty-six years of age, and a chemist. About eight days before admission here he had left his home in the central part of this State, to come to New York in search of work. The money he had with him just sufficed to pay a week's board in advance. He wandered about trying to get work, but was not successful. Pride, he says, prevented his applying to acquaintances for food or money. In this way he continued for six days, going without food, as he positively declares, for the whole of that time. Finally, he borrowed a dollar, and got something to eat, but fainted in the street shortly after leaving the restaurant. He was taken to a police-station, and from there to the hospital.

Admission.—Patient was extremely emaciated. The face was much sunburned from exposure, and drawn and anxious in expression. The voice was almost inaudible, and the patient seemed too weak to give any account of himself, except that he was starving. The surface was cool, the hands and feet being cold. The heart-sounds were almost inaudible, and the pulse beat forty-three in the minute.

The temperature, as taken by myself three or four times in the rectum, and with two different thermometers, was 90.6° ! Other physical signs were negative.

Half an ounce of brandy in hot water was given, followed by a drachm of a mixture of equal parts of brandy and ether hypodermically. Warm milk in small and frequently repeated quantities was then given, and the patient put to bed, and hot-water bottles placed under the bed-clothes. Warm milk was given freely during the day.

The following is a schedule of his pulse, respiration, and temperature. The temperatures were taken with thermometers of different makes and kinds, and they all agreed, so that there can be no doubt as to correctness.

Time.	Pulse.	Respiration.	Temperature.
April 24th, 2 P.M.	43	..	90.6° rectum.
" " 2.30 P.M.	..	..	91.6° axilla.
" " 4 P.M.	46	14	95.4° "
" 25th, 7 P.M.	62	18	96.6° "
" " 1 A.M.	62	20	98.9° "
" " 9.30 A.M.	64	20	98.6° "

After the first day the temperature remained nearly normal, it having a tendency (even now) to be slightly subnormal, going down to 97.5 early in the morning, but always reaching 98.8°, or a little more, during the afternoon. There was no febrile reaction, the highest temperature being 99.6° on the third day following admission.

The digestion seemed in no way disturbed, for three days after admission the patient was eating heartily of nearly everything, and was taking cod-liver oil and iron. In a week's time he was up, though still rather feeble, but was soon able to work about the ward. He had an enormous appetite, and gained flesh rapidly.

After being here about two weeks, the patient developed a mild form of dementia, acting in a childish, imbecile manner, such as trying to make up his bed on the floor, wanting to sleep with some of the other patients, etc. This condition has persisted up to date. It is impossible to find out whether he has been demented before.

I mention this fact of his insanity, because it may have some bearing on his low temperature—low temperatures having frequently been observed in the insane.

The combination of ether with brandy I can recommend as superior to ether alone, where promptness of action is desirable. The annoyance of the barrel of the syringe becoming filled with the vapor of the ether and the expansion of the latter forcing out the liquid portion prematurely, which so frequently happens when ether is given alone, is entirely done away with.

Professor Wharton Jones has been obliged, from age and ill-health, to resign his position as Professor of Ophthalmic Surgery in the University College, London.

Progress of Medical Science.

Rötheln, or German Measles, is described by Dr. E. R. Stone, of Philadelphia (*Medical and Surgical Reporter*, April 30, 1881), as a contagious, self-protecting disease of slight severity and short duration, with an eruption which, in the majority of cases, has a decided resemblance to measles. It has an undoubted preference for children and young adults, and he has not known of second attacks. The onset of the disease is usually quite sudden, and there is no period of invasion. The eruption appears coincidently with, or very shortly after, the development of a slight catarrhal condition of the eyes and nasopharyngeal mucous membrane. In many cases there is absolutely no fever. In several cases he has noticed swelling and tenderness of one or two post-auricular glands. The eruption differs from that of measles in that it first appears on the face as small, elevated, rose-colored points, about the size of pin-heads; these appear in round or oval groups, not generally confluent, smaller than those of measles, and not crescentic. The eruption spreads rapidly from the face, consuming from one to two days in covering the surface of the body. It remains but a few hours well-marked, and has already begun to fade on the face before it has reached the feet. In the majority of cases no desquamation can be detected. There seems to be no disorder of the digestive organs, and no tendency to bronchitis or kidney involvement. Additional facts have been furnished by Drs. Cartman and Henderson, of St. Louis, the results of their experience in the epidemic which recently prevailed in Missouri. Among the sequelæ, pneumonia of the right lung, abscesses in various localities, and sometimes nephritic troubles occur. If pneumonia supervenes, it is usually *left-sided broncho-pneumonia*. The periods of incubation, defloresecence, and desquamation in the two diseases do not differ much. The rash may be the sole cause of alarm. The more severe the attack the more nearly does the rash, as well as the other symptoms, resemble scarlet fever. Rötheln does not protect against scarlet fever or measles, nor do either of these protect from rötheln, and where a patient is said to have had measles twice, there is usually good ground for believing one of the attacks to have been rubeola. The disease calls for anti-febrile treatment merely.

Gastrostomy, with two Successful Cases.—Mr. Thomas Bryant, in referring to this subject before the Harveian Society (*Lancet*, April 9, 1881), has suggested that a resort to gastrostomy in cancerous obstruction of the œsophagus should be attempted so soon as the diagnosis is made, and there is practical difficulty in the deglutition of solid food, for by an early operation many more lives would be prolonged, and much misery saved. The progress of the disease, moreover, would be greatly retarded, whilst in cicatricial stricture the operation should so be resorted to when all hope of the passage being dilated has vanished and there is no other alternative. Two successful cases were reported: one for cicatricial stricture in which the obstruction was caused by the patient's taking, with suicidal intentions, half a wineglassful of sulphuric acid. Difficulty of deglutition was soon experienced and steadily became worse, so that for some weeks before admission to the hospital she had lived entirely on liquids, and these were swallowed with great difficulty. The operation was performed while the patient was under the influence of the anæsthetic mixture, and under the carbolic spray. It was commenced by an incision, three inches long, running obliquely below the margins of the left ribs, and the skin and muscles were consecutively divided down to the peritoneum; all bleeding vessels were twisted, and capillary oozing arrested by a hot sponge. The peritoneum was then divided, and the left lobe of the liver which became visible, was pressed upward. Next the stomach was readily found and brought well forward to the surface of the wound. Great care was observed to keep the parts well sponged, to guard against anything passing into the peritoneal cavity. Two loops of fine carbolized silk were then introduced through the peritoneal covering of the stomach about a third of an inch apart, and with these and a pair of tenaculum forceps the stomach was kept *in situ*. The ends of the loops were left long. The stomach was next carefully fastened by a series of interrupted sutures to the margins of the skin around. The sutures merely included, on the one hand, the peritoneal covering of the stomach, and on the other, neither included the parietal peritoneum, nor the divided muscles, but the skin alone. The stomach, at this stage of the operation, was not opened. During the next five days the patient was fed by nutrient enemata every three or four hours, and enough morphia was administered subcutaneously to give rest. The wound was covered with lint saturated with terebenth and oil. No sickness, elevation of temperature, pain, or other trouble, followed the operation, and on the sixth day the stomach was opened. The wound thus made was very small, not more than the eighth of an inch long. It was made by elevating the stomach by means of two loops which had been introduced through the peritoneal covering of the stomach at the first stage of the operation, where the ends had been left long, and cutting with a narrow tenotomy-knife from loop to loop. The loops were then removed. The patient did not feel this part of the operation. An India-rubber tube, with its end cut obliquely, was then introduced into the stomach through the small orifice, which it dilated, and some milk was poured into the stomach through a funnel. After this, the patient was fed regularly through the artificial gastric orifice, and the case went on well in all respects. The girl, in three months, had gained nineteen pounds, or about a pound and a half a week. For some weeks after the operation she was fed on minced meat and pancreas made into a pulp, and this thick food was readily passed into the stomach by means of a simple apparatus described as a small valveless Higginson's syringe, having one tube fitted with a funnel for the introduction of the food, and the other end cut obliquely to facilitate its introduction into the stomach through the artificial orifice, the patient, with her finger and thumb, nipping the end of the tube after the syringe was compressed so as to prevent regurgitation. The patient is now, eight months after the operation, in the enjoyment of excellent health, and with the exception of the loss of some, though not all, of the pleasures of the table, there is nothing either to shorten life or to render it less valuable. The second case reported was an operation for cancer of the œsophagus, death occurring two months afterward from extension of the disease to the trachea, lungs, liver, and mediastinal glands.

Treatment of Psoriasis by Pyrogallic Acid.—Dr. George Thin (*Lancet*, April 9, 1881) claims excellent results from the use of pyrogallic acid in psoriasis. He believes that curative action is due simply to its irritant qualities, which are most conspicuous around the hairs, each hair-follicle being the seat of a small brown patch, which, when it is scratched off, often leaves an abrasion in its place. At one stage of its curative action the mode in which the psoriasis patch enlarges is well illustrated, the dull-brown epidermis which marks the extent of the diseased surface being bounded by a thin red margin. This thread-like border corresponds to the vascular congestion produced in the blood-vessels by the extension of the psoriatic epithelium. Its application to a large surface may be attended with danger. He therefore commenced by using it over a very small extent of surface at a time. A patient that came under his observation for treatment of psoriasis, after having used the white precipitate ointment and the oil of cade with unsatisfactory results, was discharged cured after the application of an ointment composed of one part of the acid to twenty of lard, spread on lint. The remedy is one to be cautiously handled, but if it is used in the strength above stated, and over a small extent of surface at a time, it can be employed not only safely, but conveniently and successfully.

Nasal Stenosis.—Dr. F. H. Bosworth publishes a paper under this title (*Archives of Laryngology*, April, 1881). The successful treatment, he considers, lies in the ablation of the thickened or hypertrophied membrane. The recognition of stenosis is quite simple. The nostril is dilated, and the tip of the nose tilted upward, and then the mucous membrane over the lower turbinated bone projects into the nasal cavity, a rounded, tumefaction of a boggy appearance. The means suggested for the eradication of this condition are, local escharotics, the forceps, the knife, and compression by bougies or tents. Dr. Bosworth has made use of glacial acid, in a large number of cases, and considers it to be the best remedy we possess. Having saturated a pledget of cotton in the acid, by means of a probe, he sweeps it rapidly through the nasal cavity following the turbinated bone, crowding through the narrow portion between the convexity of the bone and septum. While executing this manœuvre he has the atomizer ready to spray the parts with Dobel's solution the instant the probe is removed; it neutralizes the excess of acid and acts as a sedative, thus making the application simple and painless.

The operation is followed for perhaps twenty-four hours by an increase of the stenosis, but very soon shreddy portions of the membrane are discharged; the exfoliation may continue for several days or a week. A single application is attended with marked benefit, but as a rule a second or third will be required.

Stokes' Supra-Condyloid Amputation.—Dr. Lyster resorted to this operation in a patient aged sixteen, who had recently been discharged from a fever hospital, where he had been treated for typhus. The patient was said to be suffering from erysipelas of the left leg, but it soon became evident that there was inflammatory mischief going on in the shaft of the tibia. Free incisions down to the bone were made, and the usual treatment for such a condition adopted with marked temporary relief to the patient. Necrosis, however, ensued, and the whole leg below the knee became swollen, and a large number of sinuses developed, leading down to the new bone. Stokes' operation was then performed under strict Listerian antiseptics. The anterior oval flap containing the patella was easily obtained, and the cartilage of the patella was removed without much difficulty by the aid of the saw and bone-forceps. The femur was divided three-quarters of an inch above the articular surface, the plane of section extending through the dense cancellated tissue of the end of the bone. The vessels were tied by catgut ligatures, and a somewhat troublesome capillary oozing controlled by deluging the flaps with hot carbolized water. The anterior flap was turned down, so that the patellar surface, denuded of its cartilage, was closely opposed to the sawn end of the femur, which apposition was further secured by means of a strong catgut ligature passed through the dense structures about the bones. The wound was closed by catgut ligatures; drainage-tubes were introduced; and the usual antiseptic dressings were applied. The patient made a good recovery. The stump was entirely free from pain, and he left the hospital two months after the operation. On dissecting the leg, the entire shaft of the tibia was found to be necrosed and encased by the new bone, whilst the condition of the soft tissues showed that amputation was the only course that could have been pursued with any success.—*Lancet*, April 9, 1881.

Ligation of Arteries for the Control of Inflammation.—Dr. H. H. Mudd (*St. Louis Courier of Medicine*, April, 1881) thinks he has found in the ligation of arteries a useful therapeutic measure in phlegmonous inflammations. It is a powerful means with which to limit the extent of this inflammatory action, and to control its disastrous effects. It is more powerful than bleeding, because it limits the supply of blood to the part, without disturbing its quality. Ligation in such cases involves no more danger than pertains to the ligation of an artery in a part free from disease. In controlling the supply of blood, which is a powerful factor in the production of inflammation, we can arrest, not only those inflammations which are dependent upon this superabundant supply for their food, but many which have their origin in textural changes of the part. This remedy is more frequently applicable to the arm than to the leg, for the collateral circulation in the leg is not so free or so rapidly developed as in the upper extremity. Dr. Mudd had a case of phlegmonous inflammation of the hand and forearm under observation, in which the patient, aged sixty-two years, had suffered a contusion of the little finger of the right hand. This excited a lymphangitis, which involved the hand and the forearm. After the acute inflammation had subsided, the foci of inflammatory action appeared, and new openings were made from time to time. The hand became swollen, thick, soft, boggy, and red, as did also the lower part of the forearm. The pale red color of the hand and forearm continued, notwithstanding repeated depletions by secondary hemorrhage from ulcerated vessels in the hand. The secondary hemorrhages were quite free, yet the arm retained its reddened, inflamed appearance. The brachial artery was then ligated, and the patient's condition improved. This uninterrupted recovery after ligature, in a man enfeebled by age, who had suffered six weeks with a phlegmonous inflammation of the arm, resulting in ulceration and abscess, inducing a condition of the arm which might be supposed to favor gangrene, suggests further trial of the remedy.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

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THE RECENT MALPRACTICE SUIT.

THE recent suit for malpractice against Dr. Lewis H. Sayre, of this city, presents some points of interest which it may be well to consider. As previously stated, the charge made by the plaintiff, who is a woman, was to the effect that Dr. Sayre prescribed an overdose of nux vomica, and that in consequence thereof she had suffered permanent impairment of health. The facts as brought out in evidence appear to be these: In January, 1878, the patient asked the advice of Dr. Sayre, and complained, among other things, of constipation. So intractable was the latter condition that she was often compelled to take three or four seidlitz powders at one dose before a movement from her bowels could be effected. Looking upon the case as one of more than usual atony of the bowel, a full dose of nux vomica was prescribed. The prescription was as follows: R. Pulv. aloe Soc., ʒ jss.; ext. hyoscyamus and extract of nux vomica, each ʒ ss, to be divided into thirty pills. This would give three grains of aloes and one grain each of hyoscyamus and nux vomica in each pill. The directions were to take one pill, and repeat if necessary in four hours. Instead of following these directions, the woman took four pills at once, and within an hour or two afterward was seized with symptoms which she supposed to be those of poisoning. Another physician was called in, who failed to recognize anything but an hysterical attack; but having learned that the patient had taken four grains of nux vomica, he concluded that he would give her the benefit of a doubt, and administered an emetic accordingly. The following day Dr. Sayre saw her. She then detailed the symptoms of the previous night, and complained that she was paralyzed in one of her lower extremities. This, as proved at the time, was without any foundation in fact. A few weeks afterward she complained of uterine symptoms, and was sent to a gynecologist of this city, who discovered abrasion of the os, with retroflexion. For these difficulties she was treated for several months, and at the end of that period took a trip abroad with the avowed intention of restoring her shattered health. Finally, on her return and a year after the commencement of her so-called strychnia-poisoning, she put her case into the hands of a lawyer, who in time brought it before the court. The damages were fixed at twenty-five thousand dollars.

It is safe to say that a nonsuit would have been entered had not one physician for the plaintiff testified that the symptoms of the patient were those of strychnia-poisoning, thus giving a shadow of available evidence in favor of the plaintiff. As it proved afterward, this gentleman's testimony amounted to nothing. The woman admitted that she had taken four pills at once, but that she had done so under direction of her prescriber. This statement was positively denied by the defendant and others, who were present when the directions were given. It was also shown in the testimony that the dose of nux vomica, as prescribed, although a full one, was not unusually large for a person in her condition; that there were no symptoms of poisoning present at any time, but, on the contrary, that such symptoms were those of hysteria, due to uterine trouble.

Judge Lawrence in charging the jury showed his thorough appreciation of the merits of the case, and brought out the points at issue in a forcible and logical manner. It was maintained that the plaintiff should prove that she had been poisoned by the nux vomica; that such poisoning was in consequence of taking the prescription, and that the said prescription was taken in accordance with the directions of the prescriber. Also it was competent for the plaintiff to prove that the dose actually prescribed by the physician was a large and poisonous one, thus showing, if possible, a culpable lack of skill on the part of the defendant. It was charged that a physician, in undertaking the treatment of a given case, is not expected to guarantee a cure of disease, or even an amelioration of symptoms. All that the law required was what might be called ordinary professional skill. The jury brought in a verdict for the defendant, the motion for appeal was denied, and an allowance of twelve hundred and fifty dollars was made to the defendant.

Although the case terminated, as might have been expected, in the vindication of the course of the physician, it nevertheless repeats the old story of useless and annoying litigation on the most trivial pretexts.

The case, on its own showing, was a poor one. The significance of the charge of poisoning rested upon the fact of proving that the medicine was taken according to directions. Instead of that, however, the patient took four times the dose ordered, and even then escaped poisoning. The learned judge, in his charge, placed the salient points in such a clear light to the jury that the verdict was a foregone con-

clusion. This case adds another to the list of those which have been decided in favor of the competent and conscientious physician, and should serve in its results as a suitable warning for such persons as believe that damages for malpractice can be easily obtained. The plaintiff's side in this case was the weakest within our knowledge, and prejudiced the verdict at the start.

A PLEA FOR QUACK MEDICINES.

THE editor of *Scribner's Monthly* has chosen to take up the subject of advertising quack medicines, and in the June issue of his magazine he comes to the defence of the religious weeklies for their practice in this matter. He begins his argument with the well-worn statements that "medicine is not a science; it is all empirical. There is no such thing as medical authority; every exhibition of medicine is an experiment," and other profound remarks of a similar kind. Since there is nothing exact about medicine, there is, he says, nothing certain about the skill of those who practice it. Some doctors are good, some are bad; we can only learn which by experience. It is just the same with quack medicines—some are good and some bad; and we have a right to find out by experience about these medicines just as we have to find out who is the best physician for us. Patent medicines are as legitimate therapeutic agents as doctors, and should not therefore be denounced.

The argument is a more ingenious than candid one. We have not "denounced" patent medicines as such, although we do not believe that the few useful preparations do enough good to counteract the evil done by the rest. If patent medicines were put before the public in the same way that medical men are, as is done largely in France, for example, there would be little to say. As it is, the comparison thus made by the editor of *Scribner* is most unjust. And it is a matter of regret that a gentleman, once a member of the medical profession, should present the status of the physician so unfairly to the enormous circle of readers which *Scribner's Monthly* reaches. The physician professes to treat his patients, and to cure them if he can. Patent medicines are forced upon the public by their extravagant claims to do the impossible with ease and the difficult with certainty. It is this against which we protest.

We are reproached with the charge that medicine is not a science and has no certainties. It is time that the editors of lay journals learned to speak not quite so loosely upon this point. Medicine is a science; that is to say, it possesses knowledge which is classified and certain; but it is not an exact science, and this, probably, it never can be. There are accepted certainties in it, however, and the statement that there is no such thing as medical authority is very untrue. Regarding the pathology of some diseases, and regarding the action of some drugs upon them, there exists knowledge which is uniformly accepted, and which is approximately exact. The statement that the medical world is divided mainly into two systems, the allopathic and homœopathic, is a most surprising and misleading one. The number of educated medical men who really believe in and practice homœopathy amounts probably to less than five per cent. This we learn from their own statements and statistics.

Homœopathy is now practically dead.

The magazine in question would justify religious journals in their practice of advertising quack medicines on the general theory which we have mentioned.

We would like to take the question away from "general principles," since by ingenious logic one can prove or disprove anything and treat it specifically. There is a "case" before us which we beg to present.

The *Examiner and Chronicle* is a weekly religious journal, which circulates largely among our esteemed friends the Baptists. As an exponent of religion and advocate of morality, its contents must naturally be received with considerable confidence by its readers.

Now, upon the third page we find the advertisement of an elixir which is a "sure cure for whooping-cough and all lung diseases." Medicine may not be an exact science, but it does say authoritatively that such a claim is outrageous and impossible.

Just below, there is the announcement of a "Vegetable Compound" which is a "positive cure for all forms and the worst forms of female diseases." Furthermore, "it will dissolve and expel tumors from the uterus." There is universal medical authority for saying that these claims too are preposterous. And are they to be put on a par with the claims of an educated and experienced physician, who only professes that he can treat disease? We do not think so. Experimenting with such pretensions is uncalled for and dangerous.

In a neighboring column is the advertisement of a drug which "cures all kidney diseases." Below this is the woodcut of a man with his face half-eaten with cancer, and a statement that at a certain hospital in Philadelphia cancers are cured without knife or caustic. Beside this is the card of another cancer-curer.

On the same page, which is a particularly prolific (and profitable) one, is a "sure cure for fits," and a "salve" which positively cures all sores and ulcers, no matter how old or of what kind. There is, also, an aromatic wine, which is an "infallible remedy for all female complaints," and which "has received the indorsement of medical societies and physicians"—a most palpable lie. There is an anodyne which "never fails to relieve pain," and finally a balsam made from

the oil of the shark, first extracted in A.D. 1410, and used for three hundred years throughout the Chinese Empire as a cure for deafness, in which disease it never fails.

Here, upon one page of a religious journal, are a dozen positive assertions which are entirely at variance with the medical experience and study of four thousand years. Medical science says absolutely and unqualifiedly that there are no "sure cures" for cancer, phthisis, Bright's disease, deafness, and a number of other diseases. And the heralding by religious journals of such false statements is injurious to their readers and derogatory to the medical profession. Patent medicines get their sale chiefly because they profess to cure incurable diseases. They live upon the "eternal hope" of the credulous. Their sale, as business men inform us, is regulated not by their inherent merit, but by the largeness of the claims and the extent of the advertisement. We think it but right that medical men should protest against religious journals helping on such false and dangerous claims as we have given examples of frequently in this journal. And it seems but just that the clergy, who come to us for gratuitous treatment, should respect this universal feeling of condemnation which the medical profession holds toward the practice of advertising quack medicines in religious journals.

We gladly recognize the fact that some of these journals seem to feel the justice of our protests. There is a number of them now that are singularly free from medical advertisements.

Reviews and Notices of Books.

Cyclopedia of the Practice of Medicine. Edited by Dr. H. von Ziemssen. Vol. ix. Diseases of the Liver and Portal Vein, with the chapter relating to Interstitial Pneumonia. By Prof. Ponfick, of Rostock; Prof. Thierfelder, of Rostock; Prof. von Schneppel, of Tuebingen; Prof. Heller, of Kiel; and Prof. Juergensen, of Tuebingen. Translated by Drs. A. H. Nichols, H. Osgood, E. W. Schaufler, and W. Mindelson. Albert H. Buck, M.D., editor of American edition.

The present volume contains an anatomical-physiological introduction, with a chapter on icterus, by Prof. Ponfick.

Thierfelder writes upon physical diagnosis, floating liver, hyperæmia, perihepatitis, suppuration, hepatitis, insterstitial hepatitis, syphilitic hepatitis, acute atrophy, simple atrophy, and hypertrophy.

Von Schneppel writes upon the pathological anatomy of cancer of the liver, and Leichtenstern upon the clinical aspects of the same disease. The long-delayed chapter on insterstitial pneumonia, by Juergensen, is added, making an unusually large volume of 928 pages.

Waxy, fatty, and pigment liver form another chapter, by Schneppel, parasites of the liver, by Heller, and diseases of the biliary passages and portal vein, by Schneppel, complete the work as regards diseases of the liver.

Thierfelder, in writing upon hyperæmia of the liver, very wisely abstains from trying to make any strongly marked distinctions, anatomical or clinical, between active and passive congestions. The remarks on this subject, under the head of etiology, are of much interest. Referring to the hyperæmia from dietetic causes, he says: "Respiration is more superficial in the sitting posture than when standing or even lying down, and since in health deep inspirations are produced almost exclusively by the more active movements of the body, it will be understood that, under the conditions of an inactive and sedentary life, we lose an important agent in the propulsion of the current in the hepatic veins;" the blood cannot flow off so freely. In this same class of persons—those who eat too much and exercise too little—there are apt to be distentions of the stomach and intestines by food and gases, which also interfere with respiratory activity. Corpulence may act in the same way; furthermore, in the corpulent, there may be fatty deposits on the heart, which, by impeding its force, assist in producing a hepatic congestion. Acrid substances, such as spices and coffee (on account of its empyreumatic oil), and finally, alcohol, produce a hyperæmia of the stomach, mucous membrane, and probably a hepatic hyperæmia also. With regard to alcohol, however, it has never been actually demonstrated by experiments on animals or by autopsies on man, that it alone can increase the amount of blood in the liver; still it probably does do so.

The treatment recommended for hyperæmia is a judicious one, being characterized by an almost total absence of drugs. Calomel and podophyllin are the only cholagogues mentioned, and their efficacy in expelling bile is regarded as somewhat questionable. Diet, exercise, mineral waters, and ordinary water are the measures particularly endorsed.

Under the head of cholæmia, all that is said in regard to functional derangement of the liver is given. We cannot but consider this part of the subject as imperfectly treated.

Regarding cholæmia, which name is substituted for icterus as having a broader significance, the pathology of the affection is very fully discussed. More than usual stress is laid upon the part which diseases of the respiratory organs play in disturbing the normal outflow of the bile by impairing the movements of the diaphragm. The excretion of bile is produced, says the writer, by the impulse communicated by the movements of the diaphragm, which tend to compress the liver. The importance of Fleischl's discovery, that in hepatogenous cholæmia the bile is absorbed by the lymph-vessels, and enters the blood through the lymphatic ducts, is mentioned. In describing the symptoms, the theory of Flint, Jr., that the severer ones may be due to cholesterine, is spoken of as being supported by the experiments of H. K. Mueller.

The cause of hæmatogenous icterus is asserted, with much positiveness, to be due to a breaking up of the red blood-corpuscles and a change of their hæmaglobin into biliary pigments. The experiment of Tarchanoff, together with those of the author and others, make this at present the most tenable hypothesis.

A considerably larger space than is necessary is devoted to the subject of floating liver. Only nine cases of this abnormality have been reported, and

in none of these have there been any post-mortems. The subject is of curious interest only.

In the chapter on suppurative hepatitis, the ordinary forms and the tropical forms are treated of separately. A doubt is thrown upon the causal relation, commonly given, between dysentery and hepatic abscess, and the following theory is advanced in explanation of this disease as it occurs in the tropics. In consequence of the deleterious influences of heat, bad diet, and other predisposing factors (under which head may be included certain miasmata, such as dysenteric or malarial poisons), an irritation is first set up that assumes the form of hyperæmia, upon which the necessary active causative influences being brought to bear, suppurative hepatitis is developed. Chief among such active causes are sudden colds and the abuse of alcoholic liquors. In a subsequent note, the observations of Sachs are given, in which it is maintained that alcohol, which in cold climates produces interstitial hepatitis, in warm climates, acting upon the hyperæmic tissue, produces suppurative hepatitis.

In the hepatic abscess of temperate climates the etiology naturally occupies a prominent place. Under the head of emboli in the blood-vessels of the liver as a cause, the possibility of emboli by way of the hepatic vein, is denied, and the evidence to support this view of a much-mooted, but very trivial question, is given in full. The theory that in pyæmic hepatitis the abscesses are formed in part by emboli from the points of suppuration, is embraced—with some reservation. Virchow's theory, that pyæmic suppurative deposits may be produced by changed conditions of the blood, receives no new light from the present author. Klebs's experiments, showing that bacteria develop in connection with or perhaps prior to these abscesses, does not solve the problem, even supposing that all which that imaginative pathologist says is true. The mere demonstration of micrococci in the blood is quite inadequate to explain the origin of circumscribed pus-deposits.

In the symptomatology of suppurative hepatitis nothing is said about the brain-symptoms which have of late been discussed so much by certain American observers. In the diagnosis and treatment the aspirator figures too little, we think, to satisfy the Anglo-Saxon part of the profession.

In connection with cirrhosis, the interesting question is raised whether the acute infectious poisons, such as that of typhoid or of cholera, may not produce changes in the liver which are the starting-point of a subsequent cirrhosis. A number of observations tend to show that this is the case. The usual pre-eminence is given to alcohol as a cause of this disease; to which drug the chief supplements are irritant spices, syphilis, and malaria.

Some interesting pathological facts are given in short articles upon monolobular cirrhosis, cirrhosis from affections of the gall-ducts, and hypertrophic cirrhosis.

The pathology of acute yellow atrophy has always been a matter of great perplexity and interest. Not much addition to our knowledge is given by Thierfelder, who here discusses it. After reviving the various theories upon the subject, he contents himself with saying that the view which regards acute yellow atrophy as a parenchymatous inflammation is admissible only in a minority of cases. The free exudation which Frerichs thought he discovered has been shown to be, most likely, only cellular detritus. Acute yellow atrophy is, according to the author, an acute, pernicious constitutional affection, by which a destructive process is set up in the liver and generally in other organs, particularly the heart and kidneys. The changes resemble in certain respects those produced by phosphorus-poisoning, and it may be assumed that the disease has a specific poison as its cause

The chapter on parasites is a short one. It includes a notice of echinococcus, cysticercus cellulosæ, pentastomum denticulatum, and psorosperms.

The diseases of the biliary passages and portal vein are treated of very fully and are prefaced by certain anatomico-physiological remarks which add clearness and value to the chapter. Perhaps the most important statement made under this head is the denial that muscular fibres exist or have been proved to exist in the biliary ducts.

Under the head gall-stones, the various measures usually resorted to for treatment are reviewed. Some utility is ascribed to Durande's mixture as a solvent of calculi. Much more importance, however, is given to the alkaline mineral waters, particularly those of Vichy and Carlsbad. These are believed not only to prevent the development of further accretions, but to dissolve to some extent those already present.

Juergensen's article on interstitial pneumonia will be read with some especial interest by pathologists. The question whether a catarrh of the bronchi can lead to an interstitial pneumonia is discussed at great length, and is answered finally in the affirmative, an answer with which most chemical observers at least will agree. Interstitial pneumonia is classed as an anatomical rather than clinical entity; therefore, the list of causes, which includes syphilis, phthisis, dust, pertussis, measles, croupous pneumonia, and pleurisy, is made a very comprehensive one. An excellent description of the method of development of bronchiectasis is given. More than usual attention is paid to a discussion of treatment. The article, though a good one, is riddled with italicized sentences to an extent which impairs its smoothness without adding to its lucidity.

The volume, on the whole, is not rich in original matter, but it presents what is known upon the respective subjects with great fulness, and discusses unsettled points clearly and with good judgment. The work is an important addition to medical literature, and a not unworthy close of the greatest of medical cyclopedias.

Alumni Prize.—The prize of the Alumni Association of the College of Physicians and Surgeons, New York, of $500, for an original essay on some subject connected with medicine or surgery, is open only to the competition of the Alumni of the College of Physicians and Surgeons. The conditions upon which the prize will be awarded are as follows:

1. The subject is left to the option of the competitor.

2. The essay must present sufficient original experimental or clinical observation to make it a useful contribution to medical knowledge.

3. The essay, designated by a motto, must be sent to a member of the Committee on Prize Essays, accompanied by a sealed envelope inscribed with the same motto, and containing the name and address of the author, on or before, April 1, 1882.

Albert H. Buck, M.D., 109 Madison av.
Charles McBurney, M.D., 40 West 26th street.
George L. Peabody, M.D., 55 West 38th street.
Committee.

Reports of Societies.

NEW YORK SOCIETY OF GERMAN PHYSICIANS.

Stated Meeting, January 28, 1881.

DR. F. ZINSSER, PRESIDENT, IN THE CHAIR.

PRIMARY ABSCESS OF MASTOID PROCESS.

DR. GRUENING exhibited a young man who had illustrated in his person the acute occurrence of primary abscess, involving the mastoid cells. There was no history of catarrhal affection of the middle ear. Perforation had not taken place. The patient said that in October, 1880, he became hard of hearing, was troubled with tinnitus aurium, and suffered from stiffness of his neck. On the 3d of November, when first seen by Dr. Gruening, there was pain on pressure over the mastoid region, but no swelling; only some redness could be there and thus discovered. The patient was unable to hear on the affected side, although the sound of a tuning-fork could still be made out. Examination with the aural mirror failed to elicit a diseased condition of the ear. The tympanum was then perforated, and leeches applied to the mastoid region, but no relief followed. Fluid had not escaped after the puncture of the drum-membrane. Hearing not being improved by these measures, on November 6th Wilde's incision was made. Temporary amelioration was the only result. On the 12th of November the patient had a severe rigor, and on the following day he began to vomit. It was now determined to resort to opening of the mastoid process. Accordingly, on the 16th of November, the operation was practised with Buck's instrument. About ten drops of pus escaped from the bone. Shortly after this operation the man's hearing was much improved, and at the present time his aural function is quite normal; barring, however, the tinnitus, which has persisted ever since its incipience.

URETHRAL POLYPUS—GRÜNFELD'S ENDOSCOPE—TROUVÉ'S APPARATUS FOR ELECTRICAL ILLUMINATION.

DR. ZINSSER demonstrated by means of the endoscope, used in conjunction with Trouvé's illuminator, a small rounded polypus situated in the bulbous portion of the urethra. The subject of this little growth was a youth, whose previous history was devoid of special significance. In this connection, attention was called to the recent advances made in the treatment of certain urethral affections. This was mainly owing to the improvement of our apparatuses for examination. Diagnosis and therapy had been facilitated by the employment of the endoscope. Urethral granulations and polypi, which had formerly obstinately resisted treatment, could now be rationally and successfully controlled by therapeutic measures, locally applied. A number of such polypi removed by the wire loop were also presented.

DR. KLOTZ alluded to a case in point which had occurred in his own practice. The patient in this instance gave symptoms of stricture. Thick instruments could readily be passed, but those of small calibre either not at all or only with considerable difficulty. With the endoscope he discovered a rather large urethral polypus, about 13 ctm. from the meatus.

DR. ZINSSER remarked that urethral polypi only exceptionally became obstacles to the introduction of instruments. They would have to be of firm consistence in order to act thus, and this rarely happened.

DR. JACOBI inquired whether these polypi could not be made accessible to removal by the curette, whereupon

DR. ZINSSER replied that the available space was too limited for such interference; moreover, attempts in this direction had been followed by such abundant hemorrhage as to obscure the entire field of operation. Besides all this, the polypi easily yielded and escaped the instrument.

COMPLICATED RUPTURE OF THE UTERUS.

DR. GARRIGUES presented a specimen of ruptured uterus. The rupture was the result of complicated labor in a woman with a distorted pelvis. The infant was with much difficulty removed from the mother's abdominal cavity, into which it had escaped after the uterine rupture. Several physicians, after looking at the specimen, had been unable to find a uterine rupture. The specimen had been sent him for examination in his capacity of pathologist to the Obstetrical Society of New York.

In the anterior half of the cervix, which was considerably distended, he found a distinct rupture of longitudinal direction. A second transverse rupture could be traced up to the former. This one involved the cervix and peritoneum. The neck was only 3 mm. thick, whereas the body of the uterus was 3 ctm. thick. It was this circumstance, *i. e.*, the abrupt line of demarcation between neck and corpus, which had evidently misled others to believe that what was in truth the cervix, represented the vagina. A macroscopical examination had fully corroborated the macroscopical diagnosis of true uterine rupture.

CYSTOSARCOMA OF BOTH OVARIES.

Dr. Garrigues presented a second specimen, consisting of a round-celled cystic sarcoma of the ovaries. The woman was twenty years old, and had died in collapse. Her death was apparently due to the bursting of one of the cysts, and the subsequent escape of its contents into the peritoneal cavity. The uterus was completely walled in by the cystic neoplasm. The walls of the cysts were found to be quite delicate. Of original ovarian tissue no trace remained.

INTESTINAL POLYPUS AT PYLORIC VALVE.

DR. GLUECK exhibited the above specimen, which was accompanied by the following history: The patient was a woman twenty-nine years of age, who had undergone an attack of peritonitis some six years ago. Since that sickness she had always been slightly ailing, and an almost constant symptom was nausea. Five days ago the patient suddenly experienced a violent pain in the right hypochondriac region. There was no assignable cause for this sudden access, but in spite of its persistence she went to a dancing entertainment the same night, and took an active part in the same. While dancing the pain suddenly became intense, and vomiting soon followed. The pain was subsequently controlled by morphine, but the vomiting continued. A circumscribed area of dulness, corresponding to the seat of the gall-bladder, was made out. Her temperature appeared normal, but the pulse was faint and of great frequency. Collapse set in, and shortly afterwards she died.

At the autopsy signs of recent peritonitis were not visible. There were some old adhesions between the colon and duodenum. The ileum and colon were

stained by bloody imbibition, and were found distended with grumous blood. In the duodenum a papillary growth, with a narrow pedicle, was discovered. This excrescence was attached to the pyloric ring, and was about the size of an English walnut. A similar tumor, only of much smaller size, was found in the jejunum. In the ascending colon a few superficial abrasions appeared. Perhaps they had produced the bleeding.

Dr. Wendt said that the neoplasm was probably an ordinary mucous polypus, similar to those which not infrequently occurred in the rectum, and it had doubtless been the source of the fatal hemorrhage in this case.

Dr. Adler remarked that the growth was more likely to be sarcomatous. It took its origin from the pyloric valve, which was composed of connective tissue and mucous membrane. Hence the tumor was probably an adeno-sarcoma, a variety of growth well known to readily and profusely bleed, from the presence in it of large vessels.

Dr. Jacobi observed that the pitchy condition of the blood favored the notion of hemorrhage high up in the intestinal canal, and not in the colon. Had the latter been the case, the blood in the large intestine would have resembled recent extravasation. The presence of copious blood in the small intestine would stimulate peristaltic action, and thus the fluid would be rapidly propelled downward.

HEMORRHAGIC INFARCTUS IN A CONTRACTED KIDNEY.

Dr. Wendt presented a specimen, consisting of a small kidney removed from the body of a man, who had had chronic valvular heart disease. Recent emboli had obstructed several of the main branches of the renal artery. The wedge-shaped infarction was distinctly marked by its dark red color, contrasting sharply with the pale look of the adjoining tissue.

PSEUDO-LEUKÆMIA.

Dr. Wendt also exhibited specimens obtained from a patient who had died of Hodgkin's disease, at the St. Francis Hospital. This case was presented at a meeting of the Pathological Society. (See Medical Record, March 5, 1881.)

TRIPOLITH—THE NEW SUBSTITUTE FOR PLASTER OF-PARIS.

Dr. Gerster showed a dorsal splint for the leg, made of tripolith. In this connection he also gave his experience with the new article. He had received a sample from abroad, and while it was true that tripolith quickly hardened, and weighed less than plaster, it did not resist the action of water, as claimed by Langenbeck. It might be, however, that his sample had become spoiled on the voyage over the ocean. Nevertheless, the gypsum now in use at the German Hospital and Dispensary was in all respects so satisfactory an article, that tripolith would not be likely to supersede it there.

Stated Meeting, February 25, 1881.

Dr. E. Gruening, President, in the Chair.

EXTRACTION OF LENS CONTAINING A FOREIGN BODY AFTER ARTIFICIAL INDUCTION OF CATARACT.

Dr. H. Knapp, exhibited a young man on whom he had recently performed the above operation. The patient had first consulted him six months previously. He was unable to specify the time and occasion when the foreign body had become lodged in his eye. The ophthalmoscope showed a blackish body fastened in the lens at its lower and posterior aspect. Partial opacity of the crystalline lens was associated with its presence. The necessity for removal of the lens including the foreign body was apparent. In order to produce complete opacity, Graefe's plan of entering the anterior chamber and making a T-shaped incision in the presenting face of the lens, was adopted. This was thought to be necessary, in view of the fact that in extracting immature cataracts portions of the crystalline are apt to remain behind.

Opacity of the lens promptly establishing itself, a second incision was practised four months after the first one. In this way the foreign body was made to approximate the lower border of the pupil. Now the lens, together with the included body, was removed by linear incision. It was ascertained that a steel splinter had been the cause of the mischief. The iris not prolapsing, iridectomy was not performed. The subsequent course of the disease was painless. On the third day after the surgical interference, the iris was found adherent to the wound. Atropia promptly restored it, and barring a slight adhesive band still plainly visible, a normal result was obtained.

Dr. Knapp, thought the method recommended by Hölk, in which the lens was to be extracted by means of a needle, an unsatisfactory one, since portions of the cataract were almost certain to be left behind. The method by suction, and the use of the magnet should also be avoided.

EXSECTION AT ELBOW FOR FUNGARTHROSIS.

Dr. Gerster, showed a patient, whom he had subjected to the operation of excision of the elbow-joint, thirty-seven days ago. The man was forty years of age, and the disease had existed ever since 1864. Its course was a slowly progressive one, and there was at first a manifest lack of all tendency to the production of fistulous openings. The arthritis was of the kind denominated gelatinous fungus by the German writers. Last December, abscesses first began to appear, and a series of periarticular circumscribed gatherings now developed. They were laid open and drainage-tubes inserted through the incisions. The diagnosis being readily established, on account of the characteristic spindle-shaped enlargement of the joint, the doughy consistence of the surrounding parts, and the position of the limb taken in conjunction with its impaired mobility, excision was proposed to the patient. He readily consented. Accordingly a dorsal splint was made with plaster-of-Paris. Bands of iron were so connected with it, as to leave an interval for the joint. The operation was then performed. Langenbeck's dorsal incision being chosen. Esmarch's method was followed during the course of the surgical procedure. Of the humerus, about 0.025 were removed (about one inch), of the ulna 0.04, and of the radius only 0.015.

The articular cartilages and the synovial membrane were found to be completely destroyed. In appearance the tissues in and around the joint were gelatinous, their consistence was rather firm, but elastic. Not only the soft parts, but also the bones had become thus transformed. Finger-like projections extended far into the bones, but were easily removed. All the removed portions of bone looked as if they had been gnawed, but osseous suppura-

tion was nowhere visible. Purulent collections were discovered only in the peri-articular fungoid masses.

Antiseptic precautions were made use of, a permanent compression dressing applied, and the arm being secured to the splint was suspended. Twelve hours later it became necessary to renew this dressing on account of hemorrhage. Nevertheless the subsequent course of the case was a favorable one. Pain never set in and fever was absent. In the deep parts primary union quickly occurred. In the second week after the operative interference the drainage-tubes were removed. On the seventeenth day active and passive movements were begun, and continued every day. At present the patient can spontaneously flex his arm, sufficient to produce an angle of 95°; with assistance as far as 75°. The pseudarticular looseness (*schlottern*) is but trifling. A suitable appliance prevents lateral displacements. Massage and the faradic current would doubtless improve his condition still further.

CASES OF URANOPLASTY.

Dr. Gerster also exhibited two young men, on whom he had successfully performed uranoplastic operations. The first case was that of a brewer, who had fractured his lower jaw some nine years since. At the time of receiving that injury a bone splinter had forced its way through the hard palate. Necrosis followed, and finally a triangular opening, 0.02½ long and 0.015 broad, remained. Speech was very much impaired and during deglutition portions of food frequently entered the nasal cavities. A piece of soft palate had to be sacrificed in order to secure a linear union. The two edges of the wound were of unequal length, a circumstance which rendered the operation unusually difficult. A little gaping at one extremity at first took place, but cauterization healed it, and the final result was a good one.

The second case was one of congenital cleft palate and hare-lip. The latter deformity had been closed by an operation during the patient's childhood. A portion of the intermaxillary process, in which an obliquely misplaced tooth was still seen, had been allowed to remain. Langenbeck's method of operation was pursued, and primary union promptly took place. The opening still existing in the soft palate was reserved for a future operation, since the method of operating at two different times and with a suitable interval offered better prospects of a satisfactory result.

EXTENSIVE INFANTILE NÆVUS.

Dr. Fridenberg exhibited a child three months old, having a symmetrical nævus of both upper eyelids, temporal regions, and part of the head. The telangiectasis was first observable four days after birth, and for the past four weeks the disease seemed to be undergoing regressive changes. The treatment had been essentially indifferent, and it was a notable feature of the case that there appeared to be a tendency to spontaneous improvement. The symmetrical disposition of the vascular new formation was likewise somewhat remarkable.

Dr. Jacobi remarked that he had repeatedly observed the spontaneous cure of such tumors in cases where unyielding osseous structures existed immediately beneath them. But the spontaneous retrogression of the affection in the lids appeared to him a doubtful matter.

Dr. Knapp stated that he had but rarely seen telangiectatic tumors of the lids. Generally such erectile growths were cavernous structures. He asked the society to express their experience with regard to the use of the galvano-cautery in such diseases.

Dr. Jacobi said he had reason to feel satisfied with the results of his trials in this direction. Partial galvano-caustic destruction of these tumors had yielded gratifying results within his experience. In this connection he described a case of large vascular neoplasm affecting the upper lip of a patient. He had applied the galvano-cautery a single time only, and that from within, in order to spare the external skin. The tumor soon diminished in bulk, and even externally became paler. In superficial degenerations of this kind, he had found the use of moderate heat sufficient for purposes of treatment. It was unnecessary in such affections to cause destruction of the growth; simple vascular obliteration through the induction of coagulation would be the only requirement. Of course every case was not amenable to this kind of treatment.

Dr. Knapp stated that superficial shrinkage of erectile tumors was wholly inadequate to produce deep contraction, and thus effect a cure. Even with firm surface cicatrices small remnants might exist in the deeper parts. Such remnants would act as foci, whence a return of the malady would sooner or later occur. He was of opinion, therefore, that excision was, whenever practicable, a safer procedure.

Dr. Adler observed that electrolysis had been also tried, but with merely temporary benefit.

FIBROSARCOMA OF THE BREAST.

Dr. Jacobi presented a specimen of fibrosarcoma removed from the mamma of a young girl. This tumor has been exhibited at the Pathological Society.

Dr. Knapp called attention to the accidental occurrence of inflammation with exudation around orbital osteomas. This was an analogous process to the one alluded to by Dr. Jacobi.

LARGE VESICAL CALCULUS REMOVED FROM A CHILD'S BLADDER.

Dr. Jacobi exhibited a stone which he had removed by lithotomy from the bladder of a child two years of age. It was a uric acid and urate calculus, weighing almost half an ounce. Median lithotomy was practised. On the day following the operation the child's temperature rose to 102°. Since then the progress of the case had been very favorable. After the second day following the lithotomy urine was passed by the urethra. On account of the large size of the stone, its extraction had been rather tedious.

Dr. Adler was impressed with the good results attainable with Dolbeau's method, which was not to be mistaken for that of Mariani. In the latter method the prostate gland was invariably incised, whereas in the former it was subjected to dilatation. Large calculi could be broken into fragments prior to extraction by Dolbeau's method.

Dr. Garrigues demonstrated a human monster belonging to the class of malformations called micromelous.

Stated Meeting, March 25, 1881.

Dr. A. Jacobi, President, in the Chair.

Dr. Gerster exhibited a patient with epithelioma of the face and nose.

COMPLETE ATROPHY OF TURBINATED BONES DUE TO CHRONIC RHINITIS.

Dr. Brandeis showed a patient who had lost the cartilaginous portion of his nose in consequence of a bite. The turbinated bones had dwindled away in consequence of chronic inflammatory processes. The action of the muscles on the orifice of the Eustachian tubes could be well seen. During inspiration the opening gaped. During deglutition the same was observed. The action of the tensor and levator palati muscles could be well studied in this connection. The soft palate was raised during the phonation of vowels.

PULMONARY GANGRENE ASSOCIATED WITH ABSCESS OF THE LIVER.

Dr. Heppenheimer presented specimens, consisting of the liver, diaphragm, and lungs of a workman, whose death had been apparently caused by copious hemorrhages of the lung. Since June, 1880, the man had suffered from cough, with bloody expectoration. Last December this became almost incessant. Physical examination revealed only slight apex dulness. Near the end of the year acute pleurisy, with an abundant effusion, set in, and the bloody expectoration at once ceased. Thoracentesis was not practised, lest the removal of pulmonary pressure again lead to cough and bleeding. Soon after inception of the pleuritis, the patient expectorated large quantities of purulent, blood-stained masses. Death took place a little later. At the autopsy the right lung was found to contain a cheesy deposit in its upper lobe. The left lung was in a condition of atelectasis, and its base adhered to the diaphragm. A gangrenous portion of some size was also present. Corresponding to the latter, an opening was found in the diaphragm leading into a large hepatic abscess. The cavity in the liver was also found to communicate, through the diaphragmatic opening, with a bronchial tube.

Dr. Langmann remarked that the primary affection in this case was to be looked for in the liver. He alluded to four cases of a similar kind, which had but recently come under his observation. He also thought that the so-called tropical hepatic abscesses, which were, as a rule, of large size and single occurrence, were more frequent in our climate than was generally supposed. The rational signs in such affections were frequently insignificant or misleading. This he illustrated by citing a case in which a diagnosis was made only four days before the hepatic abscess burst into the pleural cavity. In another case of empyema, the presence of abscess of the liver was first suspected when the peculiar condition of the fluid removed from the chest was noticed. In the present instance, the fact that pulmonary hemorrhage had existed without profound lesions of the lungs was another argument in favor of assuming the hepatic origin of the malady.

Dr. Seessel, on invitation, then read a paper on the present condition of our knowledge regarding the cerebral psycho-motor centres, illustrating his remarks by the demonstration of models constructed by himself. The usual vote of thanks was extended to him by the society.

ULCERATIVE PERFORATION OF INTESTINE IN THE COURSE OF TYPHOID.

Dr. Heinemann presented specimens of the above. In one case death had occurred twelve, and in a second twenty-four hours after the perforation. Diarrhœa had been present in both.

Dr. Jacobi said that in our country, as distinguished from Europe, intestinal perforation, without diarrhœa, was a frequent occurrence. Several cases were described to substantiate this view.

INFANTILE CEREBRO-SPINAL MENINGITIS.

Dr. Heinemann also exhibited the brain of a child that had died of cerebro-spinal meningitis. In this case an abundant purulent deposit was visible in the pia mater. This was a rather exceptional occurrence, since in very many such cases the post-mortem evidence was negative.

Dr. Brandeis saw fourteen cases of this kind. Eight times recovery took place, but with total deafness as a result of the disease. In the fatal cases deafness was not a symptom during life.

Dr. St. John Roosa had repeatedly observed complete convalescence in children, without deafness as a remnant of the meningitis. With regard to the fatal cases, they differed in this respect, some having become deaf and others not. He also thought that primary affections of the inner ear were often mistaken for cerebro-spinal meningitis. It would be interesting, as well as important, to search for such lesions in autopsies on cases of this kind.

Dr. Jacobi remarked that deafness following cerebro-spinal meningitis was an exceptional matter. At any rate, he had observed a favorable issue in very many instances without the supervention of deafness. Probably the proportion of cases in which this aural symptom occurred would not exceed six or eight per cent. When deafness had occurred he had found it absolute, a fact which would indicate profound degeneration of the aural nerves.

Dr. Roosa could not entirely agree with Dr. Jacobi as regarded his last statement. He had seen many cases in which a certain amount of hearing had been retained. For this reason he was of opinion that in such instances the auditory nerve was not itself diseased, but that the existing lesions were seated in the middle ear, or concerned the labyrinth.

CARCINOMA OF THE DURA MATER.

Dr. Jacobi exhibited the calvarium removed from a woman, aged fifty, who had died of cancer affecting the dura mater. The skull-cap showed four irregular perforations. In addition, both plates, but especially the external one, showed extensive erosions. Secondary cancerous nodules were discovered in both lungs.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, February 22, 1881.

Dr. H. B. Sands, President, in the Chair.

CARBUNCLE—COMPLICATIONS.

Dr. Post remarked that, since he reported a case of carbuncle with diabetes mellitus and multiple abscess, he had seen, in a British Journal, a report of a case of large carbuncle, in which the patient was having a tedious recovery, when an enormous gluteal abscess developed that proved fatal. No mention was made in the report of the existence of diabetes.

Dr. T. M. Markoe referred to a case as follows: A gentleman, fifty-six years of age, and in apparently excellent health, suffered from one or two boils during the past few weeks, and when he saw him there was a large carbuncle which nearly filled the left ischio-rectal fossa, and had assumed a sloughing character. So rapid had been the progress of the

case, that within seventy-two hours from the beginning of the disease the entire fossa was occupied by a mass of inflamed sloughing tissues, attended by marked constitutional symptoms. The patient died about forty-eight hours subsequently. Previous to the occurrence of the disease the patient's urine contained neither albumen nor other abnormal constituents, but it had not been examined for sugar. During the existence of the carbuncle, Dr. Markoe examined the patient's urine and found that it contained eight per cent. of sugar. He referred to the case as one illustrating the fact that many gangrenous disorders are associated with the diabetic condition.

MEMBRANOUS CROUP—TURPETH MINERAL.

THE PRESIDENT referred to a fact in the history of a case as follows: On the 9th inst. he was called by Dr. William H. Draper to see, in consultation, a boy four years old, who had symptoms of laryngeal stenosis, and was thought to have diphtheritic croup. Three weeks previously the boy had had scarlet fever, and, while convalescing from that disease—and supposed to be beyond danger—he began to be hoarse, and, when Dr. Sands was called, his breathing was quite difficult, markedly croupy, and the question was raised with regard to the propriety of opening the windpipe. The symptoms were not very urgent, although the disease was well marked, and the difficulty in breathing was rather greater on inspiration than on expiration. No membrane was to be seen in the pharynx or upon the tonsils, and it seemed a little uncertain whether any existed in the air passages. That point, however, was soon afterward settled by the discharge, during an act of vomiting, of several pieces of membrane as large as the nail of one's little finger, and of several smaller shreds. The diagnosis, also, seemed to be confirmed by the appearance of albumen in the urine, followed by almost total suppression. It was decided not to operate, partly because the laryngeal symptoms were not very urgent, partly because only temporary relief might be afforded, and partly because the parents were rather averse to an operation. It was thought proper, however, to administer *turpeth mineral*, which produced copious vomiting, and the escape of many fragments of false membrane. On the second day the child's condition was much improved, and on the third day the croupy breathing had almost entirely disappeared. This was one of the few cases of membranous croup Dr. Sands had seen in which recovery had taken place without operation.

DR. POST remarked that he was called to see a well known physician in this city who, when a small boy, was suffering from membranous croup, and he introduced a solution of nitrate of silver—forty grains to the ounce of water—and the application was followed by rapid improvement and recovery.

DR. BRIDDON remarked that he had a tubular membrane an inch and a quarter long, which was thrown off by a child that was supposed to be suffering from membranous croup, although no membrane could be seen. The relief was prompt, but the disease returned and proved fatal. He had seen several cases in which he had refused to operate on account of the mildness of the croupy symptoms, but had subsequently regretted that he had not performed tracheotomy, because the patients died from asphyxia.

DRY GANGRENE OF THE FOREARM.

DR. JOSEPH C. HUTCHISON presented the right forearm of a female patient, aged forty years, whom he saw first in consultation with Dr. Gregory, of Brooklyn, on April 17, 1880, and then obtained the following history: For some months previously her health had been impaired in consequence of uterine hemorrhage, ascribed to degeneration of the mucous membrane of the body of the uterus, but she was then improving. Three days before Dr. Hutchison saw her she was suddenly taken with numbness of the fingers and hand, and almost immediately those parts became blanched. On the following day she suffered considerably from pain which extended upward nearly to the elbow. On the day he saw her first the arm was blanched nearly to the elbow and sensation was abolished. There were a few ecchymotic spots on the radial side of the arm. No pulse could be felt below the subclavian artery. There was a systolic murmur heard with greatest intensity over the aortic valves.

On the 18th of April the patient was seen by Dr. H. B. Sands, and her condition was about the same as on the day previous.

Within a few days dry gangrene appeared in the fingers, and extended so rapidly that within a week it had reached to within two inches of the elbow in front and nearly as far behind. The line of demarcation soon began to appear, and gradually the separation went on, while the patient remained quite comfortable with the arm in that condition. Dr. Hutchison allowed the separation to progress until it had extended entirely through the muscles in front and nearly so behind before amputation was performed, which was done within an inch and a half of the elbow joint. The bleeding was insignificant. A tourniquet was not used, and no vessels were secured. Recovery was satisfactory, and the patient remains well.

In reply to questions, Dr. Hutchison said that his diagnosis was embolism of the subclavian artery.

THE PRESIDENT remarked that he had seen several cases of well-marked embolism in which gangrene of the upper extremity seemed imminent, but this case was the only one he had observed in which it had actually taken place.

DR. POST had met with a case of spontaneous gangrene limited to the little finger. Embolism was not distinctly traced. The patient was a middle-aged person.

Correspondence.

THE ENFORCEMENT OF THE MEDICAL LAW IN MONROE COUNTY, N. Y.

TO THE EDITOR OF THE MEDICAL RECORD.

DEAR SIR—There has appeared in late numbers of the MEDICAL RECORD a series of articles entitled "The Enforcement of the Medical Law," and the object of so many able editorials seems to have been to rouse the Medical Society of the County of New York to a sense of its duty. At the same time it is made to appear that nothing has been done in this matter outside of New York City, save a prospective action mentioned of the Erie County Medical Society. Shortly after Chapter 513 became a law, the Monroe County Medical Society held a special meeting, endorsed it, and appointed a committee to enforce it: this was September 8, 1880. One week afterward the committee organized, agreed upon a form of circular—enumerating the requirements and penalties of the law—to be sent to each regular prac-

titioner within the county. Accompanying the circular was a form of affidavit which, when filled up, could be filed with the County Clerk. At the same time the Monroe County Homœopathic Society was invited to co-operate. This systematic work bore fruit in the promptness with which all legal practitioners, and, for that matter, illegal practitioners too, registered. Meantime, the committee kept their eyes open for offenders, and ere long a notorious quack of Rochester was indicted, arrested, and forced to give bail for his appearance in court.

A second case was a female practitioner, whose literary capabilities may be judged from the following certificate of death:

"Albert Heuer dies of infermation of the bowls.
"MRS. DR. K."

This lady had been practising medicine for a number of years without a diploma (so she admitted before the coroner who investigated the above case). Mrs. K. was arraigned in the Monroe County Court, April 15, 1881, and *pleaded guilty*. The presiding officer suspended judgment—moved to mercy, I believe, by the prisoner's sex, and, on the condition that she should refrain from practising medicine until duly authorized. This is claimed to be a conviction, and the *first* under the new law.

WM. F. SHEEHAN, M.D.

ROCHESTER, N. Y., May 18, 1881.

LEPROSY IN THE SANDWICH ISLANDS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR—In the summer of 1878, I addressed to General Comly, U. S. Minister to the Sandwich Islands, a number of questions on the subject of leprosy, which I requested he would have answered by a medical man.

I enclose the list of questions as answered by Dr. McGrew, and also a letter accompanying them from General Comly.

Having noticed that the New York Medical Society had recently discussed the subject of leprosy, I have thought the enclosed communications would be of interest to the members.

Yours truly, JAMES H. MCBRIDE,
Medical Superintendent.

ASYLUM FOR INSANE, MILWAUKEE, WIS., April 7, 1881.

(Copy of letter from General Comly.)

LEGATION OF THE UNITED STATES,
HONOLULU, September 30, 1878.

MY DEAR DOCTOR—I have been for some time past engaged in accumulating information on the subject of the leprosy, with a view to making it useful to the people of California and the United States generally. When I shall have completed my inquiries, I will embody the results in a note to the State Department. Meantime, I have referred your letter to Dr. James S. McGrew, and he has most courteously responded in terms enclosed.

Dr. McGrew was a surgeon in the Union Army during the rebellion, and his eminent services and ability gave him a place during most of the war as medical director of an army corps or military department. Better authority on any medical subject is not to be had. He writes me also in a private note much additional matter of value, which I am not authorized to use publicly in its present shape. I may say that the doctor, who is a thorough-going American, desires to warn his countrymen against allowing lepers to come among them from these Islands, and gives reasons for the warning which are most potent. Command me at all times,

Very respectfully, JAMES M. COMLY.

Dr. James H. McBride.

(Copy of Dr. McGrew's letter.)

HONOLULU, September 26, 1878.

To his Excellency General James M. Comly, United States Minister Resident:

DEAR SIR—In answering the letter handed to me by you from Dr. McBride, of San Francisco, I am compelled to be very brief. The life of a physician here cannot be said to be *sans grèvre*. If I had the ability, I have not the time to devote to the subject to make it interesting, I fear, to your correspondent.

The first question, "When leprosy first made its appearance in the Sandwich Islands," is rather a hard one to answer, as the "oldest inhabitant," who is generally as unreliable as other people, is not satisfied as to the date. From the very best information that has been obtained, it has always existed among the natives of the islands. The most intelligent natives say that their earliest traditions give an account of this disease; that it was not introduced by the Chinese, as some people want to have it.

Second, "Are all cases of leprosy excluded from intercourse with society?" Very generally. From political and other influences with officials of the Government, many are permitted to go at large without being questioned—really dangerous cases of leprosy.

Third, "Do foreigners (other than Chinese) have leprosy in the islands?" I am credibly informed that there never was a Chinaman landed here with the leprosy from China. What few Chinamen have the disease, have contracted it since their arrival here, from association and cohabitation with leprous natives. The Leper Hospital contains several English, German, and American lepers; quite as many of either of these nationalities as Chinese.

Fourth, "Do physicians in the islands consider leprosy contagious or infectious?" Most of our physicians, I might say all, have every reason to believe it to be both contagious and infectious.

Fifth, "Is it a fact that a certain island is set apart for the care of lepers?" A portion of the Island of Molokai was set apart by an act of the Legislature, in 1866, for this class of unfortunates. This was considered a necessity, and of the greatest importance to the public health. They are well cared for at this settlement: they have food, clothing, and medicines furnished at great expense by the Government, and are more comfortably situated than they could possibly be at their own homes. Still the mortality is very great at the settlement. It has been in existence about thirteen years; there have been, in all, about 1,850 patients admitted; the number of deaths for the same period is 1,140; leaving over 600 still there.

Hoping, my Dear Sir, that the questions of Dr. McBride are answered, I am, very truly,

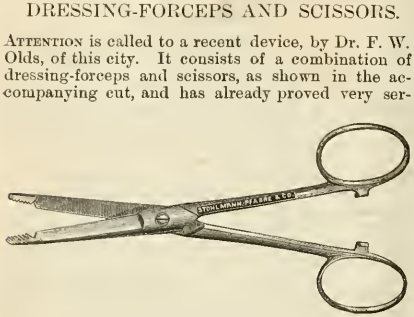
JOHN S. MCGREW.

DR. ALANSON S. JONES died in this city on May 20th, in the seventieth year of his age. He was graduated in the College of Physicians and Surgeons in 1839, and became surgeon-in-chief of the old Police Board before the establishment of the Metropolitan Police force. He was a member of the County Medical Society, and of the Board of Managers for the Relief of Widows and Orphans of Medical Men.

New Instruments.

DRESSING-FORCEPS AND SCISSORS.

Attention is called to a recent device, by Dr. F. W. Olds, of this city. It consists of a combination of dressing-forceps and scissors, as shown in the accompanying cut, and has already proved very ser-



viceable in hospital work. Besides answering the purpose of both dressing forceps and scissors, the serre-fine catch on the handles renders it a good needle-holder, thereby making it an acquisition to the surgeon's pocket-case, where economy of space is desirable.

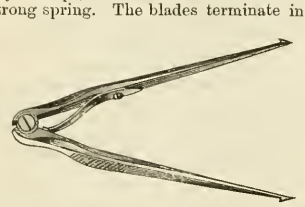
It is manufactured by Messrs. Stohlmann, Pfarre & Co., of this city.

A NEW PHIMOSIS-FORCEPS.

By JOHN H. GIRDNER, M.D.,

NEW YORK.

This instrument is composed of two blades, like an ordinary forceps, and these blades are held apart by a strong spring. The blades terminate in sharp



points, and on the outside of each there is a barb, which is made very sharp and points a little backward. These barbs as seen in the figure are a little larger than natural, in other respects the figure is under size.

To use this instrument the penis is grasped between the thumb and index finger of the left hand, and the prepuce drawn as far back as possible, or until the muco-tegumentary junction forms the boundary of its opening. The instrument is taken in the right hand, and the jaws pressed together until the points are completely closed, when it is introduced into the preputial opening until the barbs have just passed within it at either side. Now the grasp on the instrument is slowly relaxed, and the spring, pressing the jaws apart, causes the barbs to transfix, first the mucous membrane and the skin. Now, when traction is made upon the instrument, air passes in under the mucous membrane, lifts it from the glans, and it is drawn out along with the skin, when both are incised at one stroke and both recede from over the glans.

They are next brought together and their edges found to co-optate perfectly, any number of horse-hair sutures are put in, and primary union follows within twenty-four to forty-eight hours, without swelling or effusion of any moment.

I do not wish to say anything about the results which have been obtained where this instrument has been used, but only ask that it be given a fair trial.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from May 22, 1881, to May 28, 1881.

Bache, D. Major and Surgeon. His leave of absence for one month, on account of sickness, extended one month. S. O. 79, Division of the Pacific and Department of California, May 17, 1881.

Woodruff, E., Capt. and Asst. Surgeon, now awaiting orders in New York City. To report to commanding officer, Willet's Point, N. Y., to relieve Surgeon Clements. S. O. 116, A. G. O., May 21, 1881.

Shannon, William C., Capt. and Asst. Surgeon. Assigned to duty at Fort D. A. Russell, Wyoming. S. O. 44, Department of the Platte, May 21, 1881.

Medical Items and News.

Contagious Diseases — Weekly Statement. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending May 28, 1881.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
May 21, 1881.	34	10	151	27	157	114	42	0
May 28, 1881.	17	6	154	24	162	96	51	0

More Trichinosis at Hoboken.—Hoboken has recently had its third case of trichinosis. The patient is a young man, twenty-four years of age, who is employed in a pork-packing establishment in this city. He suffered at first simply from swelling in the muscles of the arms and legs. Subsequently, more marked symptoms of trichinosis developed, and the parasites were discovered in the muscles. The case is under the care of Dr. Kudlich.

The Heatonian Method for the Radical Cure of Hernia.—In an interesting article by Dr. W. H. Heath, U.S.M.H.S., in the *Buffalo Medical and Surgical Journal*, some new facts regarding the Heatonian method for the radical cure of hernia are given.

Dr. Heath thinks that the operation has not yet received the attention which its merits justify, and urges the importance of employing more generally a measure that is at once harmless and efficient. Dr. Heath has operated, in the usual way, in twelve cases, with one failure (due, probably, to a nurse's careless-

ness), and one accident when the irritant was deposited in the areolar tissue of the cord, which, from pressure of the hernia, had been spread out and displaced almost beyond recognition. Nine of the cases he considers permanently cured, and two are still under observation in the wards. All the cases were of oblique reducible inguinal hernia: eight of five years' standing; one of seventeen years; one of twelve years; and two over two years. Two of the cases operated on were seen six months after the operation, and found to be in perfect condition. One of them had been working as a coal-heaver.

Dr. Heath refers to the necessity of great care in the details of the operation. With such care, success is almost certain. The great importance and usefulness of a successful method of treating hernia are very forcibly described.

Trance in the Lower Animals.—Dr. George M. Beard, writing on this subject in the *Journal of Comparative Medicine*, classes among trancoidal conditions those induced by Rarey in his famous method of training horses. The animal is tied, thrown, and allowed to struggle until completely subdued. It is then gradually unloosed, and is then found to be docile. Elephants are tamed in the same way. Jack-shooting of the deer, fishing with lights, catching fish by tickling, charming snakes, lizards, and alligators, as is done by some hunters, are all forms of the same method.

Doctor-making.—A French journal gives the following account of an examination for a medical degree. We might locate the incident in this city, if it were not for the Latin.

Q. Quid est creare?

A. E nihilo facere.

Q. Bene; te doctorem creavimus.

The Metric System.—Dr. Charles H. Eames, of East Saginaw, Mich., writes: "In the Record of the 30th ult., Dr. J. B. Stair, of Spring Green, Wis., refers to a recent correspondence of mine, in which I suggested a method of estimating doses by the metric system for the use of those who had become accustomed to Troy weights and measures, 'and to whom it would be almost impossible, certainly impracticable, to forget the old in learning the new.'

"In my article, I assumed that one gramme equalled fifteen grains. He says: 'Of course the formula is an approximate one. A careful prescriber will not approximate terms.'

"Throughout the entire article, he iterates and reiterates the fact that those who prescribe on this hypothesis are not *accurate*, and only approximate the desired dose. Now this is all logical, and to a whilom reader might be convincing; but let us see what it is he complains of. In prescribing one-fourth of a grain of morphia, he wants to know that his patient gets just one-fourth of a grain. Of course he does! but if he assumes that a gramme equals fifteen grains, he will prescribe nearly $\frac{7}{1000}$ of a grain too much. Just think of it!! but perhaps a trace of it might adhere to the spoon or paper: that would just about compensate for the *inaccuracy*.

"He may say I am unfair in taking so small a dose as an example, although it was one of his hypothetical cases; we will suppose he wishes to give tincture of iron in a fifteen-minim dose: if he should prescribe one gramme, he would get nearly half a drop too much. How dire might be the result!

"The plea of inaccuracy is merely captious—it is frivolous; it would be contemptible if it was not so ludicrous.

"I will tell the doctor something. This is not the reason he does not adopt the metric system; it is not even one of the reasons; it is an excuse begot of a prejudice.

"He and others do not change because they like the old way; it answers the purpose well enough; it is the time-honored method; it has become American, and we like our own custom better than foreign ones. It is too much trouble to make the change; we are too lazy—too busy.

"There are plenty of reasons, and good ones too, but the plea of inaccuracy is an excuse 'after the fact,' as lawyers would say.

"If it is accuracy the doctor is championing, why does he not touch on some of the practical points instead of this purely visionary one. I will respectfully direct his attention to the variation in the size of teaspoons; the manner of filling them; and the difference in the size of a drop if let fall from a free surface, or from a medicine dropper with a small aperture, now so much in use.

"Besides all this, I have not learned to regard medicine as such an exact science, that it is of vital importance whether we give 15 or 20 minims tincture of iron, 10 or 12 minims tincture of digitalis, 6 or 8 minims tincture nux vomica, or 3 or 4 minims tincture gelseminum; and I believe if we give the right drug, and not too much of it, giving nature some kind of a chance, those who use the metric system and those who don't will alike be entitled to a seat in the kingdom of heaven, provided there is such a place, and it is not foreordained otherwise."

Commencement of the Woman's Medical College of the New York Infirmary.—The twelfth annual commencement of this college was held on the evening of May 31st, at Association Hall. A fair audience was in attendance, and an orchestra, with piano, gave some choice selections from the masters. The exercises were opened with prayer by the Rev. Dr. Collyer, who also delivered the address to the graduating class. The degree of Doctor of Medicine was conferred upon eight young ladies. The valedictory was delivered by Dr. Fanny Gertrude Willard, of the graduating class, and was much above the average of such efforts. The front of the platform was covered with rare and beautiful flowers, tastefully arranged in baskets and bouquets, and were the contributions of friends of the graduates. The Rev. Dr. Collyer, after putting the audience in good humor by some of his characteristic anecdotes, gave some earnest words of encouragement to the graduates, assuring them that by patience and faith their ultimate success would be duly assured, and the necessity for their work triumphantly vindicated.

Epidemic Metastatic Orchitis.—Dr. S. L. Bramlette, of Honey Grove, Texas, writes: "In your journal of April 30th, an article by Dr. Miller, of Kansas, states that there exists in his community an epidemic of parotiditis, with a decided metastatic tendency, which he terms 'Epidemic Metastatic Parotiditis.' There exists in this vicinity and the adjoining, an epidemic of the same character. The epidemic commenced as such in December, there having been a few cases all the year. With the females there have been few, if any, cases of metastasis, whereas few males have escaped. In most cases there is but a sympathetic tenderness and very little swelling. In others we have well-marked and severe cases of orchitis, the swelling reaching in many that degree seen from extension of gonorrhœa. Usually both testicles are involved, extending from one to the other, the last

one more affected than the first. The inflammation runs a regular course, and subsides in from four to ten days; in no case, so far, any hardening or permanent lesion occurred. Cold appears to play no part in the metastasis, for the latter occurs in as many now as it did in the cold months; besides, for the past month, men go to their rooms and take every possible care of themselves on appearance of first symptoms of mumps, for it has got to be dreaded by men on that account.

"Notwithstanding all the precautions, it occurs just as often; in two cases now on hand, the patients actually were afraid to go out of the house, and stayed in bed most of the time. Yet their testicles are swollen, very painful, and there is slight fever from pain and extensive inflammation, yet they appear to suffer very little from the parotiditis. There is also an unusual tendency to orchitis from extension of gonorrhœa, which for the past few months has been very marked. Only a few days ago a young man came to me suffering from enlarged and painful testicles. Stout and athletic, he had never had gonorrhœa, nor was he suffering from any symptoms of mumps. The only cause he could assign for the trouble was jumping, for he was a noted jumper, and from his history I came to that conclusion. Yet why should it have occurred at this particular time, when he had done the same thing many times before, with no injury? Was it a sympathetic tendency? In conclusion, I have (following my text-books) always doubted metastasis, but in the past four months I have been convinced to the contrary. I am confident that I can gather in this little town the history of between fifteen and twenty well-marked cases of orchitis, besides many who have suffered from slight swelling and marked tenderness during the course of an attack of parotiditis. All have occurred in the past four months, and, like Dr. Miller, I believe there is decidedly an epidemic tendency to metastatic orchitis in this epidemic."

Another Fasting Girl is reported to be in her eighteenth week of starvation at Chapelton, Scotland. The girl takes a little cold water, but no food whatever. The case, we are told, is "exciting great interest in medical circles," and the *Tribune* says: "If Dr. Tanner has that magnanimous appreciation of the successful efforts of his competitors which ought to animate the bosom of the great American faster, he will make a pilgrimage to the shrine from which this Scottish maiden is being gently exhaled."

Advising Change of Code of Ethics.—At a meeting of the Medical Society of Scott County, Iowa, April 7th, in response to a previous resolution, a committee was appointed to prepare a report on the desirability of changing the code, so as to admit into our societies those of known and acknowledged ability, without regard to previous habits of thought or modes of practice. This subject was deemed of sufficient importance to merit attention, in view of the action of the New York County Medical Society in admitting ex-homœopaths to membership, and of the Universities of Michigan and Iowa in sustaining homœopathic departments in addition to their medical departments.

At the succeeding meeting, May 5th, the following report of the committee was unanimously adopted:

"*Mr. President, and Gentlemen of the Scott County Medical Society:* Your committee, appointed to consider the desirability of so changing the code as to admit into the membership of our societies those of known and acknowledged ability, without regard to previous habits of thought or modes of practice, would respectfully report as follows:

"We do not think it advisable to make the change specified,

"*First*—Because the code as it is, which we consider to be a most excellent professional standard and guide, requires no alteration to admit to membership homœopaths, or others who may have abandoned their special tenets for the regular diploma and practice.

"*Second*—Because without such reform on their part, we must approach the problems of disease in ways so radically different, that there could be no harmonious and beneficial co-operation.

"Supplemental to and in further explanation of this report, we beg leave to present the following statement:

"In view of recent accusations emanating from more or less prominent sources, and made public through the press, both of England and the United States, charging the regular profession with bigotry and illiberality in their attitude toward the homœopathic and other special schools, your committee deem it expedient and right that this Society should at this time clearly define its position, which is also, we believe, that of the regular profession the world over.

"We hold that the practice of the healing art should be based on no dogma or article of faith, but on *knowledge*, the most exact that scientific research and unbiased observation can obtain.

"The terms 'allopathist' and 'old school,' as applied to members of the regular profession, are to-day obsolete, inapplicable, and disclaimed. Rational medicine, which we endeavor to practice, is a *growing science*, to whose development all sciences contribute, and whose votaries acknowledge the restrictions of no 'pathy' nor 'school.'

"Because this is so, there can be no common ground for efficient counsel between us and those who are controlled by any fixed medical creed, even though the elements of such creed were not, in themselves, irrational and absurd; nor can we trust or take counsel with those whose integrity is not such as to prevent them from assuming a name and professing principles with which their practice does not agree.

"The Homœopathic Society of Northern New York having formally discarded the doctrine of infinitesimal doses, the regular profession of that State sanctioned the recognition of some who have thus advanced to more tenable ground.

"When the homœopathists of Iowa shall take a like rational course, and can establish the claim to a scientific medical education, we shall stand ready to welcome them under our ethical code as it exists, as co-laborers for the good of man. But we see little prospect that even so much of a reform as that in New York is likely soon to become general; not certainly so long as the people of two great commonwealths like Michigan and Iowa, continue to support in their State Universities, side by side, departments for instruction in broad medical science, and for the maintenance of a special medical creed.

(Signed) "J. W. H. Baker,
A. S. Maxwell,
C. H. Preston."

Some Recent Studies in Hypnotism.—Professor W. Preyer, of Jena, has recently written an article on the subject of trance, or hypnotism, which has been published in the *Deutschen Rundschau* for February. Hypnotism, or nervous sleep, he says, is

a peculiar condition of the nervous system, which may be caused by continuous forced attention, especially by means of the eyes, upon any object. The history of hypnotism is given, and the prominence which Braid has in this is referred to. He speaks of the large number of persons that can be hypnotized, and of the fact that children, the restless, and the idiotic cannot well be put in this condition, because their attention cannot be concentrated. He thinks that absent-mindedness and hypnotism are but different degrees of the same state. The various disturbances of the special senses and of motion and sensation, which are brought about in trance, are described. There is nothing especially new given, however, no facts that have not been noticed and described in this country, especially by Beard.

Preyer says that a current of air blown with the lips has been felt at a distance of fifty to ninety feet, and has been made to dehypnotize a person. He gives as a differential diagnosis between sleep and hypnotism the circumstance that in hypnotism a person holds everything fast that is put into the hand. In sleep, however, they drop what is in the hands.

Preyer refers to various experiments in phreno-hypnotism, and in miraculous cures made by Braid. In speaking of the theory of trance he refers to the fact that when we wake up children gently, as they awake they can be made to do things of which they are scarcely conscious. Preyer also thinks that in the case in which the condition is produced the fixation of the attention produces a hyperactivity of one part of the brain, which causes an accumulation of the fatigue products, and a consequent tendency to abolish sensation.

A Bohemian University is to be established at Prague, in addition to the German university at present there.

German Measles in this Country.—There has been in this city during the past winter quite an epidemic of what has been called by some German measles, by others roseola. It is contagious, but runs a very light course. It has affected children chiefly or altogether, and, so far as we can learn, has produced no serious results. The symptoms in general seem to resemble those of a similar epidemic which has occurred in Chicago recently, and which is described by Dr. C. W. Earle as German measles, or rötheln. Dr. Earle characterizes it as a disease occupying about the relation to measles and scarlatina that varicella does to variola. It is a specific acute exanthema, characterized usually by slight coryza and suffusion of the eyes, followed by an eruption and enlargement of the cervical glands.

Professor Pirogoff.—The fiftieth anniversary of Professor Pirogoff's professorship is to be celebrated on June 5th.

Dr. Ludwig Waldenberg, died at Berlin recently. He was a Professor in the University of Berlin, Physician to the Charité Hospital, and editor of the *Berliner klinische Wochenschrift*, the leading medical journal of Germany. Professor Waldenberg is also known for his device for the inhalation of compressed air.

The Oleomargarine Bill, which obliges oleomargarine to be sold under its own name, has passed both Senate and Assembly.

Some Recent Medico-Legal Cases.—The Whittaker case has now reached the stage of medico-legal interest, the question being whether Whittaker was really unconscious or only shamming. Dr. G. M. Beard propounds the somewhat novel theory, that Whittaker was in a state of trance, coma, or sleep, into which he had been frightened by the persons who bound and mutilated him. Other medical men testify that he could not have been shamming, a prominent reason being that his pulse was so slow and regular.

A case of much interest in the Brooklyn courts involved the question whether the patient had functional or organic disease of the spine. The medical testimony brought out a great many facts in regard to the physiology and pathology of the spinal cord.

The case of poisoning by eating a lemon meringue pie has just been brought up and has brought out some interesting facts. Somewhat over a year ago, a baker on Eighth avenue sold some lemon meringue pies. Individuals in five families who bought and ate them were taken violently ill with symptoms of gastro-intestinal irritation. One man died, and on post-mortem evidences of gastro-enteritis were found. It was thought, and stated at the time, that the poison was some salt of copper, formed by cooking the pie in copper kettles. No copper, however, was found, either in the pie or the man's stomach. It was then discovered that there was in the pie a large amount of yellow dye—not the usual aniline yellow, but *dinitro-naphthol*, a cheap pigment, used sometimes in dyeing. A considerable amount of this was found. The interest centres in the fact that this was the first time that this dye had ever been known to have poisoned any one. The case brought up the subject of the poisonous nature of aniline dyes, a subject not yet very thoroughly investigated.

Sir William Jenner has been elected President of the Royal College of Physicians.

An Official Report on American Pork.—In view of the recent action taken by the French and other European governments in regard to American pork, as well as to be able to correct by positive and personal evidence the exaggerated reports which are published in Europe concerning hog-cholera and trichinæ among American swine, Secretary Blaine sent the Chief of the Bureau of Statistics, of the Department of State, to Chicago and Cincinnati, to investigate the entire question of hog-raising and pork-packing in the West in all its phases, "from the farm to the ship." This gentleman visited representative hog-raisers, buyers, shippers, packing-houses, stock-yards, rendering establishments, health offices and forwarding agents, and has now submitted his report. The conclusions arrived at were in brief that American swine were the best and healthiest in the world; that they were killed and cured in the best and most careful manner, and that the reports regarding disease among them were grossly exaggerated. It was shown that the prevalence of hog-cholera could in no way affect the cured and exported flesh, since no animal that died of that disease would be or could be utilized as food.

In regard to the prevalence of trichinæ, the reporter states that "in all probability" American swine are less subject than European swine to this disease.

This opinion does not tally with the results of Dr. Billings' investigations. The statements given in the report are probably in the main correct; but they show a strong bias in favor of the pork trade; and bear very strongly the impress of the opinions of Western pork-packers. And, unfortunately, the

investigations heretofore made by Government officials into contagious diseases among the lower animals have not always been of the character that inspires confidence in the ability or judgment of the investigators. In this case, the very point which most needed investigation, viz., the amount of trichinosis in American swine, was almost entirely ignored. Very flattering commendations of the way the Western dealers cure their hams make up most of the conclusions. The report is therefore a temporary help to the commercial interests of the West, but it adds little to our knowledge of the actual prevalence of parasitic and contagious diseases among American cattle.

Damiana Turnera Aphrodisiaca.—Dr. J. J. Caldwell writes of this drug in the *Virginia Medical Monthly* as follows:

"This remedy I had the pleasure of introducing to the profession several years ago, although known in Mexico since early in the seventeenth century. It is now *generally* known, and it is admitted to be the best of the permanent tonics in the treatment of debility of the genito-urinary organs. If there has been any question as to its merits in this particular, it has been caused by the numerous imitations and counterfeit preparations that have been on the market since its introduction; or, as J. H. Hammond says: 'The greatest impediment in its way to professional confidence is the large amount of spurious preparations upon the shelves of our merchants, or which has been rendered worthless from age or improper handling; hence the many disappointments.' The true damiana is a great remedy in renal and vesical diseases. In nephritic albuminuria the results were, from the beginning, most marked. The albumen slowly but steadily disappeared, the patient at the same time constantly improving until perfect restoration to health ensued. In combination with atropia, it is one of our best remedies in inflammatory diseases of the kidneys.

"Although slower and more silent than buchu, uva ursi, and other positive diuretics, the true damiana, persistently administered, will meet every indication fulfilled by these drugs, and is and must prove their superior in all inflammatory and mucous membrane diseases of the genito-urinary apparatus. Damiana, in combination with tincture of cimicifuga, is an elegant remedy in painful diseases of the muscular coat of the bladder, and in neurotic diseases involving the kidneys."

Dr. Caldwell does not refer to the supposed tonic action on the cord attributed by some to this drug.

Anatomical Nomenclature.—The general subject of anatomical nomenclature, with a list of more than one hundred and fifty names of parts of the brain, has been discussed by Professor B. G. Wilder, in *Science* for March 19th and 26th. In the same journal for April 9th, Dr. E. C. Spitzka comments at some length upon Professor Wilder's views and propositions, with which, in the main, he accords. The subject is of practical interest to all teachers and students, and it is to be hoped that other anatomists will give free expression to their opinions.

Cranial Temperature and Voluntary Muscular Movements.—The experiments of Dr. Amidon, of this city, which seemed to show that voluntary muscular movements caused an elevation of temperature in certain definite areas of the cranium, have been repeated by M. Paul Bert, M. François Franck, and Dr. J. S. Lombard. All the experimenters failed to corroborate the observations of Dr. Amidon, so far as elevations of temperature are concerned. Dr. Lombard's experiments seemed to show that the effect of the muscular movements was on the whole to lower the cranial temperature. This latter experimenter is of the opinion that muscular movements do cause variations in cranial temperature. Exactly what these are, or what the mechanism, it is impossible yet to say.

An Interesting Case of Deafness.—The following is abstracted from a newspaper account of the deafness of Mr. Cowles, editor of the *Cleveland Leader*, sent us by Dr. Hines: There are certain sounds this person has never heard, such as the voice of a bird, and until manhood he never knew the music of the bird existed except as a poetical fiction. A multitude of birds might fill the room with their vocalizations, yet he would never hear a single note; the fluttering of their wings, however, he would hear.

The hissing sound in the voice he never hears, consequently, not knowing the existence of that sound, he grew up to manhood without ever making it himself in his speech. Even after acquiring the art of hissing it is not heard by himself, and, consequently, he frequently omits the sound in his speech without knowing it.

A portion of the consonants he never hears, yet he hears all of the vowels. He does not distinguish between the hard sound of the letter S and the soft sound, consequently he frequently mixes these sounds in a sad manner. It is the same with the soft and hard sound of the letter G. It having become a second nature to omit the sound of the letter S, when he makes it the effort required is very great, and this in a measure, gives his pronunciation the peculiarity it has. There are words which he pronounces literally, according to the spelling; this gives an additional peculiarity to his speech. For instance, the word "parochial" was pronounced phonetically until he was taught to say "parokial." He cannot distinguish by his hearing between the sounds "ch" and "k" when embodied in a word. Before he was taught to make the hissing sound, his own pronunciation sounded the same to others that theirs did to him. He thinks that at least one-fourth of the sounds in the human voice are never heard by him, but, having obtained the sense of the conversation, he is greatly aided by watching the motions of the speaker's lips. He has observed a policeman at his side blowing his whistle, and, although plainly heard by others half a mile away, it was not heard by him. He never hears the upper notes of a piano, violin, or other musical instrument, although he hears all the lower notes. He can hear low conversation better than the voice of a public speaker in a hall. This condition of his hearing accounts for a peculiar impediment in his speech.

An explanation of the phenomena described above may be found in a paper read by Dr. Samuel Sexton before the New York Academy of Medicine, and published in the Record for January 22, 1881. In this paper, Dr. Sexton discusses the subject of false-hearing and autophony in singers, speakers, and performers on certain musical instruments. Dr. Sexton has for many years made physiological acoustics the subject of careful research from the standpoint of clinical observation, and we feel sure the profession will receive with much interest the complete results of his labors in this particular department of otology.

Original Communications.

CASE OF MICROCEPHALUS.*

By MARY PUTNAM-JACOBI, M.D.,
NEW YORK.

Herman Wagner is quoted by Fischer as saying: "If we had the exact physiologico-psychological analysis of one hundred microcephals during life, and careful anatomical examination of their brains after death, we might become much farther advanced than at present in physiological psychology."†

Descriptions of microcephalic brains, although constantly increasing in number, are not yet so frequent that the detailed relation of a new case need, I think, be regarded as superfluous. This is my reason for laying the following account before the society.

The child from whom this brain was taken was born under the following circumstances: The parents were both healthy country-people, the father especially so. The mother, married at the age of twenty-four, had been rather anæmic before marriage, and the menstrual periods had often been delayed for months. This circumstance, however, did not seem to affect the general health, and no uterine disease, not even uterine catarrh, developed. During the first eighteen months of marriage Mrs. N—— became pregnant twice, but on each occasion miscarried at the end of three months. Becoming pregnant for the third time, she consulted me in regard to the possibility of preventing a recurrence of her misfortune. She was then two months advanced in pregnancy. I advised her to remain in bed until the beginning of the seventh month, an advice which she at once accepted, and followed most scrupulously. During this long period of confinement her health remained extremely good; she was free from even the ordinary discomforts attendant upon pregnancy, the appetite and digestion remaining unimpaired. Thinking to exceed my precautions, she, however, stayed in bed till nearly nine months had elapsed. At full time she was safely delivered of a little girl, presumed at the time to be perfectly healthy, and weighing seven and a half pounds. It was nursed by the mother, and was supposed to thrive, until at the age of three weeks an accident occurred, of which I received the following description. The child, who had been lying quietly, and apparently well, suddenly gave a long inspiration, and then seemed to cease to breathe. The eyes rolled up, but otherwise there was no convulsion perceptible to the mother or attendant. The child was said to have become pale, and at no time bluish or livid. After an interval, which the mother could not define with precision, the child began to breathe again, but feebly. It remained in a state bordering on collapse for five or six hours, unconscious, and refusing the breast. The next day it seemed to be restored to its usual condition, but a week later it began to have paroxysms of "choking," which continued up to the time at which I first saw it, at the age, namely, of three months.

During the intervening time the solicitude of the parents was not at all awakened about the child. The mother's milk rapidly dwindled, so that from the age of six weeks it was fed from the bottle, receiving cow's milk and barley-water for nourishment. When three months old the mother brought it to me, not because she herself was alarmed about it, but because the neighbors told her that it was unnaturally small for its age.

At this time the baby did indeed weigh nearly the same as at birth, namely, 7½ pounds. Its length, from vertex to heel was 20½ inches. The body was much emaciated. The circumference of the head was 12¼ inches, and the distance across the vertex, from ear to ear, was 7 inches. The anterior fontanelle was very small; the parietal bases and the occiput were very protuberant; the temples hollow. The palate was excessively arched. The ears were deformed, the upper part of the ear being crumpled back almost at right angles with the lower.

In addition to the deformity of the ears, there existed a double pes calcaneus.

The child coughed a little, but not sufficiently to attract the mother's attention. The latter was, however, much preoccupied by the paroxysms of so-called choking, which had continued to recur ever since the baby was a month old. This would sometimes come on during the act of feeding, but not exclusively then. They consisted in a series of spasmodic expirations, causing a sound as if from the presence of a foreign body in the œsophagus or air-passages, to whose expulsion these expiratory movements were directed. They were preceded by a moderately long inspiration, as in spasm of the glottis, but were not separated from each other by any intervals of completely arrested respiration. During the paroxysms, which lasted barely a minute, the color of the face did not change, nor did the child exhibit marks of distress. The paroxysms were repeated several times a day, varying in severity. In the intervals, the child often wheezed a great deal. Examination of the lungs found a most extensive pneumonia. The upper half of the right lung seemed to be completely solidified, as shown by absolute dulness on percussion, and rather loud tubular breathing. At the base of both lungs the respiration was excessively harsh, the expiration somewhat prolonged and mingled with râles. The upper half of the left lung was free. There was no fever, and, the greater part of the time, no dyspnœa, and probably on this account the existence of the pneumonia had never been suspected.

Careful examination by percussion was made, to ascertain if the thymus glands were enlarged. Dulness on percussion existed at the upper part of the sternum; but I was obliged to refer this to the consolidated lung. The possibility of thymic asthma was therefore excluded, and, as the autopsy proved, with justice. It did not seem improbable, however, that the choking spasms were due to a recurrent and temporary excess of irritation of the respiratory centres, from imperfect aëration of the blood, dependent on the pneumonia. The singular fact was that the respiration should not have constantly presented the modifications characteristic of pneumonia—should have been neither acceleratad nor laborious. This fact necessarily implied an abnormal tolerance of the respiratory centres. It seemed as if, under the accumulation of the irritation, their susceptibility was from time to time awakened; hence the prolonged inspiration, followed by the spasmodic expirations.

The existence of the extensive pneumonia, which might have dated from the convulsive attack three weeks after birth, would largely account for the profoundly impaired nutrition of the child, and even

* Read before the New York Neurological Society, April 4, 1881.
† Fischer: Archiv. f. Psych. Bd. V.

for a considerable arrest of bodily development. Chronic pneumonia in young infants is as efficient a cause of "athrepsia" as are diseases of the digestive organs. But, in common cases of this rather frequent disease, the intelligence of the child is not fundamentally affected. Though dull and apathetic, the child shows distinct capacity for recognizing persons and things, and marks of varying emotion, such as this baby had never exhibited.

It was mentally no farther advanced than a baby a week old, to which age its bodily development corresponded. When a bright light was held before its eyes the pupils contracted, and the head was turned away; but, further than this, the child could not be made to notice anything. It never smiled, keeping up a constant low, fretting cry, entirely unable to sit up, or even hold its head up, or to grasp anything in its hands. No localized paralysis, however, could be discovered. The muscles, including those involved in the pes calcaneus, contracted perfectly under the faradic current.

The general conclusion arrived at in the case was that the brain sustained, not only an impairment of nutrition in common with all the organs of the body, but a real arrest of development. If, as was considered doubtful, the pneumonia should ultimately resolve, and the general nutrition improve, it was to be expected that the child would remain idiotic.

The baby was first seen on March 1st, and again on April 20th. During this interval, under the use of cod-liver oil, it had at first gained one-fourth of a pound in weight, but then lost three-fourths of a pound, so that it weighed one-half pound less than at birth. The flexor muscles of both feet, namely, the tibialis anticus, extensor communis, and extensor pollicis muscles on each side, were in rigid contraction. The knees were also partially flexed, and the hamstring muscles, especially on the right side, rigid. The condition of the child was otherwise unchanged. This was the last time I saw the child alive. A few days after its second visit to me, the child began to suffer from pains, which made it cry and moan almost constantly. These pains seemed to be associated with, if they did not consist in, a generalized hyperæsthesia of the surface of the body, as the crying was always increased, and often excited by merely touching the surface. The contraction of the right leg became more marked, and some rigidity of the arms appeared. Deglutition became increasingly difficult: the buccinator muscle, and also the soft palate, became paretic, so that the milk ran from the mouth and often regurgitated from the nose. On the evening of April 30th, violent vomiting set in—at first of bile, afterward of a chocolate-colored fluid, and the child died of exhaustion at five A.M. the following day.

The autopsy was made on the afternoon of the same day.

The body was excessively emaciated; the scalp seemed much too large for the skull.

On opening the calvarium, the dura was found adherent over the central part of the cranium, for a space about an inch broad, and extending from the posterior angle of the fontanelle to the occipital protuberance. The surface of the cerebral hemispheres was extremely pale and the whole brain highly œdematous. Serous effusion in moderate quantity existed in both the lateral and the fourth ventricles, and the aqueduct of Sylvius was much dilated. The ependyma lining the ventricles was not injected; there was no distinct sign of meningitis, either internal or external; the hydrocephalic effusion, which terminated the child's life, seemed to have been mechanically determined by the continued shrinkage of the brain. This cause of acute hydrocephalus is of course well recognized. Examination of the lungs showed extensive broncho-pneumonia with consolidation, occupying exactly the same area as had been marked out by the examination made two months previously.

The thymus gland was normally atrophied. The question now presented itself with renewed interest, whether the diminutive size of the brain was merely the result of general malnutrition determined by the pneumonia, or whether it depended on the perversion of development characteristic of true microcephali. The symptoms of the last fortnight of existence, the hyperæsthesia, muscular rigidity, paresis of deglutition, and final attack of vomiting, were evidently due to the hydrocephalus, and especially, perhaps, to the distention of the aqueduct of Sylvius, and consequent intense irritation of the tubercula quadrigemina.

But the arrest of intelligence, well-marked long before the occurrence of such symptoms, pointed to the existence of a morbid condition anterior to the hydrocephalus, which must be considered as acute, for the amount of the ventricular effusions was insufficient to explain the small size of the brain by an atrophy due to compression. Nor, again, was there such premature ossification of the cranial bones as could constitute a cause of microcephalus by the theory of Virchow; a theory, moreover, which Virchow himself has more lately surrendered as exclusive. The diminutive size of the brain was therefore considered to be the result of a primitive arrest of its development, and not a mere atrophy secondary to pathological lesions that had developed during extra-uterine life. This conclusion was confirmed by closer examination of the brain, which discovered many profound modifications of its structure.

Description of the brain.—Weight of entire encephalum preserved in alcohol = 8.25 oz. To this, according to Prof. Marshall's calculation, must be added 27 of weight as lost from weight of fresh brain. This brings entire weight to 10.49 oz. = 326.581 grms.

The last researches of Bischoff give three hundred and ninety-six grammes as the average weight of new-born girls. The weight of the brain of a baby of seven months should be between six hundred and seven hundred grammes, or double the weight of this brain—which, indeed, was seventy grammes less than the average for the new-born.

Since the child, just before death, weighed seven and one-fourth pounds, and when born seven and one-half pounds, the latter number may be taken to estimate the proportionate weight of the brain to the body. This was as one to eight and one-third.* Bischoff's average for the proportion at birth is a little less than one to seven. The brain in this case was therefore not only absolutely, but relatively too small. The proportion, however, is still very much higher than for the chimpanzee and the orang, where the proportion of the brain to the weight of the body is from 1 : 19 to 1 : 30.

The cerebellum weighed one ounce, *i. e.*, about one and one-third ounce in the fresh state. The medulla and pons weighed one-fourth ounce, or one hundred and twenty grains preserved, *i. e.*, one hundred and fifty-five grains in the fresh state.

The right hemisphere was about twenty grains

* Body weighed 7¼ lbs. = 2612.684 grms. Proportion to this of 326.581 is as 1 to 8¼.

heavier than the left. It was also about one and one-fourth centimetre longer than the left in the antero-posterior diameter, this difference existing entirely in the posterior lobe, for on each side the distance from the fissure of Rolando to the apex of the frontal lobe was the same, *i. e.*, 6.5 centimetres; but from the same point to the tip of the occipital lobe, measured on the right side eight and one-fourth centimetres, on the left seven centimetres.

Thus the entire length of the right hemisphere was fourteen and three-fourths centimetres, of the left, thirteen and one-half centimetres. This agrees with the microcephalic brain described by Schule in an adult idiot, whose sagittal diameter measured thirteen and one-third centimetres. Steffen describes a microcephalon of a year old, the sagittal diameter of whose brain was eleven and one-third centimetres.

The differences in weight and size between the two hemispheres were accompanied by a moderate degree of asymmetry in the arrangement of the convolutions and sulci. These are recognizable in the drawing. On the right side the occipito-parietal fissure was remarkably deep. The disposition of the frontal canal differs considerably on the sides. Thus, the brain, so notably below the normal type of a human brain in regard to weight and size, tends somewhat to return to that type by the asymmetry that constitutes such an important characteristic of the higher organization. The general appearance of the brain, viewed from above, is well represented in the drawing. Its most striking peculiarities are the following:

First, the hemispheres taper to a point at each extremity, instead of presenting the normally rounded appearance. Posteriorly this tapering causes the extremities to diverge outward from one another, leaving exposed between them the middle third of the cerebellum. Moreover, the occipital lobes fail to reach the posterior extremity of the cerebellum, which projects beyond them as much as six centimetres. The distance between the apices of the occipital lobes was 5.5 centimetres. This tapering of the frontal and occipital lobes, and the uncovering of the cerebellum, were the most obvious and striking peculiarities of the brain viewed as a whole.

In addition, it was noticeable that the line of maximum breadth passed through the inner part of the sulcus centralis, and that the line of greatest height of the brain just reached the inner extremity of this same sulcus. From this point the surface sloped steadily down to the ear-tip of the frontal lobe. Just before reaching this, the abruptness of the line of descent was suddenly increased.

This general appearance of the brain, constituted by the tapering of the frontal and occipital lobes, the uncovering of the cerebellum, the relative breadth and height of the parietal region, closely resembles a microcephalon described by Bischoff and another by Luschka, and the case of Sabin related by Wagner. On the other hand, in the two cases of microcephalus described by Marshall, although the cerebellum was largely uncovered, the general form of brain was a short oval, rather than a long ovoid, as in this case. The tapering and flattening of the frontal lobes are seen in all the cases I have found described. But in Schule's case the occipital lobes covered the cerebellum completely, and Vogt, arguing exclusively from casts of microcephalic crania, asserts this to be the rule. Wagner and Sander, in contradicting this assertion, lay claim by their contradiction to already seriously undermine the analogies which Vogt declares to exist between the microcephalic brain and that of apes. This author, as is well known, maintained, that the microcephalon represented an actual regression toward the ape type, and entitles such individuals "affenmenschen." In this theory the condition of the occipital lobes is of great importance, because, as is known, in the anthropoid apes these lobes are remarkably well developed. According to Flower, the length of this part of the brain is greater in many of the apes than in man. Hence, the many cases of microcephalic brain in which the cerebellum is uncovered, as in our case, do not resemble, but, in this particular at least, strongly contrast with the anthropoid apes. The resemblance only exists with the lower genera of monkeys. Vogt, however, asserts that the uncovering of the cerebellum, when it exists, depends on the fact that this organ is normally developed, while the entire cerebrum is atrophied, and seems to think, therefore, that the fact has no significant bearing on his theory. In the tapering of both extremities, the brain in our case considerably resembles the brain of the Bushwoman, described by Marshall.

While the diminutive size of the frontal and occipital lobes is in accordance with the conditions most frequently observed, the proportion between the parietal and temporal lobes does not continue in the same manner. According to Schule, the temporo-sphenoidal lobe is the most developed of all in microcephalons; and this, he adds, should be expected, since the arrest of development involves only the vaulted portions of the encephalon and cranius; the base to which the temporo-sphenoidal lobe belongs is normal. Now, in our specimen, whether from accidental flattening or not of the highly œdematous fresh brain, the temporo-sphenoidal lobe is quite small; the parietal alone is, relatively to the size of the whole brain, well developed.

Now, according to Broadbent, the temporo-sphenoidal lobe is composed, with the exception of the gyri hippocampus and uncinatus, of superadded convolutions. It would seem, therefore, when the development of the brain tended to be arrested at the point of formation of the primary convolutions, that the temporo-sphenoidal lobe would be small. It certainly seems small in our case. In the frontal lobe may be observed the excessive simplicity of its convolutions, which has been noticed not only in microcephalic brains, but in those of the Bushwoman, described by Marshall, and of the Hottentot Venus, pictured by Gratiolet. The three convolutions are not straight, but are, on the other hand, only moderately curved; are narrow and flattened, and uncrossed or complicated by any secondary gyri.

These convolutions, however, remain superposed in horizontal lines—not arranged behind each other, as shown in some of Vogt's specimens. Such an arrangement would certainly indicate a much lower type.

The orbital convolutions are also extremely simple. The lobe, however, preserves its shape, instead of being as in the ape. I have not ascertained whether there is any "bridging" convolution between the orbital and anterior central convolution described by Vogt as characteristic, and of which anomaly Luschka relates a case. Another peculiarity greatly insisted upon by Vogt is an alteration of the Sylvian fissure, due to the defective development of the orbital convolutions. When these latter are well developed, as in the perfect human brain, they press backward underneath the anterior ramus of the fissure, and determine the formation of a common stem with two branches—the characteristic Y-shape of the hu-

man Sylvian fissure. When the same gyri are not well developed, as in the anthropoid apes, room is left for the united base of the two central convolutions to press downward and reach the base of the brain. As they pass between the rami of the Sylvian fissure, they obliterate the common portion of the latter and convert it into a V instead of a Y. This condition, recognized as characteristic of apes, is claimed by Vogt as equally characteristic of microcephalons. This proposition, also, Sander disputes. In the brain presented, from the unfortunate injury of the temporo-sphenoidal lobe, I am not quite sure whether or no this condition exists. But when the hemisphere is placed horizontally, it certainly seems as if the united bases of the central gyri reached to the base of the brain, *i. e.*, that the Sylvian fissure is V-shaped.

Coming now to the parietal lobe, we find well marked, the sulcus centralis and precentralis, the interparietal fissure, two central convolutions, and the supra-marginal convolution and lobule. The development of the latter is important, as it is well known that, according to Gratiolet, it is characteristically more developed in human beings; conversely, it was very imperfect in Marshall's cases. In my notes of the entire brain, I find that the angular gyrus is said to have been also well developed. But the left hemisphere has been embedded for microscopic sections, and on this one the accidental obliteration of the parallel fissure renders difficult the determination of the angular gyrus at its extremity. So far as can be made out, however, this gyrus is very imperfect.

Throughout the parietal lobe reigns the same extensive simplicity noted in the frontal. The central convolutions are almost straight, the interparietal fissure undivided, the superior and inferior parietal lobules and the præcuneusof a fœtal degree of simplicity.

The occipital lobe is by far the most rudimentary of all. Instead of the tortuous mass of bridging convolutions, only the three typical gyri exist, small and simple. The cuneus is very small. Especially to be noted is the prolongation across the cuneus of the sulcus described by Ecker as the occipitalis transversus. This prolonged sulcus passes between the parieto-occipital and calcarine fissures, and terminates in the former. Ecker states that this fissure is recognizable early in the fœtus; but that, according to Bischoff, it disappears again at the eighth month. This fissure is present in certain genera of apes, and, in the connection, its marked development in this microcephalic brain is especially interesting.

Below the calcarine fissure can only be seen a single convolution, the gyrus occipito-temporalis medialis, or lingual lobule, running into the gyrus hippocampi anteriorly. The gyrus hippocampi does not rise directly from the gyrus fornicatus, but is separated from the latter by a prolongation of the calcarine fissure. Now, this is a circumstance that I have not seen mentioned in any of the other microcephalons whose descriptions I have read; yet, according to Ecker, it is most decidedly a feature of the simian, as contrasted with the human brain. Ecker says that in "scarcely any other particular does the brain of the majority of apes differ so essentially from that of man as in the disposition of the fissura hippocampi. In man the gyrus fornicatus passes without break into the gyrus hippocampi, and it consequently results from this continuation of the convolutionary tract, that the fissura calcarina and fissura hippocampi are separated from each other. In the apes, on the other hand, with two exceptions, the two fissures just mentioned pass into one another without a break, and it is thus that the gyrus fornicatus and gyrus hippocampi come to be parted from one another."

Exactly this character exists in our brain, and is, perhaps, its most important individual peculiarity. In regard to the central ganglia of the brain, little remains to be said.

I have not yet examined the convolutions of the ventricles, nor the insula. The thalamus seems remarkably large, and, so far as can be seen, the corpus striatum proportionately small. This disproportion between the two great basal ganglia is observed, according to Marshall, whenever the frontal lobes are atrophied, the size of the corpus striatum and that of the frontal lobes being proportioned to each other. The corpus callosum, if we may judge from its present shrunken state, is very small, and seems to terminate prematurely. The diminution of the three lobes receiving fibres from the corpus callosum, as well as from the crura and basal ganglia, would seem necessarily correlated by a diminished bulk in this commissure.

The cerebellum was normal, and as we have seen, weighed about a tenth of the entire encephalon, and is one-seventh the weight of the cerebrum. According to Bischoff, in the normal adult the cerebellum weighs a little more than one-seventh of the entire encephalon, and, in proportion to the cerebrum, is between one-seventh and one-eighth. Thus, there is little deviation in this respect from the normal standard in proportion to the cerebrum, but in proportion to the entire encephalon the cerebellum is smaller. The pons was flatter than normal, and the medulla looked smaller.

Dr. Birdsall very kindly made a microscopic examination of various portions of the cortex of this brain. The examination was rendered difficult from the regrettable fact that the brain had been hardened without removing the pia, and the subsequent removal of the pia during examination of the convolutions, more or less bruised the cortical substance. Dr. Birdsall, however, came to the conclusion that the development and situation of the ganglion-cells was about as rich as in the new-born child, and that the superposition of the different layers of ganglion-cells was normal. I have been unable to find any account of histological researches on microcephalic brains; the general expectation seeming to have been that, in this respect, these brains would show no especial peculiarity. It seems probable, however, that fruitful results might be obtained from examination of the relative masses of fibres passing from the stem and core of the brain to the different portions of its atrophied cortex.

Four sets of considerations have been brought forward by those who have studied microcephalic brains. They have been asserted to illustrate the development theory, by constituting a reversion to a lower type of animal or a lower race of man, or regarded as cases of literally arrested growth at some stage of development; hence, to represent a fœtal condition prolonged into extra-uterine life, or, finally, to the accidental result of pathological lesions, extra- or intra-cerebral; hence, to be necessarily variable and irregular, presenting superficial resemblances, but no real homologies, with brains of any lower type. Certain characters are common to all the lower types brought in comparison, whether of race, of species, or of individual development. These are, the smaller size and weight of the brain, the greater

approach to symmetry of its two halves, and the greater simplicity of its convolutions, or even their reduction to those primitively formed— and absence of the so-called superadded convolutions. All these characters are shared by this brain, and of themselves suffice to prove that it was not simply smaller, but modified below the possibility of normal human functions.

The brain of the Bushwoman has been further especially characterized by, first, the partial exposure of the island of Reil, in which it resembles the fœtal brain; second, in the large size of the supra-marginal lobule, which offers the line of greatest width of the cerebrum; third, in the very defective development of the occipital convolutions. In the two last peculiarities—both contrasting with brains of apes—this microcephalic brain resembles that of the Bushwoman.

Common to the latter and to the ape brain are: first, the more vertical direction of the Sylvian fissure; second, the beak-like projection of the orbital lobes near their median line. Neither circumstance was observed in our microcephalic brain. The simian characters to be noticed, apart from those already mentioned are, first, the descent of the operculum to the base of the brain, pushing asunder the two rami of the Sylvian fissure; second, prolongation of the sulcus occipitalis transversus entirely across the cuneus; third, union of the fissura calcarina and fissura hippocampi; fourth, uncovering of the cerebellum, as seen in lower genera of apes. All these characters were observable in this microcephalic brain, the second and third not having been, so far as I know, hitherto described.

It is evident, therefore, that the microcephalic condition could not be considered to represent either that of a fœtus of an ape, nor of a Bushwoman. In this connection the suggestion of Virchow is extremely pertinent. In a discussion of the Anthropological Society, and while arguing against the theory of atomism, he cites the example of the so-called reptile-hearts, thus described by Meckel. This malformation is now known to be due to the stenosis of the pulmonary artery, the result of inflammation, and which, by obstructing the normal course of the blood, determines the patency of the ventricular septum. Similarly, cerebral malformations, which now remind us of brains of lower type—since, indeed, it would be impossible for a deviation to resemble a higher type which does not exist—may one day be traced to intra-cranial lesions which now elude our observation.

In this particular case, the etiology of the malformation became a very practical matter, since there was a natural tendency on the part of the family to attribute the idiocy of the child to the advice given to the mother to remain in bed during her pregnancy. As I have said, this advice was carried out considerably beyond the time I had really indicated, and the fact suggests an interesting possibility. In the anthropological discussion to which I have just referred, Dr. Jager brings forward the question why macrocephalic brains are ever developed, and urges that there is a tendency for this to occur when, during the period of gestation, the head of the fœtus is held pendent. Hence, the macrocephalic condition of the human being would be the consequence of the final assumption of an erect position on the part of some simian ancestor. This position at once tends to develop a greater width of the pelvis, and correlatively a larger head, in accordance, says the doctor, of a law well known to botanists, that parts which hang down have a tendency to grow larger than parts which grow up. Now, this law, if it were true, would only be operative for the human female after the sixth month of utero-gestation, since until that time the fœtus floats about freely in the membranes. Only in the seventh month does the head tend to assume a constantly dependent position during the upright position of the mother. But, in her recumbency, the head of the fœtus does not hang at all; and a maternal condition which would have no influence during the early months of utero-gestation, would certainly greatly change the condition of the child during the later months. Correlative with this suggestion, which I only offer as such, is the remark of Ecker that, on a superficial examination at least, the arrest of development in microcephalons would often seem to begin between the sixth and seventh month of fœtal life.

Note.—The early age at which this child died, rendered impossible any such analysis of its mental functions as might, perhaps, have been usefully correlated with the anatomical description of the brain. Further, the existence of the extensive pneumonia when the child first came under observation, and of the hydrocephalic effusion which finally terminated its life, made it difficult to refer many physical symptoms directly to the arrested development of the brain. Thus, the proportions between the weight of the brain and the body were entirely disturbed by an arrest of general nutrition quite explicable as a result of the pneumonia. Similarly the anorexia, whose possible relations to the atrophy of the occipital lobes was inquired into by Dr. Amidon, is so common a symptom of pneumonia, that this inquiry could not be pursued. Dr. Seguin referred to Erb's opinion, that in tetanoid paraplegia, where the lesion of the foot is equinus, there was an agenesis of the entire motor tract, including its cerebral portion in the central convolutions. In this child existed congenitally a pes calcaneus, and correlatively the parietal lobe was, proportionately, rather well developed.

In the first number of a new French journal, entitled *L'Encéphale*, Dr. Luys, one of the editors, communicated a generalized description of idiots' brains in respect to their convolutions, and also their histology. Under the former heading there is nothing of especial bearing on our case. Under the second, attention is called to certain "irregularities in the development of the vascular system," to which are attributed, in large measure, the imperfect structure of the brain. "In the submeningeal networks, the perivascular membrane was absent. In the deeper parts of the cortex, the vascular reticulum ceased to be permeable to the blood-current. The walls were thin, brownish in color, dilated here and there, and represented by simple fusiform elements embracing the globules. In other places were only spaces containing isolated globules, and attached to the surrounding capillaries by slender filaments of conjunctive tissue. Elsewhere the capillary reticulum was incrusted with yellowish granulations, and contained only altered blood-globules. . . . . In the greater part of the cortex, all the cerebral cells, still recognizable by their pyramidal form and multiple prolongations, were in advanced necrobiosis. They were crenulated, irregular in their mass, and opaque. Their number seemed to be diminished; on the contrary, the proportion of amorphous intercellular substance was notably increased."

This last remark is in accordance with the state-

ment of Dr. Birdsall I have already quoted, that, in our case, "the neuroglia seemed to be increased." His attention had not been especially drawn to the vascular system. He merely noticed that "the perivascular spaces seemed larger than usual." But this condition probably depended on the terminal œdema.

On the other hand, we do not feel inclined to admit, with Dr. Luys, that the alterations described by him "show clearly and precisely the subordination of the phenomena of arrest of normal development to the progressive suspension of the blood-current in the cerebral capillaries, by means of which the nervous elements are deprived of their means of nutrition." The question may, at least, be asked, whether the vascular lesions were not secondary to an idiopathic arrest of nutritive assimilation in the nervous elements. Foville (article Idiotie: "Dictionnaire des Sciences Médicales") and Tuke have, however, enunciated the same theory as Luys.

BLOCK ISLAND AS A HEALTH-RESORT.

By H. H. CURTIS, M.D.,
NEW YORK.

Of late, the various journals have been crowded with articles advocating certain localities as possessing specific advantages in the cure of phthisis pulmonalis. The literature on this subject has become such a drug in the market that physicians look upon every new proposition with suspicion, and wonder if there remains a single place unnoticed. The Adirondacks, Minnesota, Colorado, New Mexico, Florida, Nassau, Thomasville, Ashville, etc., each have their claims as the perfection of sanitaria endorsed by high authorities, and there are hundreds of consumptives who will slap their well lung and exultingly exclaim, "Nassau did it! But for Nassau I should have been a corpse. Dr. O. sent me there; consequently there is no physician who equals Dr. O." Hearing conversation as to the relative merits of physicians, I often ask myself, Is there a doctor who can, with any degree of confidence, say to his patient, Go to this place or to that, it is the locality best suited to your case?

I have spent several winters on the Island of Nassau, and have witnessed what seemed to me almost miraculous results in cases of phthisis, and have observed equally beneficial results derived from a sojourn in the Adirondack wilderness. A case has been cited, however, of a young man who had been improving steadily in the woods of the Adirondack region, but so rapidly sank upon changing to the climate of Nassau, that he was unable to return, and died. He acted simply on the advice of a classmate who, in a nearly identical phthisical condition, had experienced the greatest improvement at Nassau, so he went there expecting the same benefit. As regards climate in the treatment of consumption, Flint says in his new work: "It may be taken for granted that there is no specific influence in any climate. It would be, therefore, needless to inquire if there be one particular place on the globe to be preferred to all others. Observation shows that different climates are suited to different cases."

I was much surprised, while talking to a well-known physician of this city, who makes his summer home in the Adirondacks, to hear him say that he had never seen a single case of phthisis benefited by Nassau. I could count a score of my own friends who attribute their recovery entirely to the climatic influences of that charming island. Persons are too apt to become prejudiced in their opinions of places by not taking a broad enough view, but accepting rather the opinions of a few, instead of making a careful study of statistics. A gentleman recently told me that, after trying the various resorts all over the world, he found his phthisis to be most benefited by the climate of Algiers, yet ten miles distant, at a different elevation, he found it impossible to remain. Hearing so many accounts of climates which exactly suited individual cases, I think it would be more logical to conclude that climatic influences exist which differ for every case in point of greatest efficacy. Is it not reasonable to suppose that the walls of the minute air-cells which make up the membrane through which the process of osmosis is carried on in the respiratory function may become modified in thickness and tension? This would happen as the result of disease and by the increase of work necessitated by the destruction of surrounding areas of pulmonary tissue. If this be so, then we may conclude that the easiest and consequently the most beneficial conditions under which the respiratory act can be performed, essentially depend on the three climatic elements, *temperature*, *atmospheric pressure*, and the *hygrometric state*. The proper combination of these elements differs for every stage and variety of phthisis. Hence, for individual cases, the proper altitude and degree of moisture can only be determined by experiment.

These few generalizations may go to suggest the impracticability of advising any one place to consumptive patients. There are localities, however, which, if properly employed in the beginning, would tend, in great measure, to check those conditions which inevitably lead to phthisis. Why pulmonary phthisis should always be taken as a test of climatic influence I cannot imagine. It is much easier to say, with some degree of confidence in your own advice: go there and you will avoid phthisis, rather than go there and your phthisis may be benefited.

Dr. Reed, in an article published in one of the March journals, entitled "What Atlantic City can do for Consumptives," says: "There are many patients who are drifting into phthisis as the result of a general break-down following excessive devotion to business or pleasure. These may not care and do not need to expatriate themselves for half a year. They may often do perfectly well at home, provided they avoid all excesses, and have the best medical treatment; but, their vital forces being at a low ebb, they need, occasionally, the stimulus to be derived from a few weeks' sojourn in some invigorating seaside climate, where it is not too cold to keep them indoors, and yet not so warm as to relax their tissues and still further debilitate them." Physicians take great care in the selection of a winter resort for their patients, but where to spend the summer is not considered to be an important question. Many of our men and women rely on the two or three weeks' relaxation they get in summer for systemic improvement, on the strength of which the physiological machinery must run for another year. To this very class of people, together with those spoken of above, from whom the great army of consumptives is recruited, I would suggest another place quite as near New York, and possessing even greater advantages at certain seasons for the overworked brains of our professional and business men, as well as their wives and children.

The place to which I am going to allude is Block Island, situated midway between Montauk Point and

Point Judith, in lat. 41 13′ N., long. 71° 35′ W. The island rises precipitously from the ocean, the cliffs toward the eastward standing perpendicularly a hundred feet above the surf, which constantly washes their base. From this huge wall the land slopes toward the west, until it is nearly level with the sea, the surface of the island being made up of a succession of knolls, between which, here and there, are the "duck ponds"—natural springs, full of water-lilies. On the north, perched on the high ground back of the harbor, are the numerous hotels, which have sprung up like mushrooms since the larger steamers have made the island a stopping-place.

The island, being thirty miles from the coast-line of Rhode Island, receives on three sides the breezes from the Atlantic ocean, and, on account of the cold current which sets in toward the entrance of the Sound, the temperature is markedly affected. In the excellent article on climate in Appleton's Encyclopædia, it speaks of this current as follows: "Climates distinctly maritime, or directly controlled by adjacent water surfaces, exist in but few positions on the eastern borders of the continent. At Norfolk, Newport, Nova Scotia, and Newfoundland, on the Atlantic coast, there are distinctly maritime influences, particularly at or near Newport." Whatever the meteorological influences which produce the result may be due to, it will be interesting to show the range of the thermometer at 12 M., as taken by a gentleman during the summer months of July and August of 1880, a higher average than the two preceding years.

	July.	Aug.		July.	Aug.		July	Aug.		July.	Aug.
1...	79°	78°	9...	78°	77°	17...	78°	73°	25...	74°	89°
2...	74°	78°	10...	81°	78°	18...	74°	73°	26...	76°	65°
3...	70°	79°	11...	75°	72°	19...	79°	76°	27...	78°	64°
4...	74°	78°	12...	71°	72°	20...	80°	76°	28...	74°	74°
5...	75°	71°	13...	79°	75°	21...	78°	76°	29...	70°	79°
6...	77°	73°	14...	70°	74°	22...	78°	80°	30...	70°	62°
7...	79°	78°	15...	74°	69°	23 .	71°	79°	31...	76°	74°
8...	80°	75°	16...	75°	65°	24...	72°	80°			

It will be seen, by comparing the above table with the tables of daily temperature taken in New York, that there is uniformly nearly 15° difference. The evenings are invariably cool, and one readily gets the impression, walking on the broad piazza of the great hotel, that he is on the deck of an ocean steamer, breathing the purest air, untainted by the dust, pollen, and organic elements, which always appear as constituents of the atmosphere on the main land. I think it must be this absolute purity of the atmosphere which has given the island a reputation of possessing a specific effect on certain diseases of the eye. During a two months' stay at the place last summer, I had an opportunity of studying the effect of the air on several cases of malarial fever which had been sent there, and also of observing the very great advantage several phthisical patients derived in being relieved of night-sweats. The air is wonderful in its exhilarating properties, and the temptation is strong to land what seem to be marvellous results in cases of nervous prostration and insomnia which have derived no benefit elsewhere. We read long articles setting forth the advantages to be derived from the climate of Ventnor, Isle of Wight, for those invalids requiring change and perfect rest. I can do no better than quote a lady patient, who said to me last summer: "This is one of the few places in the world where I can truly rest. My window faces the Sound, which affords to me an ever-changing panorama. The yachts flying along toward Newport, the ocean steamers and Sound boats of every description, give me enough to occupy my mind without fatigue, while the deep blue of the ocean seems to relieve all disagreeable glare. Once a day our little steamer brings the mail. After a glance at the papers, to see what is going on in the outside world, the sea bath, then dinner; after which a drive on roads not yet well enough known, but that they are turf-colored and free from dust. I can sketch the tall cliffs with the surf below, the lighthouses, or the lazy windmills which have for a hundred years ground the corn for these simple folks, some of whom, though fifty years old, have never been ashore. There is plenty to occupy one's self, and the perfect independence and freedom from fashionable restraint is delightful. I feel that I derive more benefit here in a week than from a month's stay anywhere else."

Not alone does the pure air and the cool nights make Block Island the paradise of over-worked brains, and the best place in the world to recuperate, if you only have a few weeks to do it in, but the sanitary and hygienic conditions are perfect. Every bit of sewage and waste from the hotels is emptied, by means of a large pipe, beyond low-water mark directly into the sea. There are no smells nor mosquitoes, and the spring-water is excellent. During ten years of my life, spent in the various sanitaria, both here and abroad, I have never seen so many conditions fulfilled to make an approach to perfection. The drainage is perfect. The hotels are as good as anywhere on the coast. There is fine fishing and amusement enough for those who desire it. The sea-bathing is superb. There is no dust, no noise, no intolerable heat. These are the facts: would it not be well to profit by them? Put our patient on one end of a cod-fish line, let him live at Block Island, and he will never go back to the city with his headaches, as he is accustomed to do when he stays at the model resort, with a fish-oil factory on one side and a marsh on the other.

For the reasons stated above, I have not advanced many claims for the good Block Island will do in cases of phthisis; but I have observed in several instances that cases which are benefited by the seashore climates of Florida and the West Indies, more particularly tuberculous in character, are greatly relieved by a summer sojourn on the island. Hence, I conclude that sending a patient there whose home is elevated and inland would be of therapeutic value in the climatic treatment of tuberculous phthisis.

251 Madison Avenue.

A Most Dangerous Instrument.—A number of high authorities in ophthalmology have called attention to a new instrument called the "eye-cup," which has been imported from France to this country. It is constructed on the principle of an ordinary rubber cupping glass, but made so as to accurately fit over the eye. By squeezing the rubber bulb, and then applying it, suction is made and the eye drawn more or less from its socket. It is claimed that it will relieve the presbyopia of old people and thus render the use of glasses unnecessary. It really has been known to produce retinal congestion and hemorrhage; lenticular-corneal; conjunctival and palpebral changes or inflammations, and in one case total blindness (Turnbull) from retinal detachment.—*Philadelphia Medical and Surgical Reporter.*

A CASE OF BONY CLOSURE OF THE NOSTRIL; REMOVAL BY THE BURR-DRILL.

Being an Oral Report of a Case at the State Medical Society, which was Ordered to be Printed in the Transactions.

By OREN D. POMEROY, M.D.,

NEW YORK.

Mr. H——, aged thirty-five years, has had a total obstruction of his right nostril as long as he can remember. As this nostril is catarrhal, the considerable secretion resulting is a very great source of annoyance to him, as it can only be removed by syringing. His right ear also has suffered somewhat from a chronic catarrhal otitis-media, aggravated very likely by the non-passage of air across the mouth of the Eustachian tube in its exit from the nostril. I found some polypoid material about the obstruction, which was removed by forceps. Near the back part of the nostril my instrument was arrested by a solid wall, stretched across the passage at right angles to its bony axis; it could not be broken through by the utmost pressure.

As the mucous lining of the nostril was considerably swollen, it was impossible to get a view by any system of illumination, and I depended wholly on the sense of feeling to determine the topography. The finger was passed behind the velum, and, by crowding very hard, its tip could just touch the obstruction, which appeared the same behind as in front; its thickness did not seem great, as I estimated by the distance the probe passed into the nostril before reaching it. There seemed no doubt but that there was a bony growth, extending from the inferior turbinated bone across the nostril, and completely closing it. I then determined to remove it, or make a sufficient aperture to allow the air to pass freely through it. The dentist's lathe occurred to me as a very appropriate instrument to use, but the drills coming with any in the market were too short, it being impossible to reach nearly five inches into the nostril with one of them. A drill was accordingly made to order, having a chisel-like point, with the sides for a short space made quadrilateral, as I was told it would then bore laterally. The length of this drill was four inches; its chisel-like extremity was one line in diameter. A hole through the bony wall was easily made by this instrument, but it could not be enlarged sensibly.

I then had constructed what is known as a cross-cut burr-drill, the cutting being rather coarse, to diminish the liability to clog; the cross-cutting being also for the same purpose. The burr portion of this drill was almond-shaped, and about two lines in diameter at its widest part; length about one and three-fourths its width.

This instrument readily made its way through the bone, boring as well laterally as in front, and in three sittings I succeeded in making an aperture sufficiently wide to allow of moderate breathing through the nostril, and the ability to clear it thoroughly and comfortably by blowing the nose. There was some difficulty in passing the drill up the narrow nostril, as it inclined to catch in its swollen and soft lining. This difficulty was obviated by filling the interstices of the drill with vaseline, when it was passed with comparative ease. No ether was given, and the operation was not excessively painful; only a moderate amount of hemorrhage. By the swelling of the soft parts, the nostril was closed for a few days after each operation, as might have been expected. It has been recommended to remove the whole of these bony growths by cutting or drilling *around* them, and bringing them away *en masse*. In this case it seemed clearly impossible to do so. As the distance from the anterior part of the nostril to the obstruction was fully five inches, it made it somewhat more difficult to operate on that account. As to the cause which gave rise to this growth, it is difficult to state, as the patient gives no history of any previous pathological process whatever.

Progress of Medical Science.

The Anatomical Seat of the Fungus in Tinea Tonsurans.—Dr. A. R. Robinson, in a paper (*New York Medical Journal*, March, 1881), on this topic, gives the results of his studies for the past two years. In one case he excised a portion of skin in such a way that part was affected by the disease and part was normal skin. On studying sections, the fungus, consisting of spores and mycelia, the former more abundant than the latter, was found to be lodged, in some cases in the upper, in some in the lower layers. In the stratum corneum the greatest number was observed where this structure surrounds the hair and forms parts of the internal root-sheath, that is, from the neck of the hair to the free surface. In the rete Malpighii both spores and mycelial threads were present. The spores were either isolated, in groups or in rows. Rarely more than five or six were found in any group or row. In the corium, the spores varied in quantity, but were disposed in the same general way already described. Their shapes were either round or cylindrical. In the subcutaneous tissue the spores were also found in great number, surrounding empty hair-follicles, in fact they were as plentiful as in the corneous layer. Dr. Robinson would conclude that the anatomical seat of the fungus in this disorder differs in different cases. It may be seated only in the corneous layer and hair-shaft, or may extend into the subcutaneous tissue. Where a large number of hairs fall out entire, the fungus is seated deeper than when the hair is only stubbed.

Influence of Fairs, Famines, Floods, and Seasons on the Development and Diffusion of Cholera in India.—From a paper on this subject, read before the Epidemiological Society, by Surgeon-General Murray (*Lancet*, April 9, 1881), some very valuable information has been obtained, showing that an abnormal increase of the disease must be induced by some special cause. The statistical returns of the civil population show the course of the disease more clearly than the military hospital records, though the latter have been kept from the beginning of the present century. In considering the subject of fairs, the epidemics following the Koomke Mela, at Hurdwar, were minutely traced, accurate returns having been obtained from all the civil surgeons of the appearance and progress of the disease, and in all cases the dates corresponded with the arrival of the pilgrims at the ordinary rate of travelling. In 1879 the dates coincided in all instances except at Scinde, where its arrival was accelerated by about two months, which may be attributed to the in-

troduction of railway travelling, more than a hundred cases of the disease having been removed from the trains in a dead or dying condition. The great fair which is held in February at Allahabad is followed by an analogous diffusion of cholera. The fair is held six weeks earlier than that of Hurdwar, and the epidemic appears six weeks sooner. These reiterated facts prove the danger arising from these fairs, but their suppression cannot be resorted to by the government on account of the religious feelings of the natives. An epidemic which commenced two days after a cyclone wave overwhelmed the eastern part of the delta of the Ganges, proved fatal in the following four months to 75,459 persons in the three coast districts. The disease spread to the surrounding districts, and the mortality during the year amounted to 159,733. There was a partial cyclone wave on the coast of Chittagong in 1879, followed by a similar outbreak of cholera two days after the subsidence of the water. The influence of famine on cholera was shown in Madras, where there was a severe famine in 1866, when the mortality from cholera amounted to 197,977. A more prolonged famine occurred in 1875–6–7, when the mortality from cholera rose to 617,869. The course of the disease in both famines was identical, the mortality being greatest when the price of food was highest. It was little influenced by season, and was probably aggravated by the collection of crowds of starving people at the famine kitchens, and its spread on their return to their homes. The greatest mortality in the military hospitals is at the commencement of or during the rainy season, *i. e.*, from June to September, whereas the greatest mortality among the civil population commences in April.

Hypodermic Injection of large Doses of Atropine in Sciatica.—Smythe *(Pester med. chir. Presse)* claims that atropia, subcutaneously administered, is a specific in sciatica. He had accidentally used one-twelfth of a grain in this way, in a case of persistent neuralgia. The patient had shown symptoms of atropia intoxication, but when these had passed off the sciatica remained cured. Following up this success with repeated attempts, he always obtained highly gratifying results in the treatment of this painful neurosis. He ordinarily employed one twenty-fourth or one-twelfth of a grain at a single dose. Untoward symptoms may be overcome by morphia, although Smythe was never obliged to resort to its use. Administration of the drug in repeated small doses is not to be recommended.—*Allgemeine med.-cent. Zeitung*, February 16, 1881.

The Normal Axis of the Sole.—Dr. Benjamin Lee, of Philadelphia, has studied this subject with more than ordinary consideration, and describes the normal axis of the sole as being a curved and not a straight line, contrary to the universal popular belief. And to the ignorance of this fact on the part of the laity he ascribes the tortures resulting from an improperly made shoe. The aim of the shoemaker has been to make each foot symmetrical in itself, while the foot, being a double organ, follows the law of all double organs, and is symmetrical only with its fellow. If we could succeed in making both feet exactly alike we should at once lose the beauty which comes from the comparison of two objects symmetrically unlike, one of the highest sources of gratification which the sense of sight is capable of appreciating. In carrying out this aim he has made the shoe not simply what it should be, a covering for and protection to the foot, but an *orthopædic instrument*, the object of which is to straighten out its natural curve. He furnishes diagrams, showing at what points the pressure is applied in order to produce this result. They are observed to be the inner side of the heel, the outer side of the middle of the foot, and the inner side of the great toe. At the same time that strong pressure is brought to bear upon the first or metatarsal joint of the great toe, its distal extremity is forced toward the middle line of the foot; the result of this is necessarily to convert the inner surface of the articular portion of the metatarsal bone into a fulcrum, against which the first phalanx is forced outward. The articular surface of the phalanx is thus uncovered, and, instead of remaining in contact with the opposite articulating surface of the metatarsal bone, it is in contact with the shoe, protected only by the integument. A provisional bursa is sometimes established, itself often the seat of inflammation; but this does not prevent the sensitive joint surface and the synovial membrane from ultimately receiving injurious pressure, which results in the hideous and painful deformity known as a *bunion*. At the other end of the toe the continued pressure against the matrix of the nail induces a suppurative inflammation of low grade, with fungous granulations, to which the name of *ingrowing toe-nail* is given; while the other toes, crowded together and overlapping, are not long in becoming knobbed with corns and callosities. Dr. Lee recommended the ready-made shoe known as the "Waukenphast" as the best to which he has referred as conforming to this principle.—*Transactions of Medical Society of Pennsylvania*, 1880.

Nitrite of Amyl as a Disinfectant for Urine.—Remarkable disinfectant properties are attributed to the nitrite of amyl by Dr. Weiser *(Répert. de Pharmacie)*. As yet, however, this quality has only been tested in relation to the urine. On account of this alleged disinfectant action, the drug has been applied locally in chronic catarrh of the bladder. Satisfactory results were thus obtained. Three drops of the nitrite were mixed with an ounce of warm water, and the fluid injected twice daily into the bladder. For the disinfection and preservation of urine, nitrite of amyl is also claimed to be preferable to carbolic acid.—*Le Courrier Médical*, March 26, 1881.

Effervescent Bromide Mixture in Nervous Nausea and Vomiting.—The following is said to be efficacious by Chéron *(Rev. Méd.-chir. des Malad. des Femmes)*. Prepare two separate solutions, the first consisting of bicarbonate of soda (2.0), water (60.0), and bromide of potassium (2.0); the second containing citric acid (4.0), water (120.0), and syrup (40.0). Then take a teaspoonful of the first, and add to it a tablespoonful of the second solution, and drink at once, after stirring well the mixtures. This dose to be repeated in hourly or half-hourly intervals, until the desired effect is obtained. In addition to cases of purely nervous vomiting, this combination has been found very serviceable in the nausea associated with localized peritonitis, even during the acute period of an attack.—*Le Progrès Médical*, March 26, 1881.

Uterine Fibroids treated by Suppositories of Ergotine.—Following the advice of a Belgian physician, M. Dujardin-Beaumetz has employed ergot in large doses in the form of suppositories for the metrorrhagia associated with uterine fibroma. Each suppository contained about eight grains of ergot to five ounces of butter of cacao, which corre-

sponds to about five times the strength of an ordinary hypodermic injection of ergot. Gratifying results were obtained in several cases after a few applications. The dangers attending the subcutaneous administration of the drug are entirely obviated by this method. Still, if the use of the suppositories should occasion pain, the dose of ergot could readily be reduced for a single rectal application, and the number of suppositories increased.

Suppositories containing only half this amount of ergot have been successfully employed by Ferrand in the treatment of hemorrhoids. A case of this kind was recently reported at a meeting of the Therapeutical Society, in which eight suppositories had promptly cured a persistent hemorrhoidal flux.—*Revue Médicale Française et Étrangère*, March 26, 1881.

The Ablation of Tumors by the Method of Parcelling (*Morcellement*).—M. Péan, at a recent meeting of the Paris Academy of Medicine, read a paper with the above title, in which he advocated this method as applicable to many growths. He thought that it was especially indicated in bulky neoplasms, the peripheral excision of which would prove a difficult or dangerous undertaking. The manner of performing this kind of an operation is simple. It consists essentially in dividing the tumor into a number of smaller or larger portions, which are then successively removed. *Morcellement* is only contraindicated when the peculiar arrangement of their vessels preclude the possibility of arresting hemorrhage either temporarily or permanently.

After having passed in review the various kinds of neoplasms amenable to treatment by parcelling, and having illustrated by typical examples the details of procedure, Péan presented the following conclusions: 1, morcellement may be classed with the best methods of removing tumors; 2, the operation first attacks the central portions of a growth, and then proceeding outward divides the peripheral parts; 3, the principle underlying its performance is based on the fact that most neoplasms have a richer vascularity at the central than the external portions; 4, the ordinary surgical instruments are alone required, such as bistouries, scissors, the thermocautery; 5, it may be combined with the other methods of ablation; 6, the preliminary incisions may be made shorter than in the usual methods; 7, in many cases the duration of an operation may thus be lessened and loss of blood diminished, the latter especially if hemostasis is effectually performed by the use of sponges and the hemostatic forceps; 8, during the course of the operation contiguous parts are more perfectly exposed to view, and are more readily manipulated than by other methods; 9, parcelling is indispensable for the removal of large tumors, which are united to numerous and deeply situated organs; 10, it is not a necessary procedure in all tumors, but in very many it leads to better results than the older methods.—*Gazette Médicale de Paris*, March 26, 1881.

Hæmoglobinuria a Frigore.—M. Mesnet had occasion to observe, in his hospital service a patient who was subject to the paroxysmal appearance of hæmoglobin in his urine. The examinations of the patient's urine had been made by M. Hayem. The reason for calling the morbid state hæmoglobinuria a frigore was that the invariable exciting cause of a paroxysm was the action of cold. The attacks came on at irregular intervals. Cause and effect appeared to correspond very closely, that is to say the rapidity and intensity of a paroxysm were proportionate to the more or less energetic action of the cold. This interconnection had been understood to exist by an English observer, who had called the disease winter-hæmoglobinuria. The duration of an attack in the case described did not exceed six hours.

In the interval between the seizures the patient's health was to all appearances perfect. No anatomical lesion could be made out, and no functional disturbance was discoverable. Slight anæmia was the only morbid manifestation. The following symptoms were found to accompany an attack: Marked coldness of the feet, at least a decided sensation of this kind; slight chills; cephalalagia with some vertigo; a sense of constriction at the epigastrium; general malaise, together with a feeling of sinking referred to the heart, but no nausea or vomiting. During the stage of malaise the frequency of the pulse-rate was increased by from ten to fifteen beats per minute, and the temperature rose one or two degrees. The urine changed its color from the very beginning of the attack. It first had a pale, reddish hue, and then gradually became darker in color, according to the amount of hæmoglobin voided. The latter substance was recognized by the spectroscope. Blood-globules were not visible with the microscope. The amount of albumen present corresponded to the quantity of hæmoglobin found. The attack over, the urine quickly returned to its normal state. No trace of albumen or hæmoglobin were then discoverable, and, barring some anæmia, the patient rapidly improved, until a new paroxysm was developed.—*Bulletin de l'Académie de Médecine*, March 20, 1880.

The Temperature of Tubercular Meningitis in Children.—Careful hospital observations concerning the condition of the temperature during the course of meningitis tuberculosa in children have led Dr. Turin to propound the following conclusions (*Jahrbuch für Kinderheilkunde*, December 23, 1880): 1, tubercular meningitis is always associated with an elevated temperature; the febrile movement may manifest itself in the prodromal stage, or it may develop at a later period; it rarely persists during the entire course of the malady; 2, in only a small proportion of cases the disease is ushered in by a sudden elevation of temperature, such as is observed in other acute affections; 3, the thermometric results are extremely variable; a typical curve (graphic method) is out of the question; 4, in uncomplicated cases of infantile tubercular meningitis the temperature rarely exceeds 39° C. (102.2° F.); it usually fluctuates between 38° and 39° (100.4–102.2); occasionally it becomes subnormal; 5, the common type conforms to the remittent variety, with the ordinary daily fluctuations; sometimes the daily variations do not exceed those of health, at other times they are considerably greater; in some instances the fluctuations are very irregular, sudden elevation or rapid sinking at different times during the day or night and in any stage of the disease; 6, if the meningitis is superadded to previously existing febrile affections (such as coxitis or other diseases of the bones or joints), the temperature is found to be higher throughout; in other respects no peculiarities appear; 7, in cases of acute miliary tuberculosis the temperature is more elevated, and its fluctuations still more marked.

A British Congress of Veterinary Surgeons is to be held in England during the coming summer.—*Journal of Comparative Medicine.*

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

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CONCERNING THE RIGHTS OF LECTURERS.

A MATTER of the greatest importance to authors has recently come before the United States Supreme Court in this city. It has long been a question, whether or no a lecturer has the right to restrain the publication of a lecture publicly delivered before students. It has been generally understood, upon what grounds we do not pretend to say, that when once the lecture or address was delivered before an audience, it became the property of that audience, the latter being entitled to use it as it saw fit. Hence, it was assumed that the ideas of the lecturer having been offered to his hearers, any one of the latter could report the same, and multiply such reports without hinderance or restraint from the lecturer, provided the latter was given due credit for the ideas expressed therein.

A few years ago, the question came up before the faculty of a medical college of this city, as to whether a certain student could furnish to others of his class verbatim reports of the lectures of the different professors, and without their consent. We believe it was settled without an appeal to the courts. Legal advice was obtained, however, and the understanding arrived at was to the effect, that when lectures were read from manuscripts they were the absolute property of their authors, but when delivered orally they became the property of the hearers. There was no occasion, however, to test the value of this opinion one way or the other, as the reports in question were never made or published.

The specific settlement of the question to which we refer, was made through a suit brought by G. H. Putnam and others (of the firm of G. P. Putnam's Sons) against Leo T. Meyer and others, in which the plaintiffs obtained an injunction from the United States Supreme Court restraining the publication of a report, by Meyer, of Professor Darling's lecture on "Anatomy," the report being an infringement upon the rights of the said publishers in reference to "The Essentials of Anatomy," by Professors Darling and Ranney.

It would appear from the testimony, that the defendant was, at the time of making the report of the course of lectures, a student of Professor Darling; that he asked and received permission of the lecturer to print the report. A short time subsequent to this, Professor Darling, in conjunction with Professor Ranney, entered into a contract with Putnam's Sons to write "The Essentials of Anatomy," it being understood that the same book should comprise Professor Darling's course on anatomy, and should be edited by Ranney, with additions by the latter. While it is claimed by Darling that he gave none but the plaintiffs permission to publish his work, he admits that he previously gave Meyer permission to print the report. This being admitted, the case turned upon the legal difference between the terms to print and to publish. The discussion of the point at issue involved an examination into the right of a hearer to report a lecture, and his limitation of use of the same. The court held that lectures delivered to a class were the property of that class for their use only, and that the said lectures could not be published by any member for outside profit without the permission of the party giving the lectures. It was the design of the lecturer to instruct his hearers, but not the public at large. For the latter, the author had the right to use his material in his own way. Upon the proper understanding of this point turned the question of the difference between the permission to print and that to publish. In the former case there was to be a limited and specific circulation to the report—such, for instance, as that among the students in actual attendance upon the lectures; in the latter case the report would be given, without reserve, to the public at large. The injunction was accordingly granted against Meyer's book, except so far as the promise of Darling was concerned, which allowed Meyer to sell the report to the students in actual attendance upon the lectures.

Not only is the difference between permission to print and that to publish legally defined, but it would also appear, by the ruling, that the student or reporter has no right even to print his report for limited circulation without the consent of the author. This decision, then, will interest medical lecturers, in so far as it not only protects them from the unauthorized publication of their lectures in medical journals, but even from garbled reports made merely for the students.

A question might arise, however, as to whether this decision would include clinical lectures as well as didactic. The former stand upon a somewhat different footing from the latter; they are generally free to all medical students; their delivery directly

benefits the lecturer by enlarging his special knowledge and his consultation practice; and, besides this, they are not delivered from manuscript, and often do not rise much above the level of a bedside talk. Such lectures have long been considered the property of the audience and of the medical reporter. But whether or not they are to be classed along with didactic lectures, as the exclusive property of the lecturers, makes little difference, at least to medical journals, for it is phenomenal to find a clinical lecturer who objects to being well reported.

With regard to didactic lectures, the effect upon journals accustomed to publish them will be apparent enough. As no properly conducted journal ever publishes this kind of lecture without the author's consent, only such periodicals will suffer as are in the habit of acting contrary to the rule. There are very few, if any, of these.

A COMPROMISE TOWARD VIVISECTION.

We have received a work on the subject of vivisection, which has more than the usual bulk and pretension of similar pseudo-humanitarian documents.* It consists of three prize essays, each of which aims to demolish the position of those persons, pleasantly characterized by Mr. Bergh as "hellish brutes," who advocate the utility of vivisection.

Some of the points taken up by the different authors are: Have experiments in vivisection been of any scientific value? Are there not fallacies underlying such a method which necessarily vitiate the results? If good results have been obtained, could they not have been arrived at by other methods? Are such experiments morally justifiable, and is not their tendency to harden the operator?

Such is the scope of the discussions undertaken, and it is needless to say that the writers do their best to prove their own side.

The book begins with a quotation from a letter, addressed by command of her gracious Majesty the Queen to the President of the Royal Society for the Prevention of Cruelty to Animals. We are edified with the information, that the "Queen hears with horror of the sufferings which the brute creation undergo from the hands of the ignorant and thoughtless, and she fears also from experiments in the pursuit of science."

With this powerful argument *ad hominem*, the essayists take up their subject.

The book shows abundant research, and we do not doubt that its authors are animated by a sincere desire to lessen the cruelty and inhumanity of man. But it seems incredible that any candid person could follow their lines of reasoning without feeling great impatience at the lack of fairness that is shown. The writers set out to prove certain theses, and they pervert the facts and sophisticate the English language to this purpose. It is claimed that vivisection is almost uniformly cruel and immoral; also that it has produced scarcely any scientific, and no practical or useful results. Furthermore, it never will. Therefore it should be abolished.

It would be folly to attempt to refute assertions so puerile and unfounded.

In striking contrast to the tone of these essays, is that of a circular on the subject of vivisection just issued by the Committee on Experimental Medicine of the State Medical Society. The circular is addressed to the members of the American Society for the Prevention of Cruelty to Animals. It recites the fact, that the medical profession believe it to be most important, for the health and well-being of the community, that the most accurate possible knowledge should be acquired of the laws of health and disease.

The prevalence of diseases among lower animals also calls for investigation. Any interference with experiments on animals would have the effect of prohibiting a most useful means of investigation, and would be a lasting detriment to the cultivation and improvement of medicine.

The committee avow that the medical profession desires as much as any class to prevent every form of unnecessary suffering; but they would most strongly draw attention to the radical difference between the infliction of wanton cruelty, and the serious and careful use of the lower animals for the benefit of humanity and of the brute creation. In conclusion, it is respectfully asked that the name and authority of the Society for the Prevention of Cruelty to Animals may not be employed to the injury of the medical profession and of medical science.

The letter, of which the above is an abstract, is calm and dignified in character, and cannot but appeal strongly to the reason and justice of those to whom it is addressed. It indicates a desire to meet the opponents of vivisection in a friendly manner, and discuss the question apart from all passion. This is the better way, and whether or not it succeeds with the society which is addressed, the effort to secure some mutual understanding and respect is certainly very much to the credit of our profession and of the committee of the State Society.

At about the same time with the appearance of the above circular, there appeared in the London *Times* a letter from Mr. Charles Darwin to Professor Hölmgren, which confirms in a striking way this opinion of the committee as to the great importance of experiments on animals. Mr. Darwin is not a physiologist or a medical man, but a naturalist, and his sympathies would be inclined toward the lower animals. He says, however, "I know that physi-

* Vivisection: Scientifically and Ethically Considered, in prize essays. By James Macaulay, A.M., M.D., Rev. Brewin Grant, B.A., and Abiathar Wall. London: Marshall, Japp & Co. 8vo, pp. 316. 1881.

ology cannot possibly progress, except by means of experiments on living animals, and I feel the deepest conviction that he who retards the progress of physiology commits a crime against mankind. No man, unless he is grossly ignorant of what science has done for mankind, can entertain any doubt of the incalculable benefits which will hereafter be derived from physiology, both by man and the lower animals."

There could be no stronger indorsement than this of the position taken by the advocates of vivisection. Its usefulness must be admitted. Let all unite, therefore, on this common ground and try, not to abolish experimental medicine, but to lessen, as much as possible, any pain or cruelty connected with it.

PHYSICIANS AND PHARMACISTS IN TROUBLE.

THERE occurred not long ago a controversy between the doctors and druggists of Washington, D. C. The Medical Association and the College of Pharmacy of that district held several conference meetings, and tried to come to some definite arrangement by which the druggists should agree to give up counter-prescribing, etc., and the doctors to give up dispensing their own medicines. The Medical Association finally drew up a circular, which it sent to every druggist in the city. The contents, expressing the feelings and intention of the society, were substantially as follows: 1st, the pharmacist shall not give medical advice; 2d, a prescription marked "not to be renewed," shall not be renewed without authority; 3d, the doctors will not patronize druggists who do not conform to the above; 4th, the Medical Association approves the code of ethics of the College of Pharmacy; 5th, both professions should show due forbearance and consideration toward each other. No assurance was given that the physicians would not dispense their own medicines.

In reply to this, the druggists sent a letter, in which they said, essentially, that the Medical Association was getting beyond its business, and attempting to dictate to persons over whom they had no authority. They should, therefore, while feeling great kindness toward the medical profession, conduct their business in the way that seemed best.

It will have to be admitted that the Medical Association acted unwisely, and came off second best. There is no doubt of the abuses which occur in the dispensing of medicines by druggists, but no good can come from any formal threats, especially when, as in the above case, concessions are demanded only on one side. The medical profession has but one powerful weapon against the abuses of the shops, and that is to dispense its own drugs. But the profession of Washington made a poor use of this means of defence, and got a rebuke that was not undeserved. It will never do to make any formal agreements between the two parties. Personal interests and business considerations will naturally always be paramount, and will prevent any such agreements from being uniformly binding. By mutual action among physicians it can perhaps be shown to pharmacists, eventually, that it will be wiser for them to look out more than they do now for the interest of the doctor and less for the money of his patient.

THE WORK OF THE STATE BOARD OF HEALTH.

THE State Board of Health has now issued nearly twenty official circulars and letters. We can gather from these something in regard to the work which this body is directing.

The Registration of Vital Statistics, which is now obligatory, has been commenced in various counties, and energetic efforts are being made to have the system a uniform and complete one. A circular letter has been addressed to each town clerk throughout the State, informing him of his duties in the matter, and giving instructions in regard to the methods of registration. The cost to each town for the necessary books and papers to be used in the registration is only about five dollars a year. As the secretary well says, the registry of births, deaths, and marriages is the most important of all public records. Earnest efforts should be made by officials, medical men, and clergymen, to see that their share of the work is attended to.

The State Board has been busy also in circulating sanitary tracts, and in urging the enforcement of the vaccination law. There has existed for twenty years a statute in this State to the effect that all persons attending public schools shall be protected by vaccination. This law has practically been a dead letter in most localities. The Board of Health has been trying to secure its enforcement. The extensive prevalence of small-pox during the past winter has, no doubt, helped to secure some progress in this direction.

The various health tracts issued by the State Board contain little which our City Board has not published. Still they are models of their kind, and their extensive circulation cannot but benefit the citizens of the State.

In the circular on disinfection, sulphur is recommended for fumigation; sulphate of iron for disinfecting sewers, soils, etc., and sulphate of zinc and common salt for clothing, bed-linen, etc. The fact is impressed, however, that nothing can take the place of cleanliness and ventilation.

The rules for the prevention of diphtheria and scarlet fever are concisely given, but are very complete, and cannot fail to be useful. The State Board of Health is certainly making progress in its important field of work; and considering the fact that its duties are chiefly advisory, it has certainly achieved all that could be expected of it.

Reviews and Notices of Books.

The Metric System in Medicine, etc. By Oscar Oldberg, Phar. D. Pp. 182. Philadelphia: Presley Blakiston. 1881.

This little volume is divided into three parts, the first of which contains general information concerning the metric system, several novelties in its application, and a number of tables. The general information is useful, and one of the novelties, the use of the expression "fluigram" instead of cubic-centimeter, is to be commended; the other novelties in nomenclature are of doubtful utility. The tables are exceedingly valuable for reference. The second part contains some three hundred standard formulæ expressed metrically. This part also contains some novelties. In the first place, the names of the several ingredients in the prescriptions are in the nominative case instead of the genitive. This is a change that we decidedly approve of, but we are not quite prepared to accept the expressions, "Oleum Tiglium," "Oleum Ricinus," "Linimentum Sapo," "Liquor Calx," etc. This is carrying reform, if such it be, a little too far for this conservative generation.

The third part of the book is an extended posological table, in which the doses are expressed in the ordinary manner as well as metrically. Here, too, we notice an innovation in the symbol "f D," meaning a "fluidime," or tenth part of a fluigram. On the whole, the book is a useful one, but we believe that it would prove more useful, and certainly more acceptable, if the author had simply given an exposition of the metric system as it exists, and without so many attempted improvements.

How to See with the Microscope: Being Useful Hints connected with the Selection and Use of the Instrument; also some Discussion of the Claims and Capacity of the Modern High-angled Objectives, as compared with those of Medium Aperture; with Instructions as to the Selection and Use of American Object-Glasses of Wide Apertures. By J. Edwards Smith, M.D. Illustrated. Chicago: Duncan Brothers. 1880.

This is a work devoted to microscopic technology, and it gives a great deal of useful information upon that subject. The author's own views are given on the use of the "higher powers," which he advocates very strongly. The book is written by one who is evidently an enthusiastic student of his subject. It lacks in method and in conciseness; furthermore, we should not feel inclined to put the fullest confidence in the judgment of the author. Still, the work can be read with profit by those who are well enough informed not to take it as an authoritative guide.

Illustrirte Vierteljahrsschrift für Aerztliche Polytechnik. Herausgegeben von Dr. G. Beck. I. Jahrgang, 1879. II. Jahrgang, 1880, etc. Bern: Verlag der I. Dalp'schen Buch- und Kunsthandlung.

Illustrated Quarterly Journal of Medical Polytechnics. Edited by Dr. G. Beck.

This is a quarterly journal devoted to the joint interests of the physician and instrument maker. Judging from the volumes before us, we must say that this publication has well fulfilled its purpose. It contains a faithful record of newly-devised instruments throughout the entire civilized world. Concise descriptions and satisfactory woodcuts of new apparatus fill its pages. To the instrument-maker desirous of keeping abreast of the times it would appear to be quite indispensable. And certainly the surgeon will find many suggestive novelties, or improvements of older appliances, described therein. We are pleased to find America conspicuously represented in these volumes, and if many new instruments which the reader of the Record is already familiar with are here faithfully reproduced, certainly we have no cause to grumble, for due credit is invariably given to the originator of an implement.

The Student's Guide to Medical Case-Taking. By Francis Warner, M.D., Lond. 8vo, pp. 211. Philadelphia: Presley Blakiston. 1881.

The object of this little work is to provide a guide for the student to use at the bedside when wanting to know what to look for and what to note. Much attention is given to the special conditions met with in disturbance and disease of the nervous system.

The young graduate will doubtless find it a useful manual.

Hand-book for Coroners: Containing a Digest of all the Laws in the Thirty-eight States of the Union, together with a Historical Resumé, from the Earliest Period to the Present Time, a Guide to Physicians in Post-mortem Examinations, and Valuable Miscellaneous Matter, never before Collated. By John G. Lee, M.D., Coroner's Physician to the City and County of Philadelphia, Pa. Philadelphia: W. Brotherhead, agent. 1881.

This, together with a neat little quotation from Hamlet, is almost the complete title of the unpretentious volume before us. Certainly Barnum could never have devised a more telling title than this one. There scarcely appears any necessity for reading the book after digestion and assimilation of its title-page. It is all there, as it were. Nevertheless, the dish was found to be more palatable than the sauce, so that we may ignore the latter altogether. The work itself is offered to the "coroners, their deputies, the medical profession, and the public." That is all. The critics are left out in the cold, so to speak. Of course the author does not hesitate to assure us that the immediate necessity for publishing this guide was "to fill a void." There is positively no end to the "voids" in medical literature. We all know that nature abhors a vacuum and the medical bookmakers kindly second nature's antipathies by continuously preparing abundant volumes. But apparently the task is a Danaïdean one; these voids show an obstinate power of resisting the "filling" process, so largely prevalent a malady of our days. Dr. Lee contributes two hundred and eighty-eight pages toward filling his newly discovered void, yet we doubt not that an additional thousand pages would hardly suffice to satisfy the demands of this medico-literary vacuum.

The history of coroner's law forms the first chapter of the book, and this, together with the abstracts of legal enactments found in Part II., constitutes in all respects the most satisfactory as well as the most useful portion of the volume. The hints and suggestions relative to the performing of autopsies are wretchedly inadequate, and only tend to show in how bungling a manner the average coroner's post-mortem examination must be performed. Virchow's diminutive treatise on the same subject is vastly superior to Lee's superficial directions. One might easily construe this part of the production into a solid argument in favor of the total

abolition of the office of coroner, and the present system of appointing deputies.

The book closes with a representative collection of more or less amusing anecdotes, which the reader is supposed to take in as a sort of winding-up dessert to the heavier dishes which have gone before. They are evidently intended to capture the "public," the "coroners" being supplied with the State laws, and "their deputies" with the directions for making post-mortem examinations. But unfortunately, after the contents have been thus divided, there is no subject matter left for the "medical profession." Let us devoutly wish that the void thus made apparent will be speedily filled ere its dimensions expand into infinity.

A Guide to the Clinical Examination of Patients and the Diagnosis of Disease. By Richard Hagen, M.D., Privatdocent to the University of Leipsic. Translated from the second revised and enlarged edition by J. E. Gramm, M.D. New York: Boericke & Tafel. 1881.

This little work of two hundred and twenty-three pages will doubtless be welcomed by the large class of students who need a short and concise clinical guide preparatory to studying disease in the living subject, and after having studied sickness in lecture-rooms and from text-books. The value of this guide might have been considerably enhanced by judicious additions to the original. As it stands, the work is thoroughly German, and even some of the translations bear the imprint of a German translator. The American student, for example, is not accustomed to hear the "present condition" of a patient spoken of as his "status præsens." Typhus abdominalis he usually hears of by the name of typhoid fever, and typhus exanthematicus by that of typhus fever. Scorbutus is more familiar to him as scurvy, and lyssa humana as rabies or hydrophobia. But in spite of slight defects of this kind the guide will prove a welcome companion to the student, and even the clinical instructor will find in it a thoroughly systematic exposition of the best methods of examining patients for the discovery of their diseases.

A Veterinary Medical Register.—We are requested to print the following: "The editor of the *Journal of Comparative Medicine* desires to secure as complete a list as possible of all persons practising veterinary medicine in this country. No Veterinary Medical Register now exists. It would tend to unite members of the veterinary profession, and benefit them in many ways, and would be a convenience to many others, if such a register were published.

"All veterinarians are urgently requested to forward, by postal, their names, titles, and addresses. All such will receive a copy of the final list at cost rates. Address Editor of *Journal of Comparative Medicine*, care W. L. Hyde & Co., 22 Union Square, New York City, N. Y."

New Hospitals in Philadelphia.—Two new hospitals, one to be under the charge of the Little Sisters of the Poor, and the other under the Sisters of St. Francis—the latter a branch of St. Mary's Hospital—are to be erected this season in Philadelphia.

Additions are to be made to the Children's Hospital, the Pennsylvania Hospital, and to the Philadelphia College of Pharmacy.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, April 13, 1881.

Dr. T. E. Satterthwaite, President, in the Chair.

Dr. Geo. L. Peabody presented, in behalf of a candidate, a specimen of *fœtal abnormality.*

CANCER OF THE STOMACH—SECONDARY DEPOSITS IN THE LIVER.

Dr. John H. Ripley presented a specimen with the following history:

Steudel, aged fifty-seven, Germany, was admitted into St. Francis' Hospital January 31, 1881. No known hereditary disease in the family. With the exception of a prolonged attack of inflammatory rheumatism, which he had had fifteen years ago, he had been a healthy man, until the beginning of his present illness. He had been a moderate drinker. He had never had venereal disease.

Six weeks ago he began to suffer from a burning pain in the epigastrium while swallowing his food—particularly solids and cold liquids. A few days later the pain became more or less constant, was often lancinating, was worse after eating, and was sometimes felt in the dorsal and umbilical regions. It was also increased by deep inspiration, and by assuming the erect position; hence, while sitting or walking, the patient was accustomed to lean forward. During the last four weeks he had had frequent attacks of vomiting, but the rejected matters had never contained blood. He had lost both flesh and strength.

On examination, after admission, it was observed that he was greatly emaciated and had an anxious expression of countenance, but no special cachexy. The abdominal walls were retracted and rigid, producing a broad, deep sulcus in the epigastric region, which was more marked on account of a rachitic deformity of the chest. The tongue was moist and coated with a thick fur. The pulse was rapid and feeble—the right radial pulse being weaker than the left. A physical examination of the lungs showed chronic emphysema. The heart-sounds were feeble, and a slight diastolic murmur was heard just above the xiphoid appendix and a little to the left of the median line. Pressure on the epigastrium produced pain, but no evidence of the presence of a tumor in that region was found. The outline of the liver appeared to be about normal. His urine was examined with negative results. As the symptoms thus far pointed, for the most part, to simple ulcer at the cardiac orifice of the stomach, that diagnosis was temporarily made. There was no marked change in the symptoms until about the middle of March, when slight jaundice supervened. A few days later the patient was chloroformed, so as to relax the abdominal muscles and permit of a more thorough examination of the organs within. The liver was then found to extend about one and a half inches below the free border of the ribs, its edge was irregular and hard, and its dorsal surface slightly nodular. No tumor of the stomach could be felt, but the diagnosis was changed from simple ulcer to malignant disease of the stomach, with secondary invasion of the liver.

From this time he continued slowly to fail. The

jaundice deepened and the liver rapidly enlarged. Pain became more constant and severe, and the stomach rejected almost everything taken. April 6th he became delirious, passed his urine and fæces involuntarily, and died the following day.

Autopsy by Dr. E. C. Wendt.—Body jaundiced. Abdominal cavity contains a small amount of clear, brownish fluid. Liver protrudes about five inches beneath ribs; left lobe prominently enlarged; the whole organ considerably increased in size. Pleural cavities contain no fluid; a few old pleural adhesions are found. Lungs on both sides in all lobes show a few small, hard, rounded patches of yellowish tint. Subpleural nodules of this kind especially numerous. There is a slight diffuse pulmonary hyperæmia. The heart is small, flabby, and its muscular substance is tinged brown. All the valves, with the exception of the semilunar pulmonary valves, contain a few sclerotic, yellowish plates; papillary muscles of the left ventricle are hypertrophied. Spleen large and firm in consistency and very rich in blood. Kidneys lobulated, but otherwise normal. Œsophagus, stomach, liver and pancreas removed *en masse*. There is a very hard, yellowish white thickened ring at the cardiac orifice, and a second circular new-growth at the pylorus. In the apparently cancerous ring a small, diamond-shaped ulcerated surface appears. A few hard, rounded masses are found near both rings. One larger nodule, seemingly an infiltrated lymph-gland, is discovered at the common bile-duct, near its duodenal termination. The mucous membrane of the stomach is moderately thickened, thrown into conspicuous folds, and has a diffuse, reddish color. The bulky liver presents a mottled appearance; superficially, numerous white and yellowish areas alternate with reddish and brownish portions. The consistency of the organ varies at different places. On section, the mottled appearance is still more marked. The yellowish districts are much harder than the more succulent red and brown portions. Extravasation has apparently taken place around or in some hepatic lobules.

In addition to variously sized hard masses of new-formation, the entire liver appeared to be the seat of an irregularly disposed infiltration. With the microscope the nature of these new-formations was seen to be cancerous. Perfectly healthy hepatic lobules were not discovered. But while some acini were entirely replaced by islands of carcinomatous tissue, other lobules showed only a peripheral cancerous deposit. In many places the branches of the portal vein were apparently filled with epithelial corpuscles. Some of these cells were more or less stained with a brownish pigment. Throughout the entire organ rounded heaps of epithelial elements filled with fat droplets were found. Such heaps were irregularly scattered in the liver, but were most abundant in those portions corresponding to the greatest malignant change. In the hepatic arteries, and in the central veins, epithelial corpuscles could not be detected.

In some portions of the liver, polyhedral yellowish white nodules were visible with the naked eye. They had various sizes, and were separated from the surrounding tissue by a rather sharp line of demarcation. All these nodules represented cancerous deposits. In many there was a decided preponderance of connective tissue over epithelial bodies. But the softer ones were largely composed of cells, conforming to the epithelial type. The perilobular vessels were lodged in thickened connective tissue, which was the seat of an abundant small cellular infiltration. Red blood-globules were present in the latter, and also occurred in little aggregations or sinuous streaks throughout the liver. Larger collections of blood, or distinct clots, were not seen. The epithelial elements composing the neoplasm were smaller than the hepatic corpuscles. Nor did they resemble them very nearly in shape. Besides their nuclei—though, as a rule, plainly visible—were proportionately smaller. In addition, their protoplasm was less granular.

Concerning the condition of the lymphatics and biliary channels, the minute examination failed to elicit satisfactory evidence. The cancerous invasion must have travelled along the portal system of vascular channels, for in many lobules their central veins, with their immediately adjoining capillaries, appeared to be normal. A perhaps noteworthy feature of this particular hepatic cancer was, that the pigment granules already alluded to were found both in the remnants of original hepatic cells and in the epithelia of new-formations. They were, however, more abundant in the former elements.

Finally, as regards those portions of the liver where the disease was least advanced, miliary, or even small nodules of cancer, were the exception rather than the rule. Instead of these rounded collections which are generally found, there was here a peripheral zone of cancerous elements; so that almost normal central portions of certain lobules seemed to be surrounded by a band or ring of carcinomatous corpuscles.

Dr. Ripley regarded the case as interesting in its early symptomatology, because there was nothing which pointed to other than a simple gastric ulcer. The specimen was interesting because the cancer involved both ends of the stomach; the most frequent seat of cancer of this organ being the pylorus, and only that extremity of the stomach in a large majority of cases.

It was also interesting with reference to the secondary invasion of the liver. Up to the 25th of March, the liver could not have been much enlarged, but from that date it increased in size rapidly. That fact corresponded with the statement made by von Schüppel, that secondary cancer involving the liver developed much more rapidly than the original disease. Schüppel says that primary cancer is often overlooked, because it is so small, and also, perhaps, has undergone retrograde degeneration.

The specimen was also interesting as illustrating the extension of the disease into the œsophagus.

Dr. Shrady asked if diagnosis of carcinoma of the cardiac extremity of the stomach was based on the fact that the patient experienced a smarting sensation with vomiting immediately after taking food.

Dr. Ripley replied that it was, and Dr. Shrady further remarked that he had had a similar case.

The President remarked, concerning the point of origin of cancer, that it might be so small as to be readily overlooked; as, for example, cancer of a bronchus, followed by secondary deposits in the lungs, etc. He also thought it was not very rare for cancer to undergo retrogressive change and actually diminish in size, and throw off its epithelial elements, and perhaps cicatrize in places, while in other parts the disease is progressing rapidly.

Dr. Ripley said, it seemed, from the autopsy, that the liver was involved prior to the lungs, a fact which made the case accord with the statement made by Walshe, that the lungs never become involved except as secondary to the invasion of the liver.

The President remarked that, usually, the second-

ary involvement of the lungs was by direct extension of the disease from the liver. But in Dr. Ripley's case such seemed not to be the mode of invasion, because the nodules were scattered through the lungs.

Dr. R. T. Bang presented a

COMPOUND OVARIAN TUMOR,

with the following history:

Anne O——, aged thirty-four, New York; widow; laundress. Admitted to St. Luke's Hospital, June 9, 1880. Family history good. Five years ago she had rheumatism, which troubled her for six months; otherwise the patient had always been well up to two years ago, when she began to complain of general malaise, cramps in the stomach, vomiting, and severe vertex headaches. After a short time these symptoms disappeared, and she continued well all the following winter. Last summer, however, she again fell sick, complaining of exactly the same symptoms. Toward the end of the summer she had several severe chills, which were followed by fever, intense headache, pains in the back and limbs, anorexia, and constant, profuse diarrhœa. She gradually, however, regained comparative health, and passed the fall and winter in tolerable comfort. In April her old trouble again returned, vomiting, headache, and rigors, followed by fever, being the most marked of her symptoms. The chills occurred at irregular intervals, sometimes twice or thrice daily; at other times, once every week or ten days. For the last six months she has had a slight, dry, hacking cough. Has had no night-sweats nor hæmoptysis, but has lost considerable flesh and strength. Fourteen years ago she gave birth to a child, the labor being a perfectly normal one. Has borne no children since, and had no miscarriages. When she was ill, last summer, her abdomen enlarged, but rapidly diminished in size as she regained health. This spring the abdominal distention returned, and has been steadily increasing since. Her abdomen was punctured by a physician last April; but, as he obtained no fluid, he did not repeat the experiment. Of late her bowels have been perfectly regular. Since her abdomen has begun to enlarge, she has urinated more frequently, passing, however, but little water at a time. Her menses have always been regular, but each molimen has been attended with considerable pain and discomfort. For the past month her feet have been slightly œdematous.

On admission, the patient is seen to be very much emaciated. The abdomen is markedly distended with fluid, and both feet and legs are somewhat swollen. The superficial veins of the abdomen are greatly increased in size. Phthisis, in the second stage, exists in the apex of the left lung. The cardiac sounds are perfectly normal, the apex-beat being situated in the fourth intercostal space. The intestines are pushed upward, so that the boundaries of the liver and spleen cannot be clearly defined. The abdomen, on inspection, is fuller on the right side than on the left. There is also a marked rotundity noticeable, the flanks being but slightly bulged out. On palpation, fluctuation is easily made out. Percussion elicits dulness all over the abdominal surface, except at the sides and in the upper portions of the epigastric and hypochondriac regions. A digital examination of the vagina discloses the presence of an elongated cervix. An examination of the urine gives a negative result.

July 13th.—Since admission the patient has been in about the same condition. She micturates twelve or fifteen times daily, and passes from eight to twenty-four ounces of urine in the twenty-four hours. Repeated examination of the water shows nil, its specific gravity varying from 1024 to 1030. The distention of the abdomen has diminished somewhat, and the œdema of the lower extremities has entirely disappeared. The rational symptoms of phthisis have become more pronounced. Her temperature has varied between normal and 103°, the latter elevation being reached on three consecutive evenings a week ago. She has been taking iron, digitalis, and small doses of fluid extract of jaborandi. Dr. Wheelock, in making a vaginal examination to-day, discovered a hard mass in the right iliac region. By conjoined manipulation, the roof of the vagina felt hard and rough. The uterus did not seem to be increased in size and was not freely movable.

August 12th.—No change of any importance in patient's condition since last note. She is menstruating now for the first time since her admission to the hospital, and is suffering from severe uterine colic, with pain in the back, nausea, and vomiting.

August 25th.—The tumor was explored with an aspirator-needle, attached to a hypodermic syringe. The puncture was made in the linea alba, midway between the symphysis pubis and the umbilicus. A fluid of a dirty milk-white hue was obtained which, when expelled from the syringe, coagulated spontaneously. Microscopical examination of this fluid showed the presence of granular cells, resembling leucocytes, small spindle-shaped cells, blood corpuscles, and free granular matter.

September 25th.—The patient is menstruating again. The tumor is increasing in size, and the distention is causing her much pain.

September 28th.—The house physician to-day removed ten quarts of a clear, transparent, syrupy liquid from the tumor by aspiration, much to the patient's relief. A well-defined cystic tumor of the right ovary can still be felt, and, in the right iliac fossa, a hard mass is made out on palpation. The liver is small and the spleen is of normal size. An abdominal bandage was adjusted. No albumen was found in the fluid removed.

October 7th.—For the week previous to the tapping the patient passed only from eight to twelve ounces of urine daily. For the week following she passed from fourteen to eighteen ounces. The tumor is rapidly refilling, and the severe abdominal pain is returning. She also complains of an intense sciatica on the right side. Fifty minims of liquor Magendie, given hypodermically and orally, had to be administered in the past twenty-four hours, in order to keep her from suffering.

October 11th.—The patient is very much more emaciated than when admitted. "Facies ovariana" quite well marked. The tumor is again so large as to cause dyspnœa. On auscultation of the chest to-day a cavity is detected anteriorly in the left apex. The patient passed only eight ounces of water in the last twenty-four hours.

October 12th.—The house physician drew off eight and a half quarts of a thick, grayish fluid from the cyst. Codman's aspirator and injector was employed in performing the operation. After the tumor had been well emptied of its contents, a solution of half an ounce of compound tincture of iodine to four ounces of water was injected without withdrawing the needle. This was allowed to stay in for three minutes; at the end of which time it was withdrawn, and a firm abdominal binder was applied. The patient was immediately relieved of all pain, and passed

the rest of the day in great comfort. On microscopical examination of the fluid, the same was found as on a previous occasion. Chemical examination showed the presence of thirty per cent. of albumen, by bulk. Specific gravity, 1018; and reaction neutral.

October 16th.—Since the aspiration the patient has passed twenty, twenty-four, and twenty ounces of urine daily.

October 29th.—The pains in the back, thigh, and abdomen have returned. The tumor is again fully distended, and the patient wishes to have it tapped once more. For the past week she has voided but eight ounces of urine daily.

October 30th.—Aspiration was performed as before, three and a half quarts of a dark and very thick fluid being removed. A solution of compound tincture of iodine of the same strength as that used the last time was again injected into the sac, and, after five minutes, withdrawn. A binder was applied as before. The specific gravity of the fluid removed was 1022. Otherwise its examination was negative.

November 3d.—The patient has passed sixteen, fourteen, fourteen, and sixteen ounces of urine respectively on each of the last four days.

November 12th.—The pain in the back is returning. The patient is slowly sinking and requires considerable morphia to keep her comfortable.

November 14th.—Died at 11.40 A.M. of pulmonary œdema.

November 15th.—Autopsy twenty-two hours after death. Cadaver extremely emaciated. Abdomen greatly distended, and pendulous toward the right side. Post mortem rigidity tolerably well-marked.

The heart was found in systole, and weighed six ounces. Its valves were normal. The pericardium contained a normal amount of fluid.

There were fresh pleuritic adhesions on the left side. The apex of the left lung contained a cavity as large as a horse-chestnut. The rest of the apex was filled with a cheesy mass, around which there was a proliferation of fibrous tissue. In the lower lobe of this lung, phthisical foci were found surrounded by localized pneumonia. Old cicatrices and calcareous deposits existed here and there. There was marked œdema.

On the right side there were no adhesions. The lung was œdematous, but otherwise healthy.

The liver was small, and weighed two and one-half pounds. The spleen weighed twelve ounces.

The abdomen was filled with a cyst, which was attached all around by soft and easily broken-down adhesions. Eight quarts of thick, viscid, dark-gray fluid, with a sediment of pus, were removed from its cavity. It was found to be attached to the right ovary by a pedicle half an inch in diameter. It was multilocular, being made up of one large cyst and several smaller ones. Near the pedicle was a colloid mass of the size of a child's head at term. This was at first thought to be a medullary cancer; but, on microscopical examination by Dr. Satterthwaite, it proved to be simply a papillary growth. The cyst lay upon the spinal column, displacing the intestines toward the sides and upward. The latter were pigmented and adherent, in places, to the tumor. The colon was normal in size and in position; but the small intestines were contracted to the size of one's little finger. The ileo-cæcal valve was situated under the free border of the ribs, on the right side.

The right kidney was three-fourths of an inch higher than the left. Both kidneys were normal, except their pelves, which were largely dilated. The ureters were of normal size.

The uterus and left ovary were healthy. The retroperitoneal glands were enlarged.

The bladder was small and empty.

DR. E. C. WENDT presented specimens illustrating

TRICHINOSIS.

The slides under the microscope showed muscular trichinæ in a free state. They exhibited different degrees of parasitic development, although they were all taken from the same woman. The infested muscles were obtained from a recent fatal case of the disease, which had occurred in Hoboken. For the history of the case he was indebted to Dr. W. T. Kudlich of that city. The whole course of the malady, from the initial enteric symptoms through a typhoid stage with intense muscular pains, to the lethal termination, was so typical that the detailed clinical account of this case might be omitted. It should be stated, however, that shortly after the young robust wife fell ill, the husband also took to his bed with well-marked symptoms of trichinosis. In view of the present agitation of the public mind over the wholesale prohibition of American pork by the Continental powers, it might be of interest to remember that in the present instance the disease was unmistakably traced to a home product. The living parasites were used for purposes of experimentation; and, while entirely new facts were not elicited, a few words might be said as to the results of various trials.

Encapsulated trichinæ were notoriously tenacious of life; but here were the immature, only recently emigrated parasites still wandering about in the muscles. A few of the animals had indeed already assumed the position of a spiral coil, which was the preparatory stage of encapsulation. But the majority were either stretched out or twisted at either extremity. Little pieces of the woman's muscles were exposed to the action of cold, being several times frozen. Examination, four days afterward, found them apparently quiescent. A gradual elevation of temperature up to about 100° F. soon proved that life was not extinct, in so far, at least, as active motions can be interpreted as an indication of vitality. Ten days later the parasites were still alive. Some of the flesh was then allowed to undergo partial putrefaction. Even then the animals were living. This was thirteen days after the death of the woman.

On the day following the autopsy, some fresh muscle was teased, and, there being an abundance of living trichinæ, many thus became isolated. The animals were never seen to actually creep along in a definite direction. Their movements resembled the unfurling and recoiling of a pennon. Nevertheless, a change of place was now and then fortuitously effected. Next, the parasites were subjected to the action of different reagents. Saliva produced no visible effect upon them. Dilute acids resulted in increased activity of motions. Alkalies made them sluggish. Concentrated solutions of both rapidly killed them. In carbolic acid they squirmed and writhed before dying. Glycerine, contrary to what was supposed, did not immediately kill them. Some lived for ten minutes after its addition. Finally, however, the worms became shrivelled up into almost shapeless filaments. If previously heated, however, they retained their form to a great extent.

A little of the fresh muscle was submitted to artificial digestion by being placed in a suitable fluid and exposed for twelve hours to about body heat. The muscle was in great part dissolved at the end of this

time, and many free parasites were found in the liquid. But they were, if anything, less active than they had been, and, as soon as the liquid was allowed to cool, their movements ceased, to be renewed, however, on reheating the slide. A noteworthy fact, and of great interest, was that the trichinæ had unquestionably grown. But, though their size was now increased, and although indications of sex could be barely perceived, a distinct evolution into mature males and females was not obtained. It must be remarked, however, that future experiments at such artificial breeding may be more successful. Through an inadvertence the continuation of the artificial digestion was interfered with, the animals being killed by overheating.

Portions of partially putrified muscle were placed in vials containing water, with the addition of a small proportion of glycerine, carbolic acid, and alcohol. In this liquid the parasites were maintained in a comparatively good state of preservation, showing the details of their interesting organization with satisfactory clearness. Permanent specimens, no matter what technique of preparation may be employed, were never found as perfect as recent ones made from bits of muscle thus kept. Of course, fresh would answer still better than partially decayed muscle.

Concerning the pathological condition of the infested muscles, the changes there found were the frequently described conditions of acute myositis accompanied by vitreous metamorphosis, cloudy swelling, and fatty degeneration. In some places the interfascicular hyperæmia and small-celled infiltration were beautifully seen.

The subject of trichinosis had occupied his attention for a number of years; but this was not the place to discuss the many questions which presented themselves: only one further remark as to the diagnostic value of examining small bits of muscle removed from accessible regions in patients suspected of trichinosis. If the animals were found, of conrse the evidence was incontrovertible. But, *rice versa*, a conclusion could not be arrived at. This he wished to emphasize, because a contrary opinion was prevalent in some quarters. In the present fatal case of trichinosis, small bits of the deceased woman's muscles were torn from the gastrocnemius and deltoid muscles; and while some specimens had contained numerous parasites, others had been found without them. In the diaphragm, intercostal muscles, and other well-known places of predilection, every examined specimen showed abundant parasites.

Dr. Carpenter's observation at the dead-house of Bellevue Hospital had been that encysted trichinæ were found more frequently in the pectoral muscles or the diaphragm than in the deltoids or the gastrocnemii.

The President remarked that the subject of trichinosis was now of very great interest to the country at large, and we should be anxious to get all the light possible upon it. Though a vast amount of labor had been expended on the origin, clinical history, and treatment of trichinosis, we have good reason to suppose is was seldom recognized during life, and even after death would often escape notice, unless the examiner had his attention specially directed toward the possibility of its occurrence. Consequently our present statistics could not be relied upon in forming an opinion as to its prevalence. One of the points on which we needed more information was the period of incubation. This was variously placed at between ten and forty two days; or, rather, according to our present ideas, it would take ten, but might take forty-two days, for the young trichinæ to appear in the muscles after the infected meat had been eaten.

Now, it was just upon this variable period that the dealers relied chiefly when they were prosecuted for selling trichinous meat. As most infected persons are Germans, who are in the habit of eating uncooked meat, more or less continuously, it is generally easy for the accused to show that other hams or sausages were eaten during this period of forty-two days, and as statements are to be found that a limited number of living trichinæ have been eaten without harm, it is almost impossible to secure conviction. Dealers therefore do not ask for an examination of hogs or their products, nor are they afraid of being convicted, even should they sell trichinous meat.

Now it is particularly important to determine whether or not there is this variable time between the ingestions of the animal and the subsequent migration of the larval form, and more experiments should be made on animals to determine it.

Then another point is important, which is, How frequently is trichinosis met with? In Europe it is said to occur in from one to two per cent. of all cadavers. In this country we have as yet no trustworthy data; at least this conclusion may be drawn from the recent report of late Assistant-Surgeon Glazier, to the U. S. Marine Hospital Service. Still we know that eight hogs out of a hundred were once found trichinous in Chicago and though this percentage has been once exceeded in Germany, it is a large one, and invites consideration.

Especially important was, he thought, the determination whether living trichinæ can really be swallowed with impunity, if in small numbers, and, if so, what quantity is necessary for infection; whether such trichinæ be the larval or fecundated forms; and whether emetics or purgatives were not afterward employed to expel them, as in this latter case it is reasonable to suppose they might have been removed without harm to the individual.

The President further remarked that there were now no specially appointed officials who made it their duty to inspect meat, as was formerly done. A diminished appropriation led to the suspension of this work.

MIXED SARCOMA OF THE HUMERUS.

Dr. W. H. Porter then presented a specimen taken from a large mastiff. Some six or eight months prior to death the dog was chasing a cat, and ran with considerable force against a stone wall. When the owner of the animal reached the spot, the dog was lying near the wall, howling pitifully, and could not be induced to move. She was accordingly wheeled home in a barrow. The injury at that time was located at the left shoulder. Though very lame, she commenced using the left limb after a day or two, and at the end of a week or ten days had apparently recovered entirely. A week or two later, however, she again became lame, and a small tumor was noticed for the first time at the point of the left shoulder. The growth steadily increased in size, lameness became more and more marked, until finally the limb was useless as a means of support, and she steadily lost flesh and strength.

When first seen by Dr. Frank Walton, veterinary surgeon, the animal was walking on three legs and drawing the toe of the left foreleg on the ground.

There was a large solid mass covering in the shoul-

der-joint and extending backward, so that the outlines of the scapula and humerus could not be detected. This growth was surrounded by considerable œdematous swelling and œdema of the left leg.

A diagnosis of traumatic aneurism was at first entertained, but later it was thought to be a sarcoma of some kind or other. The animal continued to loose flesh and strength, although her appetite remained good.

On April 9, 1881, an attempt was made under ether to remove the growth, but the animal died under the operation.

The limb was then removed entire, when it was found that the growth seemed to have sprung from the humerus at the junction of the upper and middle thirds, at which point the bone was broken. From this central point the neoplasm radiated out in a centripetal manner, as is common in the periosteal sarcomata. The tumor which was surrounded by a thin, fibrous capsule, extended above the superior end of the humerus, reaching into the infraspinous fossa.

The growth was about nine inches long and five in diameter; at its superior extremity there were two large cysts containing a bloody fluid. These cysts had smooth walls like the inside of a blood-vessel; but careful examination failed to detect any communication with the blood-vessels. There was also small spicula of bone in the neoplasm.

Examination of the internal organs revealed secondary superficial deposits in lungs, kidneys, and in the spleen; the liver was free from any secondary deposits.

The humerus, both above and below the fracture, was condensed, and the medullary cavity was completely obliterated. That portion of the infraspinous fossa against which the tumor rested was thickened and roughened, covered by numerous small bony projections.

Microscopic examination.—The tumor was found to be made up principally of various elements conforming to the connective-tissue type, the oval and round corpuscles being the predominating variety, though a few spindle and myeloid bodies were also noted. The secondary deposits were entirely of the round-celled variety.

The case is of interest, because it is probably the first one of the kind in the dog on record, although this form of malignant growth has been met with in others of the lower animals. Second, as adding still further proof that the diseases of man and animals are quite similar. Third, that the growth seemed to follow directly after the receipt of a severe injury. Fourth, it is of interest in connection with a case of secondary carcinoma of the kidney presented by Dr. Wendt, in which the secondary deposits were superficial in the kidney, the same being true in all the organs in this case.

Dr. Wendt remarked, that the fact that the capsule of the tumor was entirely fibrous went to show that the growth was of central origin rather than periosteal. In the latter, bone spiculæ were usually found in the capsule.

Dr. C. S. Bull presented a specimen of

INTRAOCULAR AND ORBITAL SARCOMA.

The patient was a man, aged forty-six, who first noticed a failure of his sight in the spring of 1879. The loss of vision was progressive, and for about two months before I saw him had been accompanied by considerable pain. I saw him in February, 1880, and found the following condition of affairs: Vision was reduced to 0; cornea clear; iris retracted; pupil closed by a membrane; tension + 2; injected ciliary vessels; eyeball sensitive to pressure. An intraocular tumor was suspected, and the patient urged to have the eye enucleated. This was declined, and he withdrew himself from observation, and he was not seen again till early in September, 1880. The eyeball was then very prominent; a growth could be felt in the orbit, and the patient was suffering from severe and constant pain. He consented to an enucleation, which was done on the following day in the usual manner. The whole orbital tissue was found infiltrated by the growth, and part of it was removed with the eye. The entire contents of the orbit were then cleared away, the cavity washed out with a five per cent. solution of carbolic acid, and then a careful examination was made, and it was found that the growth had extended into the sphenoidal fissure and optic foramen. No further operative interference was deemed justifiable, and the patient was told that the tumor would surely recur and grow outward toward the margin of the orbit, as the tendency of these growths is, and that it eventually would probably cause his death. He disappeared from observation, and has not been seen since.

Microscopical examination.—The cornea is about normal in appearance. The anterior chamber is increased in depth, owing to a retraction of the iris. The latter is thickened and merged with the capsule of the lens. The pupil is closed by a membrane. There is no trace of the lens. The ciliary body and processes are pushed forward and inward toward the interior of the eye by the growth behind involving both retina and choroid, and detaching the latter in part from the sclera. There is no trace of the vitreous. Nearly the entire eyeball is occupied by a growth, which presents somewhat different appearances in the retina and choroid. Anteriorly between iris and retina, which is partially detached, is a cheesy mass, connected with iris and ciliary processes, which, under the microscope, consists of a large number of small round cells, with nucleus and granular contents and a mass of granular matter and some pigment lying free. Behind this is the densely infiltrated retina, partially inclosing the cheesy mass just mentioned. Surrounding this is the infiltration of the choroid, extending well forward to the region of the peripherical attachment of the iris and sclero-corneal junction, and partially separating choroid from sclera. Back of the equator the sclera has been perforated by the growth in several places, which in some spots seems to have entirely disappeared; and the growth has extended back into the orbital tissue, and involved the sheath of the optic nerve and the nerve itself. Running through the growth, in the region of the choroidal infiltration, is a striated appearance, due to a rather marked development of connective tissue, which in one or two places extends backward into the infiltrated orbital tissue. The mass of the tumor consists of the small round cells, which form most of the choroidal sarcomata, with some pigmented cells, round and fusiform. The growth is not very vascular until the orbital portion of the tumor is reached.

The contents of the orbit, when examined, proved to be the same as the mass of the intraocular tumor, and belongs to the class of round-cell sarcoma.

Dr. Peabody presented a specimen of

ACUTE PERICARDITIS,

typical in appearance and clinical history. He also presented a similar specimen, which was accom-

panied by croupous pneumonia and double acute pleurisy.

CONGENITAL ABSENCE OF ONE KIDNEY.

Dr. Peabody also presented specimens removed from the body of a female, twenty-one years old, a native of Ireland, unmarried, and by occupation a prostitute, who was admitted into the New York Hospital with acute peritonitis, and died at the end of forty-eight hours. No cause for the peritonitis was ascertained. At autopsy it was found that the left lung had three lobes, the right one four. There was no kidney on the left side. On the right side the kidney occupied its usual situation, but was double the normal size, and was connected with the aorta by two renal arteries, one going to the upper and the other to the lower part of the organ. The renal veins were essentially normal. There was no renal artery on the left side. Both suprarenal capsules were present. The ureter was about double the normal in size and entered the bladder in the normal situation. The left half of the *trigone vesicæ* could not be made out. The uterus was *bicornis;* though the right was better developed than the left horn. The cervix was large and readily admitted the little finger. The vagina was essentially normal. The ovaries were normal, and a recent corpus luteum was prominent on the right. There was no evidence that the woman had ever borne children, and the cervix uteri was not lacerated. The woman gave a history of chronic alcoholism. The kidney presented the lesions of acute nephritis. Dr. Peabody gave the following *résumé* of the literature of the subject.

The latest allusion to the condition that I find is in the March number of *Virchow's Archives* for this year. A case is there reported by Dr. Falk, of Berlin, which is the forty-fifth case on record. In this case the right kidney was absent. Of forty-four cases tabulated by Beumer, of Greifswald, in No. 72 of *Virchow's Archives* for 1878, many showed unusual relations of blood-vessels, ureters, suprarenal capsules, defects and anomalies in the genito-urinary tract of various degrees of importance, and one is noticeable as having exhibited in several places marked stenosis of the aorta. In twenty-two of these cases the right kidney is absent, in twenty-two the left, and in the others we are not told which is missing. Twenty-seven cases are recorded among males, and thirteen (besides my own) in females. In five cases the sex is not given. The difference in frequency of the occurrence in the two sexes is to be regarded, I think, as only apparent, for the reason that, as Beumer says, the whole number is too small to admit of such generalization and because a much larger number of male bodies than of female find their way to the post-mortem table.

In some of these cases rudimentary renal vessels were present, as well as also a rudimentary ureter, although in most cases there was neither ureter nor vessels on the side of the missing kidney. In some cases, as in my own, the half of the *trigonum vesicæ*, which would have been in relation with the absent ureter, is not to be found. The suprarenal capsule is generally present upon both sides, its absence in such subjects having been recorded only in five cases.

In one case, where the left kidney was absent, the left seminal vesicle was very small, the other one being proportionately larger than normal. Similar relations are occasionally observed in regard to the testicles. In one case, where the male genital organs were well developed, a uterus, whose length was 38 mm., and a vagina, whose length was 25 mm., are recorded.

Among women, defects and anomalies in the genital apparatus seem to be more frequent than among men. Of the thirteen cases previously recorded among women eight showed such anomalies. Usually the uterus, occasionally the vagina, rarely the ovary, is the affected organ. The uterus is sometimes double, sometimes normal, sometimes unicornis, sometimes (as in my case) bicornis. When the uterus is bicornis, the horn on the side of the kidney is usually larger and better developed than is the other horn. The vagina is occasionally double. The ovary has been noticed to be small, without follicles, and misplaced.

The single kidney is always larger and heavier than normal, with blood-vessels and ureter proportionately increased in size. Of forty-five cases the kidney was unhealthy in twenty-three, showing that the liability to disease is increased by the abnormality. Of these twenty-three cases nearly all died of the kidney lesion; in six of them there were other diseases present besides the kidney lesion. In ten cases calculi were found in the pelvis or ureter. In several cases death was caused by nephritis calculoso, and in five a calculus occluded the ureter, causing renal colic and retention and death.

It is a matter of some interest to ascertain what is the cause of the increase in the size of the single kidney in such cases as these. Are the individual elements, the glomeruli, the tubes, the vessels, increased in size? Are the epithelial cells larger than usual? Elaborate investigations have been made upon these subjects, and the conclusions have been reached that none of these changes take place, but that the increased size is due to an actual hyperplasia, an increased production of individual kidney elements, and not to an hypertrophy of the individual elements of a previously normal organ.

Dr. Putnam-Jacobi suggested that the peritonitis might have been due to nephritis, in the same way as pleurisy, meningitis, etc., occur in connection with chronic Bright's disease.

Dr. Peabody thought that, inasmuch as the nephritis was of the acute variety, the peritonitis might not be secondary to it. The urine contained albumen, but no casts, and although the quantity was abnormally small, he thought that would not throw much light upon the condition of the kidney, because the reduction in quantity might be due to the peritonitis.

Dr. C. K. Briddon presented a specimen of

SARCOMA OF THE UPPER JAW, REMOVED AFTER PRELIMINARY LARYNGO-TRACHEOTOMY AND PARTIAL NARCOSIS BY CHLOROFORM AND MORPHIA.

The specimen was referred to the Committee on Microscopy. The history was furnished by Dr. W. S. Seamans, House Surgeon of the Colored Home.

S. G. W——, native of United States, fifty-four years old, married, mulatto. Admitted to hospital March 24, 1881. Family history irrelevant to present disease of patient. Had usual diseases of childhood, malaria (tertian type) ten years ago, gonorrhœa twenty-five years ago—denies all other forms of venereal disease—epitrochlean glands enlarged. No alopecia—no rheumatism. With these exceptions enjoyed good health until five months ago, when he first noticed "an enlargement" about the size of a Lima bean, firm to the feel, on the inside of the upper right alveolar process, middle portion, at the junction of the gum and the teeth.

This tumor was neither painful nor tender on pressure, but kept on growing until it involved the whole of the palate on the right side, to such an extent that it greatly interfered with the opening of the mouth.

Two months after its first appearance it commenced to ulcerate. From the beginning of its growth it had been treated with washes, etc., without benefit. One year ago all the teeth of the right upper jaw, being in bad condition, were extracted. Appetite fair, bowels regular, tongue clean. Pulse, 76; respiration, 20; temperature, 98°. Urine, yellow; acid, 1026; alb., none; sugar, none. Heart and lungs healthy.

Inspection.—The right cheek was decidedly prominent, the contents of the orbit were not displaced, both nasal passages were free, the right half of the roof of the mouth was projected downward by a growth of a light maroon color, its surface was granular and continuous with the alveolar process, there was a suspicious appearance about the mucous membrane covering the posterior portion of the lower jaw, but it was regarded as probably nothing more than superficial erosion due to the irritation caused by discharge from the disease above. There was an enlarged lymphatic gland in the submaxillary space. The growth in the superior maxillary bone was regarded as malignant, probably sarcomatous, and its entire removal was recommended and accepted by the patient.

Operation, March 29th.—To obviate the danger of asphyxia from entrance of blood into the air passages it was determined to make a preliminary laryngotomy, and it was also proposed to partially narcotize the patient according to the plan suggested first to Nussbaum, of München, and carried out in several operations about the face by Prof. Thiersch, of Leipsic. The patient received a subcutaneous injection of twelve drops of Magendie's solution of morphia, and chloroform was administered to commencing rigidity, an incision was then made through the coverings of the crico-thyroid space, and as the interval between those cartilages was limited it was enlarged downward by dividing the cricoid; a hard-rubber canula was introduced, communicating through the medium of eighteen inches of soft tubing with a funnel covered with flannel; on this it was only occasionally necessary to drop a few drops of chloroform to keep the patient in a condition insensible to pain, and yet able to assist the operator by such movements as were deemed necessary; a large sponge was then passed back into the fauces, and the operation on the face was begun by an incision commencing below the right internal canthus and terminating over the zygomatic process of the malar bone; the periosteum was lifted from the floor of the orbit, and a second incision was carried from the commencement of the first to just outside the alar cartilage; the vessels divided in these incisions were controlled, and then the termination of the last incision was carried round the nasal aperture and through the medium line of the upper lip; by making the incisions in the soft parts in the manner described a considerable amount of hemorrhage into the mouth was prevented; the remaining steps of the operation were those usual in excision of the whole bone; the nasal and palatal processes were divided, then the zygomatic process of the malar and the mass was removed by avulsion. There remained in the depth of the wound and incorporated with the connective tissue covering the pterygoids a material that had evidently been continuous with the neoplasm that filled the antrum; this was detached by scissors, and the surface from which it was removed was cauterized with Paquelin; the adjacent buccal mucous membrane, which was infiltrated with the same elements, was dissected off and cauterized with solution of chloride of zinc; a gland in the sub-maxillary triangle was found in process of caseation; it was dissected out, and the soft parts were approximated with two pin and a number of interrupted sutures.

The behavior of the patient under the method for partial narcosis was extremely pleasant; he responded to questions as well as it was possible for a person to do with a hole in his air-tube, and afterward insisted that he was cognizant of what was going on, though he felt no pain, and the condition of semi-insensibility was maintained with very little chloroform.

On examining the parts removed it was found that the orbital plate was the only part of the bone that had not been invaded by the disease. There was a small perforation of the internal surface leading into the middle meatus, the facial and zygomatic surfaces were almost entirely destroyed, the palatal process was replaced with the same growth that filled the antrum, and which was evidently sarcomatous in character.

March 29th.—8 P.M.: Patient stood operation well, and experienced no immediate ill-effects. On being questioned, said he knew everything that occurred throughout the operation, and at the same time felt no pain whatever. 10 P.M.: pulse 94; respiration, 22; temperature, 101° F.

March 30th.—8 A.M.: Rested well during night; feels well with exception of a slight headache. Pulse, 90: respiration, 20; temperature, 100.2° F. 7 P.M.: Has taken plenty of nourishment through a glass tube; pulse, 92; respiration, 20; temperature, 100.3° F.

March 31st.—8 A.M.: General condition unchanged; pulse, 92; respiration, 20; temperature, 100° F.; 7 P.M.: pulse, 104; respiration, 20; temperature, 101° F.

April 1st.—8 A.M.: Still complains of slight headache, otherwise condition good; pulse, 100; respiration, 20; temperature, 101° F. 7 P.M.: pulse, 104; respiration, 21; temperature, 103° F. Is taking plenty of nourishment.

April 2d.—Pulse, 100; respiration, 20; temperature, 101° F.

April 5th.—Condition much same since last note; pulse, 108; respiration, 24; temperature, 102.1° F. Removed every other suture this A.M. and found wound closing by first intention.

April 6th.—Patient says he feels comfortable; pulse, 94; respiration, 32; temperature, 101.2° F. Mouth has been syringed out three or four times a day with a saturated solution of salicylic acid.

April 7th.—8 A.M.: Pulse, 96; respiration, 30; temperature, 101.3° F. Last night patient was very restless. Gave atropia sulph., gr. $\frac{1}{60}$, morphia sulph., gr. $\frac{1}{4}$. 5 P.M.: Pulse, 102; respiration, 32; temperature, 103.1° F.

April 9th.—Patient's condition unchanged; pulse, 100; respiration. 28; temperature, 102° F.

April 10th.—Comfortable; pulse, 100; respiration, 26; temperature, 101.2° F. After this date the temperature declined to the normal, he gradually gained in strength and flesh, and by the 18th he was sitting up, and expressed himself as feeling better than he did before the operation. The sloughs had all separated, leaving a healthy granulating

surface exposed to view. The suspicious appearance about the alveolar process of the lower jaw had disappeared, and altogether his local and general condition was most gratifying.

SEPTIC PLEURISY IN AN INFANT FOUR DAYS OLD.

Dr. J. Lewis Smith presented the lungs of a child four days old, which exhibited in a marked degree the plastic exudation of acute pleurisy. The following was the history of the case. One week previously he delivered a primaparous woman with the long forceps. The labor was simply tedious. The operation was performed with great care, and during the twenty-four hours immediately succeeding, the woman seemed to be progressing favorably. On the second morning, however, her temperature was 105½° F.; pulse, 120; and respiration, 34. There had been no chill. Thinking that he had to deal with puerperal fever, Dr. Smith ordered quinine in doses of five grains, every four hours; *one* grain of opium every three hours, and, externally, camphorated oil and turpentine with poultices. The patient was progressing favorably. On the second day of the treatment salicylic acid was added every four hours, and the temperature soon began to fall and had reached 102½° F. in the evening.

The baby was unusually quiet for two days. When aroused it seemed lively and took the breast. On the third day it became fretful, and on the following day Dr. Smith found absolute dulness on percussion over the right side of the chest, respiration was accelerated, and the child moaned. The temperature in the rectum was normal. Death occurred in the evening of that day. The duration of the sero-fibrinous pleuritis was apparently only twenty-four hours.

Dr. Smith then referred to a case of peritonitis which terminated fatally after only one day's sickness, and as it was recognized that septicæmia was one of the causes of peritonitis, he supposed that in his case of pleurisy he had to deal with a serous inflammation of like character. A practical question was whether the child received the poison by nursing or was born with it. Were the conditions such that at the birth of the child both mother and child became affected—one with a high fever, and the other with a serous inflammation.

Dr. Ripley remarked that, so far as he knew, physicians were accustomed to allow children to nurse puerperal mothers. He regarded it as the general practice, where the mother had milk, to put the child to the breast, and it was done with the idea that if she recovered rather speedily she could continue to nurse the child. He did not remember to have seen any case of inflammation which could be attributed to that line of practice. New-born infants sometimes had pluerisy independent of instrumental operations or puerperal fever, and it was not very uncommon for a child to die of peritonitis independent of puerperal fever.

Dr. Smith said that he should be glad to believe that the condition of the mother and that of the child were coincident.

The society then went into executive session.

Giving up the Use of the German Letters.—In view of the opinions lately expressed by eminent oculists, that the reading of German text is injurious to the eyes, the Bernese Government have resolved as much as possible to discourage its use, and all their official announcements and reports will henceforth be printed exclusively in Roman characters.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, April 25, 1881.

Dr. A. E. M. Purdy, President, in the Chair.

Dr. Clinton Wagner read a paper on

HABITUAL MOUTH-BREATHING: ITS CAUSES, EFFECTS, AND TREATMENT.

Man by nature is a nose-breathing animal. The nose has a double function: 1. It is a channel for the passage of air into the lungs; 2. It is an organ of special sense. Man is the only animal that breathes through the mouth. Indians are remarkably free from nose, throat, and ear affections, although they live under circumstances most favorable to the development of such diseases, and that immunity he attributed to their habitual practice of nose-breathing.

Causes.—These were to be looked for in the nose, the mouth, and the throat. Of nasal causes there were, complete or partial occlusion of the passages, which might be due to narrowing of the nostrils, the presence of polypi, myxoma, fibroma, adenoma, exostoses, false membrane, congenital closure of the posterior nares, cicatricial contractions from syphilis or burns, foreign bodies, general thickening of the mucous membrane, and paralysis of the dilators of the nostrils.

Dr. Wagner did not accept Cassels' claim that the left nostril naturally is narrower than the right.

Of the mouth causes, mention was made of enlarged tonsils, lingual and sublingual tumors, elongated uvula, adhesions of the soft palate to the posterior wall of the pharynx, and irregular, uneven, or protruding teeth.

Effects.—Change in physiognomy. The law of compensation does not apply to the nose, and closure of one nostril does not have the effect of dilating the other, or increasing its functional activity. The sense of smell is impaired or lost. The sense of hearing is affected, ranging from slight impairment to total deafness. Pharyngitis sicca is produced, and chronic catarrhal laryngitis. The voice is disturbed. Snoring ensues. Pigeon-breast is frequently brought about by the habit. There is imperfect oxygenation of the blood, and its attendant consequences. Asthma may result, and acute hyperæmia of the lungs may follow efforts at inspiration.

Treatment.—Local causes should be carefully ascertained, and the surgical operation performed which may be indicated, together with such local applications as the case may require. The cutting burr devised by Dr. Goodwillie, answers a most admirable purpose for the removal of bony or cartilaginous obstructions. Nasal polypi should be removed with the snare or galvano-cautery loop. For structural narrowing of the nasal passages he recommended dilatation by means of metallic sounds, slightly curved and olive-pointed. The process is somewhat painful, but not more so than dilatation of the urethra, and weeks or months may be required to secure the desired result. A favorite local remedy in cases of hypertrophy of the mucous membrane, etc., is the following:

℞ Iodini	gr. ij.
Potass. iodid	gr. iv.
Zinci iodid	gr. x.
Aquæ	℥ j.

M. Apply with a brush, or on cotton.

Dr. Wagner also uses the galvano-cautery for destroying hypertrophied mucous membrane, and recommends the simple wire snare ecraseur devised by Dr. Wm. C. Jarvis. He advised extirpation of enlarged tonsils, and uses Mackenzie's guillotine. He has operated on children *three* years old, and would not hesitate to remove them from a younger patient if necessary. He had removed the tonsils over five hundred times, and has had no accident following the operation, either in the way of hemorrhage, or otherwise. He recommended daily cleansing of the nose in infants, and the use of borax water, applied with either a syringe or a brush. Children should be taught to keep their mouth closed, except while eating and speaking.

Dr. Andrew H. Smith, while accepting much that Dr. Wagner had so clearly stated, took issue with him on the statement that "pigeon-breast" is produced by mouth-breathing. He regarded it as always the result of obstruction of the nasal passages, the result of the same cause which leads to mouth-breathing. It is the result either of some form of nasal disease, the most frequent being hypertrophy of the mucous membrane covering the inferior turbinated bones, or natural narrowness of the nostrils without pathological conditions. Dr. Smith thought that ablation of the tonsils was not so entirely simple and devoid of danger as Dr. Wagner had stated. Of all the simple operations, he thought it was the one very liable to be attended with hemorrhage or other trouble. He then referred to a case in which alarming hemorrhage followed extirpation of the tonsils with the guillotine.

Dr. E. S. Peck stated that it was a remarkle fact that so little had been written upon this important, as well as novel subject of mouth-breathing. Since his attention had been called to the subject by the author of the paper, he had found but three short articles having direct reference to it. Dr. Wagner had so thoroughly alluded to the clinical bearings of this anomaly of respiration, that little was left to be said. Dr. Peck wished to speak of the disturbances due to mouth-breathing which were not confined to the respiratory tract. The vault of the pharynx, mouth of the Eustachian tube, and the tube itself, the cavity of the middle ear, and even the membrana tympani, he had found to be fields of serious disturbances due to this bad habit. The same hypertrophic and hyperplastic changes which transpire in the unused nares with this kind of respiration, are found to obtain in the mouth of the Eustachian tube. This portion of the naso-pharynx is richly supplied with vascular and glandular tissue, and its submucosa is very lax. Non-use of these parts invites a thickening of tissue due to infiltration; this he has seen in the rhinoscopic mirror, and it is fair to presume that erosions of the basal cartilage and of the pale mucous membrane of the mouth of the tube, may result in confirmed habituation of mouth-breathing. True chronic catarrh of the tube and middle ear may be the product. If the disease is confined to the ostium tubæ, its resulting deafness is at first mechanical and due to stoppage; later, the membrana tympani becomes indrawn on account of changes on its own mucous (internal) layer and rarefaction of air, and the patient becomes chronically deaf. The paper calls attention to the acquired habit of infants with "snuffles" to contract mouth-breathing. Within four months he has had repeated occasion to observe this in very young persons, who have applied for relief from deafness at the Northwestern Dispensary, and from whom persistent inquiry has elicited a story of mouth-breathing. He has also found, with great satisfaction, that such young persons were usually amenable to treatment. Chronic tubal, and especially chronic middle-ear catarrh of the adult, is well known to be the bugbear of the aurist. In these young patients, however, suitable metallic astringents applied with the post-nasal brush, or bent cotton-probe, to the ostium tubæ, and a thorough inflation of the tube and middle ear, has usually restored normal hearing. He has carefully examined the drumhead of such persons, and found it more intracted, duller in color, and sometimes immovable to Valsalva; the cone of light either gone, or broken into a single dot at the position of the apex and a trapezoid at the base, or so diminished in size as to be changed into an amorphous light-spot in the posterior-inferior quadrant, while Schrapnell's membrane usually remains movable. The changes have not materially differed from those of a mild variety of middle-ear catarrh. In none of these cases of mouth-breathing deafness has he found the drumhead immovable to Siegel's otoscope. It is important to emphasize this fact, as it must largely determine the prognosis in these young persons. It would be culpable to dismiss such persons without having united persistent inquiry of the etiological factors with every clinical means of treatment. To consign a young patient to perpetual and increasing deafness is a very serious matter. He has now under treatment a private patient, a lad of fourteen years, with chronic deafness, *limited to the Eustachian tube*, with the drum-heads in perfect order, whose only cause seems to be mouth-breathing.

Dr. Peck stated that there were two physiological points worthy of notice in this connection. The first, which is a pertinent question for the medical jurist, is this: Air is found in the intra-tympanic cavity of the still-born child, who has never breathed in the legal sense; that is, whose lungs contain no hydrostatic air. The other is a physiological experiment, illustrating the effects of mouth-breathing upon the aural apparatus. Let the nostrils be firmly closed, and respiration be carried on by the mouth. The buccal mucous membrane will gradually become dry and leathery, and some of the saliva at the posterior portions will find its way into the larynx, which will be thrown into spasmodic efforts of coughing. Every such effort, as well as every normal act of swallowing, will produce a sense of constriction and tightness in the ears with, possibly, deep aural pain and vertigo. There will be continued deafness, gradually progressive, and the patient will feel as if the head were enclosed in an air-receiver and separated from the external world by a dense medium.

Dr. Peck emphasized the necessity of instructing mothers and nurses in the early training of children to breathe with the shut mouth, and alluded to the methods of Indian squaws of closing the mouth of the infant, and to the fact that the common dog and rabbit, with a more profuse scrolling and a larger number of turbinated bones than in the human species, always breathe with the closed mouth.

Dr. Thomas R. Pooley, referring to Cassels' statement concerning narrowing of the nostrils, gave the statistics furnished by his own cases of unilateral deafness, 89 in number. Of these the deafness was on the *right side* and due to acute purulent inflammation in 16, chronic purulent inflammation in 12, acute catarrhal inflammation in 9, and chronic catarrhal inflammation in 9: total 46. The deafness was on the *left side* and due to acute purulent inflammation in 16, chronic purulent inflammation in 15, acute

catarrhal inflammation in 4, and chronic catarrhal inflammation in 8: total 43.

In two of the left-side cases there was stenosis of the corresponding nostril. It would seem that there is only a slight preponderance of cases for the right side, and he was inclined to the belief that the statement made by Cassels had no foundation in fact.

With reference to extirpation of the tonsils, Dr. Smith had somewhat anticipated what he had to say on that point. He believed it was an especially dangerous operation in adults, and thought it should not be spoken of as an operation so entirely devoid of danger as regarded by the author of the paper.

Dr. Ward had used Mackenzie's guillotine very many times, and seen it used many more, and believed the operation of extirpation of the tonsils to be one without danger.

Dr. Samuel Sexton said, that having been unable to be present at the reading of the first part of Dr. Wagner's paper, he could not discuss the whole subject of mouth-breathing. He was inclined to believe, however, that its importance had been over-estimated by some authorities, and that although it is a symptom that attends many diseases, there were, in his experience, very few persons who practised mouth-breathing habitually, although many did so for a portion of the time, as when exercising violently, etc. The statements of some writers respecting the breathing and other habits of the aborigines of America were not always founded on careful and exact observations; nor were these writers experts in special work; hence, their conclusions were to be accepted with some allowance. Inquiries of medical officers who had served among our North American Indians, elicited the statement that these savages are by no means exempt from the diseases that compel mouth-breathing, and that aural diseases are very common among them.

Attention was drawn by Dr. Sexton to an operation recommended by the author of the paper for the removal of growths in the naso-pharynx by the galvano-cautery. Several cases of acute inflammation of the middle ear had been reported as produced by this severe proceeding; whether from the entrance to the middle-ear, through the Eustachian tube, of the hot vapor produced by the burning of the tissues, as had been suggested, or by sympathetic irritation, he was not prepared to state, as no case of this kind had ever come under his own observation. It was well, however, to be cautious in the use of the cautery.

The principal interest in mouth-breathing to him as an otologist was, of course, the influence it had upon the renewal of air in the tympanic cavity. Dr Sexton then briefly related the histories of two cases now under his own observation, which were illustrative of the subject (drawing diagrams of the drum-heads on the blackboard). The first diagram drawn represented the left drum-head of a patient; only a narrow rim of the normal membrane remained, but a loose and thin substitutive membrane had been developed, which occupied the place of the normal structure, and which was endowed with monometric functions, thus enabling the observer, by means of an aural speculum and the illumination afforded by a head-mirror, to inspect its movements during the period of varying intra-tympanic pressure. During each respiratory act, the membrane was seen to first bulge gently outward and then instantly fall back again. During the act of swallowing, the membrane is first forced decidedly outward, and then instantly flaps back again with considerable force.

Valsalvian inflation bulges the membrane out on either side of the malleus-handle, to which it is attached. In this case the patulency of the Eustachian tubes seemed to afford facilities for the renewal of air in the tympanum whether the patient breathed with the mouth opened or closed. The external auditory meatus and the drum-head were very large, affording unusual opportunities for observation.

In the second case, the right membrane was found to be very much relaxed, and on each side of the short process of the malleus there was a large opacity. Valsalvian inflation wrinkled the loose membrane, and bulged it slightly outward. At nearly every act of respiration, when the mouth was closed, the patient was aware of the renewal of air in the drum—he heard the membrane move outward with a sound like the bursting of an air bubble, or, as the patient himself described it, there was a "pop." While the membrane remained distended by the air in the tympanum, the patient heard his voice and the respiratory sounds autophonously; if, however, breathing was performed through the mouth it was not thus heard, nor did the interchange of air in the tympanum seem to take place. The patient can voluntarily induce a vacuum in the pharynx and drum of the ear, when the membrana tympani may be seen to fall in under the external atmospheric pressure, and autophony then ceases. When the patient has a cold in the head, perhaps occluding the Eustachian tubes, the membrana tympani remains retracted, and autophonous voice is no longer experienced.

The first case seems to show that in some instances a renewal of the air in the tympanum may take place during mouth breathing. The second case, however, seems to confirm the conclusions of most late observers: namely, that the physiological functions that insure the normal renewal of air in the tympanum, are interfered with by mouth-breathing and most of the causes upon which that anomaly depends.

Dr. R. C. Brandeis referred to anterior curvature of the upper cervical vertebra, and also to post-pharyngeal abscess, as causes of mouth-breathing not mentioned by Dr. Wagner. An effect which he had noticed, additional to those enumerated by Dr. Wagner, was protruding of the lower jaw.

He differed with the author of the paper with reference to the efficacy of dilatation of the nostrils with nasal sounds, and thought the conditions in urethral stricture, stricture of the rectum, lachrymal duct, etc., were very different from those which obtain in the nostrils, where the mucous membrane is vascular, and is upon a bony substructure that is cavernous and vascular.

Dr. Brandeis' method of treating bending of the septum, is to fracture it and then restore it to its normal position with catheters, which can be retained in the nasal cavity for weeks and months without being accompanied by serious inconvenience or giving rise to evil consequences.

Dr. Goodwillie illustrated upon the blackboard various forms of deviation of the nasal septum, and believed that in the greatest number of cases the deviation occurred in the cartilaginous portion. For the relief of this condition he had found no operation which gave so good results as removal of a portion of the septum.

Locomotor Ataxy, differentiated from functional conditions which simulate it.

Dr. A. D. Rockwell read a paper on the above subject. His conclusions were based upon fourteen carefully recorded cases, and were as follows: Of

the fourteen cases, eleven proved incurable. In analyzing the whole number, it was found that incoordination of movement, pain, and loss or impairment of sexual power were present in all. Anæsthesia was a symptom in all the incurable, and of two out of the three curable cases. Inability to touch a given point on the face by a rapid movement of the hand was present in all the incurable, but in none of the curable cases. This he regarded as one of the most, if not the most valuable accessory diagnostic signs.

Abolition of the tendon reflex and absence of the iridal reflex are also most important symptoms, since in curable cases these phenomena are seldom, if ever, wanting. Dr. Rockwell analyzed the cases with reference to several other symptoms, and said, "Manifestly we cannot depend on any one symptom, perhaps not on any single grouping of symptoms, in endeavoring to make a diagnosis." In treatment, general faradization will accomplish much more than local applications of either current, and in many cases the patient can be more or less alleviated.

Dr. Geo. M. Beard referred to certain symptoms which he regarded as almost invariably, perhaps invariably, indicative of functional disorder rather than organic lesion of the spinal cord. Sweating hands almost surely point to functional trouble. Dilated pupils and morbid fears were nearly as reliable symptoms of functional disturbance as were sweating hands. A person with a nervous tendency will be far more likely to develop functional than organic disease. Time is a necessary factor in the study of all these cases, for many cases of posterior spinal sclerosis are non-progressive for a time, and then go on with renewed vigor. His best results had been obtained by general faradization, franklinism, and the use of heat and cold.

Dr. Wm. R. Birdsall thought that the element of time was an important one, for many cases which had been pronounced cured had not been followed long enough to fully answer the question. He thought that sufficient stress had not been laid on pain by Dr. Rockwell as a diagnostic symptom, and believed that the characteristic pains were the best symptom in the early stage of the disease. He gave the history of a case which had been diagnosticated several times as tabes dorsalis, in which the patient had morbid fears, ataxic gait, the tendon reflex was exalted, but there was no history of the characteristic pains. It was a case of functional disorder, and complete recovery had taken place.

RESOLUTIONS OF CONGRATULATION TO MR. T. SPENCER WELLS.

Dr. Andrew H. Smith quoted from the statistics of Mr. T. Spencer Wells' ovariotomies, and offered the following resolutions, which were unanimously adopted:

Resolved, That the Medical Society of the County of New York extend their congratulations to Mr. T. Spencer Wells on the completion of his series of one thousand cases of ovariotomy, and upon the brilliant success which has attended his operations.

Resolved, That this society recognize the great service rendered by Mr. Wells in bringing this operation to its present perfection, by which so large a proportion of formerly hopeless cases may be rescued from death, and by which lustre is shed upon the healing art.

Resolved, That a copy of these resolutions, properly attested, be transmitted to Mr. Wells.

The society then adjourned.

THIRD ANNUAL CONGRESS OF THE AMERICAN LARYNGOLOGICAL ASSOCIATION.

This Association, consisting at the present time of forty-five Fellows, held its annual meeting at the College of Physicians of Philadelphia, on May 9th, 10th, and 11th, and was presided over by Dr. J. Solis Cohen, of Philadelphia, President of the Association for 1881.

The first day's session opened with an address by Dr. Harrison Allen, Chairman of the Committee of Arrangements, who regretted that the meetings of the American Medical Association and the Medical Society of the State of Pennsylvania, occurring at almost the same time with the present meeting, interfered somewhat with the plans of the Committee of Arrangements.

The President's address spoke of the advances made during the year in Europe and America, and called attention to the publication of the *Archives of Laryngology* in New York. An additional journal devoted to laryngology and its adjunct subjects is being published in France, and similar periodicals are expected in the immediate future from Germany and Great Britain. The first International Medical Congress of Laryngologists has had a very successful convention at Milan, and a laryngological subsection of medicine has been organized for the approaching International Medical Congress at London, which bids fair by its prospective brilliancy to outshine the parent section that denied it equality of recognition.

LUPUS OF THE LARYNX AND PHARYNX.

Dr. Frederick I. Knight, of Boston, detailed three cases of lupus larynges, in two of which the disease was associated with lupus of the face. The paper was illustrated by colored drawings of the clinical appearances.

Dr. Morris J. Asch, of New York, then gave the history of a patient suffering with lupus of the pharynx and larynx, without any external disease. He believed the affection is more frequent than is usually thought, and that women are more frequently its subjects than men. The results obtained from treatment are not very encouraging.

CERTAIN NEUROSES OF THE THROAT.

Dr. Andrew H. Smith, of New York, alluded to the peculiar nervous disturbances experienced in the throat, for which the physician can find no appreciable anatomical lesions. These cases, which are often so baffling, are undoubtedly deserving of study and investigation.

LARYNGEAL PHTHISIS.

Dr. Beverley Robinson, of New York, presented a paper on "The Laryngeal Affections of Pulmonary Phthisis," and Dr. William Porter, of St. Louis, one on the "Prognosis of Laryngeal Phthisis." The former stated that laryngeal disease may antedate the pulmonary disease, with which it is usually associated, and advocated in certain cases Dr. Robinson's well-known method of dealing with such laryngeal lesions by tracheotomy, as a rest-producer, and local applications to the larynx. The paper of Dr. Porter held out more hope of relief in laryngeal phthisis than is usually done by writers on the subject.

TUBERCULAR ULCERATION OF THE MOUTH.

This subject, which is closely allied to the one above, was discussed by Dr. Frank H. Bosworth, of New York, who read a report of cases illustrative of his remarks and opinions.

HISTOLOGY OF THE THYROID CARTILAGE.

Dr. Louis Elsberg, of New York, presented microscopic drawings, and read a paper on "The Microscopical Anatomy of the Thyroid Cartilage." He also described and exhibited a new laryngeal apparatus, and a galvanic accumulator for illumination and cautery purposes. The improvements which he had been able to suggest in the manufacture of these instruments he did not speak of in detail, as he merely desired to call the attention of the Fellows to the appliances.

OPERATION FOR DEVIATION OF THE NASAL SEPTUM.

Dr. William C. Glasgow, of St. Louis, exhibited an instrument or forceps for relieving occlusion of the nostril from deviation of the septum. By this instrument a stellate incision is made in the septum, and the fragments are then pushed over to the opposite side, and the nares kept patulous by the temporary use of plugs.

Dr. Goodwillie, of New York, though not a Fellow, was allowed to take part in the discussion, and illustrated his views by diagrams on the black-board.

THE EFFECT OF THE CONDITION OF THE NASAL CAVITIES UPON ARTICULATE SPEECH.

Dr. Carl Seiler's paper on this subject was more physiological than clinical, and dealt especially with the formation of the special sounds which constitute articulate speech.

SUB HYOIDEAN PHARYNGOTOMY FOR THE REMOVAL OF THE EPIGLOTTIS.

The case reported by Dr. Clinton Wagner, of New York, led the author to express the opinion that the epiglottis was not as important an organ in the process of deglutition as generally believed. The existence of malignant disease of the epiglottis was the reason the organ was removed.

HEMORRHAGE AFTER TONSILLOTOMY.

Dr. George M. Lefferts discussed the question of Hemorrhage after Tonsillotomy, and stated, what is well known, that hemorrhage of a dangerous character after the operation is exceedingly rare.

The other papers presented in full, in abstract, or by title, were: "Paralysis of the Abductor Muscles of the Larynx," by Dr. W. C. Glasgow, of St. Louis; "A Case of Laryngeal Whistling," by Dr. J. O. Roe, of Rochester; "Paralysis of the Vocal Chords due to Lead-Poisoning," by Dr. C. E. Sajous, of Philadelphia; "Hyperæmia of the Larynx," by Dr. William C. Jarvis, of New York; "Comparative Value of Atomized Fluid in the Treatment of Diseases of the Larynx," by Dr. J. O. Roe, of Rochester; "The Relation of Hay Asthma and Nasal Catarrh," by Dr. William H. Daly, of Pittsburg.

During the session, the following Fellows elect were received as Fellows of the Association: Drs. D. B. Delavan, U. G. Hitchcock, G. W. Major, E. C. Morgan, H. Mynter, J. W. Robinson.

Dr. F. J. Knight, of Boston, was elected President for 1882, and Niagara Falls was selected for the next annual meeting.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from May 29, 1881, to June 4, 1881.

Baily, E. L., Lieut.-Colonel and Surgeon. So much of Par. 1, S. O. 112, C. S., from A. G. O., as directs him to report in person to the commanding general, Division of the Pacific, for duty as Medical Director of the Department of California, is revoked. S. O. 121, A. G. O., May 27, 1881.

Coues, E., Capt. and Asst. Surgeon. Assigned to temporary duty as Post Surgeon at Fort Verde, A. T. S. O. 56, Department of Arizona, May 20, 1881.

Medical Items and News.

Contagious Diseases — Weekly Statement. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending June 4, 1881.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro spinal Meningitis.	Measles.	Diphtheria	Small-pox.	Yellow Fever.
May 28, 1881.	17	6	154	24	162	96	51	0
June 4, 1881.	32	8	97	9	143	101	51*	0

* Five emigrants.

Another Rival of Dr. Tanner.—A Mr. John Griscom began a forty-five days' fast in Chicago, on the noon of May 28th.

Another Operation for Excision of the Stomach has been performed by Dr Wölfler, one of Billroth's assistants. Six days after the operation the patient was doing well, and showed good prospects of recovering.

Billroth's operations for cancer of the pylorus have been made the subject of a letter home by Minister Kasson.

Alexis St. Martin, of immortal story, is dead, and his gastric fistula closed forever.

The Annual Session of the National Board of Health was held at Washington, June 1st and 2d, all the members being present. The session was devoted chiefly to discussing the subject of Louisiana quarantine, the question at issue being whether or not vessels from supposed infected ports bound for New Orleans shall be compelled to go directly to Ship Island, which is about sixty miles out of the regular channel, or whether they shall be allowed to go to Port Eads, the regular quarantine station, and if found infected, sent to Ship Island. It was finally decided to leave the matter to the discretion of the Executive Committee.

The officers of the past year were all re-elected.

Enforcing the Registration Law.—Dr. A. E. M. Purdy made a complaint on the 2d inst., at the Essex Market Court, against Gustave Fernan, of No. 76 Forsyth street, and Louis Widman, of No. 35 Seventh-street, who have been practising medicine. He alleged that neither of them had diplomas, and were violating the law of 1880. Fernan, who was

recently fined in the Court of Special Sessions on a similar complaint, was paroled to produce bail for his appearance for trial. Widman denied the charge. He declared that he had a diploma from the New York Eclectic Medical College, and had been legally in regular practice since May. He gave bail.

Tincture of Musk, in the proportion of ℥j. to ʒ j. is the latest perfect deodorizer of iodoform.

Plumbers are to be registered and not abolished, according to the law recently passed at Albany.

Cerebro-Spinal Meningitis.—Dr. H. N. Heineman writes: "May I ask you to correct an error in the report on page 637 of your last issue. In a case of infantile cerebro-spinal meningitis I am quoted as having said 'abundant purulent deposit was a rather exceptional occurrence.' I remarked 'that the lesion was in this instance very pronounced, and further stated, that this was not *always* the case, even when symptoms were very marked.'"

Salicylic Acid as an Adulteration.—In February last, a ministerial circular was issued, prohibiting the sale of any food or drink which contained salicylic acid. This action was taken in consequence by M. Vallin, who stated that such large quantities of the acid were introduced into wine and beer as to be dangerous. Thus M. Vallin asserts that from fifteen to fifty-two grains of the acid to a quart of beer were found. At this rate, we are told that a French laborer is liable to take fifty or sixty grains of the acid in a day. Such a quantity is, he says, far from being innocent. We should say, however, that if the average French laborer can stand a gallon of beer a day, he will not be made much worse by a little salicylic acid.

The *Cincinnati Lancet and Clinic* states that some contrary investigations have been made by Dr. Galippe, who shows that the evils from salicylic, especially that of its producing anaphrodia, are not so great as is asserted.

Business is Business.—Dr. Honest, of Balve, Germany, publishes in a leading newspaper the following:

"My sad experience with a certain class of well-to-do people compels me to state that I will visit no more cases of infectious diseases of any kind during the night, except for payment in cash and upon receipt of the prescription."

Syphilis Communicated by Razors.—Dr. Desprès has earned the gratitude of the barbers and added to the popularity of shaving, by reporting two cases of syphilis communicated by razors. Now we shall expect the introduction of the carbolic spray and antiseptic lather by the best tonsorial artists.

A Bill to Provide Seats for Shop-Girls has passed the State Legislature. It provides that employers shall allow the girls a reasonable length of time in which to rest during the day. We fear, however, that shopkeepers cannot be legislated into humanity.

The Number of Registered Medical Students in England, Scotland, and Ireland is 2,106, a little less than one-half being in England.

George H. Hammond, M.D., only son of Dr. C. E. Hammond, of Portland, Conn., died May 18th, in New York City, aged twenty-five years. Dr. Hammond was a gradnate of Wesleyan University, class of '77. After leaving the University, he began the study of medicine and graduated at the Yale medical school in 1879, and at the University Medical College, New York City, in February, 1880. During the following March he secured a position on the resident staff of Bellevue Hospital. Soon after, while on duty in that institution, he sustained an injury of the knee-joint, which finally cost him his life. The medical board of the hospital, on account of his sickness, gave him leave of absence until able to resume his duties. In April last, when changes were made in the staff of the hospital, Dr. Hammond's position among the new appointees, as determined by examination, was first. The injury to the knee resulted in inflammation of the joint, for the relief of which an aspiration was performed. Septic poisoning followed the operation and terminated fatally in spite of the best attendance and surgical skill. He was a young man of great promise, and, had he lived, would have undoubtedly attained a high rank in his profession.

Diplomas for Sale.—The following advertisement appeared in a recent issue of the New York *Herald:*

"A physician having two medical diplomas will sell one upon liberal terms. Address Allopathy, *Herald* Uptown office."

The Investigation of Insane Asylums.—A resolution has been adopted by the State Senate that the senate committee, consisting of Messrs. Woodin, Pitts, and Fowler, that was appointed last year to investigate the management of the insane asylums of the State, be continued in existence, with instructions to report to the next legislature.

Imported Bogus Diplomas.—The County Medical Society is now engaged in looking after physicians who practise on illegal foreign diplomas. Such diplomas are, as a rule, from institutions in Breslau and Berlin. Some of them are simply matriculation papers.

Imprisonment of a Physician for Failing to Report a Case of Small-Pox.—Dr. Alphonse Oulman, of Brooklyn, having refused to pay a fine of fifty dollars, imposed on him for failing to report a case of small-pox, has been sent to jail.

The law which compels physicians to report cases of infectious disease, whether they will or not, and without any compensation for the trouble, is arbitrary and with no foundation in equity. Since the law exists, however, physicians must abide by it, unless they wish to break it for the purpose of testing its legality.

The Celebration of the Centennial Anniversary of the Massachusetts Medical Society took place in Boston, on June 7th and 8th. The opening address was delivered by Dr. S. A. Green, at Sander's Theatre. A large number of members were present, and the meeting appears to have been a successful and enjoyable one. A full report of it will appear in the Record later.

Bellevue Hospital.—One of the house staff was recently taken with typhus fever, but is now said to be convalescent.

The Deaths Annually in New York City exceed the births by about ten thousand.

A Street-Cleaning Commissioner, Mr. James S. Coleman, has been nominated by the Mayor and confirmed by the Board of Health, under the new law. There is general satisfaction at his appointment.

Original Communications.

MALIGNANCY OF DISEASE-GERMS MITIGATED BY OXYGEN.*

By JAMES LAW, F.R.C.V.S., Eng.,

In a series of observations on swine-plague, conducted at intervals for the past three years, I have been led to the conclusion that the disease-germ of this affection varies in its potency according as it grows in a medium to which oxygen has free access, or in one to which a limited amount only can find its way. The recent observations of Pasteur and Buchner, showing that the same is true of chicken-cholera and anthrax, suggest that the results reveal a grand principle, applicable at least to the non-recurring bacteridian diseases—a principle which may be made the basis of a new and valuable departure in sanitation. The great importance of the subject has led me to throw together some of the more prominent facts that bear upon the question, and to present them to you in a strong light, that we may all have the advantage and instruction of the free criticism it may call out.

PASTEUR'S OBSERVATIONS ON CHICKEN-CHOLERA.

To Pasteur pertains the honor of having first stirred the medical mind on this subject, and Pasteur's observations accordingly deserve our first attention.

Led by his former observations on fermentations and the growth of micro-organisms in different fermenting liquids, he conceived the idea of producing a variation from the common germ of chicken-cholera by cultivating it artificially in infusion of chicken flesh, with long intervals of time between the successive cultures. In pursuing this course, he found that, after a cultivation of four months and upward, the product of culture became less deadly to the chickens on which it was inoculated. At first the inoculated chickens showed the mitigation of the virus by surviving for a day or two longer, though all finally died. Later, one in ten would recover; then two, three, four, five, six, eight, nine, until finally he reached a point at which the death of the inoculated chicken was rare, and recovery was almost the invariable result.

When this had been reached, it is remarkable that the disease-germ no longer multiplied its numbers by myriads in the blood, breaking down its vital elements and fatally interfering with the functions of sanguification and nutrition, but it increased only in the seat of inoculation, producing a circumscribed slough, which was thrown off, leaving a healthy, granulating sore to heal in the ordinary way. This, to my mind, is very suggestive. The experimenter had cultivated the germ in vessels to which air had free access through a plug of cotton-wool. The germ had hitherto lived in the blood and animal fluids where it could find but a very limited supply of oxygen, and had acquired the habit of surviving under this restriction, and, with the power of unlimited proliferation in the vital fluid and the tissues of the body, had maintained the most deadly *rôle* in the destruction and arrest of vital elements and functions. But now it has been trained to grow and develop for a succession of generations under different conditions; oxygen has been made freely accessible; its successive generations have consumed more and more of this element, and finally it has come to be an immediate necessity of its existence that air must be present in large amount. The result is that it can no longer pullulate and freely increase in the depths of the system, in the circulating blood nor solid tissues, but its active development is confined to the point where it has been implanted and where it is in close contact with the air. Here it acts with no less energy than in the blood or deeper tissues; the structures in which it has been implanted perish by gangrene, and are finally thrown off as a slough, and the system at large is preserved.

That this is the true explanation of the remarkable result is shown by some test-experiments of Pasteur. He enclosed chicken-cholera virus in hermetically sealed tubes containing two-thirds their capacity of the fluid and one-third of air, and after six, eight, and even ten months, he found that it had lost none of its deadly properties when inoculated on the chicken. Further, when this hermetically secluded fluid was inoculated on fresh chicken-infusion, it infected that, and made it as deadly to the chickens inoculated with it as if the virus taken directly from the dead chicken had been employed.

In still other cases in which the culture-liquids had free access to air filtered through cotton-wool, the growth of the germ was so abundant that the thickness of its layers shut out the air from the deeper strata, and in such cases the product remained as deadly as before when inoculated on chickens or rabbits.

The process, it will be seen, is precisely like what we see in the various fermentations. The bacterium of the fermentation assumes the most varied forms, according to the medium in which it grows, and the influence of air, electricity, and other attendant circumstances. We can modify many of these at will by placing them in a saccharine, albuminous, aqueous, or other mixture; also by the varying amount of air admitted to the fermenting liquid. So with the pathogenic bacterium-germ. If continuously grown in the blood, or in some medium which supplies it with the same amount of food and air, it retains its power of unlimited multiplication in such menstrua, and of affecting the system fatally; but if grown under conditions in which air is freely supplied, the germ branches off into a new development, to which a large supply of oxygen becomes a necessity for vigorous existence, and as it can no longer pullulate so rapidly and increase so numerously in the blood and solid tissues, it becomes for the time comparatively harmless to the animal economy into which it may be introduced. The operation of the poison becomes local and circumscribed, yet the general system is influenced, and is as surely protected against a second attack as if the first had been contracted in the ordinary way, and as if the germ had been propagated in the blood or system at large.

BUCHNER ON BACILLUS ANTHRACIS AND BACILLUS SUBTILIS.

No less interesting are the recent developments concerning the mutual interchange of characters and identity of the bacterium of hay infusion and of malignant anthrax (malignant pustule). It had long been noticed that the microphyte found in a fermenting infusion of hay (bacillus subtilis) was

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practically indistinguishable under the microscope from the germ of malignant pustule (bacillus anthracis). They had, however, the most widely different effects when inoculated on the animal system, the inoculation of bacillus subtilis being perfectly harmless, while that of bacillus anthracis produced the deadly malignant anthrax. It was naturally enough suspected that the two bacilli were bnt varieties of the same species, and would prove to be mutually interchangeable, if we could only find out the special conditions of growth that would determine the transformation. The first step in this direction was probably that taken by Dr. Greenfield, of London, who found that the cultivation of bacillus anthracis in aqueous humor for six generations robbed it of its virulent properties, and reduced it to a condition in which it was indistinguishable from bacillus subtilis.

Buchner started out in the same field, and by an indomitable perseverance, coupled with a brilliant ingenuity in devising new apparatus to overcome the difficulties by which he was confronted, he has succeeded not only in repeating Dr. Greenfield's experiment of transforming bacillus anthracis into bacillus subtilis, but of changing the latter, by cultivation, into bacillus anthracis. He has, by cultivation, developed a harmless germ from a pathogenic one, and a pathogenic from a harmless one; and what is more, he has demonstrated the fundamental condition necessary to such transformation. Constructing a cultivation apparatus with two glass retorts, one for the culture of the germ, and the other for the preparation and supply of the cultivating liquid, he connected the two by a tube, through which he could supply fresh meat-infusion whenever a culture had been completed, and without any possible contact with air or aërial bacteria. By closing the outlet-tubes from the glass retorts, and the tube connecting them, he could insure the perfect exclusion of extraneous germs, and that no new cultivation-liquid should be supplied but such as had been first perfectly devitalized by prolonged boiling in the reservoir retort.

After cultivating the germ of the bacillus anthracis for several hundred successive generations, subjected to free access of air, filtered through cotton-wool, he found that the cultivation-liquid was no longer infecting when inoculated on animals. Continuing his cultivations, he found that the microphyte, which at first grew in the body and bottom of the liquid only, began to develop on the surface as well—first as a greasy scum, but finally as a thick, dry layer. This habit of growing on the surface rather than in the bottom of the liquid is characteristic of the bacillus of hay; and to make it more manifest that the transition into this germ had actually taken place, the germ was now found to grow readily in an acid hay-infusion, whereas formerly it had required an alkaline infusion.

The converse transformation from the bacillus subtilis of hay to the virulent bacillus anthracis was not effected without difficulty, but after several failures Buchner devised an apparatus in which the cultivation-liquid could be kept in constant movement so as to break up the scum of bacteria found on the surface, and keep a number of the germs constantly beneath the surface, and in a condition as regards the air-supply approximating that of the germs in the circulating blood. Using defibrinated blood as the cultivating medium, he succeeded in obtaining a growth of bacteria at the bottom of the liquid in place of on the surface, as in the case of bacillus subtilis, but the development went no farther, and the product did not prove infecting. Observing that, as grown in the blood, the bacillus never developed spores, he now substituted extract of meat for the blood, and was gratified by the production of spores and by the development of virulent properties. Rabbits and mice, inoculated with the culture-fluid, developed malignant anthrax and died, having their blood, swarming with bacillus anthracis. Their blood, in its turn inoculated on other animals, produced anthrax in these with equal readiness and fatality.

In this we have Pasteur's observations confirmed and carried a step farther. It is not only shown that the growth of the germ in a full supply of air robs it of its virulence, but that the growth of the non-virulent germ in a very limited amount of air endows that with a virulence to which it was formerly a stranger.

PRESERVATION OF ANTHRAX-GERMS IN GRAVES, ETC.

In pursuing this line of thought, and before referring to any other disease-germ, it may be well to state shortly what is known of the conditions requisite to the preservation of the anthrax-germ in soils, buildings, etc.

Under certain conditions the exposure of the anthrax-germ to the free action of oxygen determines its death. Feltz found that compressed oxygen (fifteen atmospheres) killed the bacillus, but was harmless to the spores. Bert showed that compressed oxygen killed the bacillus, but had no influence on the chemical poisons which they had already developed in the liquid. Long before, Davaine had shown that the process of putrefaction in the open air led to the death of the bacillus and the loss of its infecting power. Later observers have shown that, when bacillus has formed spores, these can survive the action of oxygen and exposure to air, but that, if left in conditions in which these spores can again develop into bacilli or rods, the continued access of air secures their destruction. Now, the spores are not found in the living system, but may be so in the animal fluids after death. If putrefaction of the carcass is allowed to proceed at once in free access of air, and with sufficient moisture to insure that it shall be perfect in all parts, the virulence is destroyed. If, however, a limited amount of air only is admitted, as in graves in damp or waterlogged soils, in soils of clay, heavy loam, or other impervious materials, or in those with subsoils of an impervious quality, spores are formed, and the virulence may be preserved indefinitely. In such cases, the germs, hidden away in the depth of the soil for months and years, are brought up by the earth-worms and deposited on the surface, and even on the vegetation in the worm-casts which cover the less permeable soils. From these they are liable to be taken in with food or water, being washed into streams and ponds during showery weather. In one instance that came under my notice, forty cattle died in a fortnight on an infected pasture, and though their graves were fenced in according to instructions, from one of them the liquids leached out a year later on a river-bank, between the surface-soil of loam and the subsoil of clay, and six cattle found licking the product promptly died of anthrax. The place was fenced in down to the river and the mortality ceased.

In open, porous, sandy or gravelly soils, on the other hand, in which drainage is perfect and the soil is always largely charged with air, the disinfection of buried carcasses or other infecting products takes

place with great readiness. On these soils, too, earth-worms are far less numerous, so that there is less risk of imprisoned virus being brought to the surface and disseminated. On such porous and well aërated soils anthrax cannot long survive, the transfer of herds or flocks of infected animals to such soils soon puts a period to the disease, and the burial of the infected carcasses does not lead to the permanent preservation of the poison as it does in the less open soils.

It will be observed that it is not the entire exclusion of air that preserves and intensifies the poison. Toussaint and others have found that when the virus is shut up in hermetically sealed tubes, without air, its potency is destroyed in eight or nine days. To use Pasteur's term, the germ is not anærobic. The condition necessary to the preservation of its virulence is that it should have a limited supply of air, but not too much—an amount nearly approaching to what it would receive in the circulating blood or the normal organic liquids of the animal economy. In waterlogged soils, in heavy clays and hard-pan, and in rich alluvial deposits abounding in organic matters, the fermentation of which develops gases which drive out the oxygen, we have the condition of a limited supply of air, capable of preserving the germs in their virulence, but incapable of leading to their destruction.

OBSERVATIONS ON HOG-CHOLERA (SWINE-PLAGUE).

In experiments on hog-cholera, which I have been conducting at intervals for the past three years, the truth gradually came out that the virus varied in intensity according to the medium in which it had been developed. Without wearying you with unnecessary details, I may give the following summary of the results obtained.

Three pigs inoculated with virus which had been cultivated in *cow's milk*, with free access to air through a plug of cotton-wool, suffered only very slightly from the infection, and thereafter resisted all moderate exposures and inoculations with the unmodified swine-plague virus.

Two pigs inoculated with virus which had been grown for *two* and *four generations* respectively in egg-albumen, in free air admitted through a loose plug of cotton-wool, had but a slight fever, and recovering, proved themselves to be insusceptible to any future moderate inoculation with unmitigated swine-plague virus or exposure to infection.

Two pigs inoculated with virus which had been grown eight and nine days in human urine, with free admission of air through cotton-wool, suffered but a slight fever, and after this resisted inoculation with a limited amount of the native virus and exposure to infection.

No less significant are my inoculations with virus which had been *dried on quills* for a variable length of time.

Two pigs, inoculated with virus preserved on quills for one day only, had fatal attacks of the disease.

One pig inoculated with virus *two days on the quill* had a less acute attack, from which it perished on the twenty-sixth day.

Two pigs were inoculated with virus *four days on the quill*. They had mild febrile attacks, from which they recovered, and thereafter resisted ordinary exposure and inoculation with a minimum amount of fresh virus.

One pig was inoculated with virus *five days on the quill*. The results were as in the case of the dried virus four days old.

One pig was inoculated with virus *six days on the quill*. It contracted a severe attack of the disease, and died on the twenty-fifth day.

Here the general result favors our former conclusions as to the action of the air in lessening the virulence of this poison. *Three subjects* inoculated with virus dried in a thin layer and preserved *less than three days*, perish, while *three more* treated with similar virus dried in a thin layer for *four* and *five days*, suffer very slightly indeed. *A seventh* animal inoculated with dried virus six days old, has a fatal attack. This exception could doubtless be satisfactorily explained if we had all the data: the virus was, perhaps, in a thicker layer; it was, perhaps, more speedily or thoroughly dried; it was, perhaps, more perfectly wrapped from the air; the germs had, perhaps, advanced to the production of spores insusceptible to the action of oxygen, or other possible conditions may have contributed to their preservation; but, in the absence of exact knowledge, it is useless to indulge in bootless speculation. The general results exactly agree with the effects observed when the virus was grown in organic liquids with a free supply of air. Free and prolonged exposure mitigated the force of the poison; transient exposure left it with all its native potency.

The force of these general conclusions will be better appreciated when we have noted the results of the virus as grown with a limited access of air. These were carried out in the two methods following:

First.—A portion of the diseased intestine, lung, or lymphatic gland was packed firmly in the midst of dry wheat-bran, and preserved for periods of *three days* and *one month* before it was used for inoculation

Second.—A portion of the virulent liquids (blood or peritoneal exudate) was placed in a sealed bottle with one-fifth its volume of air, or in a glass bulb with narrow outlet, tightly corked with moistened cotton-wool.

Five pigs were inoculated with the virus which had been preserved *three days* in the bran, and *three* suffered moderately, while *two* suffered severely—probably fatally had the malady been allowed to run its full course.

Three pigs were inoculated with the virus which had been packed *thirty days* in bran, and of these *two* suffered severely (fatally) and one moderately. Here, not only has the virus preserved its potency, but it has increased it in proportion to the duration of the seclusion. It will be noticed that here the virus was packed in the moist condition, so that its contained germs of whatever kind must have undergone some development in a limited amount of air.

Six pigs were inoculated with blood or peritoneal exudate which had been shut up with *one-fifth its volume of air* for periods of *five and eleven days*. All six suffered severely and perished from the disease.

In view of these facts, I would submit that this truth of the increasing virulence of the germ as grown in a certain limited amount of air, and of the decrease of its potency as cultivated under a free supply of oxygen, is a principle applicable, to say the least, to a number of bacteridian diseases. Before venturing to draw any of the numerous obvious deductions, I would ask attention to several other affections in which the same principle seems to dominate the virulence of the plague-germ.

SEPTIC INFECTION.

In an ordinary dissection-wound the result may be severe and even promptly fatal, by reason of the general diffusion of the poison through the blood and

system at large, the phenomena being those of a high fever with distinct intermissions, shivering fits, disordered digestive functions, great prostration, and, after death, a fluid state of the blood which abounds in bacteria, more or less extensive blood-extravasations in internal organs, and frequently, in the more tardy cases, phlegmonous nodules or abscesses.

But in a second victim of the same poison there may be little or no constitutional disturbance, but only a diffuse red erythematous or erysipelatous swelling around the wound, or, at worst, an abscess in the vicinity of the sore or in the nearest connecting lymphatic glands. In this case the blood (usually) contains no bacteria, but they abound in the local inflammatory products or in the pus of the abscess.

What is even more remarkable, the same septic germs which so constantly come in contact with raw sores on all of us without proving hurtful in the slightest degree, are always most dangerous and even deadly after they have once developed in the blood of a human victim. Burdon-Sanderson has shown experimentally that, as propagated in the lower animals, the septic germ gains in virulence and in deadly power with each successive victim for the first few generations.

Have we not here the exact counterpart of what we have seen to hold in the case of the other bacteridian diseases? The germ, as grown in organic liquids undergoing ordinary putrefaction in the open air, is perfectly harmless to the average animal economy, but becomes a most deadly poison after it has been grown in the blood of a victim, with the limited amount of air admitted into this liquid. Not only so, but this virulence increases with each successive victim, or, in other words, with each similar cultivation, until it has reached its maximum.

YELLOW FEVER.

While yellow fever differs from the diseases already mentioned in being less of a contagious affection, communicable from man to man, and more a disease of locality or ships, yet it has some points of resemblance which are not without an instructive bearing on the question of the cause of the varying potency of certain disease-germs. It must be acknowledged that no disease germ has been demonstrated as causative of yellow fever. Yet the history of each epidemic almost of necessity implies the existence of such a germ. The disease is introduced into a foul tropical seaport by an infected vessel, and the sufferers from the fever, and the infected ballast and cargo, when landed, establish so many centres of infection wherever they may be carried, and from which the poison is spread over one or many cities, so long as the conditions are favorable to its maintenance. A mere chemical poison cannot propagate itself in this way; and the propagation of yellow fever through a foul city, from a single infected victim, demands for its explanation that we assume the existence of a living, self-multiplying organism. It does not affect this position, though it be proved that the disease is not transmissible directly from man to man, or that the poison cannot undergo increase in the human body; it suffices that it can be carried about the body of the victim, to increase and grow indefinitely under the combined influence of heat, damp, and foulness outside of the diseased economy. Though it should be shown that the human body does not admit the germ at all, but only its chemical products, it does not affect the position that the history of yellow fever demands for its explanation that we assume the existence of a germ which can grow and increase out of the body, and extend the area of the epidemic.

That yellow fever can originate on board ship seems to be proved by a large mass of testimony by La Roche, Faget, Anderson, Potter, Hargis, Gamgee, and others. Take one example from Potter: The Bushbridge sailed from England for Madras, April 15, 1792, and passing through the tropics far west of the Cape de Verde Isles, and in the yellow fever area, developed yellow fever on board, though she had touched at no port since leaving England. A still more striking instance is given by Caldwell: The sloop Mary, from a healthy port, was sent into Philadelphia as a prize in 1791. Her cargo was removed, the decks washed, and the hatches and ports shut without accident to any one employed in the work. In this closed condition she lay during three weeks of extremely hot weather, when a very offensive smell of bilge-water was traced to her. Her ports and hatches were thrown open; torrents of foul air rushed out, spreading a suffocating stench for a considerable distance, and a number of cases of yellow fever, the first in the city, developed in persons exposed to the offensive vapors. Here we find the hitherto harmless contents of the hold developing virulent properties, under the combined influence of heat, moisture, and a limited supply of air. The fermentation, which went on harmlessly so long as the bilge-water and other products were exposed to free air, developed a deadly product when that air was partially excluded. Many similar cases serve to support the idea that a germ which probably exists in a harmless form in the waters of the western tropical Atlantic acquires virulent properties by propagation in a confined area like the closed hold of a ship, where it can meet with but a limited amount of air.

The converse holds equally true, that free exposure to air puts a limit to the virulence of the yellow fever germ. This is testified by the Congressional Board of Experts (1878), and by all quarantine surgeons.

I submit, therefore, that the facts concerning yellow fever support the doctrine that, in a considerable group of diseases due to microphytes, the virulence of the germ is connected with its propagation in a limited amount of air.

TYPHOID FEVER.

Typhoid fever is undoubtedly due to a germ which may be propagated and increased in foul, putrefying organic matter out of the human system. Murchison's idea that it is a *pythogenic* or *filth-begotten fever* is far less in keeping with observed facts than Budd's, that it develops in filth only when the germ has passed into such from the human bowels. The presence of a privy odor in many houses in which typhoid is habitually a stranger, and still more the observations of Barlow, that while the gaseous products of ordinary putrefaction in feculent matter will produce a febrile condition, but not a specific disease communicable from man to man by contagion, negatives the idea that sewer-emanations are *per se* causative of typhoid fever. To generate typhoid it is necessary that the virulent excreta of a typhoid fever patient should be thrown into the channel containing the decomposing sewage; but when the virus has been introduced it becomes at once more abundant and more potent, and the whole sewer or privy-vault, as the case may be, becomes a prolific propagator of the disease. Every one who has studied the subject will testify to the more pestilential character of such sewer-emanations than of the excreta that have just

passed from the bowels of the typhoid fever patient. Aitken states the matter thus:

"The specific virus of typhoid fever may be propagated among healthy persons in one of three ways, namely: 1st, by percolation through the soil into the wells that supply drinking-water to the inhabitants; 2d, by issuing through defects in the sewers into the air of the inhabited area; or, 3d, by exhalation through the apertures of small, ill-trapped water-closets or privies, which are at once the receptacles for the discharges of the sick and the daily resort of the healthy. *When the specific poison thus issues into the air, the atmosphere generated is immeasurably more likely to communicate the disease than that which immediately surrounds the fever-patients.*

We all know that typhoid fever has been actually increased in certain towns by the construction of unventilated sewers, from which the pent-up gases forced themselves back into the houses as their most available means of escape, carrying with them the fever-germ in an intensely virulent form. The ventilation of the sewers did away with this in a great measure, and we may infer, not only by furnishing new outlets for the noxious products, but by supplying more oxygen to the decomposing mass, and counteracting the increase of virulence.

To glance for a moment at the other side of the question, who ever heard of the lengthened preservation of the typhoid-poison in excreta which had been spread in thin layers on the surface of the soil? It is from the close room, the sewer, the privy-vault, or the closed contaminated well that the germ is to be derived in all its malignancy, and it is in these that it is longest preserved.

Can anything testify more strongly to the working of the principle we have been considering that certain disease-poisons become more dangerous as grown in a very confined atmosphere?

ASIATIC CHOLERA.

This furnishes another striking example of the truth of our principle. I shall take for granted the existence of a cholera-germ without seeking to pronounce upon its nature—vegetable or animal. The permanence of the disease on certain rich tropical soils (Asiatic), its conveyance during the warm season to the remotest parts of the world within the torrid and temperate zones, the communication of the disease from man to man in a constantly increasing ratio, and the easy transmission of the contagion through mediate objects, demand for their explanation the existence of a germ which increases, as do other vital organisms, by continuous generation.

Regarding the effects of air on the growing germ, Burdon-Sanderson's experiments on mice furnish important data. With blotting-paper dipped in the virulent bowel-discharges of a cholera-patient and dried in a current of air, he fed mice on each of six consecutive days, and noted the results. The first day 11 per cent. contracted cholera, and 8 per cent. died. The second day, 36 per cent. became ill, and 32 per cent. died. The third day, 100 per cent. sickened, and 21 per cent. died. The fourth day, 71 per cent. became sick, and 57 per cent. died. The fifth day, 40 per cent suffered, and 24 per cent. perished. Finally, on the sixth day, no case of illness occurred; the poison had lost its virulence. Without waiting to consider the gradual rise and fall of the virulence, we have here the fact, as in the other diseases, that the free exposure to air of itself robbed the agent of its virulence, at as early a date as the sixth day.

That it was not due to the mere lapse of time is shown by the fact that in certain soils the germ may retain its virulence indefinitely in warm weather, and keep up a cholera epidemic. Pettenkofer states the condition of soil essential to this preservation as follows:

"A soil porous and permeable to water and air, charged with a certain amount of moisture determined by the presence of stagnant water in the subsoil, and with decomposing organic, especially excrementitious, matter."

Here we have precisely those conditions which we have found conducive to the preservation and increased virulence of the germs of the different diseases already passed in review: confined air, largely driven out of the soil or space by other gases, the products of organic decomposition, and decomposing organic matter in abundance as a food for the developing virus. In the open air, as Burdon-Sanderson showed, the virus became inoperative after the fifth day; but in the close, damp, hot, putrid soil we see it preserved and intensified until destroyed by the return of the cold season. So it is in other confined and impure areas. Orton, Greenhow, Pettenkofer, Barton, and others have shown that cholera is especially severe and fatal in those infected houses in which a privy odor prevails. The close atmosphere and decomposing contents of the sewer serve to maintain the virulence of the germ as surely as the interstices of the close, damp, septic soil.

DIPHTHERIA AND CROUP.

Turning to the pseudo-membranous inflammations of the throat, we are confronted by a series of phenomena which may be apparently most easily explained by a reference to the same general principle. Dr. Thorne has shown that diphtheria may begin by what appears to be a simple inflammation of the pharynx of no very great gravity. A second case, contracted from the first, proves considerably more severe, while the third case presents all the deadly malignity of the most pronounced diphtheria. On what principle can this be most easily explained? Will not the growth in a limited amount of oxygen give the solution? When the pseudo-membranous growth occurs, as it so frequently does, on the tonsils, it soon fills up the follicular spaces of the portions invaded, and cuts off the supply of oxygen from that portion which occupies the fundi of these spaces, by using up for the respiration of its own superficial layer whatever comes in contact with its surface. The membranes, or rather the germs lodged in the depths of the tonsillar follicles, can receive no more oxygen than is contained in the blood circulating in the capillaries of the surrounding living tissues. As this is practically venous blood, containing, according to Foster, six to ten volumes of oxygen for one hundred volumes (one hundred cubic centimetres per litre), and as the oxygen dissolved in the vital fluids must be still further diminished before it reaches the germs in the bottom of the follicles, we have exactly those conditions that have been found most conducive to an exalted virulence and malignity on the part of the germs of the other diseases named. It may well be conceived that in the first case of this disease the germs would fail to live and increase in such a dearth of oxygen; but we must bear in mind that we have here all gradations of supply, from the somewhat stagnant air in the fauces to the comparatively small amount of

oxygen present in the venous blood, and the still smaller proportion existing in the juices of the living tissues and false membrane. There is thus furnished the most ample opportunity for the gradual transition of the germ from the comparatively harmless form which grows in free air, and cannot at once accommodate itself to the relative privation which it must sustain in the blood, to the deadly form which finds a welcome home in the deoxygenated blood and still less oxygenated plasma of the tissues. We have, in short, every opportunity for the transition of the germ from one which must live on the surface only, and is capable of inducing a mere local disease, into one which revels in the blood and fluids in the depth of the economy, and carries its baleful influence throughout the entire system. Is it not the fact, in outbreaks in which a malignant diphtheria has apparently developed through a succession of milder cases, that the earliest cases have often attacked this follicular apparatus of the tonsils?

We find a similar reason for the progressively increasing malignancy of diphtheria in the implication of the posterior portion of the pharynx. In this situation, and in the commencement of the œsophagus, air is altogether absent, or is admitted intermittingly, or is, at best, comparatively stagnant. There is also, in passing from the pharynx to the gullet, that same gradual transition from the free air of the upper pharynx to the air of the blood and tissues only, which has been already noticed as operating in the tonsils in developing the malignancy of the germ. Along the walls of the pharynx there would be points to provide for the respiratory needs of the germ in all stages of its metamorphosis, from that producing the benignant local disease to that causing the deadly systemic affection.

One suggestion more with regard to the connection between diphtheria and membranous croup. In all our older standard works these are considered as essentially distinct, but recent observations tend to support the older doctrine that they are really identical. Wagner has shown that the supposed anatomical difference is only in degree, that in both membranes alike the same elements exist, and that, apart from the difference of site on the air-passages and alimentary canal respectively (in throat cases) the difference is mainly in mode of growth, the croupous growth confining itself to the surface, and leading to the formation of an excess of pus-corpuscles, while the diphtheritic product extends into the mucosa, and even into the submucous connective tissue, and determines necrosis and sloughing rather than suppuration. The frequently observed coincidence of croup in fowls and diphtheria in man in the same localities, and the readiness with which the two diseases have been inoculated from man upon animals, have tended still further to sustain the doctrine of the identity of the two affections. Finally, the investigations of the committee of the London Royal Medical and Chirurgical Society show that diphtheria and croup have been observed to arise habitually from the same poison, that a case of recognized croup in one person will determine in another a case of recognized diphtheria, and that no anatomical nor clinical basis for a distinction between membranous croup and diphtheria has been established (Ziemssen: "Supp.").

Accepting the identity of the two diseases, Dr. Jacobi attempts to explain the difference in gravity by the fact that the membrane, as developed in the interior of the larynx, overlies a surface exceptionally rich in muciparous glands, and that the continuous secretions from these glands loosen and disintegrate the false membrane, and detach it from the surface of the mucosa, so that the germs fail to penetrate the epithelial and fibrous layers, and to establish destructive changes and sloughing. Doubtless these glands do exercise a certain protective influence, so long as the inflammatory process fails to reach their ultimate recesses; but, this accomplished, their secretions would promptly cease, and their protective influence fail; and all know how quickly and widely the inflammatory process extends around the seat of the false membrane in croup and diphtheria alike. The alveoli of the amygdalæ, on the contrary, have no such abundant mucous secretion, and in these, accordingly, the membrane can develop and grow, so as to invade the deeper tissues. But what of the theory of mucous detachment when applied to the pharynx? This surface is abundantly supplied with mucous glands, simple and racemose, and the secretions of the pharyngeal mucosa are even more abundant than those of the larynx. Why, then, does the diphtheritic false membrane adhere with such tenacity to this? why eat into it and cause the destructive sloughing which fails to occur in the air-passages? Is there a more obvious explanation than the slowly acquired adaptation of the germ to grow in a comparative seclusion from air? In the pharynx, any loosening and disintegration of the false membrane that may occur fails to prevent the development of the transition forms of the germ, for, even if detached from the wall, it is confined between the approximated folds of the closed pharynx, and receives oxygen only at fitful intervals, apart from that supplied in the animal fluids. But in the larynx, the first deposited germs are, in a medium, as well aired, almost, as on a free external surface; the supplies of oxygen are constantly renewed; no stagnation can take place; and the successive generations of the germs maintain the habitude of free respiration, and perish if this is at once denied them, as would happen from a sudden transfer to the substance of the mucosa. The constant passage of the fresh inspired air will determine a penetration of the oxygen through even a thick false membrane, so that in the deepest strata the germs will retain their habit of free respiration, and their tendency to perish when this is abruptly shut off. The contrary is the case when the air is stagnant, as in the fauces, or absent, as in the posterior pharynx. Finally, in the larynx, the mucous secretion spoken of by Jacobi is not without its influence in loosening, breaking up, separating, and detaching the false membrane, and thereby admitting oxygen freely to all parts of its substance.

Transplant the germ thus grown in the larynx to a raw surface on the skin, or exposed mucous membrane of another subject, and it could not be expected to make its way into the comparatively deoxygenated interstices of the tissues, but it would produce, at worst, a localized superficial pellicle like that of *pip* on the chicken's tongue, or *croup* in the human being. If lodged, however, on the tonsils or posterior pharynx, it would meet with the conditions already noticed, which are capable of transforming it into a germ that breathes little oxygen, and would, in one or two successive growths in as many subjects, acquire all the destructive habits of the diphtheria-germ.

THE LUNG-PLAGUE OF CATTLE.

This affection furnishes us with an equally striking example of the operation of the law we have

been considering. To bring this before you I must premise that this so-called lung-plague, or pleuro-pneumonia, is not necessarily a disease of the lungs. We can inoculate the disease in the tail, and obtain the development of the specific morbid processes there, and we can thereby protect the system against the future inroads of the plague as surely as if the poison had been propagated in the lung-tissue. Some people, more witty than wise, have spoken deprecatingly of attempts to produce *pleuro-pneumonia* in the tail, but a closer attention to the logic of facts would have assured them that it was their nomenclature which was at fault, and not the inoculators; that the specific plague, by whatever name it may justly be called, was really produced in the tail; and that the subject of this *caudal plague* was thereby rendered proof against the *lung-plague*. In short, the plague is a local disease which will develop in any vascular structure of a susceptible animal in which it may be implanted. The germs inhaled into the lungs prey upon the lungs alone, and other germs applied upon a raw surface on the tail develop in the tail only, but in both cases alike the disease is communicable and inoculable, and in both alike the system is affected so that it becomes proof against the same poison in the future. In the tail, the disease is usually limited, the exudation and swelling rarely exceeding the size of a hen's egg, while in the soft texture of the lungs, in which the air-passages may be easily blocked, and where fresh air fails to enter as soon as the air-cells fail to dilate, the solid mass of exudate may amount to thirty pounds, besides an enormous liquid effusion into the pleurae. But even in the tail the results vary widely, according to the depth of insertion of the virus. Placed on a mere abrasion, the exudation is usually very limited, though the result is entirely protective. Inserted deeply in the subcutaneous tissue, a far greater number contract enormous swellings at the seat of inoculation, at the root of the tail, and in the pelvis; and the results are not seldom fatal. If the virus has been kept over a day or two in a closed bottle, with a small quantity of air, these swellings are the rule, and life is only to be saved by the prompt amputation of the appendage. Hence, in city stables, when the operation is performed in a slovenly manner by the owners, the tail is usually lost, and the stump tail was long the synonym of the swill-stable cow. In Australia, the inoculation is clumsily but successfully performed by drawing a worsted thread, smeared in the exudate, through the connective tissue beneath the skin of the tail. This is a deep insertion, but the loose texture of the worsted serves to favor the admission of air, and to counteract any dangerous change in the virus.

NOTE.—*Sheep-pox—Variola ovina.*—In the *Comptes Rendus de l'Académie des Sciences* for February 14, 1881, Toussaint records some experiments on the germs of sheep-pox, which may be shortly stated. The bacteria, which were globular, like the spherical germs of anthrax, were cultivated for ten generations in infusions of mutton or rabbit. In each culture a pellicle of bacteria formed on the surface, which fell to the bottom in four or five days in the form of spores, and the liquid cleared up. The deposit was used in each case to start a new culture in a fresh quantity of infusion. With each fresh culture the thickness of the surface-film increased, which we may easily explain on the hypothesis that the germ became more and more adapted to growth in free air. The bacteria of the film in the cultures, from the fifth to the tenth, when inoculated on sheep, produced a vesicular variolous eruption, but this never advanced to the formation of pustules. The sheep recovered in fifteen days, and on subsequent inoculation with genuine sheep-pox matter none of them contracted that disease.

Now, whether we accept the pathogenic activity of the bacteria as proved or not, this much is proved by the experiment: the germ cultivated in the normal liquids of the sheep and rabbit, but with free access to the air, preserves its infecting qualities, but loses its malignancy, and produces a very mild and harmless disease, which proves vicarious of the natural sheep-pox. As developed in the ordinary way, and transmitted from sheep to sheep, the disease has no such tendency to a progressive benignity, but rather the opposite, the most reasonable explanation being that the habit of growing with a limited power of respiration has specially adapted it to carry on its ravages in the deeper parts of the system, and with more redoubtable results.

This result with the sheep-variola is strongly suggestive of similar methods for the variolous diseases of other animals; but this need not be pursued further at present.

I might adduce still other examples drawn from glanders, hospital gangrene, erysipelas, puerperal fever, and other specific diseases, but these must suffice. I shall only add, by way of parallelism, one or two examples of organized ferments which adapt themselves to life in different media and elaborate different products according to the amount of oxygen supplied.

Mycoderma vini, when grown on the surface of an alcoholic fluid, and with free access of oxygen, literally burns up the alcohol, the products being carbonic acid and water. But if the same ferment is grown beneath the surface of an alcoholic liquid, where little oxygen can reach it, it merely decomposes and rearranges the elements, the products being acetic acid or aldehyde (Pasteur).

Mucor mucedo, which grows as a mildew with mycelium and sporangia in free air, "if grown in a medium which contains the necessary nourishment for it, but excluded from the free air, the formation of sporangia takes place very sparingly or not at all, but that of germules is very abundant" (Cooke). If placed beneath the surface of a saccharine solution into which little oxygen can enter, the mycelium breaks up into rounded spores and remains so, unless restored to the surface and to oxygen. Thus submerged in the saccharine fluid it is a true alcoholic ferment, and generates alcohol until the latter has increased to 3·5, or 4 per cent. of the whole. *Mucor racemosus* comports itself in exactly the same manner in a saccharine fluid. Its sporangia fail to appear, its branches break up into rounded spores, and these spores act as an alcoholic ferment (Schützenberger).

In these fungi, then, we have the counterparts of what we have already observed in the pathogenic bacteria, a most remarkable change in function and nutrition, and a no less notable alteration in the chemical products of cell-growth. They furnish in the higher family of the *fungi* illustrations of what we have already seen so abundantly in the lower one of *bacteria*, and tend to remove our conclusions still farther from the charge of being hasty, or unsupported by parallel cases.

SUGGESTIONS—SANITARY, PROPHYLACTIC, AND THERAPEUTIC.

The principle which I have sought to elucidate opens up a wide field for its application alike by the sanitarian and the therapeutist, but I cannot do more now than throw out hints for the most obvious applications. Many more will occur to each of you, provided you are prepared to admit that there is a solid foundation for the doctrine as regards the diseases named.

SANITATION.

First.—Avoid close packing of all agents that may carry contagion.

Second.—Secure free and prolonged aëration of all parts of infected places and things.

These precautions are as old as hygiene, but we now see an additional reason for enforcing them, since, though the vitality of the germ may survive exposure to air, its virulence is likely to be modified.

Third.—We can see the great danger of seclusion

of disease-germs under close walls and floors, in cracks, joints, and decaying parts of wood-work; under wall-papers, etc., in close commodes, and in cellars and spaces beneath floors.

We have long known that disease-germs may be preserved in such close, dry places, but we must now recognize that dryness is not essential to their preservation, and that in some close, damp situations certain germs may not only be preserved, but intensified in virulence. Hence the absolute necessity of a thorough exposure and purification of all closed places of whatever kind in infected buildings.

Fourth.—We can appreciate the risk of the preservation of certain germs, and the augmentation of their force in privy vaults, sewers, drains, cesspools, manure-heaps, etc. If danger attaches to the buildings which are relatively clear of decomposing organic matter for the supply of suitable food for the germ, much more does it attach to the decaying matter in which the germ may find all the requisites for its nutrition and growth, together with that very partial supply of oxygen which habituates it to grow in a medium with as little air as in the blood and animal fluids.

Fifth.—In this principle or law we are furnished with a most substantial reason for the frequently recurring outbreaks of typhoid fever and other diseases of a malignant type, from contamination of the drinking-water. We can well understand how the filtration of infecting liquids from a leaking sewer, cesspool, or close privy-vault, into a well should produce a far more deadly type of disease than if the same original germ had been thrown into an open river or pond from which water was taken for drinking or culinary purposes. This law absolutely condemns the construction of wells in porous soils, unless they are deep enough and close enough to insure that no liquids from the surface nor from any putrefying organic matters can by any means reach their interior. We have long viewed these faulty wells as propagators of disease; we must now view them as part of a system by which communicable diseases are rendered increasingly malignant.

Sixth.—This law would suggest the great risk of shutting up churches, halls, factories, and public buildings generally, and of closed railroad cars, ships' cabins, holds and wells, into which the germs of disease may have penetrated. The importance of constant aëration of such places cannot be too much insisted on. Even in cold weather means can be devised to secure a fresh supply of air at a genial temperature; but, if not, let cold air be furnished rather than the stifling material we are too often condemned to breathe.

Seventh.—I will simply name crowded and unventilated sick-rooms and hospitals—no comment is necessary.

Eighth.—Our principle teaches the danger of impervious, water-logged, filth-sodden, or rich organic soils. As the rich, undrained, and impervious soils of Central and Southern Asia have been the home in all times of the plagues of man and beast, so their counterparts in Europe and America tend to become local plague-spots in which certain of these germs become acclimated, preserved, and intensified. Volumes might be written on the sanitary importance of the drainage, cultivation, and aëration of these soils, but I can now do no more than name this.

Ninth.—Our conclusions imply the especial danger of drainage into wells or other drinking-waters of germs from such impervious, damp, or putrid soils. The fear of the sanitarian has been mainly from the open, pervious soils, because through these the offensive matter passed with the greatest ease. But the air contained in such porous soils would sooner have disinfected the products, and had they not been supplied in excess by the confined cesspools and other inclosures, the danger in such soils would have been comparatively slight. But it is in the close, damp soil, where air scarcely penetrates, that the smallest amount of the poison is most likely to be preserved, and from which it is likely to come with its morbid energies enhanced. Hence, any drainage that may occur into drinking-water, through impervious, damp, or putrid soils, from feculent accumulations, graves, etc., is even more to be feared than that passing through open sand or gravel. Hence, too, the closeness of a soil is no warrant for the sinking of wells in the vicinity of any such dangerous collections, and especially on ground leading down from them.

PROPHYLAXIS BY A MITIGATED VIRUS ACTING VICARIOUSLY.

As chicken-cholera, lung-plague, and, to a certain extent, anthrax and swine-plague, may have their germs so modified by culture that they cannot at once grow actively in the poorly oxygenated blood and animal tissues, but develop as a local, superficial, or slight and transient disease, the question arises—How many other dangerous affections can be similarly limited, and a vicarious attack induced, which, compared with the normal affection, shall be relatively as mild as vaccinia is to small-pox?

SURGICAL SUGGESTIONS.

Our principle would suggest that, in deep wounds that must be closed up from the air, the greatest care should be taken to avoid the lodgment of germs, through fingers, instruments, sponges, water, etc. It would further suggest the dressing of all recesses of the wound with an antiseptic or disinfectant. Germs that will readily grow in the depth of such wounds are likely to be injurious. They may, besides, grow in the blood as well, and produce a general infection. Germs growing on the surface only are likely to do little harm comparatively, even should they survive the action of the disinfectant dressing. But germs that are in process of transition from surface or aërial growth to tissue- or blood-growth have their vitality already subjected to a severe strain, and, if subjected to the additional trial of a disinfectant dressing can hardly survive the ordeal. What if this is the true explanation of the success of antiseptic surgery! Recent observations have shown the presence of bacteria in abundance beneath the Listerian dressings. It cannot be, therefore, that the excellent results of the antiseptic system depend on the absolute destruction of the micro-organisms. The source of the success is to be sought rather in the antisepsis of the chemical products of the bacterial growth, or in the destruction of the transitional forms of the bacteria, or in both combined.

Another surgical suggestion offers itself with regard to the aspiration of the liquid contents of cysts and abscesses. If germs are allowed to enter these within or upon the needle of the aspirator, and if no agent is used for their destruction, they may succeed in surviving, and by themselves entering the blood, or by pouring into it their chemical products, they may induce general infection or poisoning. If, on the other hand, such cavity is well washed out with a carbolic lotion, the transitional forms are

likely to be destroyed, and septicæmia and septic intoxication alike avoided.

THERAPEUTICS.

It is, I believe, premature to say anything of internal disinfectant medication in bacteridian diseases. It might be supposed that the exhibition of agents calculated to furnish oxygen to the blood would be beneficial in warding off the malignancy of such germs; but, inasmuch as the blood can at most take up but a limited amount (twenty volumes per cent.), and as the germs themselves help to use up the dissolved oxygen, it is to be feared that the increase of oxygen would only assist in the survival of the transitional forms, and thus add to the number of the bacteria in the blood and to their toxic properties. At present I would be much more inclined to rely on the antiseptics which, at the very start of the disease and before many of the micro-organisms had become habituated to life in the comparatively airless blood and tissues, might be hoped to limit the numbers of the survivors, and thereby to mitigate the intensity of the disease. For cases already well established, and for those inoculated with germs which had already grown for two or three generations in the blood and tissues of other animals, or which had been cultivated in some comparatively deoxygenated medium, so that the micro-organisms had already acquired their dangerous and deadly habits of growing in blood-like liquids, there would appear to be no good ground of hope from even this system of treatment.

USE AND VALUE OF ARTIFICIALLY DIGESTED FOOD—PEPTONE.*

By GEORGE B. FOWLER, M.D.,

INSTRUCTOR IN PHYSIOLOGY, COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK.

If we are to judge by the number and consumption of prepared foods common in our day, it would appear that they possess a value which is recognized by both the profession and the laity.

A mere list of the various beef extracts and essences would occupy considerable space. They are made in every country from all manner of flesh and fish, and are generally eaten dissolved in water as a soup.

The effort to isolate the more soluble and easily digested nutritive ingredients of meat has been the fundamental principle of most of the processes, but in many instances the method employed has been such as to result in the separation of certain extractives and coloring matter; and the common error has been to regard these as representing the nutritive constituents of lean meat.

About two years and a half ago I conceived the idea of manufacturing peptone on a large scale, with the view to test its efficacy as a food. Theoretically it seemed to me that it should meet the requirements better than any material hitherto in use, in all cases where the function of the stomach or pancreas are impaired, and it appeared especially adapted for intravascular injection, as a substitute for blood, milk, etc. Its indication for introduction directly into the circulation, in properly selected cases, was so apparent, and the subject so interesting, that my attention at the beginning was almost wholly directed to the restorative value of peptone thus employed.†

It is well at the beginning to bear distinctly in mind exactly what peptone is, and perhaps you will not consider me too elementary were I to go rapidly over the digestive processes which give rise to this substance, and say a word or two respecting its physical and chemical properties.

Food is the fundamental requisite for life, growth, and development. It consists of a vast array of articles drawn from the three kingdoms of Nature, and to the unlearned presenting anything but an orderly classification. But chemistry has revealed analogies by which we are able to arrange all alimentary substances into, first, two great classes, *organic and inorganic*. The inorganic, consisting of *water and mineral salts*, the organic of *albuminates, carbo-hydrates, and fats*.

Water and the mineral salts when introduced into the body are absorbed under their own form, and, having served their purpose, are subsequently excreted unchanged. But it is otherwise with the organic constituents of food. The fats, under the influence of the pancreatic secretion, are broken up into a state of physical subdivision, the particles of which test the highest powers of the microscope, and are affected by other changes, such as saponification, before they are capable of being absorbed. All carbo-hydrates must first be converted into glucose.

Now, the albuminates, upon which I propose to dwell more particularly, are a class of substances characterized by a very complex chemical composition, $C_{72}H_{112}N_{18}O_{22}S$, and possess striking chemical and physical properties, whereby, in the native state they are not adapted either for absorption or assimilation. In order, then, that these objectionable conditions may be overcome, the albuminates, like the carbo-hydrates and fats, undergo digestion. Being subjected to the action of the gastric and pancreatic juice, these substances are found to undergo a peculiar change, whereby a new material of the same class is produced, namely, albuminose or peptone. Peptone differs from its original albuminate chiefly as follows: whereas native albuminous matters are, as a class, coagulable by heat (72° C.), the mineral acids and their salts, by acetic acid with ferrocyanide of potassium, alcohol, and by tannic acid. Peptone is unaffected by heat, mineral acids, alkalies, or acetic acid with ferrocyanide of potassium (with the last, an opacity is produced after some hours' standing). Peptone is precipitated by tannic acid and alcohol, and is further distinguished by the red-violet color which it gives with the reagents of Trommer's test—copper sulphate and potassium hydrate—soluble albumen giving with this test a pure violet. But the most practical result of the digestion of albuminates is the high degree of diffusibility which the product acquires. Although this property of peptone has been denied by some (v. Wittich), the great majority of investigators decidedly agree that digested albumen diffuses with great freedom, in marked contrast to albumen. Funke* states that about twelve times more peptone will pass through the septum of a dialyzer, in a given time, than albumen. My own observations support this statement, and experiments recently reported by Dr. William Roberts, of Manchester, England† are especially interesting in this connection. Dr. Roberts dialyzed milk forty hours into

* Read before the New York Academy of Medicine, June 2, 1881.

† Intra-Vascular Alimentation; the Nutritive Value of Peptones: New York Medical Journal, June, 1879. Read before New York County Medical Society, April 28, 1879.

* Das Endosmot. Verhalten der Peptone. Virch. Arch., Bd. xii., p. 449.

† Lumleian Lectures on Digestive Ferments, etc.: Lancet, Am. ed., August, 1880, p. 103.

twice its volume of water and failed to detect any proteid in the diffusate. But when he had previously digested milk for four hours with pancreatic extract, a very marked peptonic reaction was obtained on the water side of the septum after eight hours' dialyzing.

Again, he prepared a solution of white of egg in nine times its bulk of water, and filtered it, obtaining a perfectly clear filtrate. This solution being dialyzed into twice its bulk of water for thirty-two hours failed to pass through at all, but when the same solution was previously digested with either pepsin or pancreatic extract, the diffusate gave distinct peptonic reaction after five hours' dialyzing.

The nature of the changes effected in proteid bodies by the pepsin of gastric juice and trypsin of pancreatic juice has been the subject of unremitting study for many years, and to day is not perfectly understood. The molecular constitution of the proteid itself is not definitely known, and it is therefore extremely difficult to trace the chemical changes in this rather mystical compound. Yet, the study of the digestion of starch, and the changes whereby starch is converted into sugar elsewhere by the action of various ferments, as diastase in the ripening of fruit, and by boiling with dilute acids, has given a significant hint to physiological chemists as to what may be the explanation of the digestion of albuminoids. Starch, under the above mentioned circumstances, is converted into sugar (glucose) by the assumption of the elements of one molecule of water:

Starch. Water. Glucose.
$$C_6H_{10}O_5 + H_2O = C_6H_{12}O_6$$

Bodies which cause a decomposition like this are called *hydrolytic ferments*, and, so far as known, are the only kinds of ferments in the body. Those best known are: 1. *Amylolytic*, or sugar-forming (in saliva, pancreatic, and intestinal juice). 2. *Fat-decomposing*, causing fat to combine with the element of water, and to split up into fatty acids and glycerine (in pancreatic juice). 3. Ferments which decompose albuminous bodies (in gastric and pancreatic juice). The following table by Hoppe-Seyler* will serve to show how, under the influence of various ferments, anhydrides are converted into hydrates:

HYDROLYTIC FERMENTATION.

Ptyalin (Saliva): Starch. Water. Dextrin. Grape sugar.
$$2\,(C_6H_{10}O_5) + H_2O = C_6H_{10}O_5 + C_6H_{10}O_5$$

Invertin (Intestinal juice): Cane sugar. Levulose. Grape sugar.
$$C_{12}H_{22}O_{11} + H_2O = C_6H_{12}O_6 + C_6H_{12}O_6$$

Pepsin / Trypsin:
$$\text{Albumen} + n(H_2O) = \begin{cases} \text{Pepton,} \\ \text{Leucin,} \\ \text{Tyrosin,} \\ \text{Xanthin, etc.} \end{cases}$$

It is regarded safe, then, to consider peptone as *the hydrate of albuminate*. Modern research seems to show that under the influence of pepsin and trypsin, in the presence of water and at the proper temperature (35° C.), albuminoids become hydrated, and thereupon capable of appropriation by the economy. This view has recently received very substantial support from the experiments of Henninger,* who, obtaining very pure peptone, analyzed it, and found it to contain less carbon and nitrogen, but more hydrogen than the original proteid from which it was derived. The following is a table of his results:

	Peptone. I.	Peptone. II.	Fibrin.
C.	51.58	51.29	52.51
H.	7.02	7.08	6.98
N.	16.66		17.34

He even goes so far as so say, that he has reversed the process by dehydration, and obtained the original albuminous substance, or something very like it.

In this outline of the physiological chemistry of peptic digestion, my main object has been to remind you of the indispensable changes which organic food must undergo previous to absorption, to call your attention to some of the more recent developments on this line of study, and to bring you in sympathy with the considerations which prompted me to introduce a new food preparation.

Among the experiments that I have performed with peptone, are two of a nature which bear directly upon our present subject. As narrated in my former paper, they are as follows: "Further investigations were made by trying the effects of excessive feeding by subcutaneous injections of peptone. A rabbit and cat thus treated received respectively what corresponded to about four and eight ounces of beef per day for a week, water being allowed *ad libitum*. The results were a maintenance of weight and every evidence of comfort. It was interesting also to note that in no instance did the urine contain either albumen or peptone, and that the absorption of the fluid was very rapid, and unattended by any inflammation of the skin or cellular tissue. . . . . A rabbit received the equivalent of about four ounces of meat per day into the rectum, and was thus sustained a week without loss of weight."

The results convinced me of the nutritive value of peptone, and the next thing to do was to obtain the material in suitable form and quantity for practical purposes. For, although it is a comparatively easy thing to digest boiled white of egg or fibrin in small amounts for class demonstration, I found it quite another problem when the object is to obtain quarts and gallons of the product.

Efforts in my laboratory were rather disheartening on account of lack of proper accommodations, but fortunately I found in Messrs. James Grant & Co., 77 Varick street, manufacturers of the London Beef Essences, willing and competent allies. Yet, being able to pursue the subject only at irregular periods, and having to devise and modify many forms of apparatus and test many preparations of pepsine, almost two years have gone by since the attempt was begun. Various products were obtained which were unsatisfactory, chiefly on account of imperfect digestion, a persistent bitter taste, and a disposition to rapid decomposition.

Finally, however, about six months since, the product which I show you here was obtained, and is made as follows: An infusion of the fourth or digestive stomach of the ox, acidulated with hydrochloric acid to .2 of 1 per cent. is made. To one pound of finely chopped lean meat one pound of the acid infusion is added. This mixture is then kept at a tem-

* Ueber die Processe der Gährungen und ihre Beziehungen zum Leben des Organismus: Pflüg. Arch., Bd. xii., Heft 1.

* De la Nature et du Rôle Physiologique des Peptones. Paris, 1878.

perature of about 37° C., for two or three hours, being agitated in the meanwhile by a special mechanism. At the end of this time a perfect solution of the meat is effected, and it is found that there is less than seven per cent. of solid residue, which consists principally of fibrous tissue. The whole is now carefully neutralized by sodium bicarbonate, forming CO_2, which is driven off, and sodium chloride which remains in solution. The whole is finally concentrated to one-eighth the original weight of the meat employed.

(I will say here that I think it may be found advantageous to preserve a certain degree of acidity, for administration in special diseases.)

This preparation of peptone is of a dark color, of a thick molasses consistency, has an agreeable beefy odor, and is very pleasant to the taste. It responds to all the tests for peptone, and on account of the manner of its preparation it evidently contains *all* the constituents of lean beef. A thoroughly digested substance like this has manifold advantages which any one familiar with the laws of digestion and absorption can readily appreciate. Since a sufficient supply of peptone has been obtainable, I have constantly employed it, and am happy to say that my expectations as to its nutritive value and superiority over the usual beef extracts, etc., have been fully realized. The following cases illustrate its value:

Acute dysentery in a child five years old.—H. C——. Saw this little boy February 24, 1881, and found him suffering from the usual symptoms of acute dysentery, bloody stools, constant and severe pain and tenesmus, fever and vomiting. All medicines and food were vomited, and ice-water injections failed to afford much relief. With the view to give the rectum absolute rest, I suspended all medicine and food, and did nothing but administer twenty drops of peptone in a teaspoonful of water every two hours. The vomiting ceased, and the other symptoms gradually abated.

Phthisis—third stage.—M. R——, aged thirty-four. When I began to treat this patient he was suffering from the usual distressing symptoms of advanced pulmonary consumption, night-sweats, emaciation, anorexia, and persistent vomiting. I decided to try peptone, and gave it him freely, with the result of marked amelioration of the sweats, absolute cessation of vomiting, and a gain of ten pounds of flesh in about three weeks. At this time the supply of peptone was exhausted (by an accident to the apparatus), and it was impossible to obtain more until a week had elapsed. During this period his old troubles returned, and he very perceptibly lost weight. More of the preparation having been manufactured and supplied to us, I immediately resumed its use, with the same favorable results. But shortly afterward the patient received a severe shock by the suicide of his brother, and a fatal hemorrhage ensued.

The beneficial effects of peptone in the case were manifest to the most unobserving attendant. The patient, of course, grew tired of such exclusive diet, and I should have given it per rectum, had it not been that a fistulous tract in this situation rendered the parts exceedingly sensitive and intolerant.

Case of persistent vomiting (cause not apparent).—This was a young lady who was taken sick with tenderness over abdomen, and bloody discharges from bowels. There was no diarrhœa or tympanites, and neither Dr. Markoe, whom I called in consultation, nor I, could make a definite diagnosis. The most marked feature of the case was persistent and violent vomiting, which would ensue when even a few drops of water were given. The usual remedies, arsenic, iodine, wine of ipecac—all in drop doses—and cerium oxalate failed to arrest the distressing condition. Ice applied over stomach finally quieted that organ to the extent that there was cessation of vomiting when nothing was given by the mouth, but it still rebelled against the minutest amount of the blandest materials. Her strength rapidly failing, I began administering peptone per rectum—two teaspoonfuls in a teacup of water every three hours. She was thus exclusively nourished for a week, gaining every day. At the end of this time the stomach would tolerate a little milk—she would not take peptone by the mouth—and she is now nearly well.

Minnie P——, aged two months. This child was perfectly healthy when born, but soon had trouble in retaining its food. Before it was a month old, was troubled greatly with vomiting and diarrhœa. It was nursed by a wet-nurse—a fine, healthy woman—but this failing to agree, cow's milk, and lastly condensed milk were tried, but with no better success. The child continued to emaciate rapidly, and was reduced to a mere skeleton. It was immediately put upon an exclusive diet of peptone, ten drops every hour. It got no medicine whatever. The vomiting stopped, the diarrhœa soon began to diminish, and in less than three days was checked completely. The child gained rapidly in strength, and at the end of two weeks began to nurse some, and had not the slightest difficulty in retaining its food. By the end of the third week the use of peptone was discontinued, and the child allowed to nurse as usual. One month after beginning the use of peptone, the child was discharged in a well-nourished condition.

Nellie G——, aged six weeks. The mother of this child died of pelvic cellulitis, and child was consigned to the care of a wet-nurse. Although the nurse had a good quantity of healthy milk, the child did not thrive well. When born it was not robust. From the first the child vomited often and showed slight desire for food. Digestion seemed to cause pain, and it cried most of the time. Bowels were somewhat relaxed. It continued to emaciate slowly, and but slight hopes of its recovery were entertained. Having had such flattering results in previous similar cases, I advised the use of peptone, ten drops every hour, and the withholding of all other food and medicine. This was kept up for about two weeks when the child was able to take a little milk. It by this time had improved much in strength, ceased crying, and slept most of the time. By the end of a month, the peptone was stopped, and the child partook freely of milk, and was gaining flesh rapidly when it passed from under my observation.

I am aware that since I began to investigate this subject several others in England and Germany have been similarly engaged, and Dr. R. J. Nunn,* of Savannah, has advised that in children's diseases much can be accomplished by first coagulating the milk with rennet and then breaking up the clots into a fine state of subdivision. This, the author claims, prevents subsequent clotting in the stomach, kills germs, and promotes absorption. Dr. William Roberts, before quoted, says he has for some time used, for the sick-room, milk to which liquor pancreaticus (Savory & Moore's, a tablespoonful to the pint of milk), and the whole made alkaline with twenty

* Am Jour. Ob. and Dis. Women and Children, July, 1880.

grains sodium bicarb., and kept in a warm place for an hour.

These are, no doubt, excellent preparations, but they represent but partial products, and have to be continually prepared anew or they decompose.

This meat-preparation which I now present will be found to contain all the meat, with the exception of a small portion of fibrous tissue, in a digested fluid state, and I recommend it to you with great confidence, as a valuable adjunct to our therapeutic means.

Progress of Medical Science.

Knots of the Umbilical Cord.—Dr. J. H. Pooley (*Gaillard's Medical Journal*, April, 1881) is led to believe that true knotting does not occur so frequently as has been commonly supposed. Dr. Redman met with it only four times in ten thousand cases; Dr. Beale four times in one thousand two hundred and twenty. It is caused by too great length of the cord, with, in some cases, excess of liquor amnii. Forming early in pregnancy, it may terminate fœtal life by interrupting the circulation. Forming later, it is not dangerous, unless the cord be very strongly dragged upon during labor. Dr. Pooley cites a case from his own practice illustrating this latter condition, where there was death of the fœtus and subsequent miscarriage.

Malarial Poison.—Dr. W. O'Daniel (*Atlanta Medical and Surgical Journal*, March, 1881) is inclined to believe that the effects of this poison can be greatly mitigated by keeping the doors and windows closed between the hours of sunset and sunrise. He gives instances from his own neighborhood, a very malarious district in Georgia, where persons who made a thorough trial of this plan escaped entirely from infection, while almost every other inhabitant of the district was suffering to a greater or less extent from malarial infection.

Hammam R'Irha as a Winter Resort in Gout and Rheumatism.—Warm baths and chalybeate waters are by no means exclusively the property of Hammam R'Irha. They are to be found all over Europe; but the peculiarity of Hammam R'Irha, as described by Dr. T. Lauder Brunton in the *Practitioner* for April, 1881, is the combination of baths and waters with a warm winter climate, so that patients can resort thither when the season of European baths is over. It is situated about sixty miles to the southwest of Algiers, and about fifteen in a direct line from the coast. The baths are abundantly supplied with hot water conveyed from the springs, which rise high up on a hill-side. The water is clear and bright, the temperature at the fountain-head being 45° C. (113° F.). In the swimming-baths it varies between 42° and 44° C. (107° and 110° F.). The water belongs to the class of thermal salines, its most important ingredient being sulphate of lime. In composition, it agrees very closely with the water of Bath, or with the famous baths of Baden. The affections in which these waters have been claimed to be useful are chronic rheumatism, articular or muscular, gout, stiffened tendons, erratic pains and neuralgias of rheumatic origin, also certain special diseases and injuries of the osseous, lymphatic, circulatory, nervous, and cutaneous systems. The diseases of the bones in which they have proved useful are periostitis, caries, and badly consolidated fractures. They are very serviceable also in cases of old gun-shot wounds and painful cicatrices, as well as in chronic ulcers. The diseases of the lymphatics, circulatory, nervous, and cutaneous systems already referred to are obstruction of the lymphatics, varicose veins, chorea, and syphilitic cutaneous affections. Patients suffering from prostatitis and vesical or renal catarrh and ulceration of the os uteri, have used advantageously local application of the waters as douches.

The climate of Hammam R'Irha renders it a suitable winter resort for cases of pulmonary disease, as well as in rheumatism and gout. It is most useful in cases of phthisis occurring in persons of a lymphatic or strumous diathesis, and is especially serviceable when dyspeptic complications are present. In cases of phthisis, where the temperature is high, it does more harm than good. Phthisical or other patients residing at Hammam R'Irha can readily descend to Algiers during the bad weather, and even those who prefer to spend the greater part of their time at Algiers may find it a pleasant variation to make a short stay at Hammam R'Irha. The best months are October, November, and the beginning of December. But its baths are not the only therapeutic advantages which Hammam R'Irha enjoys. A little less than a mile distant is a chalybeate spring, from which the water is conducted by pipes to a pavilion, where it pours from a small fountain into a basin below. The water contains carbonate of iron and free carbonic acid. The quantity of iron is too small to render the taste of the water disagreeable, and the carbonic acid which it contains is sufficient to enable it to be used as a pleasant effervescing table water. It does not constipate, and indeed has rather a laxative action, probably from the salts it contains. Cases of obstinate constipation have yielded to the continued use of this water. It is useful also in cases of chronic hepatitis and affections of the liver, and persons suffering from malaria sometimes recover very rapidly under the combined use of the chalybeate water and the cold douche. It is slightly diuretic, and this property, combined with the astringent effect of the iron on catarrhal conditions of the pelvis of the kidney, is likely to render it useful, like the waters of Wildungen, in cases of renal calculus.

Ophthalmia Neonatorum.—The *Cincinnati Lancet and Clinic*, April 23, 1881, contains some practical suggestions on this topic by Prof. W. W. Seely. Disinfection will reduce the number of cases in an extreme degree. He maintains that solutious of boracic acid, or the yellow oxide and vaseline, can be substituted with great advantage for the more irritating salicylic and carbolic acids and nitrate of silver.

The Diagnosis of Fatty Heart.—Fothergill, in commenting on this subject, in the *Practitioner* for April, 1881, states that there is a mysteriousness about the fatty heart, which adds much to the general dread of it, both in and out of the profession. Fatty degeneration of the heart is not a specific disease, except in the very rare cases where a pericardial adhesion exists over a coronary artery, and the heart-wall is thus deprived of its supply of nutrient blood. Then it is a disease *per se*; ordinarily it is but a fragment of a widespread degenerative change. That is the point to keep steadily in view. As a rule, with few exceptions, it has such distinct associations that if they are not found it is very unlikely to be present.

Most commonly it follows upon a former hypertrophy, where the coronary arteries become all but obliterated from atheromatous change. When so found, the heart is heavier than normal, albeit its muscular fibre may be extensively degenerate. If these associations were only generally known and recognized, error would be avoided, or largely so, for fatty heart is sometimes diagnosticated in cases where it is feeble from atrophy or malnutrition. Wasting diseases impair its integrity; so do fevers ultimately, but here repair, swift and complete, is the almost universal rule. The fatty heart is the usual concomitant of senile degenerative changes. Even when the physical signs suggesting fatty degeneration are found in elderly persons with hard arteries, the suspicion may not be confirmed; the symptoms may be due to malnutrition, as the effect of treatment ultimately demonstrates.

The condition which simulates the fatty heart most closely, and is the cause of most of the errors made in its diagnosis, is that due to mal-assimilation, and which may fairly be denominated "heart starvation." This is quite a common malady. The assimilative powers are defective, especially as regards the proper and thorough digestion of albuminoids. Consequently the tissues are badly nourished, and the heart suffers especially. The heart's impulse is feeble also, and its sounds are weak and ill-defined. There is a small, compressible pulse, with other evidences of a defective circulation. The impairment of the action of the starved diaphragm is seen in the dyspnœa readily induced. The *tout ensemble* resembles that of the fatty heart so closely that the mistake is one easy to make. In "heart starvation" the signs of degenerative change elsewhere are absent. But one will actually find a loss of appetite, some impairment of sleep, the positive signs of indigestion, the evidence of deficient action in the liver, deposits in the urine, and the characteristic tongue. Usually, too, there are sundry neurotic symptoms due to defective nutrition of the nervous system. There is depression with irritability; the brain is at once underfed, and poisoned with the products of mal-assimilation. There are the localized spots of pain found when the blood is charged with nitrogenized waste, usually at the inner edge of the lower angle of the shoulder-blade; less frequently near the apex of the heart or in or over the pectoral muscles. Imperfectly developed attacks of genuine vaso-motorial angina are also common, from the waste-laden blood, producing spasms of the small arteries and arterioles. "Heart starvation" is a disease of early and middle life, associated with overwork and defective digestion, most commonly seen in persons of the neurosal diathesis. It is thus associated with mal-assimilation, and not with degenerative changes in elderly persons. When the assimilative processes are once more restored to their normal efficiency the alarming symptoms pass away, and the nature of the case is cleared up.

Fracture of the Lower End of the Radius.—Dr. P. S. Connor (*Cincinnati Lancet and Clinic*, April 23, 1881) endorses the theory of a "cross-breaking strain," due to over-extension of the hand, in the production of this fracture. The fragments should be loosened by bending the wrist backward, and then drawn into apposition by steady flexion; if necessary, direct pressure should also be made upon the projecting upper end of the lower fragment. Dr. C. believes the treatment suggested by Pilcher—viz., trusting to the weight of the hand and a band about the wrist, without splints—is all sufficient to correct the deformity; at the same time, he would not like to place himself on record as advising its general adoption by the profession, until the matter has had more general acceptance.

Bovine Tuberculosis in Man.—This affection in its more acute manifestations so closely resembles an infective disease that the theory of a virus, whether generated in the interior of the body from caseous matter, or derived from without, is almost irresistible. This view has been recently put forward by Cohnheim, and Klebs professes to have discovered a micrococcus, by whose agency the infection is brought about. Dr. Creighton adduces proof of an anatomical kind in support of the doctrine that, at all events, in many cases the tuberculosis which affects the human subject is identical with the disease which is so common in cows and oxen, and which has received among many other names that of the "pearl disease," or *perlsucht*, in consequence of rounded excrescences which grow on the surface of serous membranes. This disease has been communicated to the calf, lamb, goat, pig, and rabbit, by feeding either with the milk of the diseased animal or with the pearl bodies themselves; and Dr. Creighton contends that there is strong evidence from the anatomical similarity between the disease in the cow and that often observed in man, that the infection is very commonly communicated to the human subject by the milk of cows affected with *perlsucht*, or, as he calls it, bovine tuberculosis. The great importance of such a question does not need to be pointed out. Twelve cases are recorded, which have all been observed recently at the hospital in Cambridge, and where the appearances, both to the naked eye and on microscopic examination, so closely resembled those seen in cows affected with *perlsucht* as to convince Dr. Creighton of the identity of the affection in the two cases. Of course, actual experiment to prove the transmission of the disease from cattle to man is impossible; but, if it is considered how largely cow's milk enters into the dietary of everyone, it will be seen that, if such transmission be possible, it must occur very frequently; and this is what is contended by Dr. Creighton. Milk is now recognized as a means of carrying the virus of disease, and epidemics of typhoid fever have in many cases been traced to milk contamination; but, in all cases, it is believed that this contamination is due to something added to the milk after it has been taken from the cow, and this something is always sewage of one kind or other, which is, in the minds of most sanitarians, the origin of all evil. Dr. Creighton starts the view that many of these supposed attacks of typhoid fever are in reality outbreaks of tuberculosis, and that the milk was contaminated not by adulteration, but owing to its having been secreted by tuberculous cows. Far too much stress, he thinks, is laid to the matter of imperfect drainage, and the real causes of disease are often overlooked, because it is supposed that where an untrapped drain or a leaky sewer-pipe is discovered, quite enough is found to account for infection.—*Dublin Journal of Medical Sciences*, May, 1881.

A Statue of Harvey has been completed by a London sculptor, and will be unveiled at Folkestone in August next, during the session of the International Medical Congress.

THE MEDICAL RECORD:

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GEORGE F. SHRADY, A.M., M.D., Editor.

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THE COMING INTERNATIONAL MEDICAL CONGRESS.

THE Seventh Biennial Session of the International Medical Congress is to be held in London from August 2d to August 9th. Preparatory work has been going on actively for some time; the programme has been prepared, and the other arrangements nearly finished, so that at present nothing seems to interfere with the prospect of a successful meeting.

The two previous sessions of this congress were held respectively at Philadelphia and Amsterdam. At neither place were the conditions so favorable as are those for the coming congress. We may therefore expect more from it.

The executive committee have made their preparations upon the largest scale. The work of the session is to be done in a general meeting and fifteen sections with one sub-section. In this way, medicine, surgery, anatomy, physiology, obstetrics, and materia medica are covered, and, in addition, all the specialties, including dentistry, state medicine, and mental diseases. Each section is very heavily officered with some twenty or thirty medical men. The consequence is that nearly every prominent medical man in Great Britain has his name upon the official list of councillors, vice-presidents, or other officers. This, we presume, insures their interest in and presence at the congress.

For each section there is announced a series of six or eight subjects for discussion. These subjects seem to have been very judiciously chosen, and, if well discussed, a great deal of importance may be expected to be brought out.

Among the topics are—In Anatomy and Physiology: Improved Methods of Instruction in Anatomy, The Functions of the Cortex Cerebri, The Intimate Structure of Cells and Nuclei; in Pathology: The Relations of Minute Organisms to Disease, Tubercle, and the Origin of Cancer and Sarcoma; in Medicine: The Localization of Disease in the Brain and Spinal Cord, and Forms of Renal Disease, with a subsection on Laryngology; in Surgery: Recent Advances in the Surgical Treatment of Intra-Peritoneal Tumors, Recent Advances in the Method of Extracting Stone from the Bladder of the Male, Union by First Intention, The Treatment of Aneurism by Esmarch's Bandage, and Syphilis; in Obstetrics: Antiseptics in Midwifery, the discussion being opened by Professor Spiegelberg; Total Extirpation of the Uterus, by Professor Freund, Oöphorectomy, by Dr. Battey; in Diseases of Children: Syphilis as a Cause of Rickets, Spinal Paralysis, Diphtheria, and Chorea in its relation to Rheumatism; in Mental Diseases there is an elaborate programme, embracing Anatomy, Physiology, Pathology, and Chemical Aspects of these diseases.

In all the sections, the prominent and still unsettled questions belonging to the special departments have been chosen as the subjects for papers and discussion.

The names of the presidents of the different sections insure addresses of more than ordinary value. The list of these officers includes Professor Flower, Dr. Michael Foster, Dr. Samuel Wilkes, Sir William Gull, Dr. George Johnson, Mr. John Eric Erichsen, Dr. McClintock, Dr. West, Dr. Lockhart Robertson, Mr. W. Bowman, Mr. Wm. B. Dalby, Mr. Erasmus Wilson, Mr. Edwin Saunders, Mr. John Simon, Surgeon-General Thos. Longmore, and Professor T. R. Fraser.

The president-elect is Sir James Paget. The "patrons" are no less personages than Her Majesty the Queen and His Royal Highness the Prince of Wales. There is a list of vice-presidents numbering almost forty, so that the total number of officers amounts altogether to nearly four hundred. The congress must necessarily be well attended, or there will be no privates.

Membership in the congress is open to all medical *men* who are legally qualified to practise in their respective countries, who shall have inscribed their names on the register of the congress, and shall have taken out their tickets of admission. These tickets cost one guinea, and will entitle the holder to a copy of the transactions when published. It will be seen that female physicians are not entitled to become members, but there seems to be nothing to debar homœopaths from fellowship and the franchise. Medical students and other persons are to be allowed admission to the meetings on payment of half a guinea.

The official languages for the meetings are English, French, and German. The rules, programmes, and abstracts of papers are to be printed in these three languages; the papers and addresses in whatever language they are delivered in; the debates will be printed in English.

The first general meeting will take place on Wednesday, August 3d, at 10 A.M. After this the sections will meet every day from 10 A.M. to 1 P.M., while the general meetings will be held daily from 4 to 5:30 P.M.

In connection with the meetings there will be a temporary museum in the rooms of the Geographical Society. In this museum, besides specimens, drawings, casts, etc., arrangements are to be made for the exhibition in groups of living examples of certain rare diseases. Among the subjects selected for such exhibition are: Addison's Disease, Charcot's Joint-Disease, Myedema, Mollities Ossium, Scleroderma, Rupture of Brachial Plexus, Xanthelasma, and Lupus Erythematosus.

The prospects now are that the attendance will be large, and also that many of the best and most representative medical men from the continent will be present. It is to be hoped that many American physicians will attend, and do more creditable work than they have hitherto attempted at these meetings.

SOME FACTS ABOUT QUININE.

THE enormous amount of the cinchona alkaloids which is used in this country calls, we think, for some special attention on the part of the medical profession. There are two points which we would particularly refer to just now.

The first is, whether quinine and the allied alkaloids are not being used in excessive, if not dangerous amount. It is asserted, by a writer in *New Remedies*, that the total annual consumption of quinine throughout the world is two hundred and twenty thousand pounds. Of this, over one-fourth is consumed in the United States alone. Nearly half a million of ounces of quinine were imported into the United States in 1880, besides over thirty-two thousand bales of cinchona bark. These figures do not include the other alkaloids; but it is to be remembered that these exist in the bark, on an average, in two or three times the amount of quinine. Of the four chief alkaloids, quinine, quinidia, cinchonia, and cinchonidia, none are wasted by the manufacturer. We can thus see that the supply for a large consumption exists in the United States.

The frequency with which quinine is prescribed by physicians in this city has become very great, and the inevitable diagnosis of "malaria" has become a by-word, and even a matter of ridicule with the laity. Yet, for every prescription of quinine which a doctor gives, the druggist receives ten or twenty calls for the drug by persons who are treating themselves. If a man has a cold, he procures quinine; if he feels "bilious," or has a headache, or is indisposed, he buys quinine. If he has eaten too much, or cannot eat enough, he takes quinine. If a person does not know what is the matter, he resorts to this same most potent drug. Quinine has become a main-stay of the physician, and the panacea of an enormous circle of self-medicating citizens. There is no question that a great deal of this dosing is ill-advised and useless, and it can hardly fail to be in some cases positively injurious. Physicians are responsible for such a condition of things in part; the wholesale manufacturers, who put the alkaloids on the market, advertise them widely, and present them in elegant and alluring shape, are also partly responsible. They are assisting to educate the people to medicate themselves. And the people themselves are a little stupid in the matter. A certain share of them have the idea that medicine can always counteract sanitary indiscretions. It is considered easier to take quinine or a cathartic, than to take good care of oneself.

It is the duty of the medical profession, in those parts of the country where the abuses to which we refer exist, to try and check this wholesale consumption of antiperiodic bitters. There is undoubtedly a great deal of the malarial poison in this city, and physicians are very often justified in their diagnosis and treatment. But, often also, hepatic derangements, indigestions, simple continued fevers, fevers from filthy exhalations, fevers from nervous or gastro-intestinal disturbance or inflammatory changes, are incorrectly diagnosed as due to malarial. We repeat that there is a great deal of carelessness in these diagnoses, and a great deal of recklessness in the prescribing and consumption of quinine.

Now, as to a second point. We have spoken of quinine; but it is undoubtedly the case that, in nine cases out of ten, persons who go to a drug-store and ask for quinine do not get it, but get quinidia or cinchonidia, or even cinchonia, in its place. Most druggists, perhaps, will give quinine when it is so written on the prescription; but the number of druggists, so far as we can learn, is very small who give quinine when it is called for by ordinary customers. The druggists do not deny this practice, but even justify it. The other alkaloids, they say, are nearly as powerful, and in most cases the customer does not need the drug any way; then, the general public does not know anything about quinidia, cinchonia, etc. They would not believe in the efficacy of such salts, therefore they cannot be sold under their own name. So that practically there is probably a vastly greater amount of these weaker alkaloids sold in the shops than of quinine. This is true not only of this city, but of others. In the South and West, and in the country generally, the allied salts are enormously used.

The question of the relative value of these salts, therefore, comes up. Regarding this, no absolute conclusions can yet be stated. It seems probable, however, that they rank in value as follows: cinchonidia, quinidia, cinchonia. Cinchonidia has been largely used in hospitals and dispensaries in this and other cities. It is sold a great deal for use among coun-

try practitioners. It has been used and tested in India and other countries. The results are, for the most part, very satisfactory. It is claimed to be almost, if not quite, equal to quinine. In some cases it seems to produce even less gastric or cerebral disturbance. Quinidia is nearly equal to cinchonidia, but it is more irritating to the stomach, and less valuable on that account. Cinchonia is the weakest of the four alkaloids.

There are some allied preparations, such as dextroquinine, of which we find good reports. Of others, such as quinquinia, less can be said.

On the whole, it seems that quinine, though still the best and surest alkaloid, is not to be considered so pre-eminent as formerly.

Knowing the present promiscuous substitution of other salts for quinine, it will be better for physicians to write for what they are most likely to get. They should also instruct their patients that quinine is neither omnipotent nor harmless; and second, that they will not get that drug often at the drug-store, unless upon prescription, or by some special effort.

THE MEDICAL CENTENNIAL AT BOSTON.

Our countrymen are fast developing a passion for the historic. Very few things are now allowed to pass their centennial without commemorative honors. The Massachusetts State Medical Society—the oldest State medical organization, with one exception, in the country—celebrated its maturity last week, to the profound satisfaction of its members and the onlooking public. The affair seems in every way to have been a successful one. The attendance was remarkably large, the addresses well prepared, the sight-seeing faithfully attended to, the dinner and the free lunches not neglected, while the whole proceedings were faithfully chronicled by the local press.

The incidents and work of the occasion were almost entirely of a social or anniversary character. A little business was done, but no medical work. The meeting was a kind of medical Fourth of July. It began with a grand special excursion to the Brighton abattoirs, and ended with a dinner. And how thoroughly the interest of the occasion was sustained is shown by the fact that there were nearly four times as many persons at the dinner as there were at the initial entertainment in Brighton. We venture to suggest, however, that the special visit to the slaughter-houses was not what the anglicized American calls good form. Is the doctor especially fond of seeing a cow knocked in the head and subsequently skinned? However, our Boston friends have no obelisk, and the Greek play was not running—hence, we presume, the abattoirs.

The two addresses which made up the intellectual part of the entertainment were each admirable and worthy of the occasion. Dr. Green traced the history of the society, and commented upon the good it had accomplished. Dr. Warren touched upon many subjects, but showed especially the advantages that will accrue from medical societies, well organized and well conducted.

The speeches at the dinner were unusually good. Many bright things were said, and the too obvious truth that medicine is a progressive science was presented in various graceful and impressive ways. The poem by Dr. Holmes would alone have made the dinner notable.

The business part of the meeting was most remarkable for what was not done, for no action was taken regarding the admission of women to membership, and the question still remains under consideration.

A characteristic of the celebration was the marked enthusiasm shown by the members for the body whose birthday they were celebrating. The large attendance, the addresses, the speeches, the press comments, all proved this. There are few, if any, other State societies among whose members such an *esprit du corps* could be awakened, and we willingly acknowledge that the pride displayed over the Massachusetts Medical Society is well deserved. It is an organization which has a long history and an honorable one. It has been a powerful and useful element in the social advancement of the State. It has been called conservative, but it is the conservatism of an honest and self-respecting body. It has now grown to be one of the largest and best organized of the State societies.

We need not wonder, therefore, that the ebullition of enthusiasm at Boston was a little greater than to the ordinary outsider would seem to be called for. The Massachusetts doctors were glorifying in their past and delighting in the present. And these conditions, we hope, will stimulate them to a still higher future.

Reviews and Notices of Books.

Imperfect Hearing and the Hygiene of the Ear. By Lawrence Turnbull, M.D., Ph. G. Pp. 147. Philadelphia: J. B. Lippincott & Co. 1881.

This little book has grown to its present dimensions from a paper by the author on tinnitus aurium, which appeared in the Philadelphia *Medical Times* seven years ago.

The subjects referred to in the book are, 1, Progress of Otology, which is the introductory chapter; 2, A Chapter on the Limit of Perception of Musical Tones by the Human Ear; 3, Tinnitus Aurium, and Observations on Aural or Auditory Vertigo; 4, The Treatment of the Throat and Nose in connection with Aural Disease; 5, Artificial Perforation of the Membrana Tympani; 6, Diseases of the Mastoid Region; 7, Aural Hygiene; 8, The Audiphone, Ear-trumpets, etc.

The author comes down to us with a long experience in the treatment of aural diseases, and in this book is collected material that has been contributed

to the medical journals during the past few years. The author recognizes the importance of physiological acoustics in the special department of medicine included in the comprehensive term otology, and we cannot but wish that his methods, as respects treatment, etc., were more suggestive of a recognition of the modern pathology that has sprung up along with physiological acoustics than of the old régime that is recalled by the title of his book. "Imperfect hearing" reminds us too forcibly of the captions of the aural fathers, who wrote of "deafness" as a disease.

In a paragraph under the heading of "Deafness the Result of Sympathy between the Ear, Teeth, and Mouth," the author says: "It is of the utmost importance that persons suffering with deafness should be provided with artificial teeth, as the loss of the natural teeth causes the soft parts to come too close together, shuts up the orifices of the Eustachian tubes, which are situated on a level with the turbinated bone, and a little higher than the floor of the nose." The book abounds in careless statements like the above, which, if accepted, would, to say the least, be disappointing. The chapter on the hygiene of the ear, like the most of the contents of the book, is evidently written for the laity, and of whatever service a popular style may be to them, it is out of place in a work ostensibly written for the profession. The author has introduced fifty-two illustrative cases, many of them in tedious detail, and by the reader likely to be less valued than by the author; indeed we think the reading of cases, unless of exceptional interest, is generally avoided. The concluding thirty-six pages of the book are devoted mainly to the causes of deaf-mutism and the education of this unfortunate class.

Dr. Turnbull has collected in the work before us a great quantity of miscellaneous matter, consisting of detached statements, statistics, etc., from numerous sources, not always arranged connectedly, but rather drawn out, like a Quaker sermon, as the spirit moved. The author is, however, a close observer of symptoms, and the profession is indebted to him for contributions of considerable value. The results of his own personal experience alone would not be without interest to the otologist, but the abstracted opinions of others as presented in his book are too briefly and too disconnectedly given to be of much service to the professional reader.

INDEX RERUM. Ann Arbor, Mich.: Joel A. Miner.

THIS book is intended for students, scientists, and members of professions who require a convenient method for indexing all important subjects of which subsequent use may be made.

It has some peculiar points on which the author grounds his request for public favor. 1. When frequent references are likely to be made from some important book, it may be entered in the table of references provided for the purpose, and in the index itself it is then referred to by the number opposite it in the table, thus saving the labor of successive writings of the title. 2. The more important subjects may have many references on the same page. Such subjects can be entered in the table at the top of the page, and afterward referred to by the numbers opposite them. 3. Each page is divided into parts by red lines, one or more of which can be given to each subject of numerous references, thus securing the advantage of bringing together in one part of the page the related references. 4. The arrangement of subjects under each letter of the alphabet is made by the vowel first following the initial letter; those having *a* in the first syllable are put on the first page; those having *e* on the second page, and so on. Two extra pages follow the necessary six of each initial letter, upon which can be continued the pages of that letter first filled; by this means the unavoidable differences of demand for the different pages is provided for. The book, when filled, will be filled throughout. It will be found of advantage to index everything by its most significant title, and important matters may be indexed under several titles.

Physicians will find this index to be most serviceable in preserving for future reference such matters as are of special interest to them in the medical journals, where they would be quickly lost sight of unless preserved by some selective reference. Under the heads of the various *diseases* and *remedies*, a record may be kept of all that is found to be noteworthy in his reading or experience. Such records will be found to be of great service to the busy practitioner who has no time to search his library for some important but only half-remembered fact.

TRANSACTIONS OF THE MINNESOTA STATE MEDICAL SOCIETY. 1880. St. Paul: H. M. Smyth & Co.

THIS is a creditable volume of one hundred and ninety pages, containing a number of interesting articles. Among others, we notice an earnest plea in behalf of the adoption by the profession of the metric system of weights and measures. As Dr. Emery has it, his intention is to show "that our profession in this Northwest is in advance in all important movements for the benefit of the human family."

TRANSACTIONS OF THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA. Vol. XIII. Part I. Published by the Society. Philadelphia. 1880.

THIS is a paper-cover volume of four hundred and ninety-five pages, and embodies the report of the usual proceedings at the annual meeting, held at Altoona in May, 1880. There are in addition full reports from the different county societies. That of the Philadelphia County Medical Society contains, besides matters of local importance, some points of general interest to the profession at large. A well-written obituary of James Aitken Meigs, prepared by Dr. Hamilton, will doubtless be read with sorrowful interest by all who see this volume. A further document of wider interest is an exhaustive report on the subject of its investigations, furnished by the Committee on the Abuse of Medical Charities.

Reports of Societies.

THE CENTENNIAL ANNIVERSARY OF THE MASSACHUSETTS MEDICAL SOCIETY.

Held at Boston, June 8 and 9, 1881.

[Special Report for THE MEDICAL RECORD.]

ON the morning of June 8th, nearly eight hundred out of the thirteen hundred and fifty members of the society had arrived at Boston prepared to do their duty by the venerable organization of which they were ornaments. A special train, which was in waiting, quickly took such members as desired to Brighton, to view the slaughtering-establishments, euphemistically known as abattoirs there. These

interesting places were thoughtfully inspected by the visitors. From Brighton the guests went to Cambridge, and the wonders of Harvard College and accessories were examined.

At 11 A.M. the Society assembled at Sanders' Theatre, and was called to order by the President, DR. HENRY W. WILLIAMS. An address was then delivered by DR. SAMUEL A. GREEN, on

THE HISTORY OF THE MASSACHUSETTS MEDICAL SOCIETY.

The speaker, after some preliminary remarks, said that the Massachusetts Medical Society was incorporated on November 1, 1781, and its charter was signed by Samuel Adams, as President of the Senate, and by John Hancock, as Governor of the Commonwealth. There had been before this time a medical society in Boston, which was the first one formed in America. It appears to have been in existence as early as the year 1735, though it did not continue long. Its records are irretrievably lost, and all that is known about it is gathered from fragmentary sources. It is very likely that it included in its list of members some of the ministers, as they were interested in the study and practice of medicine.

A long generation passed, and the Massachusetts Medical Society took the field, and occupied the broad limits of the State, including the District of Maine. Its members, together with the clergy, represented the education and refinement of the community. The charter members were thirty-one in number, and represented different sections of the State, fourteen of them belonging to Boston. The first meeting of the corporation was duly held in the County Court House, on November 28, 1781, at which time there were present nineteen of the thirty-one members. One of the prime objects of the society was to draw the line between the intelligent and the ignorant practitioners of medicine. At the third meeting permanent officers were chosen, and Dr. Edward A. Holyoke was elected president. Dr. Holyoke practised medicine in Salem for seventy-nine years, and it was said of him that there was not a dwelling-house in the town at which he had not visited professionally. He died March 31, 1829, having reached the advanced age of more than one hundred years.

The speaker went on to give the history of the successive annual meetings during the first twenty years. He referred also to the establishment of the Harvard Medical School and the part which the society had in its growth and development.

At first, he said, the school was looked upon by the society with some jealousy, as it feared that the existence of two institutions would lead to serious embarrassment. Such feeling did not last long, however. At this time there were but three professors in the medical school, and two of these were original members of the medical society. It was therefore extremely improbable that there would be any permanent friction between the two bodies. The medical society had no right to confer degrees, and it does not appear that the medical school had any intention of granting testimonial letters to the profession at large.

It is a curious fact that the Chair of Anatomy in that school has had but three occupants in the ninety-eight years of its existence. These are Dr. John Warren, Dr. John Collins Warren, and Dr. Oliver Wendell Holmes.

The history of the establishment of the Massachusetts General Hospital, in 1810, was related, and the active part taken by members of the society in introducing inoculation, and later, vaccination, was referred to as being most creditable to the intelligence and far-sightedness of the organization.

Regarding the comparative age of the Society, Dr. Green said: The Massachusetts Medical Society is now the oldest state organization of a similar character in the country. Since its formation it has borne on its rolls the names of three thousand seven hundred persons, and to-day its membership includes one thousand three hundred and fifty physicians from all parts of the commonwealth. These members represent every section of the State, and their influence on one another is as immense as it is incalculable. The average attendance at the annual meetings of late years is not far from seven hundred and fifty members; these meetings last through two days, and, with few exceptions, have been held in Boston. The charter of the New Jersey Medical Society antedates that of this society by some years, but there have been breaks in its regular line of descent.

After the address the members were invited by President Eliot to visit Harvard College, and a lunch was given in Memorial Hall. After this a train took them to Boston. An excursion down the bay and to Nantasket Beach occupied the rest of the afternoon.

In the evening a reception was tendered the society by Dr. Williams, which was much enjoyed. A number of physicians from out of the State were present, including, we are told by the local press, the venerable "Dr. Groce" and "Dr. Jacobie" (how narrow a thing is medical fame!).

SECOND DAY.

The morning was occupied in part with more sight-seeing. The hospitals of the city and various museums were thrown open to the members, and were extensively visited by them. A special exhibition had been prepared and was displayed in Horticultural Hall. It consisted of a comparative and historical exhibition of botanic plates, of old books with quaint illustrations, of surgical instruments and other curious and useful objects belonging to the past and present times. On one side were the drugs in use more than one hundred years ago, and which still retained their ground; drugs introduced within the past century—a large collection; discarded remedies, drugs, and chemicals; new remedies, not officinal—about fifty. A very extensive and complete collection of surgical instruments and appliances occupied the centre of the hall. Nearly two hundred botanical plates from the botanical gardens, Cambridge, adorned the walls, and a noticeable feature of the exhibition was the botanical models, made in Paris, from the College of Pharmacy. A rare department of the display was the large collection of ancient medical works, illustrated, some of them over three hundred years old; also anatomical and surgical charts.

The one hundredth regular annual meeting took place at 11 A.M., with the President, DR. WILLIAMS, in the chair. Not very much business was done.

By vote of the society, DR. CALVIN S. MAY, late Superintendent of the Danvers Insane Asylum, was expelled, because of his failure to answer satisfactorily charges of unprofessional conduct while in charge of that institution.

It was reported that eighty-two fellows had been added to the society during the past year, and that thirty had died. On motion of DR. B. JOY JEFFREYS, the following resolution was adopted:

Whereas, A petition has been presented to Congress asking for the calling of an international commission to consider and agree upon standard methods of testing visual acuteness and color-blindness, and standard requirements of these necessary qualifications in the navies and merchant marines;

Voted, That the Massachusetts Medical Society heartily approves of the proposed international commission, and hereby directs the secretary of the society to transmit the vote to Congress when next assembled.

Dr. J. Collins Warren then delivered the annual address. He began with a sketch of the history of the society, and referred to the many beneficent results which had been secured by its agency: the introduction of vaccination, the establishment of the Massachusetts General Hospital, the abolishment of the coroners' system, etc. The speaker then referred to the subject of medical societies in general, and how they should be organized and managed, so as to accomplish the most good. He criticised the American Medical Association, and illustrated by it and certain State societies how comparatively inefficient medical organizations may be.

Dr. Warren then touched upon a number of other subjects which, he thought, properly deserve earnest attention from physicians and medical societies. These were the establishment of State boards of health, of which there are now twenty-nine; the regulation of the practice of medicine, and the subject of the medical education of women. The speaker urged a change in the laws relating to expert medical testimony, so that there might be an efficient method, and men selected who really represented the highest training of the profession. He referred to the subject of medical journalism. He thought that the days of annual and quarterly publications were passing away. Societies ought to arrange to publish their proceedings at frequent intervals, in order to make their work more valuable. Other suggestions were made as to the best way in which society work should be done.

The speaker closed with mention of the responsibility falling on the young members, and with hope for their future.

In the afternoon a grand banquet was served in Music Hall. A thousand plates were laid for the guests. Dr. J. C. White presided, with Governor Long on one side and President Williams on the other.

After the dinner, many toasts were given and speeches made. With some opening remarks, Dr. White introduced Dr. Williams, who spoke in response to a toast from Dr. Willard Parker: "The Massachusetts Medical Society: as years roll on may she ever unite with the wisdom and experience of age the vigor and efficiency of youth."

Dr. Williams was followed by Governor Long, President Eliot, and Judge Hoar.

The last speaker told of his early prejudice against the doctors, manifested during an attack of measles at four years of age, but said that his respect for them had steadily increased since. To quote from Scripture, "as certain of your poets have said:"

> "Little of all we value here
> Wakes on the morn of its hundredth year
> Without both feeling and looking queer.
> In fact, there's nothing that keeps its youth,
> So far as I know, but a tree and truth."

As the judge said this, he turned in acknowledgment to Dr. Holmes, who sat near him, and the hand-clapping was cordial in compliment to the professor. Then turning the quotation from "The One-Hoss Shay" to the society, Judge Hoar eulogized its youth, its strength, and its efficiency. Then he mentioned the growing freedom from personal and professional bickerings, the elevation of professional knowledge, the progress in discovery, "the substitution of Apollo for Mercury as their patron deity," and the abolition of the ancient pretence which was once the curse of the profession. Now the profession does not rely so much as once it did upon the art of seeming wise.

Dr. Holmes read a poem, which was warmly applauded. Its publication is withheld for the present.

Dr. Holmes was followed by Rev. Phillips Brooks, Dr. S. D. Gross, Rev. Dr. Ellis, and Professor Alexander Agassiz.

The dinner concluded the celebration, and the guests departed, all apparently having had a most enjoyable time.

MEDICAL SOCIETY OF NEW JERSEY.

One Hundred and Fifteenth Annual Meeting, held in Long Branch, May 24 and 25, 1881.

Tuesday, May 24th—First Day.

The society met in the parlor of the Ocean Hotel, at Long Branch, at eight o'clock P.M., and was called to order by the President, Dr. A. N. Dougherty, of Newark. Vice-Presidents Drs. L. W. Oakley, John W. Snowden, and S. Wickes, and the other officers, were in their respective seats.

Prayer was offered by the Rev. Mr. Young, of Long Branch.

The attendance of members was not as great as usual. Every district society in the State, however, excepting Salem and Sussex, was represented.

A cordial welcome was extended to the society by Dr. S. H. Hunt, President of the Monmouth County Medical Society.

The following corresponding delegates were formally presented to the society by the Corresponding Secretary: Dr. William Govan, of New York, Drs. W. H. Palmer, and W. I. Burge, of Rhode Island, Dr. N. S. Babbit, of Massachusetts, Drs. G. D. Nutt and C. K. Mills, of Pennsylvania, and each expressed cordial greetings. Drs. William B. Atkinson and S. Cohen, of Philadelphia, were present, and were invited to seats as corresponding members.

Annual Address by the President.

The President read the annual address, the subject of which was "Pleural Effusion, with Special Reference to that of Pyothorax." His address began with the recital of fourteen cases of pleural effusion which he had treated or been conversant with, and detailed all his personal knowledge of the subject, good and bad. His last case, one of pyothorax, was treated by the trocar and canula, and by the drainage-tube introduced through the latter, the drainage-tube being lined for one and one-half inch with a piece of silver catheter for resting between the ribs, and a plate of silver, with a tube and binding-screw, for the passage and securing of the drainage-tube. The history of the case, still in progress, went to show that this simple treatment was sufficient in, at least, some bad cases of empyema, and that it might be employed instead of the more dangerous method in vogue, viz., perincision and injection. The patient is getting well, wearing the tube without any inconvenience whatever, and never having had an injec-

tion used, or any antiseptic precaution taken. The President then went on to give the history of pleural effusions and their treatment, from the time of Hippocrates down to and including the rib resections of Prof. Estlander. He introduced histories of cases furnished by Drs. Bleyle, Harvey, Corwin, and Prof. Chew and others, and also tables of cases from the New York and Roosevelt Hospitals, concluding with a summarized recommendation of the best mode of treatment derived from his review.

On motion of Dr. Hunt, the following resolution was adopted:

Resolved, That, during our present meeting, the Standing Committee be directed to report upon the feasibility of lengthening the period of our annual meeting.

The President then announced the following committees:

Nominating Committee.—A. Clendine, R. H. Page, H. G. Taylor, John Ingram, J. D. Osborn, G. C. Laws, W. P. Watson, O. H. Sproul, A. R. Rogers, D. C. English, J. M. Disbrow, J. G. Ryerson, J. E. Herrick, W. B. Ribber, H. H. James, P. F. Broky, R. S. Disbrow. Each district society had a representative on the committee.

Committee on Unfinished Business.—W. A. Hopper, H. G. Taylor, J. W. Ward.

Committee on Treasurer's Accounts.—W. A. Clark, S. C. Thornton, R. W. Elmer.

The society then adjourned until Wednesday morning at nine o'clock.

Wednesday, May 25th—Second Day.

The society was called to order by the President at 9.30 o'clock.

On motion of Dr. S. M. Hunt, the following resolution was adopted:

Resolved, That a committee of five be formed, to be known as the Business Committee, who shall select subjects to be presented at each annual meeting, and the person and committee to present them, and to whom shall be referred all voluntary communications offered, and said committee shall direct the hour and order of each paper, and the discussion thereupon.

report of the standing committee.

The medical history of the year has been interesting, being the first year of the enforcement of the new law for regulating the practice of medicine and surgery, and the establishment of the local boards of health throughout the townships—these laws being an evidence of the existence of a public opinion in favor of educated physicians, and also in favor of a more careful study of the prevention of disease.

district society reports.

The various reporters record a greater prevalence of disease. Malarial fevers are more numerous and severe, more obstinate to treatment, and with greater tendency to return. More typhoid and congestive complications are observed.

Many report numerous cases of puerperal fever, often attributed to malaria. Scarlatina, measles, diphtheria, and pertussis are noted as more prevalent than usual, and during the spring an almost universal epidemic of rötheln has been noted.

Small-pox is reported from three counties: *Camden*, 688 cases, 164 deaths; *Hudson*, 400 cases, mortality 33 per cent.; *Essex*, a "few" cases, two deaths. The usual diseases of the seasons seemed ordinarily prevalent, and the year has, as a whole, been more sickly than the preceding one.

cause of fevers.

The committee sent circulars, asking the opinion of the profession on this point. The answers were interesting, but exhibited a difference of opinion, and a lack of accurate and well-defined notions on the subject, that prevent the forming of any conclusions from them. The committee present the following as suggested to them by the answers:

The theory of marsh-miasm, which includes germ and spore theory, is not vindicated by the experience of residents in most of the seaboard counties of our State. No malarious diseases seem to be indigenous to the salt-meadows, cranberry-bogs, shore springs and cedar-swamps which cover thousands of acres of New Jersey; indeed, these regions are noted for their healthfulness. However, in elevated regions, where the streams are pure and free, where there is no marsh or accumulated organic matter undergoing decay, these malarial fevers prevail.

A study of the geography of malaria will suggest an inquiry into the thermal and meteorological conditions for an explanation of at least some of the phenomena.

We have to guard our patients against changes of temperature, and against the chill humidity of the night, even though we have a specific—quinine.

new remedies.

Carbolic acid is suggested by Dr. Fisler, of Gloucester, as useful in typhoid fever. The doctor has found its use beneficial.

The extract of quebracho in miasmatic conditions is recommended by Dr. Moolag, of Union.

The sulphide of calcium has been employed by Dr. Simpson, of Bergen, in the following case: a typhoid fever patient presented a swelling in the neck which promised suppuration; the drug was administered in one-fourth grain doses, with result of reducing the swelling and removing the constitutional symptoms depending on it.

interesting cases.

Dr. Thornton, of Burlington, reported two cases, one a case of stenosis of the fauces following hereditary syphilitic ulceration. The obstruction became so great as to indicate œsophagotomy, but the patient did not survive the operation. The other was a case of cancer with branny infiltration of the skin, involving the whole of the anterior surface of the thorax.

Dr. Marcy, of Gloucester, reported an interesting case of double uterus with twin pregnancy. One child, a vertex-presentation, was delivered naturally; the other, also a vertex, was delivered by podalic version.

Dr. Buckingham, of Gloucester, communicated the case of a boy whose penis was imbedded in the scrotum. The doctor proposed to liberate the organ.

Dr. Herold, of Essex, reported a case of double harelip with protruding intermaxillary bones and cleft palate (with photographs).

The operation, by Dr. Pierson, consisted in paring the edges of the clefts in the lip, and pressing the intermaxillary into the fissure between the maxilla, first notching the vomer to facilitate this movement. It was then secured in position by a suture passing through the maxilla. The soft parts were then brought together, and secured by pins and sutures. The result was a perfect lip and a continuous alveolar arch.

Dr. Harvey, of Essex, reported a case of foreign body in the right bronchus, where immediate laryngotomy was made, without result. At the end of three weeks a nutshell was discharged during a fit of coughing, together with a quantity of pus. The situation of the foreign body was determined by the presence of a peculiar musical note heard during respiration. A pneumonia followed the expulsion of the shell, from which the patient recovered with a sound lung.

THE NEW MEDICAL LAW.

Several district societies have appointed committees of registration, whose function is to insure full registration and to publish the record in the daily press. In Warren County the law has had the effect of freeing the county from the irregulars that were there. In Patterson they published a list of those practising without diplomas. One Duclos was arrested and the case sent to the Court of Sessions. Judge Woodruff decided that the man could not be held, as section 2 of the law distinctly states that the fine must be recovered in an action for debt, and that it was a civil and not a criminal charge.

INSANITY.

The committee called the attention of the profession of the State to the condition of the insane asylums. While the State has furnished elaborately built and expensively managed asylums, it has made no provision for providing apparatus for clinical study or pathological research. Now, this is to be regretted, as the asylums should be centres whence should radiate instruction regarding the nature and treatment for the education of the whole profession, who have not the opportunities there furnished.

Through the instrumentality of the committee, instruments of precision have been furnished the two State asylums, and it is to be hoped that the respective staffs of those institutions will in their future reports supply valuable information in their specialty. It is further recommended that the district societies appoint committees on insanity to have supervision of the county asylums and almshouses where insane patients are treated.

Necrology.—Drs. T. J. Thomassen, of Monmouth; C. R. Terhune, of Bergen; L. M. Crane, J. A. Cross, and I. A. Nichols, of Essex; Louis Braun, of Union; J. F. Schenck, of Somerset; C. O. Gorden, of Ocean; J. A. McCullough, of Camden; Jos. Fithian, of Gloucester.

The following essays were read by title: "Menstrual Headache," by Dr. H. A. Hopper; "Carbolic Acid in Typhoid Fever," by Dr. S. L. Fisler; "Acute Peritonitis," by Dr. J. C. Johnson; "Two Cases of Perityphlitis," by Dr. Stephen Pierson; "Etiology, Symptomatology, and Treatment of Pulmonary Phthisis," by Dr. P. C. Baker; "Camden Sewers," by Dr. J. H. Wroth; "History, Origin, etc., of the Epidemic of Typhus Fever in the Camden Almshouse," by the Staff; "Acute Pyæmia following Labor," by Dr. R. L. Burrage.

The Treasurer reported as follows:

To the Medical Society of New Jersey:

The Treasurer begs leave to report the receipts since last report to have been as follows:

Essex, $91; Mercer, $28; Hunterdon, $14; Warren, $16; Burlington, $27; Morris, $32; Monmouth, $28; Hudson, $34; Cumberland, $17; Bergen, $18; Camden, $38; Union, $40; Passaic, $36; Gloucester, $17; Middlesex, $21; Somerset, $14; Sussex, $28; Ocean, $5. Total, $503.

The Treasurer would recommend the assessment for next year be $1.50 per capita.

W. W. L. Phillip, *Treasurer.*

The committee appointed to examine the Treasurer's accounts report them correct, and endorse his recommendation.

W. A. Clark,
R. W. Elmer,
S. C. Thornton, } *Committee.*

The Corresponding Secretary reported as follows:

To the Medical Society of New Jersey:

The Corresponding Secretary would respectfully report that, in accordance with the usual custom, he has issued the Transactions of the Society to the honorary members, to medical journals, and to other State societies. Exchanges have been effected with nearly all the other State medical societies which have published the proceedings for 1880. Communications have also been received from Frederick Eklund, M.D., of Stockholm, Medical Director of the Royal Battalion of Sweden, which are herewith presented.

Respectfully submitted,

W. Elmer, *Cor. Sec.*

Delegates to corresponding societies read their reports, which were received and referred to Committee on Publication: Dr. L. W. Oakley and Dr. James S. Green, to American Medical Association; Dr. E. P. Townsend, to Pennsylvania Medical Association; Dr. D. C. English, to Massachusetts Medical Association.

The following persons were appointed by the President on the Business Committee: H. R. Baldwin, E. J. Marsh, S. C. Thornton, E. M. Hunt, and J. L. Bodin.

The degree of Doctor of Medicine was conferred upon Dr. Charles Vogler, of Newark, he having complied with the requirements of the by-laws.

Dr. S. Wicks, of Orange, read a paper, his subject being "A Twenty-five Years' Review."

EYE-AFFECTIONS FROM MALARIAL POISONING.

Dr. Kipp, of Newark, read a paper on "Eye-Affections from Malarial Poisoning." The eye-diseases may be divided into two groups—first, those which accompany the paroxysm of fever; and secondly, those which make their appearance shortly after an attack. In the great majority of cases of malarial fever the eye shows no signs of disturbance during the paroxysm, but in some there is hyperæmia of the conjunctiva, circumcorneal injection, lachrymation, photophobia, and blepharospasm, without impairment of vision. In others there is hyperæmia of the iris, and in a few marked iritis. Temporary amaurosis has been observed as well in cases of ordinary severity as in cases complicated with aphasia, paralysis of the extremities, delirium, and coma. The amaurosis usually passes away during the sweating stage. Lateral hemianopsia occurred in one case. Intermittent amaurosis has also been observed in cases of latent intermittent fever. The duration of the attack varies from a quarter of an hour to ten hours or more. The amaurosis may resemble hemeralopia if the attack occurs at night. Quinine prevented the recurrence of the amaurosis. In most of these cases the ophthalmoscopic examination failed to reveal any changes in the eye.

The second group includes affections of nearly all the different structures of the eye. The disease most frequently observed is a superficial ulceration

of the cornea, usually of a linear form. This ulceration, which was first described by the doctor in a paper read before the American Ophthalmological Society in 1880, is commonly developed shortly after an attack of the fever, often simultaneously with the appearance of vesicles about the mouth and nose. Only one eye is affected. The ulceration has a marked tendency to increase in length, but rarely much in depth. In some cases several ulcers are developed simultaneously in different parts of the cornea, and may eventually destroy the entire epithelial layer. A hypopion is but rarely seen, and spontaneous perforation was never observed by the doctor. The growth of the ulcer is always accompanied by great pain in and about the eye. The process of repair was always extremely slow, two to four months being generally required for its completion. Atropine, warm fomentation, and the pressure-bandage were used locally, and quinine, iron, and Fowler's solution given internally. Diseases of the uveal tract are of rare occurrence. A few cases of serous iritis, a case of purulent choroiditis, and a few cases of opacities of the vitreous, are on record. Hemorrhage into the vitreous has also been observed. Affections of the optic nerve and retina are also sometimes seen in cases of malarial fever of long standing. Of these, hemorrhages into the retina are the most frequent. The author has seen a number of such cases, in which there was neither albuminuria or diabetes. The hemorrhages were usually small, and mostly situated in the periphery of the retina. In the cases which he could keep under observation for several months the hemorrhages disappeared entirely. The patients were anæmic, and had enlarged spleens.

Optic neuritis after intermittent fever has been observed by a number of authors. Macnamara has reported an interesting case of a girl who, after suffering from ague for a long time, became palsied in all four limbs, and had marked œdema of the optic papillæ. Under the use of iodide of potassium, with strychnine and arsenic, the girl made a perfect recovery in a short time. Atrophy of the optic nerve has also been observed to follow malarial fever of long duration. Partial or total loss of vision of one or both eyes without visible change in the eye, and therefore probably dependent on disturbance of the nervous centres, has occurred as a sequela of latent as well as manifest intermittent fever. In the amblyopia following the latent forms of fever, typical periodic exacerbations of the dulness of sight, together with symptoms of irritation of the fifth pair, are of frequent occurrence, and in the amaurosis after this form of fever the typical character of the disease manifests itself by mild paroxysms of fever, periodic headaches, and neuralgias with transient irritation of the eye. In cases of this kind, when quinine failed, arsenic has been known to cure. The amblyopia which is developed in patients who have suffered for a long period from pronounced intermittent fever, is undoubtedly often due to albuminuric neuroretinitis; but the doctor has also seen cases in which there were no signs whatever of kidney disease. The ophthalmoscopic examination failed to reveal manifest disease of the eye. The visual field was intact, and the impairment of the color-lens was only proportionate to the amblyopia. In these cases treatment was without avail. In these cases also the amblyopia is doubtless of central origin. Cases of spasm of the accommodation during latent intermittent fever have been reported, but it is doubtful that there was a real spasm in these cases.

LACERATION OF THE CERVIX UTERI.

Dr. G. H. Balleray, of Paterson, read an essay on "Laceration of the Cervix Uteri." He referred to the frequency of the lesion and its importance as a cause of uterine disease in those who have borne children. He also referred to the frequency with which the lesion is misappreciated by general practitioners in this country, and also by specialists in Great Britain, Ireland, and France. In proof of the correctness of the latter statement, he said he had seen in one day, in the "out-patient" department of a large special hospital for women, in London, *thirteen* cases of laceration of the cervix, not one of which was diagnosed as such. In reference to the cause of utero-cervical laceration, Dr. Balleray says that, in a large proportion of the cases he has met with, the labor in which the laceration occurred was very rapid, in many delivery being accomplished before the arrival of the accoucheur. Dr. Balleray does not agree with Dr. Goodell, of Philadelphia, who thinks that "meddlesome midwifery" plays an important part in the production of this accident. He thinks that the cervix, like the perineum, will sometimes rupture, despite all preventive measures. He does not think that the forceps, when properly applied in appropriate cases, materially increases the risk of the occurrence of laceration of the cervix. The chief point of interest in the essay is in reference to the relation existing between laceration of the cervix and cancer of that portion of the uterus. Out of thirty-seven cases of cancer of the uterus examined by the author with special reference to this point, twenty-one were found to have previously suffered from laceration of the cervix. In many of the remaining cases the disease was so far advanced that it was impossible to ascertain whether or not any laceration existed. In the operation of hysterotrachelorrhaphy Dr. Balleray recommends the use of silver wire or silk-wove gut sutures. He is opposed to the use of silk, because it has proved unsatisfactory in his hands. He does not endorse the recommendations of those who advocate sewing up a woman's cervix uteri in the physician's office or at the dispensary, and then sending her home to "take care of herself" until she returns to have the stitches taken out.

A NEW DISTRICT SOCIETY CREATED.

An application in due form being presented from the physicians in Atlantic County, for the establishment of a district society in that county, it was voted that a commission be issued.

1 P.M.—Intermission for lunch.

The society reassembled at 2 o'clock.

OFFICERS ELECTED.

The Nominating Committee reported as follows:

For President—L. W. Oakley.

For First Vice-President—John W. Snowden.

For Second Vice-President—S. Wickes.

For Third Vice-President—P. C. Barker.

For Corresponding Secretary—William Elmer, Jr.

For Recording Secretary—William Pierson, Jr.

For Treasurer—W. W. L. Phillips.

Standing Committee—Joseph Parrish, C. J. Kipp, and S. C. Clark.

Dr. Parrish subsequently declined, and Dr. E. J. Marsh was added to the committee.

Delegates to American Medical Association—Drs. Hopper, Parrish, Ridge, Elmer, A. Coles, Halsey, Gordon, Ward, D. C. English, R. R. Conover, E. P.

Cooper, D. L. Disbrow, Marsh, Field, and A. J. Coles.

Delegates to International Congress—Drs. A. W. Rogers, E. M. Hunt, H. A. Hopper, John Wolverton, E. Holden.

Delegates to Medical Society of Massachusetts—Drs. G. H. Balleray, J. L. Bodine, C. J. Kipp.

Delegate to Rhode Island Medical Society—Dr. S. Disbrow.

Delegates to Pennsylvania Medical Society—Drs. R. H. Page, J. D. Heritage, J. W. Snowden.

Delegates to New York Medical Society—Drs. T. R. Varick, D. St. John.

Delegates to Connecticut Medical Society—Drs. J. C. Herrick, and J. B. Wainwright.

The report was adopted, and the ticket recommended duly elected.

Asbury Park was agreed upon as the place for the next annual meeting of this society.

It was voted that the assessment for the next year should be two dollars per capita.

Dr. W. J. Chandler, of South Orange, was appointed essayist for the next meeting.

It was voted that the hour of meeting shall be at four o'clock in the afternoon, and that the secretary be instructed to prepare the programme in accordance with the plan proposed by the Business Committee.

On motion of Dr. H. R. Baldwin it was voted:

Whereas, The position of honorary membership to the New Jersey State Medical Society has for the past century been granted with extreme caution, and

Whereas, Of late years a reprehensible laxity has grown up in the proposal of names (though highly honorable in themselves) scarcely up to the requisite standard. Therefore, be it

Resolved, That a standing committee of three Fellows be appointed, to which all nominations for honorary membership shall be referred, and who shall report at the next annual meeting. That the committee be appointed by the president, and that it shall continue in office for three years.

Drs. H. R. Baldwin, S. H. Pennington, and E. M. Hunt, were appointed on the committee.

The reports from the Committee on Honorary Membership received at this meeting were referred to the committee.

It was voted that a committee be appointed to report upon the comparative values of humanized virus and bovine virus, and the best security of their purity; and that the reporter of each district society shall transmit to the chairman of the committee the facts and opinions of the district society.

Dr. S. Wickes was appointed a committee to report upon the conditions of the hospitals, infirmaries, dispensaries, and insane institutions in this State.

Dr. Newton read a short paper on the "Adulteration of Milk."

A committee on hygiene, and the limitation and prevention of epidemics, was appointed.

The society adjourned.

Medical Legislation in New Brunswick.—The Legislature of New Brunswick has recently enacted a law regulating medical practice. This law obliges every person practising medicine to register. In order to register as a qualified practitioner, there must be evidence that the student has attended three full courses of medical lectures. Such laws as these, if enforced, will greatly tend to help along the cause of educational reform.

Correspondence.

CONCERNING VENESECTION IN PNEUMONIA.

To the Editor of The Medical Record.

Sir: I am induced to send you this note, by reading your report of the Section in Practice of Medicine of the American Medical Association.

A Connecticut doctor is rather severely handled because he asserts that catarrhal pneumonia is the only variety of this disease "he had met with in Connecticut." Evidently this wise M.D. had heard of "catarrhal pneumonia" somewhere, and adopted the term because of its scientific sound, or else on account of some reason satisfactory to himself, when, in reality, as appeared from his own paper, he had ordinary croupous pneumonia in mind. That such a man could be listened to patiently, augured well for the good nature of his auditors, and, in the light of his learning, appeared all the more exquisitely delicious the dreadful sarcasm with which he visited them "in closing the discussion." That they should presume to call *croupous pneumonia* by its name, was something he could not stand, in spite of his assertion, that "he accepted their diagnosis of his cases."

But enough of Dr. W.

What I cannot understand, is why men such as Drs. S. D. Gross and William Pepper can sit by, one of them taking part in the discussion, and not even mention the true office of the lancet in *pneumonia*. If anything is "played out," it surely is the idea of attacking an inflammation by bloodletting from the vein. To relieve pain in pleurisy, leeches are good, and they and cups have manifold uses; but it is disheartening to have resurrected what we of this generation believe to be settled, as *phlebotomy*, for inflammations, ought to be among the buried ideas and practices.

For many years the Germans have advocated a use for bloodletting in pneumonia. Niemeyer gives a masterly discussion of the use of the remedy, and his explanation no one has improved. It happens sometimes in acute pneumonia, especially when both lungs are attacked, that from the excess of arterial fluxion, and consequent collateral œdema as the result of increased tension within the capillaries, the portion of uninvaded lung becomes distended with exudation of bloody serum. This accident, it is conceded, may come on with startling rapidity; and the wild struggles of the patient for breath, within a few minutes, may give place to the dusky-blue countenance and general apathy which mark the advent of acute carbonic acid poisoning. A patient in this plight dies as rapidly and as surely as the criminal who is hanged by the neck. There is one remedy for this condition, and upon the recognition for the necessity of its employment, and its immediate use, depends the one chance for the sick man. *Bleeding from the arm* should be practised, and no more unnecessary time spent in preparation than would be taken in making ready to put a ligature on a spouting artery. In such a case, as Niemeyer says, we bleed—not to control the inflammation, but in spite of it. We recognize well the tendency of a convalescent pneumonic patient to all the evils of insufficient and poor blood. We deprive him of that for which, in the event of his survival, he will have so much need, simply because the greatness of

his immediate peril outweighs all future considerations.

As a contrast to this not very brilliant exhibit of the "Section in Practice," the specialists show to great advantage. I wish to call attention to Dr. Barnett's remark about the peculiar noise in the following sudden-closing of the *orbicularis oris* of the same side. Every smoker has noticed this phenomenon, but allusion to it has escaped my notice. If one happens to receive a whiff of smoke in his eye, the spasmodic closure of the lid produces this peculiar sound invariably.

Respectfully yours, THOMAS K. CRUSE.

WAPPINGER'S FALLS, DUTCHESS CO., N. Y.

VOLKMAN'S METHOD OF DRESSING.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR—The beautiful new surgical clinic at Halle, under the direction of Prof. Richard Volkman, is so simple in its arrangement, and still so perfect, that a few words concerning it, and the treatment of wounds pursued there, may be of interest.

Recently the medical department of the University of Halle has been removed from the centre of the town to a hill overlooking it, and some six most beautiful buildings have been completed, which number is to be increased to perhaps four more. Of these the surgical clinic is built upon the pavilion plan. There is a large central building, two stories high, containing the offices, operating amphitheatre, out-patient department, and rooms for the house-surgeons. Extending from the central building on either side is a long corridor, and from this are doors opening into the different pavilions or barracks. The barracks, which are built of brick, are one story high and accommodate perhaps thirty patients, the beds being arranged on either side of the long room between the windows. The most pleasing feature of the whole hospital, however, is the precaution taken against possible infection.

The floors of the wards are made of the "Terazzo" pavement. This is composed of a conglomerate of small pieces of various colored stones, pounded fast into a cement and then polished flat by drawing immense stones back and forth over it. When completed, it shines like polished granite, and is perfectly impervious to water, so that no impurities can soak into it. The corridors are paved with common cement, and the amphitheatre has a tesselated marble floor. The floor of the amphitheatre slopes very slightly toward a centre, where there is an opening to receive all water, blood, etc. This especially adapts the floor to Prof. Volkman's method of operating, which certainly yields excellent results. The question as to whether it is better than other methods or not need not here be discussed, but it certainly has the advantage of simplicity, and can be used under circumstances where a carbolic spray cannot be obtained. In operating, Prof. Volkman does not use a spray. Before beginning to operate, the part is most thoroughly scrubbed with soap suds and a nail brush, until no dirt can possibly remain, and then the part is usually shaved, without regard to what part it is. The sponges used in the amphitheatre are kept in seven earthen pails, marked for each day of the week. Thus no sponge is used in operating unless it has soaked at least one week in carbolic acid. The solution in these pails is ten per cent. Before operating, the sponges are placed in a three per cent. solution. The instruments to be used are placed in a three per cent. solution. From time to time the wound is flooded from a small ordinary watering-pot such as is used for watering flowers, without the sprinkler, however, and the pot is held high above the wound so that the stream may fall upon the wound with considerable force. The carbolic solution thus used is three per cent. The catgut and silk used for ligatures and sutures are kept on spools which lie continually in carbolic oil, and the ligatures are cut off and handed to the operator only when required. At the completion of the operation, after the wound has been thoroughly flooded and closed, a hand-spray is used during the application of the dressing. The wound is dressed with first a piece of prepared oil-silk protective, only large enough to cover the wound. Above this is placed a wad of very soft carbolized gauze, which is not folded, but is shaken apart, and made into a soft mass. An abundance of this is used, and then it is covered by an ample piece of gutta-percha protective, reaching far beyond the limits of the wound, and sufficient to render difficult the communication of any discharge with the air. This is held in place with a carbolized gauze bandage, which, though not so handsome as one of cotton cloth, adapts itself much better to the part, and is more secure. All interstices are caretully filled with wads of salicylic cotton, the elasticity of which tends to render the dressing more secure, and when complete the dressing, though seemingly sometimes redundant, still fully realizes the object for which it was applied, viz.: the occlusion of the wound. That this method of operation is very successful is fully attested by the results shown by Prof. Volkman's wards. When the wounds are to be opened and dressed, a simple hand-spray is used, and the wound is again thoroughly rinsed. For this purpose a can filled with a three per cent. solution of carbolic acid is used. In the side of the can, just at its lower border, is an opening to which a rubber tube is attached. This tube has a small nozzle, which can be inserted if necessary into sinuses. This is held above the head by an assistant, and the water thus runs into the wound with considerable force, or by lowering the can, with as little force as may be desired. Sponges are used only in the primary operations, and never in dressing wounds, but pledgets of absorbent cotton, which after being used are thrown away.

The free use of carbolic acid in the amphitheatre often floods the floor, but the opening in the centre serves to carry most of it away: still the feet of the operator and assistants are often wet. Although so much carbolic solution comes in contact with the wound, I was told that cases of carbolic poisoning were very rare. Carbolic poisoning is said to be less frequent when the pure acid is used, instead of the impure, as frequently is the case. Bandages that are very little soiled are washed, disinfected, and again used in the policlinic, but not in the operating amphitheatre; other dressings are burned.

The principle upon which fractures are treated is the same as in the United States. Buck's extension is much used. The leg to which it is applied is commonly laid upon a posterior metallic splint with a perpendicular foot-piece. A transverse piece of iron is fastened to the heel of the foot-piece to preserve an upright position, and this is placed upon two pieces of wood, parallel to the leg, so that the friction to be overcome by the pulley is less than would be the case if the splint with its cross-piece rested flat in the bed. In cases of resection of the elbow-joint,

after the wound has nearly or quite healed, flat strips of iron with a joint in their centre corresponding in position to the elbow-joint, are placed on either side of the arm, and are held in place by including the portions above and below the joint in a plaster bandage; thus only the movements of flexion and extension are possible, and a more secure joint seems to result than without any apparatus of this sort. Very few patients are received into the hospital who are not able to pay something, unless their cases are very urgent or very interesting. Very poor patients must pay twenty cents daily, and others thirty-seven and one-fourth cents, and they must pay extra for Lister dressings. If tramps are admitted, the city from which they come is charged for their support. Fortunately there does not seem to be the large class, such as we have, who pay nothing for hospital treatment, but most of the patients belong to some mutual society that assists them during sickness.

DUDLEY P. ALLEN, M.D.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from June 5, 1881, to June 11, 1881.

BAILY, E. I., Lieut.-Colonel and Surgeon. Having reported to Division Headquarters, in compliance with S. O. 112, Par. 1, C. S., A. G. O., is assigned to duty as Attending Surgeon in San Francisco, relieving Surgeon C. C. Keeney. G. O. 10, Division of the Pacific and Department of California, May 31, 1881.

CORSON, J. K., Capt. and Asst. Surgeon. Granted leave of absence for one month, with permission to apply for an extension of two months. S. O. 61, Department of Arizona, May 31, 1881.

HEIZMANN, C. L., Capt. and Asst. Surgeon. The telegraphic instructions of 22d inst., to commanding officer, Fort Townsend, W. T., directing Asst. Surgeon Heizmann to report at these headquarters, confirmed. S. O. 71, Department of the Columbia, May 23, 1881.

AINSWORTH, F. C, Capt. and Asst. Surgeon. Relieved from temporary duty at Post of San Antonio, Texas, and assigned to duty at Fort Clark, Texas. S. O. 76, Department of Texas, May 31, 1881.

SHUFELDT, R. W., 1st Lieut. and Asst. Surgeon. Assigned to temporary duty in the Surgeon-General's office. S. O. 129, A. G. O., June 7, 1881.

PERLEY, H. O., 1st Lieut. and Asst. Surgeon. Relieved from duty in Department of Dakota, and to comply with S. O. 104, C. S., A. G. O. S. O. 97, Department of Dakota, June 6, 1881.

POWELL, J. L., 1st Lieut and Asst. Surgeon. Relieved from duty with Company "A," 22d Infantry, on arrival at Fort Concho, then to proceed to Fort Stockton, Texas, and report to post commander for duty as Post Surgeon. S. O. 76, C. S., Department of Texas.

KENHAM, R. B., 1st Lieut. and Asst. Surgeon. Relieved from duty at Fort A. Lincoln, D. T., and assigned to duty at Fort Assinniboine, Mont. T. S. O. 97, Department of Dakota, June 6, 1881.

QUININE IN BOLIVIA.—The artificial cultivation of quinine has been undertaken in Bolivia, and, it is said, with great success.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending June 11, 1881.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
June 4, 1881.	33	8	97	9	143	101	51	0
June 11, 1881.	37	6	114	15	109	116	50	0

ENFORCEMENT OF THE MEDICAL LAW.—Abraham E. Cox plead guilty on Monday, 13th inst. Gustav Fernean found guilty of ignorance and of malpractice, thereby causing the death of an infant during delivery. His trial has been set down for an early day.

On June 1st, one Louis Widman was arrested for practising without legal right so to do. He had registered at the Board of Health as having a diploma from Breslau, of date October 12, 1878; at the County Clerk's office, September 30, 1880, on a *matriculation ticket* of the Eclectic Medical College of New York; and on May 14, 1881, say seven months later, with a *diploma* from the Eclectic Medical College, City of New York. Upon examination Widman could not speak English, and was examined in German (by the way, Fernean played that same trick at the coroner's inquest), and his Breslau *diploma* was found "nil," being represented by some tickets of attendance on lectures at the University of Breslau. The matriculation ticket *he had left at home*. His Eclectic diploma seemed to be genuine. Comment on this case is not necessary, but it is well to call attention to the speedy manner in which Mr. Widman was graduated before he had time even to learn English, and the evasion of the law touching the length of time of study.

COLLEGE OF MEDICINE, SYRACUSE UNIVERSITY, N. Y. —The Commencement exercises of this institution were held on the evening of June 9, 1881, in Wieting's Opera House, which was packed to its utmost capacity. After the offering of prayer by Dr. McCarty, the censors made their report, and then followed the conferring of degrees upon twenty graduates, by Chancellor Sims. Mr. John L. Heffron, of Syracuse, won the prizes for the best examinations in surgery and medicine. The Commencement address was delivered by Dr. George F. Shrady, of New York. In the course of his remarks he took occasion to commend the system of education carried on in the institution, as shown in the results of the preliminary examination, in the utility of the graded plan of instruction, and in the advantages of independent examinations for the doctorate degree. He also alluded to the difficulties which naturally surround the young practitioner, and the various means that should be taken to guarantee success in practice.

The Alumni of the College enjoyed the annual banquet immediately after the Commencement exercises. Dr. J. V. Kendall, of Baldwinsville, acted as toast-master. The following were the toasts and

their respective respondents: The University, by Chancellor Sims; The College of Medicine of Syracuse, etc., by Prof., Hyde; The Class of '81, by John L. Heffron; Female Physicians, by Mrs. Dr. Stanton; The Ladies, by Dr. Pallen; The Orator of the Evening, by Dr. G. F. Shrady; The Sawbones of the College, by Prof. R. W. Pease; The Clergy, by Dr. I. E. Clapp; The Press, by J. H. Durston, of the *Syracuse Standard;* The Dean of the College of Fine Arts, by Prof. G. F. Comfort.

The Chicago Faster, Griscom, was reported, at date of writing, to have gone sixteen days without food. His fast is exciting a good deal of attention, and daily telegrams regarding his condition are sent over the country. He is said to be under the surveillance of regular physicians, and to be also watched by reporters on one of the daily papers. Visitors were at first allowed, but are now generally excluded. At the beginning of the fast he weighed one hundred and ninety-seven and one-fourth pounds. By the thirteenth day he had lost nineteen and one-half pounds. By the sixteenth day he had lost twenty-five and one-fourth pounds. He takes about two pints of water daily, and has done so from the first. It is stated that careful examinations of his excreta are being made. Reports regarding the condition of his heart and blood show nothing notable. The mind has not yet been affected. The temperature remains normal.

The Alumni Association of Long Island College Hospital had its first annual banquet at the Iron Pier, Coney Island, on June 13, 1881. Under the able management of Drs. Atkinson, Robert Newman, and Brush, as Committee of Arrangements, the affair was a success and the attendance large. Prof. Alexander J. C. Skene, as President of the Association, introduced the intellectual exercises of the evening by a happy speech, after which he proposed impromptu toasts. The following were the respondents: Demas Barnes, John Foord, Dr. Paul F. Mundé, Charles R. Miller, Dr. Alexander Hutchings, G. W. Meade, Prof. S. G. Armor, F. D. Reid, Benjamin Estes, and Dr. Henry J. Menninger.

The members of the Class of '81, were present in a body as guests of the association. Among numerous other guests were Dr. J. T. Conkling, Dr. J. C. Reeve, of Dayton, O.; Dr. Paul F. Mundé, Dr. Alexander Hutchings, Dr. George F. Shrady, G. W. Meade, John Foord, Charles R. Miller, John F. Praeger, G. T. Duckwitz, Reuben Ropes, Demas Barnes, Henry Polhemus, G. W. Osborne, Dr. W. H. Dudley, President of the Council of the College; Dr. C. L. Mitchell, Dr. Geo. C. Hopkins, Dr. Joel W. Hyde, Dr. John L. Zabriskie, Dr. William Wallace, Dr. E. A. Lewis, Dr. J. C. Snively, Dr. J. H. Hunt, Dr. A. S. Clark, J. H. H. Burge, Vice-President Henry J. Menninger, of the American College of Pharmacy; Dr. Arthur Matthewson, Dr. L. C. Gray, and Drs. Sherwell and Maxwell.

The election of officers for the coming year resulted as follows: *President*—Dr. A. W. Sheppard; *Vice-President*—Dr. James Watt; *Corresponding Secretary*—Dr. F. E. West; *Recording Secretary*—Dr. C. E. Delavergne; *Treasurer*—Dr. James J. Terhune; *Councillors*—Drs. Jarvis S. Wright, John Harrigan, P. H. Kreutzmar, W. G. Russell, Robert Newman, and George R. Westbrook.

This association was formed only a year ago, by a self-constituted committee, consisting of Drs. Jarvis S. Wight, John A. McCorkle, and Francis H. Stuart, of Brooklyn, and held its first annual business meeting previous to the banquet. At the latter one hundred and fifty active members were present.

Death of Dr. Joseph Skoda.—A cablegram from Vienna announces the death of the eminent German physician, Dr. Joseph Skoda, in the seventy-sixth year of his age. Dr. Skoda was born at Pilsen, in Bohemia, December 10, 1805, and began to study the science of medicine in the University of Vienna, in 1825. He went through the entire course of the university, and began practice in Bohemia, in 1831. When only twenty-eight years of age, he was appointed physician to the General Hospital, at Vienna. There he devoted himself ardently to the study of pathological anatomy and the newly discovered methods of auscultation. In 1840 he was placed in charge of the consumptive division of the hospital at Vienna; the following year he was made chief physician of the hospital, and in 1846 he was advanced to the position of Clinical Professor. In 1848 he was elected to a membership in the Academy of Sciences, at Vienna.

As a physician his fame was world-wide, and he maintained his position in the hospital at Vienna until the day of his death. He was very successful in his treatment of consumption, which he made a specialty from the time he became an enthusiastic believer in the efficacy of the stethoscope as a detector of disease.

A New Ligature.—Mr. Croft recently tied the external iliac artery of a patient at St. Thomas's Hospital with a carbolized ligature made of kangaroo tendon. The patient had an ilio-femoral aneurism. The ligature in this case acted admirably; pulsations ceased, the wound soon healed, and three weeks after the operation there was every prospect of complete recovery. The ligature is very easily prepared, and does not, it is said, alter with keeping. It is tough, it is flexible, and it is flat.

Certain Performances in Thought-Reading, so-called, have recently been going on in London, and, from the high scientific patronage given them, have excited much interest and comment. The performer is an American, Mr. Bishop, who has done a good deal in the same line in this country. A special exhibition was given not long ago under the auspices of Dr. Alfred Carpenter, Prof. Huxley, and others. A large number of scientific men were present, including Dr. Lyon Playfair, Sir John Lubbock, Drs. Andrew Clark, Tuke, Burdon-Sanderson, Prof. Ray Lankester, Mr. Ernest Hart, and others.

The first experiment was upon Mr. Moncure Conway. Mr. Bishop, having left the room, and having been blindfolded, Mr. Conway concealed a Turkish-bath ticket behind a box on a side-table. The performer being then led into the room, took Mr. Conway's hand, pressed it upon his own (the performer's) forehead, and after swaying to and fro for a moment, went directly to where the ticket lay. Mr. Conway had, meanwhile, been directed to concentrate his mind firmly on the ticket.

A second trick was that of spelling on an alphabet a word thought of by the person whose hand the performer is holding. Mr. Bishop did not succeed in this experiment with everybody.

A third trick, and one that made the most impression, was one of which Prof. Ray Lankester was the subject. The professor was suffering from a severe pain in one of his bicuspid teeth. Mr. Bishop, after groping over his body, fixed upon the spot where the pain lay. In another similar experiment upon

Dr. Pye-Smith, the operator was not successful. Mr. Bishop created some wonderment by his telling Mr. Conway just when his eyes were closed and when opened.

American readers will recognize all these performances as having been made familiar to audiences in this country not long ago, by Brown and others. It was then quite well settled that the explanation lay in the fact that the persons experimented on made unconscious muscular movements which gave the clue to the former. It is really a case of muscle-reading, and not of mind-reading. We are not aware who first suggested this physiological explanation of the phenomena. It is one that would probably occur to any person, scientifically trained, who had studied the matter. In the *Popular Science Monthly*, in the year 1877, there appeared a very full account of the whole subject, with a full explanation of it, by Dr. George M. Beard, who investigated it thoroughly at that time. A comparison of this article with what has been done and said across the Atlantic recently, shows that the eminent scientific gentlemen there are only repeating what has been seen and fully studied here.

We believe that Mr. Bishop, though a very clever young man, and in no sense a charlatan, does not accept the unconscious-muscular-action theory himself. He thinks that he possesses some occult power, but what it is he does not profess to understand.

The Use of the Catheter instead of Tracheotomy, in Croup or Œdema Glottidis, has been recommended in several quarters. Dr. J. Wilson Paton, of Rockferry, England, relates in the *British Medical Journal* a case where this method was successfully employed. A child, aged three years and ten months, was attacked with croup, following measles. The symptoms of obstruction of the larynx gradually increased in severity. Dr. Paton was at last called in at 1.30 A.M., and found the patient suffering from intense dyspnœa, quite unable to speak, and the lips and face cyanosed. The respirations were 37 per minute; pulse, 144 and very weak. It was evident that the child could not live long unless it got some relief. A No. 11 gum-elastic catheter was very easily passed through the larynx into the trachea. The child made violent struggles to expel the tube, the face becoming livid and the eyes staring. In a minute or two these struggles ceased, and inspirations, partly through the tube, and partly through the larynx, were made. Considerable blood and mucus were ejected through the tube and mouth. After a time the cyanosis and dyspnœa lessened, the child lay quiet, and was able to swallow milk. Cough continued at intervals of ten minutes, about as before. The tube was removed at the end of eleven hours. Shortly after this symptoms of obstruction appeared again, and a No. 12 catheter was introduced, this time with very little struggle following. In the course of a few hours respiration and pulse became lower and dyspnœa ceased. The tube was kept in for forty-eight and one-half hours, and was not inserted again. The child made a rapid recovery. Dr. Paton thinks it would certainly have died had it not been for the use of the catheter.

Chimpanzees in New York.—The last of the chimpanzees at the New York Aquarium died on the 2d of February, of a throat-affection. It is a remarkably well-developed specimen. Its principal dimensions were: Height (when standing) from heel to vertex, thirty-three inches; distance from coccyx to vertex, twenty and one-half inches; length of foot, six and one-half inches; length of hand, exactly the same; its weight was twenty-four pounds. The brain was obtained by Dr. Edward C. Spitzka, making the third brain of the species in his possession. New York has been comparatively rich in anthropoids during the past three years. At one time there were five chimpanzees and one orang-outang on exhibition together. The former lived about nine months. Altogether there have been at different times nine chimpanzees at the Aquarium. Of the first pair, "Nip" and "Tuck," the former died of tubercular meningitis, the latter passed successfully through an attack of enteritis, and later of diphtheria, to die at Coney Island. A comparatively large animal, standing over three and one-half feet high, died of neoplasm in the lung. A female of depraved propensities, such as have not yet been noted in anthropoids (devouring her own excrement), and a little two-year-old, one of the finest and most active anthropoids yet kept in captivity, died of catarrhal affections contracted at the sea-side Aquarium, whither supposed business interest had directed they should go. Two well-developed animals, aged over two years, were sold to the Philadelphia Zoölogical Gardens.—*Science.*

A New Œsophagoscope, with which a person can view the lining membrane of the œsophagus, and perhaps catch a glimpse of the mucous membrane of the stomach, has been manufactured by a London firm recently, and has been successfully used by Dr. Morrell, Mackenzie, and others.

The part inserted into the œsophagus is composed of two narrow, flat, parallel bars, which are connected by rings. When the instrument is introduced, the bars lie close together. After introduction they are sprung apart, and a tube is formed. At the upper end they join at an angle with the handle. At this angle a large laryngoscopic mirror is affixed. By it the light is reflected down into the stomach.

The New York Medico-Legal Society held its regular meeting on June 1st. Judge Calvin E. Pratt, of Brooklyn, read a paper entitled the "Medical Witness." He stated that forensic medicine, or the application of medical science to the determination of legal issues, was known to the Egyptians, the Jews, and the Romans, but its modern development dated from the statutes of Charles V., of Germany, who was the first to define and specify the duties and relations of expert testimony. From this time the importance and precision of medical expert testimony had gone on increasing until now it is indispensable in courts of law, while its applications were almost innumerable.

The speaker then gave a number of instances in which medical testimony is necessary.

Advice was then given as to the preparation to appear on the witness-stand; the rights and duties of medical experts in court were explained; also the best method of giving evidence in order to convince the jury.

Regarding the payment of medical experts, Judge Pratt thought that physicians were not exempt from the duty that devolved upon all citizens, to assist when necessary in furthering the ends of justice. But they could not be asked to make special preparation or special examinations without compensation.

The paper was discussed by Dr. Johnson, of Brooklyn, and others.

Report on the New York City Hospitals.—The visiting committee of the State Charities' Aid Asso-

ciation for Bellevue, and other of the city's hospitals, has made its annual report.

They speak with the usual approval of Bellevue, but protest against the new towers, which, they say, are ill-built, and only tend to perpetuate a structure which ought to be pulled down.

Referring to the Blackwell's Island hospitals, the report announces with regret the fact that the new maternity pavilions have had to be given up. This is on account of their distance from Charity Hospital, and because puerperal fever could not be kept from the wards. It is well known that all the resources of antiseptic midwifery have been applied in order to keep the Maternity Hospital from infection. The efforts have failed, and the women now occupy pavilions near Charity, formerly used by the epileptic.

A Home for the Nurses of the Training-School, which now numbers forty members, is said to be urgently needed.

Gout and an Animal Diet.—The theory, which is widely accepted, that high living, and especially rich animal food, is, with insufficient exercise, the great factor in causing gout, has to meet a good many objections. It has lately been found that gout appears in some of the lower animals when fed upon a purely vegetarian diet. This is notably the case with parrots, according to observations of M. Meguin. In a number of these animals he has found well-developed gouty joints.

Surgical Experiments upon the Dog.—Much light can often be thrown upon severe surgical operations by first attempting them upon some of the lower animals. Operations connected with the abdomen have been studied in this way with especial frequency. At the last recent meeting of the German Surgical Congress, Dr. Gluck, of Berlin, related certain experiments which he had made. He had removed the bladder, urethra, and penis of dogs, and had sewed the ureters into an opening in the abdominal wall. The animals recovered and remained well and comfortable. He found, however, that when the ureters were sewed into the rectum, the operation would not succeed, and the animals died.

The same experimenter was successful in removing three inches of the sciatic nerve of a hen, and in substituting a piece of the sciatic nerve of another animal in place of that removed.

Orchitis in Mumps.—Dr. F. Murphy, of St. Albans, Vt., writes: "There seems to be some difference of opinion as to the frequency of the occurrence of orchitis as a complication in cases of mumps.

"In an experience of more than thirty years' active village and country practice, it has occurred that, in a particular neighborhood, there would be thirty, forty, or fifty cases of mumps without any complication whatever, and the same season, in another locality, one-half or one-third of all those attacked would suffer from complications—mammary in the female, orchitis in the male.

"This spring, in an epidemic here, in some thirty-seven cases that came under my notice, there were five cases of orchitis, and three of mammary trouble.

"In patients otherwise healthy, orchitis or mammary affections, occurring as a complication of mumps, have never been difficult to treat, or followed by serious consequences.

"I do not recollect now, and, on turning to my notes, do not find a single case of either complication, where gross imprudence on the part of the patient was not the cause."

Therapeutical Effects of Oxygen.—M. E. Hagen, in a report to the Academy of Sciences, gives some facts regarding the physiological and therapeutical effects of oxygen. It is taken in doses of forty to ninety litres per day, in two doses, and mixed with a very small amount of air. It augments the appetite, slightly elevates the temperature, accelerates the circulation, temporarily increases the red corpuscles and the hæmoglobin in the blood, and increases the weight of the body. It stimulates the nutritive movement of the tissues, and increases thereby the excretion of urea. In *chlorosis* it is a useful adjunct to iron. It stands in acts much in the same way that hydrotherapy does. In *vomiting* it is especially valuable. After one or two inhalations, vomiting will generally stop permanently, if it be not due to organic disease. Vomiting is relieved by oxygen when due to painful dyspepsia, dyspepsia with dilatation, vomiting of pregnancy and of uræmia.

Richard Grant White studied medicine, was senior walker in the old New York Hospital, and was admitted to the bar before he gave up his time to literary work.

New Hospital at Lynn, Mass.—The Hon. John B. Alley has subscribed $10,000 to a hospital fund being raised in Lynn, Mass., and the fund now amounts to $35,000.

Dr. Greenville Dowell, for the past fifteen years Professor of Surgery in the Texas Medical College, originator of the "Dowell system" for the treatment of hernia, and author of several works upon that subject and upon yellow fever, died in Galveston, June 9th, after five days' illness. Dr. Dowell was a native of Virginia, where he was born in 1826. He visited this city not long ago, and he will be remembered and regretted by many of the profession here.

Annual Commencement of the Long Island College Hospital.—The Twenty-second Annual Commencement of the Long Island College Hospital was held in the Brooklyn Academy of Music, June 14th, with an audience that filled the house in every part. The front of the stage was ornamented with a profusion of flowers and ferns, and the music was supplied by the Twenty-third Regiment Band. Dr. F. A. Farley, Dr. William H. Dudley, Dr. Samuel G. Armor, Dr. Jarvis S. Wight, and other distinguished gentlemen were present. The graduating class numbered fifty-two. The valedictory address was delivered by Charles J. Thomas, of Ohio. The prize essay of four hundred dollars was won by Albert J. Leffingwell. The Commencement address was delivered by Rev. Henry Ward Beecher. He stated that there was a generosity in the community that delighted in giving encouragement to young life. The profession of medicine was placed by him as the first of all callings. When a man was restored to health he was given back to the community for the worth and good that were in him. As Gladstone lay sick all England knocked at his door for tidings of him, for all England was wrapped up in his life. So, also, when Disraeli lay dying, all, from the royal family down to the humblest person, shared in the anxiety for his condition. He also referred to the education of the people in medical subjects, arguing that the better the community was instructed in matters pertaining to health the better it would be for the doctors. The growing diseases, he said, were those of the nerves, and no wonder, because the strain and exhaustion were constantly becoming more and more serious and severe year after year.

Original Communications.

CAUSES OF DEATH IN ACUTE PNEUMONIA.*

By ALFRED L. LOOMIS, M.D.,

NEW YORK.

Mr. President and Gentlemen—It is my purpose this evening to consider somewhat in detail the causes of death in acute pneumonia. It may be well to state that I recognize three varieties of acute pneumonia:

First.—A variety in which the primary and principal local pathological changes begin in, and are mainly confined to, the vesicular structure of the lungs, called croupous or lobar pneumonia.

Second.—A variety in which the primary local pathological changes begin in the pleura, the vesicular structure of the lungs being only secondarily involved, called pleuro-pneumonia.

Third.—A variety in which the primary local pathological changes begin in the bronchi, the vesicular structure of the lungs being slowly and gradually involved, called catarrhal or broncho-pneumonia.

After the pneumonic process is fully established, it is often difficult, and sometimes (from a clinical standpoint) impossible to distinguish these different varieties, unless careful and intelligent observations have been made of the mode of their accession. I shall this evening restrict the term pneumonia to those varieties in which the primary local pathological lesion consists in a fibrinous and cell exudation poured out upon the free surface of the lining membrane of the bronchioles, the alveoli, and the pleura.

Before discussing the special subject of this paper, the question very naturally arises, May pneumonia be classed among the *very fatal* diseases? The statistical answer to this question is as follows:

Of 12,421 cases treated in the hospitals at Stockholm, 11 per cent. died. In the Vienna hospitals, 24 per cent. died. The Basle hospitals' report for 32 years, gives 23 per cent. of deaths. Grisolle reports 59 per cent. of deaths in those over 60 years of age. In the "United States Medical Reports" from May 1, 1861, to July, 1866, of 61,202 cases which occurred among the white troops, 14,738 died, or a little more than 24 per cent., and of 16,133, among the colored troops (for the same period), 5,233 died, or nearly 33 per cent. The deaths from all other inflammatory diseases of the respiratory organs for the same time were only one-seventh as many as from pneumonia. The Confederate hospital reports give the ratio of mortality from pneumonia, for 25 months of the same period, as 31⅛ per cent. Of 255 cases treated in Bellevue Hospital during a period of four years, the rate of mortality was 34 per cent. The statistics given of private practice differ remarkably from those of hospital reports, and are somewhat contradictory. Of Lebert's 205 cases, 7⅗ per cent. died. Ziemssen lost only 3½ per cent. of his cases. Dr. Bennett (mentioning, however, that no complications existed) lost none of his 105 cases. Brundes, of Copenhagen, lost more than 21 per cent. of his 142 cases. Dr. Wilson Fox gives to pneumonia, the 5th, and Dr. Walsh, the 3d place among fatal diseases. The mortality average from all the published reports to which I have had access gives 20⅕ per cent. of deaths. From such facts it must be admitted that a disease in which death occurs in one out of every five cases should be classed among the *very* fatal diseases.

It is often stated that pneumonia is a "far more frequent disease" now than it was twenty years ago. That I might arrive at something definite upon this point, I have carefully examined the death reports of England and of New York City since 1840, dividing them into two periods of 18 years each, and I find that the average mortality from pneumonia in England from 1840 to 1858 was 5.57 per cent.; from 1859 to 1877, 4.77 per cent.; an actual decrease of 14⅗ per cent. In New York City, from 1840 to 1858, the average ratio of mortality from pneumonia to all other diseases, was 5.85 per cent.; and from 1859 to 1877 it was 6.20 per cent., showing an *increase* in New York of 15½ per cent. Thus it is shown, that while in England pneumonia is on the decrease, in New York City it is on the increase. In seeking for the causes of death in pneumonia, observers have taken the results of their *post-mortems* as a standard of their observations—one finds œdema of the lungs at the majority of his autopsies; another finds a clot in the heart, in most of his fatal cases; hence the conclusion is reached that pulmonary œdema and heart-clots are causes of death in pneumonia. But in every disease there is a great difference between the *cause* and the *mode* of death. If, as a result of the failure of heart-power during the last hours of life, pulmonary congestion and œdema are developed, and clots are found in the heart cavities, it cannot be assumed that these conditions are the causes of the death. Jürgensen states that in fatal cases of pneumonia, œdema of the lungs is probably *always* present, and heart-clots are frequently met with.

The majority of writers make mention of certain diseases which may be regarded as complications of pneumonia, while but few give a condensed statement of their statistical bearing upon the death-rate. In the analysis of my 255 cases, I find that 87 of them terminated in death, and 168 in recovery; 124 were complicated, and 131 were uncomplicated. Of the complicated cases, 75 died; of the uncomplicated, 12 died. The post-mortem results in each of the fatal cases is given in an appendix. The order of the frequency of the complication in the complicated cases was as follows: Alcoholism was present in 30 cases; pleurisy in 17; Bright's disease in 13; pericarditis in 9; hypertrophy and dilatation of the heart in 3; peritonitis in 2; rubeola in 1; fibrinous bronchitis in 1. Lebert, in his statistical report on pneumonia, states that he lost only 5½ per cent. of his uncomplicated, and all of his complicated cases. Huss, of Stockholm, lost 6 per cent. of his uncomplicated, and 20 per cent. of his complicated cases. Wilson Fox says that, according to the reports of English physicians, pneumonia, complicated by endocarditis, is fatal in 75 per cent. of the cases; complicated by pericarditis, in 54 per cent.; by Bright's disease, in 50 per cent.; and by alcoholism, in 25 per cent. Brundes, of Copenhagen, in 120 uncomplicated lost only 6⅔ per cent., while of 22 complicated cases he lost all, or 100 per cent. Thus it is evident from my own records, as well as from the others which I have given, that the ratio of mortality in complicated pneumonia is far greater than in uncomplicated. By a careful study of these complications it is apparent that they all exert a direct influence on the heart, diminishing its power and crippling its action by obstructing the blood-current from the right ventricle toward the lungs. It is unnecessary to discuss these complications in detail;

* Read before the Medical Society of the County of New York.

it is sufficient to state that weakening of the contractile power of the cardiac muscle is an essential feature of endocarditis, pericarditis, Bright's disease, and alcoholism. In all the acute infectious diseases, such complications are regarded as dangerous, because they increase the sources of heart-failure where such failure is especially to be feared.

As some distinguished observers have maintained that the heart-clots, which are so often found in the ventricular cavities of those who die of pneumonia, are the direct cause of death, may it not be well for us to inquire into the conditions which allow of blood-clotting during life. Physiology tells us that, so long as a certain relation, or equilibrium, obtains between the blood and the containing vessels, the blood remains fluid; but when this equilibrium is disturbed by events in the blood or in the vessels, changes resulting in coagulation occur. In cold-blooded animals, as long as the heart continues to beat when removed from the body, even for two days, so long will the blood therein remain uncoagulated. A vein ligatured and excised will often have its contents uncoagulated for twenty-four or forty-eight hours. On the other hand, the introduction of a wire or thread into a living blood-vessel is immediately followed by the formation of a clot at the point of its introduction.

Again, if the inner coat of a blood-vessel be injured, then blood-clotting will take place at the point of injury. So in endocarditis, fibrinous deposits from the circulating blood form upon the roughened endocardium. In pneumonia we know that the fibrin factors of the blood are increased, often to the extent of four hundred per cent. more than normal. If, under such conditions the heart-power is so diminished that the right ventricle cannot empty itself, the columnæ carneæ and chordæ tendineæ whip up the residual blood contained in the ventricular cavity, which is already prepared for clotting, and a heart-clot may thus be formed. But under such circumstances it is the flagging heart that is the main factor in the clotting. Heart-clot is the rule when there is a prolonged death-struggle, during which the heart contractions gradually grow more and more feeble. It is the heart-failure which allows of the stagnation and whipping up of the blood which collects in the ventricular cavity. Is not such heart-failure already the beginning of death? Again, cardiac exhaustion, due to the *increased resistance to the pulmonary circulation*, the result of the pneumonic hepatization, has been advanced as a cause of death in pneumonia. In other words, it is claimed that the heart becomes a *tired-out* muscle. But in many chronic pulmonary affections we find the obstruction to the pulmonary circulation far greater than in pneumonia without any flagging of the cardiac muscles. Still it may be urged that in pneumonia we have an acute, a sudden obstruction of the pulmonary circulation. Now, every day's experience shows that it is not always the pneumonia, whose extent is greatest, that is attended by the greatest enfeeblement of the heart. The signs of heart-flagging are not, as a rule, in proportion to the amount of the hepatization. From this it would seem that one is not warranted in assuming that the cardiac failure in pneumonia is the result of the obstruction to the pulmonary circulation.

Again, parenchymatous degeneration of the cardiac muscle, the result of high temperature, has been assigned as another cause of heart-failure. That a long-continued high temperature in acute diseases endangers life there can be no question, but it is still undetermined whether this danger is due to parenchymatous changes in the different organs or to disturbances in the nutrition of the nerve-centres. But it is not the pneumonia with the highest temperature range in which heart-failure is most marked or earliest to develop. There are many diseases in which there is a much higher range of temperature than occurs in pneumonia, and yet no evidence of heart-failure occurs. If a prolonged high temperature in disease causes feeble heart-power by the parenchymatous changes which it induces in its muscular fibres, such a high temperature is not met with in pneumonia, and at our post-mortem examinations rarely is the heart found to present the evidences of such parenchymatous changes. Thus it seems evident that we must search farther for the causes of the heart-failure, which is so prominent a cause of death in pneumonia.

At this point the question meets us, Is pneumonia a specific constitutional disease or a local inflammation? Jürgensen gives very positive answers to this question: he states without qualification that pneumonia is a constitutional disease, and never dependent upon a local cause; that the pulmonary inflammation and the morbid phenomena which attend it are not due to the local affection; that it belongs to the class of acute infectious diseases; that it cannot be produced by any of the usual causes of inflammation, however strong or weak their action; and that, as in typhoid fever, there must be a specific exciting cause.

I am not prepared to accept these unqualified statements of its specific character. It seems to me to occupy a middle ground between infectious diseases and local inflammations, having some elements which are common to both. It resembles infectious diseases in its initiatory chill, in its orderly pyrexia, in its critical days, and in its definite duration. No local disease runs a general typical course. The etiological conditions under which it is developed closely ally it to infectious diseases. The influence which miasmatic and septic emanations, as well as certain atmospheric conditions, exert in the development of pneumonia, are well recognized. The "sewer-gas pneumonia," which has been of so frequent occurrence in this city during the past few years, is an example of this. In its etiology, in many instances, it seems to be very similar to cerebro-spinal meningitis and diphtheria. The mode of its invasion in adults in its severe forms resembles very closely the invasion of some of the severer forms of infectious fever. The convulsions occurring in the very young, and coma and collapse in the very old, before the hepatization is completely established, allies it to those infectious diseases in which a specific and morbific agent acts primarily and principally on the nervous system. Its anatomical changes are entirely distinct from those of any other inflammation, and this allies it to the inflammations which occur in the course of cerebro-spinal meningitis and diphtheria.

Pneumonia differs, however, from infectious diseases in that it has no prodromata, and no known period of incubation; it is not contagious, and it is not epidemic. It has no typical range of temperature, no constant and characteristic surface phenomena. It is not a fever which, apart from any fixed seat, pervades the system generally. At one time it will present almost exclusively the character of a local disease, and at another chiefly those of a specific fever. Dr. Wilson Fox says that the disease which pneumonia most resembles in its clinical phenomena is quinsy and erysipelas. Dr. Dickinson finds the

evidence of a post-mortem relationship between pneumonia and acute tubal nephritis. Dr. Sturgis sees a similarity between pneumonia and rheumatic fever. Other observers speak of the close clinical and pathological resemblance of pneumonia to acute infectious diseases. If we carefully examine the points of resemblance between it and these diseases we shall find in the majority of instances that the resemblance lies in the nervous phenomena which attend its development. As has been shown, the complications which render pneumonia dangerous either interfere directly with the muscular power of the heart, or diminish its nerve-supply. In order in some degree to determine the influence which a diminished or vitiated nerve-supply may have upon the contractile power of the heart, I shall briefly refer to a few well-established physiological facts.

The inhibitory nerve of the heart is the pneumogastric; cut it, and the heart beats wildly; stimulate the cut end, and the heart is stopped in its diastole. Neither of these events can happen at the same instant as the interference, on account of the intervention of the cardiac-ganglia, which are exactly analogous to the vaso-motor system, whose centre is in the medulla oblongata. The pneumogastric nerve has in it the depressor branch of the afferent inhibitory nerve from the medullary vaso-motor centre. Again, it is established that the cardiac ganglia intervening between the influence made upon the vagus and the subsequent alteration in the heart's action can be so influenced by the injection of atropine into the blood as to check entirely its inhibitory action. An intimate connection is thus clearly seen to exist between the local mechanism of the heart, the general vaso-motor system, and some of the filaments of the vagus nerve. Moreover, it is well known that the effect of dividing the cervical portion of the vagi is to cause pulmonary consolidation; although suddenly produced, and always more extensive than pneumonic consolidation, it is not accompanied by any signs of heart-failure. May it not, then, be reasonably assumed that acute pneumonia is a disease, where the presence of a blood-poison or an *altered condition* of the blood so interferes with or prevents the function of the vaso-motor system of nerves that the tonic influence upon the vessels is lessened or even destroyed? As a consequence of this, dilatation of the smaller arteries occurs, giving rise to retention within their channels of a large quantity of blood which can no longer return to the heart. May not this diminished blood-pressure be the one essential cause of the heart's failure? And may not another cause be the direct action of a morbific agent in the blood upon the intrinsic cardiac ganglia, whereby the movements of the heart, which depend in such great measure upon their ganglia, become deranged, and the power of the heart thus be more or less diminished? At least, is it not reasonable to assume that the cause of death in pneumonia, in a large proportion of cases, is acute insufficiency of the heart, caused by the derangement of the vaso-motor system and of the cardiac ganglia, produced either by the direct action of a morbific agent in the blood upon the medullary centre, or upon the ganglia in the heart-wall, or, as is most probable, by both? These deductions certainly are based on well recognized physiological authority, viz., that of Michael Foster, Wagner, Goetz, Heidenhain, Ludwig, DuBois Reymond, and Pflüger.

Few clinical observers of large experience question that death in pneumonia is due in the majority of instances to insufficiency of the heart. I have endeavored to show the different views that are entertained as to the causes of this insufficiency. But my own experience leads me to the opinion that, in a large number of cases, it can only be accounted for satisfactorily on the basis of a defective nerve-supply to the heart. This nerve-failure may be due to the presence in pneumonia of a morbific agent (as in certain infectious diseases), which so acts upon the nerve-centres which supply the heart that its contractile power is diminished, and its rhythm disturbed. In a certain proportion of cases there undoubtedly exists, prior to the occurrence of the pneumonia, a weakened or perverted condition of the nervous system (such as is met with in chronic alcoholism, chronic uræmia, and in the old and feeble), in which the cardiac nerve-supply is easily disturbed, and consequently the signs of heart-failure appear early and are excessive.

Taking the ground, then, that the failure of nerve-power may show itself at the very onset of a pneumonia, and that the heart may commence to stagger at the very commencement of the attack, it is evident that the effect of the local pneumonic changes is to increase the elements of heart-failure; for the pneumonic consolidation causes an increased resistance to the pulmonary circulation, and consequently calls for increased power on the part of the right ventricle. Then the surfaces over which the blood and the air come in contact in the lungs are diminished by the pneumonic exudation, and yet another cause of obstruction to the pulmonary circulation is developed. Again, fever induces increased labor on the part of the heart. Thus, from all sides, the heart is the organ upon which the burden of the obstructed pulmonary circulation is thrown. If, in addition to these obstructions to the pulmonary circulation from the pneumonic infiltration, there shall occur a crippling of the heart from endocardial or pericardial inflammation, or if extensive pleuritic inflammation shall restrict the respiratory movements, the chances of early and fatal heart-failure are greatly increased.

The importance of detecting the first signs of commencing heart-failure is apparent and should lead one to a careful examination of each pulsation. At first, it will be noticed that the individual pulsations produce a variable filling of the arteries with blood, the arterial beats, as felt by the finger, vary in force; then occur waves; and then true intermissions. However significant a rapid pulse may be, I regard intermission, or even mere irregularity in the filling of the arteries, as far more important indications of a dangerous heart-failure, especially if it is attended by an entire loss or marked feebleness of the muscular element of the first sound of the heart. If, then, as I have endeavored to show, deficient or vitiated nerve-supply is the great cause of heart insufficiency in pneumonia, and if this insufficiency begins much earlier than is usually recognized by our ordinary methods of examination—for in many instances I have been able to detect it within twenty-four hours from the commencement of the pneumonic attack, occasionally, even during the initiatory chill, due, as it seems to me, to the shock which marks the advent of the disease—the question arises, What measures shall we employ to overcome or mitigate the impression made upon the nervous system by the morbific agent which is operating to produce the pneumonia?

The experience of the past eighteen months leads me to state with some positiveness that in opium we have such an agent. My rule, for the past year, has

been to bring my patient under the full influence of the drug at the onset of a pneumonia, and to hold him in a condition of comparative comfort until the pneumonic infiltration is completed (usually for the first four days of the disease). After this period, the greatest care must be exercised in its use, for now a new danger threatens, namely, paralysis of the bronchi, and consequent accumulation of secretion in the bronchial tubes, which will greatly increase the difficulties of respiration; but during the developing period of the disease, when the pneumonic blow is first struck, morphia hypodermically seems to lessen the nervous shock and to diminish or prevent the effect of the pneumonic poison on the nervous system, until the first violence of the poison has been spent in completing the pulmonary infiltration. The use of opium in this way does not interfere with the usual anti-pyretic treatment of the disease, nor does a demand for alcoholic stimulants contra-indicate its use. The results which have followed this plan of treatment in the limited number of cases in which I have been able to fairly test it (in patients that have been directly under my personal management) have convinced me that it greatly diminishes the chances of heart-failure, and cases which from their age and attending circumstances seemed hopeless, have recovered.

The great relief and comfort which the use of opium in this way gives to the pneumonic sufferer during the first four days of his struggles, are sufficient to commend it, especially in those cases where an extensive pleuritic inflammation accompanies the pneumonic development.

Appendix.

A. *Results of Autopsies in Twelve Uncomplicated Cases.*

Red hepatization of the whole of the left lung, 3; of the upper and the middle lobes of the right lung, 3; of the lower lobe of the right lung, 1. Gray hepatization of the whole of the left lung, 2; of the upper and the middle lobes of the right lung, 1; of the upper and the middle lobes of the right lung, and red hepatization of the lower lobe of the left lung, 1; purulent infiltration of the whole of the right lung, 1. Total, 12.

B. *The Portions of the Lungs involved in One Hundred and Nineteen Uncomplicated Cases, in which Recovery took place.*

The lower lobe of the left lung was involved in 48; the lower lobe of the right lung was involved in 44; the upper lobe of the left lung was involved in 1; the middle or upper (or both) lobes of the right lung were involved in 9; the whole of the left lung was involved in 6; the whole of the right lung was involved in 4; both lungs were involved in 7. Total, 119.

C. *Results of Autopsies in Seventy-five Complicated Cases.*

(a) *Complicated with Chronic Alcoholismus*, 30.—Red hepatization of the whole of the right lung, and of the lower lobe of the left, 1; of the whole of the right lung, 1; of the whole of the left lung, 1; of the upper lobe of the right lung, 3; of the middle and the upper lobes of the right lung, 1; of the upper lobe of the left lung, 2; of the lower and the middle lobes of the right lung, 1; of the lower lobe of the left lung, 4. Gray hepatization of the upper lobe of the right and of the lower lobe of the left lung, 1; of the whole of the right lung and red hepatization of the lower lobe of the left, 1; of the upper lobe of the right and of the left lung, 1; of the whole of the right lung, 1; of the upper and the middle lobes of the right lung, and marked congestion of the lower lobe, 1; of the whole of the left lung, 2; of the upper lobe of the right lung, 2; of the middle and the upper lobe of the right lung, 1; of the lower lobe of the right lung, 1; of the lower lobe of the left lung. 4; of the upper lobe of the left lung, and engorgement of the lower and the middle lobes of the right, 1. Total, 30.

(b) *Complicated with Pleurisy*, 17.—Red hepatization of the whole of the right lung, 1; of the lower lobe of the left lung, 1; of the lower lobe of the right lung, 2; of the middle and the lower lobes of the right lung, 1. Gray hepatization of the lower lobe of the right lung, and red hepatization of the upper and the middle lobes of the same lung, 1; of the whole of the left lung, 1; of the upper and the middle lobes of the right lung, 2; of the upper lobe of the right lung, 1; of the lower lobe of the left lung, 2; of the middle and the lower lobes of the right lung, 1; of the upper and the lower lobes of the right lung, 1; of the lower lobe of the right lung, 1; of the upper lobe of the left lung, and engorgement of the lower and the middle lobes of the right lung, 1; of the whole of the left lung, and red hepatization of the upper and the middle lobes of the right lung, 1. Total, 17.

(c) *Complicated with Bright's Disease*, 13.—Red hepatization of the whole of the left lung and gangrene of the lower lobe of the right, 1; of the lower lobes of both lungs, 3; of the whole of the left lung and gangrene of upper lobe of the right, 1; of the upper and the middle lobes of the right lung, 1; of the upper lobe of the right lung, 1; of the lower lobe of the right lung, 1. Gray hepatization of the middle and lower lobes of the right lung, 1; of the upper lobe of the right lung, 1; of the whole of the right lung and red hepatization of the lower lobe of the left, 1; of the middle and the lower lobes of the right lung and red hepatization of the upper lobe of the left, 1; of the upper lobe of the left lung and red hepatization of the lower lobe of the right lung, 1. Total, 13.

(d) *Complicated with Pericarditis*, 9.—Red hepatization of the whole of the left lung, 1; of the middle and the lower lobes of the right lung, 1. Gray hepatization of the whole of the right lung and red hepatization of the lower lobe of the left, 1; of the whole of the left lung and red hepatization of the upper and the middle lobes of the right, 1; of the upper and the middle lobes of the left lung, 2; of the lower lobe of the left lung, 1; of the whole of the left lung, 1; of the upper and the lower lobes of the right lung, 1. Total, 9.

(e) *Complicated with Hypertrophy and Dilatation of the Heart*, 3.—Red hepatization of the lower lobe of the right lung, 2. Gray hepatization of the middle lobe of the right lung, 1. Total, 3.

(f) *Complicated with Peritonitis*, 2.—Gray hepatization of the whole of the right lung, 1; of the upper lobe of the right lung, 1. Total, 2.

(g) *Rubeola existed as a complication in one case*, and there was red hepatization of the upper lobe of both lungs.

(h) *Of these seventy-five Complicated Cases, besides the Diseases mentioned*, fibrinous bronchitis existed in 1; chronic diarrhœa in 1; gastritis (chronic) in 1; chronic bronchitis in 3; fatty liver in 3; malaria in 1; acute mania in 1; gangrene of extremities (lower) in 1; fracture of pelvic bones in 1; cirrhosis

of the liver in 2; white cerebral softening in 2; and cholera morbus in 1.

In a few of the remaining cases the pneumonia co-existed with other diseases, but its course and termination were not affected by their presence.

REMOVAL OF A DOUBLE-POINTED NEEDLE FROM THE SUBMAXILLARY CONNECTIVE TISSUE, BY THE AID OF MANIPULATION.

By SAMUEL KOHN, M.D.,

NEW YORK.

Miss M. L——, aged seventeen, presented herself in the Throat class of the New York Dispensary, June 1st, with the following history: She is employed in running a patent embroidering machine; while changing the needles on the morning of the above date, she placed one in her mouth until such time as its use might be required. The needles, one of which she brought to me as a sample, are short, being only about three-quarters of an inch in length, sharp at both ends, with the eye placed midway between the two points. She states that, soon after taking the needle into her mouth she felt a sharp pricking sensation near the root of the tongue, and that the needle disappeared, working its way into the sublingual connective tissue. Two physicians who were successively consulted, examined the mouth, and not finding any evidences of the truthfulness of the girl's statement, declared that she either swallowed the needle or that she was mistaken. On examining the floor of the mouth carefully, I found, opposite the buccal side of the second molar tooth, a minute perforation of the mucous membrane, surrounded by a narrow white rim of superficial ulceration; this the girl declared to be the point at which the needle entered. With two fingers in the floor of the mouth, and external counter-pressure, the position of the foreign body could not be localized. Thereupon, the unsharpened end of a lead pencil was pressed against various points of the right submaxillary region, and the patient told to say when the point of the needle pricked the tissue; she finally felt a piercing pain in the subparotid region. Bimanual manipulation—two fingers of the right hand in the floor of the mouth, and three fingers of the left, at this point externally continued for over half an hour, finally succeeded in bringing the point through the mucous membrane opposite the buccal side of the second bicuspid tooth; but not enough of the needle appearing to offer a hold, I was compelled to release the grasp I had of the tissues and obtain other finer instruments. On returning to the patient, it was found that owing to several deglutitiory movements, the needle had again disappeared. Bimanual manipulation for over half an hour again succeeded in bringing through the mucous membrane of the floor of the mouth the point of the needle in the same place as before. Dr. Valentine, the house physician, was now called to my assistance, and while I pressed with full force upward and inward against the right submaxillary tissue, Dr. Valentine, with a pair of polypus forceps, attempted to seize the point of the needle, and after several trials succeeded in extracting this troublesome foreign body. My apology for sending this case to the Record lies, 1st, in its uniqueness; 2d in the evidence it affords of the value of a careful examination and of manipulation. Had a cutting operation for the recovery of this delicate foreign body been performed, the chances are, I venture to say, against the probability of its having been found, not to speak of the many unpleasantnesses attending such an operation.

125 Second Avenue, New York.

VALUE OF BARK IN SUBSTANCE.

By WILLIAM A. DAYTON, M.D.,

MEMBER OF HARLEM MEDICAL ASSOCIATION, N. Y. CITY.

It is well known that the sulphate of quinine, and especially in the form of manufactured pills, varies in strength and efficacy—a fact due to the extent of its adulteration with cinchonidia and even inert materials.

For this reason, no doubt, with me, many physicians have treated the acute infectious diseases often with embarrassing results—*i. e.*, patients would linger along beyond the time specified, when they expected to be well.

During the past six months I have used little or no sulphate of quinine. Remembering Prof. Alonzo Clark's statement that "bark in substance often succeeds in breaking up a fever when quinia fails," I have accordingly used the bark prepared as follows, with results that fully warrant the exclusion of the sulphate of quinine from the list of drugs I prize most.

The bark *par excellence* to be used is that of the cinchona flava, one hundred grains of which yields from two to four grains of quinia alone, besides other alkaloids of equal, though disputed, efficiency.

In consequence of its occasional mixture with other barks, it is well for the physician to know the appearance of the genuine article when purchasing. For all intents and purposes, it is distinguished from the cinchona communis and rubra, and spurious barks: 1st, by its yellowish color; 2d, by its flattened, quill-shaped pieces; 3d, by its external (comparatively) smooth surface; 4th, by its fibrous fracture, with the escape of a fine powder; 5th, by its extremely bitter taste.

The bark selected with these precautions, and well bruised in an iron mortar, I use thus:

℞.	Cort. cinch. flav....	℥ iv.
	Cort. aurant.....	℥ ij.
	Spts. vin. rect. dil.....	Oj.

M. Allow to stand several hours, then percolate eight ounces.

The result is a fluid extract, of which a teaspoonful may be given three or four times daily.

As will be observed, several ounces of dilute alcohol remain in the percolator. This I express and use in future preparations, which, of course, are stronger than the first.

I have carefully compared the effects of this and Warburg's tincture; on the whole, the bark was most potent; and I believe that what is claimed for the latter is realized by the use of the former, viz.: marked febrifuge effects in drachm doses, and tonic effects in smaller doses, at far less expense.

As in the case of quinine, so in the case of many other drugs, they are found to be so unreliable from manufacturers' doctoring, that the conscientious physician will soon be obliged to make his own pre-

parations, and he will then get the eminently satisfactory results that therapeutists claim for materia medica.

It is well known that many physicians are losing favor because of occasional failures due to inferior drugs which are used in compounding prescriptions, besides the expense incurred; and I, for one, am inclined to accept the PERSONAL advice of one of our celebrities—none the less than Professor Willard Parker—and dispense and prepare my own drugs.

A CASE OF FEMORAL HERNIA OF THE APPENDIX VERMIFORMIS.

By EDWARD SWASEY, M.D.,
PORT CHESTER, N. Y.

On the evening of January 29, 1881, I was asked to see the following case, occurring in the practice of Dr. N. J. Sands, of this village, and it is through the kindness of that gentleman that I am permitted to record the case:

Mrs. S——, aged sixty-seven years, a spare woman of medium height. Six years ago, while assisting in moving a heavy bureau, she experienced a peculiar sensation in the region of Scarpa's space, right side; and an hour or two afterward, while taking a bath, she discovered a compressible tumor, the size of a walnut, just at the saphenous opening. Dr. Sands saw the case at that time, and finding a femoral hernia, gave it no special attention, but advised her to go to New York and have a truss applied. She has worn this with comparative comfort and success, but it has never kept the tumor completely reduced.

On January 28th, she found the tumor the size of a hen's egg, somewhat painful and irreducible. She had some slight pain through the abdomen at this time, and nausea, but no vomiting. This sudden increase had followed a heavy lift. Dr. Sands was called, and he, also, was unable to decrease its size only to a slight degree. After a fair trial at taxis he left her, as the symptoms were all favorable, with directions to remain in the recumbent posture with hips raised.

At the end of thirty-six hours, as the condition remained unchanged, the doctor believed an operation was called for, and, in anticipation of this, asked his father, Dr. D. J. Sands, and myself, to see the case. Her condition did not indicate a strangulated hernia, and she felt quite comfortable, except for some soreness of the tumor from the manipulation, which had again been employed six hours before.

She was etherized and taxis used thoroughly, with the patient at one time suspended by the knees, and in this manner adding the gravitation of the abdominal viscera to the taxis.

These efforts did not avail; and an operation was decided upon to relieve the condition, whatever it might be. Dr. N. J. Sands cutting down cautiously upon the tumor, exposed a perfectly transparent serous sac, filled with clear bland serum. This was drawn off with a hypodermic needle and found free from odor. The sac being now empty and lax, there appeared projecting into its cavity, through the external femoral ring, a body the size of a goose-quill with blunt extremity, somewhat tapering in form, of quite firm consistency, and of a dark brown color. It was fully three-fourths of an inch in length and by slight traction could be drawn out of the canal so that fully an inch or more was exposed to view. The three physicians present believed this could be nothing else than the appendix vermiformis, as it had not the color or appearance of any of the surrounding structures, and was quite free from attachments to them. By slight manipulation it was made to wholly disappear in the femoral canal, backward and upward. No bowel was seen or felt, and at no time in the taxis did we detect, by hearing or by touch, the characteristic gurgle of intestine, but the feeling was that of a thin bladder quite tense from its contained fluid. The sac was left *in situ* and the incision closed with interrupted sutures. It healed kindly in a few days, except at the central portion, where a small knuckle of the redundant sac protruded. This contracted and disappeared in a few days more. A graduated compress and a spica bandage were worn until the parts were well healed.

Believing this to be a very peculiar and interesting case of hernia, I wrote to Dr. Robert F. Weir, of New York, describing it, and asking if he agreed with us in our interpretation of the case. On February 2, 1881, he wrote to me as follows:

"MY DEAR DOCTOR—Your case is undoubtedly one of hernia of appendix, a very rare condition. I only know of two others, one by Dr. Henry B. Sands, reported last fall at one of our private societies, when no similar case could be recalled. He and I looked up the matter then and found literature very meagre. Last week, singularly enough, I had at the New York Hospital a case of strangulated hernia in which was found a small knuckle of the small intestine a little congested, and the appendix in a sphacelated condition. This was cut off and sewed together and returned. The case was a bad one, having lasted a number of days, and patient died of general peritonitis, apparently begun before operation. Returned parts were satisfactory in appearance.

"Yours cordially, R. F. WEIR."

The only comment that I wish to make upon the case is, that I believe the appendix prevented us from emptying the sac of its fluid, as it acted on the principle of a ball-valve, and by the manipulation was so bent upon itself that it completely filled the femoral canal.

I doubt if there is another case on record where a femoral hernia of the appendix has been seen unaccompanied by intestine.

I submit the case upon its own merits, accompanied with the opinion of a surgeon of the acknowledged experience and literary research of Dr. Weir.

ENLARGEMENT OF JEFFERSON MEDICAL COLLEGE.—The familiar portico front of the Jefferson Medical College of Philadelphia will no longer greet the medical student's eyes as he visits that city. Since the close of the lecture season the front of the college has been torn down, and the workmen are busily engaged in bringing the wall out to the street line. This extension of the main building will increase the capacity of the lower lecture-room and of the amphitheatre. It is understood that the new front will be of brick, resembling, no doubt, in style the new laboratory building erected a couple of years ago on the north side of the entrance. The dissecting-room will be transformed and used for laboratory work, while a new dissecting-room will be built at the back of the college, by putting an additional story upon the western end of the building. Rumors are current that changes will soon be made in the curriculum of the institution to meet the requirements of advanced medical education.

Reports of Hospitals.

HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

CLINICAL LECTURE DELIVERED IN THE HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA, APRIL 30, 1881.

BY JOHN ASHHURST, JR., M.D.,

PROFESSOR OF CLINICAL SURGERY.

(Reported by George Woodruff Johnston, M.D.)

I.—ON WOUND BY PISTOL-BALL.

II.—TREATMENT OF GONORRHŒA.

III.—ANTERO-POSTERIOR CURVATURE OF THE SPINE.

THE first case that I present to your notice to-day, gentlemen, is that of this patient, a colored boy, who was admitted to the hospital only last night, having met with an injury from the accidental discharge of a pistol in the hands of a friend. The ball, which was one of small calibre, has entered, you see, about midway on the outer surface of the left thigh, there being a wound of entrance, but none of exit.

The resident in charge of the surgical wards was unable, after a careful examination, to find the ball. I will first proceed to investigate the wound before you and suggest some points of treatment, and will then take this opportunity to offer a few remarks upon the interesting topic of gunshot-wounds in general. But, since the ball was small, and has already been searched for unsuccessfully, it is probable that we shall not be able to ascertain its location.

Knowing, first, the position of the patient when shot, and feeling a line of induration extending for about an inch downward, we can easily trace the course of the ball; but, failing entirely to find any foreign body, either after the introduction of a suitable probe (which passes in, on coaxing, about three inches), or the use of the fingers in palpation. The missile has, therefore, in all probability, pierced the deep fascia, and has imbedded itself in the muscles beneath, where, no doubt, it will become encysted.

In the treatment of gunshot-wounds it is best to at once institute a careful examination, with the view of ascertaining the location of the ball, which, if lodged superficially, can be reached and extracted by means of a counter-opening. But if, as here, you can learn its position neither by probe nor finger, to open the limb and hunt for the ball would be, in truth, hunting for a needle in a hay-stack. If, however, as sometimes happens, when the swelling goes down and suppuration begins, its position can be recognized, it may then be extracted by a subsequent operation. The best local treatment for recent gunshot-wounds is the application of lint saturated with laudanum, and the keeping of the part at rest.

It is generally said that gunshot-wounds slough throughout their whole track, and in this climate the wounds of entrance and of exit undoubtedly do. But deeper down, in the centre of a sloughing wound, union may occur by the first intention, as is the rule in all subcutaneous wounds; and in warm climates, by this process alone, the wound sometimes heals throughout its entire extent.

By keeping our patient at rest, then, for a few days, the small ball will probably become encysted by an adventitious membrane of indurated tissue, and will, in all probability, cause the boy no further annoyance.

The improvements made in modern fire-arms, with a view to increase the momentum of projectiles, has necessarily and essentially altered the nature of gunshot wounds. Be it understood in starting, that the word momentum, when thus applied, has a technical signification, derived from the language of physics, and means mass multiplied by velocity. The three elements, which, taken singly or together, go to make the modern rifle a far more destructive and deadly weapon than the old smooth-bore musket, are briefly: 1st, the arrangement of the barrel, by which is imparted to the projectile a far longer continuance of the initial velocity, and hence, a greater momentum; 2d, the construction of the ball itself, whereby the centre of gravity differs from the centre of figure, causing, therefore, the conical ball, in addition to the movement of rotation on its long axis, imparted to it in its passage through the barrel, to have a tumbling motion, technically called the dip of the ball; 3d, the heat generated at the point of contact; for heat being, in the language of modern science, a "mode of motion," the rapid motion of the ball is by friction converted into heat, whence is added destruction. These three things, then—the rotary motion, the dip, and the heat generated—tend to make the conical ball a chosen missile in destructive warfare.

In the early part of the late war, wounds by the simple musket-ball were common, especially among the northern troops, but towards its close, when the old-fashioned confederate musket was substituted by a better arm, the wounds were noted to be of a far more dangerous character. In injuries of the long bones was this difference particularly marked. The ball of the smooth-bore musket often produced a particular kind of fracture, called by the French *en seton*, in which a channel was bored right through a bone, the continuity of the whole not being destroyed. Or again, in which a ball would enter a bone, and there remain imbedded in its tissue. Older writers record many curious cases of this kind, where the surrounding bone underwent a slow necrosis, and the wound remained open for remarkable lengths of time, in some cases for twenty or thirty years. The more deadly conical ball, on the other hand, crashes through the bone, fracturing it transversely, and splitting it sometimes throughout its entire length.

To distinguish in gunshot injuries between the wound of entrance and that of exit, it is usually sufficient to rely upon the relative size of the two, and the appearance of the edges. The entrance is smaller than the exit for two very obvious reasons: 1st, the ball striking a surface presses it in, cutting a sharply defined hole through its texture; but in passing through the tissues it loses its momentum, and at its exit tears a large and ragged opening. So the same stone thrown with different degrees of force against a pane of glass will in the one case cut a small hole directly through it, while in the other the entire pane will be shattered. The second reason, suggested by an English surgeon, Mr. Teevan, is that the ball, in passing through a part, pushes before it the tissues with which it comes in contact, thus actually increasing the bulk of the wounding body, and hence the size of the wound of exit. From the above considerations it is clear, too, that the edges of entrance will be usually inverted; those of exit, everted. Many interesting, remarkable, and almost improbable instances of gunshot-wounds might be cited, but we will proceed at once to the next case.

This young man noticed, five days after having impure coitus, that he had a slight itching at the

end of his penis, followed by scalding on urination, and a thin, watery discharge. This was nine days ago, and having had resource to no treatment, you see him in his present condition, with phimosis, and great swelling around the head of his penis, which is bathed in a profuse, thick, muco-purulent discharge.

The question whether the symptoms of gonorrhœa are merely the result of a simple urethritis, or are dependent on inoculation by a specific virus, has long been a subject of dispute. The numberless ways in which an urethial discharge can be acquired seem to throw doubt upon the idea that it must be dependent on a specific contagion. A menstrual flow, a simple leucorrhœa, can cause symptoms perfectly analogous to those following intercourse with a woman known to be suffering from gonorrhœa. The reason that husbands do not oftener contract the disease from intercourse with wives suffering from the above discharges, is because of a certain "acclimatation," if the term may be allowed, which is observed both in and out of wedlock. Another solution may be sought in the fact that men are varyingly susceptible; thus, one woman has been known to have given to three men each a different kind of venereal disease: to one, a chancre; to another, a chancroid; and to a third, gonorrhœa.

When a patient comes to you, therefore, suffering from a profuse muco-purulent urethral discharge, though you may feel almost sure that it has been acquired in impure coitus, it is sometimes safer not to express an opinion.

With regard to the treatment, I do not believe that in a simple uncomplicated case of gonorrhœa internal remedies, such as cubebs, copaiba, oil of sandalwood, and the like, are at all essential.

Should the urine be very scalding, the *chaude-pisse* very painful, a mixture such as the following dilutes and increases the quantity of the urine, and relieves the patient:

Flax-seed tea	one pint.
Sodii bicarb	one teaspoonful.
Spiritus ætheris nitrosi	one tablespoonful.

To be drunk in divided doses within the twenty-four hours.

In the local management at the early stages of gonorrhœa, I prefer what is sometimes called the modified abortive treatment at Ricord. I use nitrate of silver in the strength of a quarter of a grain to the ounce, in the form:

℞. Argenti nitratis	gr. ij.
Vini opii	gtt. xx.–xxx.
Aquæ rosæ	fl. ℥ viij.

Fl. sol. Sig.—Inject two syringefuls at a time, every three or four hours.

The first syringeful is neutralized by the mucus in the urethra. Dregs of laudanum may be substituted for the wine of opium.

In the second stage a very good injection is one containing sulphate of zinc and acetate of lead. Between these two a double decomposition takes place: the acetic acid, going to the zinc, produces the acetate of zinc, a mild astringent; while the sulphuric acid, combining with the lead, forms the sulphate of lead, a soothing, impalpable powder. A good formula is:

℞. Plumbi acet	℥ vj.
Zinci sulph	ʒ j.
Aquæ	℥ ij.

Ft. sol. Sig.—Inject as before, every three or four hours.

In this stage, submitrate of bismuth, starch, or anything allaying the inflammation, may also be used as an injection.

The disease would no doubt get well by itself, for it is self-limited; but while it is going on it is causing great discomfort, and the danger of stricture, among other complications, increases daily. Therefore, if the discharge still continues, it is well to have resource to more powerful remedial agents, and I would recommend sulphate of copper, in the strength of one or two grains to the ounce of water, as a serviceable injection in the later stages of the affection. Still later, when the disease has passed into the stage of gleet, the surgeon is often put to his wit's end to know how to get rid of it. I have found the use of the solutions of tannic acid, weak at first, but gradually increasing in strength up to ʒ j. to fl. ℥ j., very effective. Glycerite of tanniu can be locally applied by means of a piece of cotton dipped in it and put on the end of a probe. It was at one time thought that the point of inflammation could be reached and treated very effectually by using the endoscope, but its advantages are not so great as at first supposed. Should the gleet be kept up, as sometimes happens, by the existence of a slight stricture, you should resort to the use of the bougie so as to effect gradual dilatation of the urethra; or you may put on the end of the instrument a little mercurial ointment, and apply this to the inflamed tract.

For the irritation which exists at the end of the penis, rags soaked in lead-water and laudanum may be applied; for the chancre, if it occurs, camphor and opium suppositories may be employed. Epididymitis, which is often a very painful complication, or sequela of gonorrhea, is best treated by making a puncture with a small knife to relieve tension; and in mild cases the external application of lead-water and laudanum, with the internal use of opium, is all that is necessary.

The next case that is presented to us is that of a patient suffering from antero-posterior curvature of the spine. For the past year this girl has noticed a gradually increasing deformity, and now, as you can see, there is here quite a prominence involving several vertebræ. In addition to this, she experiences great difficulty, as you now witness, in rising from the recumbent into the erect posture, and in assuming it again; although, when once up, she can walk without much trouble.

As you are probably aware, there are two principal kinds of spinal curvature, the lateral and the antero-posterior, or so-called Pott's Disease, the spine disease *par excellence*.

The causes of the first of these conditions, lateral curvature of the spine, are numerous, but are generally dependent on the long-continued maintenance of some unnatural position of the body. The patient is generally a young, growing girl, accustomed to sit at her desk in school with one shoulder more elevated than the other; or the disease may arise from carrying a heavy child always on the same arm. A great deal of harm is done, also, by awkward positions in standing, the spinal ligaments and muscles becoming stretched in order to compensate for the obliquity of the pelvis. The cure depends on the removal of the cause, and the ordinary care of the child's health. In well-marked cases only is any mechanical support necessary, and then merely a slight frame of iron and leather should be used, which can be removed at night, and which will not incommode the patient's respiration by day. The plaster-of-Paris jacket may be required in some very bad cases, but the light

brace is usually preferable. The causes of antero-posterior curvature are far more deeply seated, and its effects more difficult to combat. If the bodies be affected by true caries, suppuration follows, and sooner or later the case will be complicated by a lumbar or psoas abscess. But the bone-substance in another variety of cases, of which the present is a good example, may gradually be absorbed and disappear, by the "interstitial absorption" of Sir James Paget. Here there is, and has been, no abscess, and yet quite an extensive disappearance of the vertebræ is noted.

The symptoms at the first stage of either true caries or interstitial absorption, are not such as to attract the attention of patient or physician. If the patient complain of excessive pain in the back, you may be almost sure that there is no true vertebral disease. There was in this hospital, some time ago, a girl who, on account of the prominence of this symptom, had been supposed, by the physician who sent her here, to have both spine and hip-joint disease. But it was found, on careful examination, to be a case of "nervous mimicry" of these affections, such as those spoken of by Paget. There is nearly always, in cases of this kind, some true affection to which the mimicry is added, a nervous irritation of an organic lesion, and here was found a slight, not very well marked arthritis at the left sacro-iliac juncture. But in the case before us, there is no doubt as to the diagnosis. The difficulty in moving and in stooping show that, under the stimulus of some point of irritation, the muscles are contracting in order to keep the spine as fixed as possible.

The best treatment in cases of this kind, where the deformity is pretty low down, is the application of a felt or leather splint, or of the plaster-of-Paris bandage; but if it is in the neighborhood of the cervical vertebræ, the simple bandage is found not to be so satisfactory. It is then that Sayre's jury-mast apparatus is particularly useful.

In proceeding to apply the plaster-of-Paris bandage, we first raise the patient by straps, so placed as to divide the weight equally between the neck and the armpits, and just high enough to let only the toes touch the ground. Then, over a closely fitting flannel or merino shirt, we apply the plaster roller, simply going up and down, and avoiding too great thickness in any one spot. Remember to first apply the "dinner-pad" of Dr. Sayre, to allow for freedom in the movements of the diaphragm, and also, over the deformity, a small pad of cotton to prevent excoriation.

Although the number of rollers varies with the size of the individual, I have generally found three or four amply sufficient, after rubbing over the jacket, when applied, a few handfuls of dry plaster, and allowing the patient to remain suspended until the plaster has well set, we will carefully lift her down.

The difference in the treatment of lateral and antero-posterior curvature of the spine depends upon the widely different indications to be met. In the treatment of lateral curvature, we do not want rest, but rather to encourage freedom of movement, by means of which the muscles around the spine may become strengthened and developed. But, in osteitis and caries, we wish to supplement nature's efforts in fixing the spine immovably, and for this purpose the plaster jacket is most aptly suited.

The Bill to Prevent Adulteration of Food or Drugs has been signed by Gov. Cornell.

Progress of Medical Science.

Electrolytic Urethrotomy.—In 1867, Mallez and Tripier first proposed a new method of obviating the contractions from strictures, after operating by the use of electrolysis. But the apparatus which they had devised was not applicable to all cases, the urethral sound not being supplied with a conductor. Thus the electrolytic action could not be limited to one particular point. Dr. Jardin has recently improved and, as he thinks, perfected the older apparatus by suitable modifications. The new instrument consists of two parts. One called the female branch, is essentially a grooved urethral director, having a coating of gum, which extends on either side as far as the central groove. At one extremity this branch has a little plate attached to it, which allows of readily handling the instrument. The other end is gently curved and drawn out into a non-conducting portion. At this point there is also a little contrivance serving to fix an exploring bougie. The male branch is made to slide along the groove of the female one. It consists of a metal rod furnished at one end with a blade having a dull edge, and hollowed out at its centre. The other end is constructed so as to afford attachment for an electrode. The operation is then performed as follows: The conducting bougie is first introduced into the urethral canal, then the female branch of the instrument is passed and pushed beyond the stricture. Now the male branch is introduced along the groove of the other until the blade comes in contact with the stricture. The instrument is connected with a strong battery, the negative pole being connected with the urethrotome, and the positive one applied by a suitable electrode over the thigh. At the latter point only a slightly smarting redness is produced, whereas the stricture is gradually severed. Bleeding never takes place, and after the operation the patient may resume his occupation. Micturition is immediately accomplished with ease.

This apparatus has been tried in fourteen cases by its inventor, and has given entire satisfaction. The following advantages are claimed for it: The operation is easy of performance and not painful. Hemorrhage never accompanies it. A febrile movement is not set up by it, there being no violence and only the formation of an eschar. *Sondes à demeure* are not necessary, and the patient can at once pass his water after the operation. The patient can also immediately continue his work after completion of the electrolysis. Finally, the danger of remote complications is entirely overcome by this method. The instrument was made by M. Ch. Dubois, 31 rue Saint-Andre-des-Arts, Paris.—*Moniteur de la Polyclinique*, March 20, 1881.

On a Peculiar Form of Rheumatic Fever in Childhood.—Dr. Hirschsprung (*Hospitals-Tidende*, series 2, vol. vii.) comments on the peculiarities of rheumatic fever in children, and refers to the form of the disease to which attention was first called by Meynet, which is characterized by more or less extensive affection of the sheaths of the tendons, and of the fibrous tissue. He has observed three cases. The rheumatic fever in these cases was not very intense, but was prolonged. Relapse occurs in most instances, and the cardiac symptoms are severe. At a varying time in the disease swellings of various

sizes and in various numbers appear in the tendons and their sheaths, or in parts where portions of bone lie close under the skin, as the patella, the malleoli, the spinous processes, or the skull. They are as hard as cartilage or bone. They often disappear spontaneously. In very few cases is there any remarkable tenderness or pain in the part, and only exceptionally a slight redness of the skin. The fever does not seem to have any definite relation to the outbreak, and it cannot be decided whether the deposits are confined to the region of the affected limb. In one of the author's cases the child died of heart disease, and the necropsy showed that the nodules, which appeared to proceed from the tendons, might be regarded as consisting of a new growth of connective tissue, most like the result of chronic inflammation, with some tendency to necrobiosis.—*London Medical Record*, March 15, 1881.

On Colotomy.—In an article in the *Hospitals-Tidende*, series 2, vol. vii., Dr. C. Studsgaard examines the merits of the two operations—anterior colotomy or laparo-colotomy, and posterior or lumbar colotomy. He gives the preference to the former (Littré's method), especially since the use of antiseptics has materially diminished the danger of opening the abdominal cavity. Costallat's advice to perform the operation in two stages, the bowel being first opened some days after the incision is made, in order that the edges of the incision in the abdomen may granulate before they come into contact with the fecal matter, and that the risk of diffuse inflammation may be diminished, he regards as rational, provided that the urgency of the symptoms of ileus do not demand immediate relief, in which case he considers it quite superfluous to open the bowel with the cautery instead of the knife.

Cauterization of the wound with a ten per cent. solution of the chloride of zinc is sufficient to obviate infection, the more so as it is only in exceptional cases that fecal matter passes in the first days. The incision in the intestine should be one and one-fourth inches long; not smaller, in order to give room for the passage of fæces; nor, if possible, larger, lest prolapse of the mucous membrane of the bowel should occur. The size, however, which should be given to the opening in the bowel must, in some measure, depend on the indications for the operation. In cases where it is difficult to be certain that the function of the fistula will be permanent, Dr. Studsgaard has modified the application of sutures to the intestine. The lowest sutures are introduced into the intestine in such a way that a great part in front lies free between two corresponding sutures, while posterior ones are passed through the bowel closer to one another in the neighborhood of the mesentery; in this way a kind of spur is left at the lower angle, which will obstruct the passage of fæces into the rectum. Dr. Studsgaard finally relates seven cases of anterior colotomy performed by him in the Communal Hospital of Copenhagen. Of the patients two died in the hospital and five were discharged; one of them died six months afterward of metastatic cancer.—*London Medical Record*, March 15, 1881.

The Milk Fever Epidemic in Aberdeen.—An epidemic of novel character appeared in the city of Aberdeen last April, and was connected by common acceptance with the milk supplied from the dairy attached to a reformatory. Fifty-eight families, comprising over two hundred individuals, were affected. Three cases terminated fatally. The symptoms, as described by Dr. Gordon Pirrie in the *Lancet*, April 23, 1881, briefly summarized, were as follows: Frequent rigors, lasting in some cases for twelve or sixteen hours; sudden rise of temperature to 103° F.; variations of temperature—not occurring as in some other cases of fever, it being as high in the morning as at night; intense thirst, great prostration, pain in the head, neck, back, and limbs; the pain in the head was a prominent and an early symptom; sore-throat was also complained of, together with the rapid and painful swelling of the glands and muscles of one side of the neck, which were very painful under pressure; two patients experienced a feeling of great tightness about the œsophagus and trachea, and in these cases difficulty of swallowing was present—no cause could be assigned for it; the urine, very acid, high-colored, scanty, and loaded with urates; no albumen present; bowels usually constipated; sleep disturbed, of short duration, and unrefreshing. The treatment adopted, and which was successful in the cases under Pirrie's care, was frequent purging, the administration of saline diaphoretics, until diaphoresis was well established, and after the more urgent symptoms had abated, quinine, along with the most nourishing food, and a well-regulated amount of stimulants. A relapse of all the symptoms occurred in most cases a day or two after the patients were declared to be convalescent; and, in such cases, it was always the glands and muscles of the opposite side of the neck from those first affected which became painful and swollen. One patient, who was in a delicate state of health previous to the attack had three relapses, but the symptoms during the relapses were less severe than those at the onset of the disease. A thorough investigation is now being carried on by the proper authorities, with a view to ascertain the cause of the disease.

Dengue.—Dr. J. G. Thomas, of Savannah, Ga., at the meeting of the American Public Health Association in 1880 (*New Orleans Medical and Surgical Journal*, May, 1881), submitted the following views of this peculiar disease: Dengue is self-limited, infectious in character, the specific cause, like that of yellow fever, being as yet beyond our reach. There is absolutely nothing known of its morbid anatomy. It has its own specific germ, which seems to operate when in the human system in a specific manner, and is susceptible of transportation. In the vast majority of cases, dengue runs its course in from three to eight days, but during the epidemic which occurred at Savannah it was observed to last much longer. The heat will rise and fall most irregularly, and at times give hopes that the fever is at an end, and then treacherously return again, and in this way keep up for weeks, or even months. But Dr. Thomas has been unable to see anything like typhoid in it, save that the patients have a continued fever, prolonged into weeks. Such cases need not embarrass our diagnosis, although they are liable to do so; for throughout their course the semiology of dengue will always be present. The swollen and heavy-looking face, like that of a person who has been sitting over a hot fire; the congested and maturating eyes with open pupils, the hebetude of mind, the recurring soreness in the muscles and joints, with hyperæsthesia of the surface; the tough, viscid, ropy mucus in the mouth and throat; the feeling now and then of faintness in the horizontal position; the enlarged papillæ of the edge and tip of tongue; the regular bowels, perhaps inclined to be constipated; the great irregularity in the exacerbations and re-

missions; the constant inclination of the heat to fall below the normal, without any material abatement of the serious symptoms; the intense and peculiar bitterness of taste in the mouth, together with the conspicuous absence of the leading symptoms of typhoid, should enable any ordinary diagnostician to make the distinction. Aside from the nervous complications attending and following dengue, there are no sequelæ so common as those which appertain to the heart. The percentage of cases in which the heart is affected is not stated, but they are quite frequent, and besides, very distressing, prolonging the convalescence into weeks and sometimes months. Dengue does not affect the heart in the same way that rheumatism is known to do, and in the majority of cases where heart-troubles followed there had been no special rheumatic symptoms primarily. This complication is not apt to occur in the early stages of the disease, but comes on either after the fever has subsided, or after the second or third week of its progress. It may occur in the mild as well as in the severer forms of fever. A very peculiar and characteristic symptom of dengue is a disposition to faint; this feeling often comes over patients as they lie in bed, and sometimes is a very distressing one to them, but examination of the heart reveals nothing that would seem to indicate that pericarditis had occurred as a complication. Partial facial paralysis is also one of the occasional complications. Peripheral paralysis or paresis of the forearm and brachial muscles now and then occurs. Pulmonary complications may be traced to dengue, which in the early stages assumes the form of a troublesome cough, that may remain and annoy long after the fever has subsided. It assumes the form of a catarrh of the fauces, which may extend down to the larynx, or may travel down the œsophagus. In the former, cough is the most conspicuous symptom, and in the latter there is a constant rising of phlegm in the mouth. One attack of the disease does not furnish immunity from a future one. Regarding treatment, since dengue is a self-limited disease, in the vast majority of cases the physician finds it his duty simply to make the patient as comfortable as possible, and allow the disease to run its course, being always vigilant as to the complications which may arise. A mixture of morphia, tinct. of gelsemium, and aconite has been found to be a happy combination to meet many of the indications. In the rheumatic type the salicylate of soda, in doses of five to twelve grains every two hours, has proved of the most decided benefit.

Sarsaparilla in Syphilitic Cachexia.—Dr. William Carter is inclined to think that the value of sarsaparilla in the cachexia of advanced syphilis, and more especially in cases characterized by the persistence of sluggish ulceration and indolent gummata, continues to suffer unmerited neglect. This sustains the view recently held by Clifford Allbutt. Dr. Carter records two cases in *The Practitioner* (May, 1881), where the advantage of its employment seemed very conspicuous. The first patient was one who had evidently been a man of powerful physique, but when admitted to the hospital was greatly emaciated, and so weak as to be quite unable to stand. His chief complaint was "rheumatism," the pains from which, he said, were almost unendurable, especially during the night. There were marks of old ulcerations on each leg, and the middle of the left tibia or its periosteum was thickened, but no evidence of visceral disease could be detected. He suffered from most profuse night-sweats. The temperature and respiration on admission were normal; pulse 96. Though he denied having had syphilis, he was put under the iodide of potassium, at first in doses of seven and a half, subsequently increased to twenty grains, three times a day, with hypodermic injections of morphia and atropia added for the night-sweats. He failed to show any signs of improvement under treatment, notwithstanding the administration of tonics and nourishing food. When things looked at their worst, he was ordered to take, in divided doses, a pint daily of the compound decoction of sarsaparilla instead of his other medicines. Improvement at once commenced. In three weeks he was able to be up and about the ward, and though for some time the feet were swollen, the œdema gradually disappeared. The ulceration healed; he rapidly regained flesh, and left the hospital in comparative health.

The second case was that of a seaman, aged forty-one years. He gave a history of what was obviously prolonged syphilitic disease, and its treatment at various times during several preceding years. The iodide was administered for six weeks with cod-liver oil and dialyzed iron at meal-times. Still the cachexia remained as pronounced as ever. Tender gummata appeared, with excruciating pains, especially at night. Four ounces of the compound decoction of sarsaparilla was then given three times daily, the dose being increased after some time to six ounces. The improvement in his general nutrition was speedily apparent, the cheeks filling out and gaining color, and the man himself being conscious of a most marked amelioration of his condition.

On the Treatment of Some Forms of Epilepsy.—Dr. J. S. Ramskill, in discussing the question of treating epilepsy (*Lancet*, May 7, 1881), thinks that for many years past we have had too much metaphysics in epilepsy, and the time has come for therapeutics to claim attention. The advent of the bromides has certainly done infinite mischief to the advance of therapeutics in epilepsy. This can in a measure be remedied by a careful and thorough examination, and not by following the usual *rote*, viz., to hear the history of the case, examine with a view to the discovery of its syphilitic origin, or a coarse cerebral lesion, and, failing to find either, to treat the case by bromide, and trust to it and the *vis medicatrix naturæ*. The *vis medicatrix* succeeds sometimes, *plus* the bromide, but that is only either in comparatively recent cases, or where there are no secondary eccentric causes set up to keep the primary mischief in the cerebro-spinal centres alive. Dr. Ramskill does not see why, if this were not so, the natural history of a recent case of epilepsy should not be toward cure. From forty-five to sixty grains a day of the potassium salt he has found to be sufficient. That sufficiency is precisely the object to be aimed at, and beyond the quantity necessary not a grain more should be used. Dr. Ramskill doubts the statement of Voisin, that the therapeutic dose of bromide is not attained until reflex nausea is suppressed on introducing a spoon as far as the epiglottis. This is generally, but not always, true. Sometimes the attacks may be combated successfully without suppressing the condition of reflex nausea, and certainly the condition may be produced, and not in the least degree affect the number or violence of the fits. Bromide has much less power over the *petit* than the *grand mal*. The more frequent and violent the fits, the more marked suc-

cess will be attained. The most difficult kind of case is one in which several minor attacks occur during the month, with an occasional abortive seizure in the intervals. The objection to giving small doses in the beginning lies in the fact that in a few weeks far more bromide may be given than is necessary to act successfully on the bulb, and more liability there may be to produce bromism. To allay the eccentric causes, coming chiefly *viâ* the splanchnic from the intestines, a pill of valerianate of zinc, aloes, and conium may be given to advantage in addition to the bromide. In a case under observation, the bromide was tried fairly, and diminished the number of attacks, but when the pill was added they disappeared. It seems the valerianate of zinc allayed the frequent spasms of the intestines, and gave tone; the conium assisted it, and the aloes emptied the bowel in a natural and effective way. Aided by the bromide, the irritable bowel was calmed and soothed, the weary sympathetic rested, and the perpetually irritated splanchnics carried fewer disorderly messages to the brain. Regarding the value of ice, it is effective in proportion to the youth of the patient and to the acuteness of the case. It is rarely beneficial in the chronic epilepsy of adults. In those cases where a central irritation is kept up by an eccentric cause, and the latter removed, the cerebral irritation is easily combated by the application of ice to the sympathetic nerve which issues from the last cervical and upper dorsal vertebræ, and by small doses of any bromides.

The Effects of Drugs during Lactation on the Nursling.—The result of Mr. T. M. Dolan's experimental inquiry into human milk and the effects of drugs during lactation on either nurse or nursling, as published in the *Practitioner*, may thus be summarized: All therapeutical agents intended to act on the mammary gland must first enter the blood, or be capable of stimulating the blood-supply in the mammary apparatus. This principle follows from what we know of the processes involved in the making of milk, and depends on the general principle that nutrition is dependent on the blood-supply. Further, all drugs derived from the families dilleniaceæ, cruciferæ, solanaceæ, umbelliferæ, etc., enter the blood and impregnate the milk, so that poisons in any of these classes must be administered with caution to the mother or nurse, lest the nursling be injured. Mr. Dolan has furnished instances where dill, aniseed, and conium had this effect. Again, there is no true galactagogue in the sense in which it is understood. The nearest approach to such an agent is to be found in jaborandi; but this drug is not persistent in its action, as it only temporarily affects the mammary secretions. There is, however, an anti-galactagogue—belladonna. The milk also of the mother may be improved in heat-forming elements by the administration of fat, and the salts of milk may be improved by the administration of medicines, then various physiological actions—purgative, alterative, diuretic, etc.—may be produced in the child by the administration of drugs to the mother, as is well known. Finally, if we are to expect any improvement in milk-secreting power, both as to quantity and quality, we must look to diet for the attainment of that object.

Three nitrogenized compounds, vegetable fibrin, albumen, and casein, supply flesh-forming food. The chemical analysis of these three substances has led to the very interesting result that they contain the same organic matter, united in the same proportion by weight, and, what is still more remarkable, that they are identical in composition with the chief constituents of blood, animal fibrin, and albumen. They all three dissolve in concentrated muriatic acid with the same deep purple color, and even in the physical elements animal fibrin and albumen are in no respect different from vegetable fibrin and albumen. In regard to the presence and relative amount of sulphur, phosphorus, and phosphate of lime, no difference can be observed.

The Immediate Suture of Divided Nerves.—Herbert Page has recorded an interesting case in the *British Medical Journal*, May 7, 1881, in which the patient, a lad of nineteen, had sustained a lacerated wound of the right arm, which extended downward and inward toward the internal condyle, severing the biceps muscle, the brachial, with other smaller arteries, and the median nerve. The vessels having been secured, the ends of the nerve found separated an inch and a half, were drawn into contact by two catgut sutures passed through the sheath at opposite sides. The wound healed nicely under Lister's dressing. It was manifest, when the lad had rallied from the effects of the fall sustained, that there was complete anæsthesia in the regions of the median distribution, with entire loss of motor power. From day to day the fingers were carefully tested, both as to sensation of touch and of pain. In seven days he spoke of occasional tingling in index and middle fingers; the next day the tingling continued, and a touch was perceived on the ulnar side of the middle finger, though referred to the radial side of the ring-finger. Two weeks after the operation sensation had so far improved that he was able to at once localize the prick of a pin on the thumb, and, after a momentary pause, on the index and middle fingers. Tactile impressions were invariably felt two weeks later, though feebly, and not without errors in localization. Subsequently he regained some power of flexing the index and middle fingers, but none over the last phalanx of the thumb. He was discharged from the hospital with the instruction to begin movements of the arm, hitherto kept almost entirely in the flexed position. It is obvious from this history that, for all practical purposes, the function of the median nerve has been restored, and that the usefulness of the limb has been retained without any of those trophic disturbances which are often so incessant and so distressing. Mr. Page suggests that in all lacerated wounds in the neighborhood of important nerves, it should be the routine practice of the surgeon, not only to stay hemorrhage by securing the ends of the divided vessels, but also to search for, and carefully draw together, the ends of the divided nerves. It must, however, be submitted that restoration of the nerve's function has not been entirely perfect—that is, to an extent wherein sensation might have reached the state in which it presumably was before the injury.

Hyoscyamia as an Hypnotic and Depresso-motor.—In the *Archives of Medicine* for April, 1881, is a report by Dr. E. C. Seguin, on the use of hyoscyamia as an hypnotic and depresso-motor. It is based on the experience of the Committee on Neurotics of the Therapeutical Society. The drug, as found in our markets, of Merck's manufacture, can be procured in pill form from Caswell, Hazard & Co., and Messrs. McKesson & Robbins. These two firms supply reliable pills made of the crystalline form. Dr. J. C. Shaw having made a somewhat extensive trial of hyoscyamia in cases of insanity, gives the follow-

ing results of his experience: This drug is of great service in acute mania, where the patient, from loss of sleep and continued motion, soon becomes exhausted, and then has dry tongue, sordes on the teeth, and perhaps diarrhœa. If the patient refuse food, and has to be fed with the tube, this makes the state of matters still worse. Hyoscyamia is a remedy which obviates this condition very largely; it is certain in its action. He usually began by giving one-fourth to one-half grain of Merck's amorphous alkaloid, by the mouth. He has also used it in chronic mania with excitement and destructive habits, in the excitement of general paretics, in the maniacal phenomena following epileptic seizures, etc. The effects are temporary, as a rule, most patients becoming quickly tolerant of it, and the dose has to be increased. Dr. A. B. Ball reports two cases to illustrate the marked efficiency of the alkaloid as an hypnotic in acute and subacute mania, the influence of the drug in controlling delusions, and its occasional tendency to paralyze the bladder. Dr. F. P. Kinnieutt found it serviceable in a case of delirium tremens, where seventy-five grains of chloral and one hundred and twenty grains of bromide of potassium had failed to relieve. One-fiftieth grain of Merck's crystalline preparation, administered by the mouth twice a day, was found to be sufficient. Aside from the hypnotic action of the drug, its only effects observed were hallucinations of a pleasant kind, and slight dryness of the throat. No alterations of temperature occurred. Dr. E. C. Seguin is inclined to think that a parallelism may be drawn between the arrest of morbid dreams and the effect of hyoscyamia in cases of delirium tremens, delusions of persecution, etc. He records an instance where a patient, who was hypochondriacal to a certain extent, had suffered from insomnia, which was made the more trying, because what little sleep he obtained was troubled by fantastic and fearful visions of a panoramic character; scenes of violence, obscenity, comicality, would, as it were, pass before him almost with the vividness of hallucinations. Indeed, he had the same "visions" at any time if he dozed for a minute in his chair. Injection of three grains of camphor failed. The crystallized hyoscyamia in doses of one-sixty-fifth grain, by hypodermic injection, at bedtime, was given chiefly with the view of procuring sleep, and marked relief was obtained, the depressing and fearful dreams becoming less marked. The following interesting case is contributed by Dr. Andrew H. Smith. The patient was a male, aged sixty-five years. Three of his brothers and sisters died insane, two of them by suicide. For the past two years he has been gradually developing melancholia, recently becoming rapidly worse. He was very restless, sleepless, unmanageable, wandering about the house, talking wildly and excitedly. Pending his removal to an asylum, Dr. S. advised the administration of one-fiftieth grain of crystallized hyoscyamia, to be given night and morning. This produced sleep at night, and rendered the patient quiet and manageable during the day, to the great relief of the family and his own comfort.

Observations on Pertussis.—In the *American Journal of Obstetrics*, April, 1881, Dr. S. Henry Dessau has presented the results of his experience during the past ten years in relation to pertussis. These observations are based on an analysis of three hundred and sixty-one cases, and from them it is observed that the disease attacks children from one to five years of age more frequently than at any other period of life. In regard to the season of the year when pertussis is most prevalent, it would appear that the summer and fall months are specially selected. A continuous rise of temperature, moderate in degree, lasting a week or more, was observed as an early symptom. This fact, taken in connection with a cough, occurring in frequent and short paroxysms, without the physical signs of bronchitis, he justly regards as another of the most certain early indications of pertussis. The value of the sublingeal ulcer as an early diagnostic sign is not thought to be great. In twenty-seven cases in which it was observed, the earliest date of its detection was on the fourth day of the whoop. According to Dr. Dessau's experience, the ulcer does not appear prior to the development of the spasmodic stage of the cough. His observations in the treatment have led him to believe that mild cases will end in a short space of time, under any kind of treatment, while in severe cases it is often a difficult matter to find any remedy that will mitigate the severity of the paroxysms and reduce their frequency, and none will shorten the duration of the disease to any marked degree. Chloral and bromide of potassium, in combination, while they undoubtedly moderate the severity of the paroxysms, and also reduce their frequency, do not exert any great influence in shortening the average duration of the disease. The most frequent complication was found to be catarrhal pneumonia. When bronchitis is present as a complication, it may readily be understood that the danger of collapse of air-vesicles is rendered immensely greater, and catarrhal pneumonia may almost certainly be expected. The gravity of catarrhal pneumonia as a complication of pertussis may be inferred, when it is considered that out of ten deaths from all causes, four were from this complication in a total of eleven cases treated.

Chronic Copper-Poisoning.—Dr. Gillespie (*Medical Times*, April 23, 1881) reports an instance of copper-poisoning which is of some interest, because the accident occurred to an employee in a department of the useful arts, the patient pursuing her ordinary avocation at the time. It also exhibits the value of a common precaution, viz.: wearing a sponge before the mouth. The patient was a young woman, who had been employed in a lithographic establishment, and her business was to gild the lithographs with a bronze powder largely composed of metallic copper. Neglecting to wear a sponge over her mouth, as the others did, her throat after a few days became sore, and she was taken with a severe cough. Finally, a few days before admission to the hospital, she was attacked with pain in the abdomen and vomiting, without diarrhœa, the bowels, on the contrary, being constipated. After the first day vomiting ceased. Upon admission she was found to be anæmic, and there was a bronze discoloration of the face and hands. The hair was dry, the abdomen greatly distended, and there was pain referred to the region of the umbilicus. Neither teeth nor gums presented any appearance of the green line said to be present by Clapton, but a faint purple discoloration of the gums, as described by Sir D. Corrigan, was seen. The sleeves of the underclothing were stained green. Headache and vertigo, with muscæ volitantes, were prominent symptoms. Examination of the urine failed to show the presence of copper. The fæces, when first voided, were of a greenish hue, but, on exposure to the air, became dark red.

A cure followed the liberal use of magnesia and milk.

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MENTAL STRAIN IN SCHOOL CHILDREN.

THE death, recently, of a scholar of one of our public schools from alleged mental strain, has given rise to considerable discussion in the daily papers regarding the pernicious effects of the present cramming system so commonly adopted by ambitious teachers. Although it requires considerable exercise of the imagination to suppose that cerebro-spinal meningitis was directly caused by overstudy in the case to which we refer, there is enough in the attending circumstances of the illness, the predisposing influences to the attack, and the previously exhausted condition of the lad, in consequence of overwork at school, to point a useful moral for misguided educators.

The medical profession have long ago come to the conclusion that growing children, above all others, are most liable to injury from the present forcing system. Particularly is this the case with such as attend our public schools. The teachers of the latter, with a natural desire to show the best results of their work, are notoriously strict and exacting in the work required of the pupils. It is safe to say that the amount of labor required of the scholar is, as a rule, altogether out of proportion to his strength. The ambitious child who is able to keep up with his class and secure the usual rapid promotions to higher grades has very little time left for the requisite sleep, much less for recreation. Add to the labor of hard tasks the forced confinement in ill-ventilated rooms, the continuous strain of recitations following in quick succession, and the anxiety against failure and reprimand from the teacher, there is no wonder that the scholars are placed in the worst possible condition for healthy mental effort. Nearly the whole period of actual school attendance is occupied by the recitation of tasks which must be learned during what should be play-hours at home. The latter are oftentimes not only sacrificed to extra mental labor, but the studies extend far into the night, and many of the hours which should be given to sleep are occupied in hard and exhausting mental effort. Of course, in many instances, when the pupil can by mere strength of constitution withstand the strain, brilliant scholarship results, and the teachers receive the credit due to trainers in other and humbler walks of life. But the truism that infant philosophers make adult fools still holds good, and is still exemplified in the history of the premature decay of many an otherwise promising lad.

The evil at the bottom of the present system is the want of appreciation on the part of teachers as to what should constitute education. The best results are obtained by leading out the mental faculties rather than forcing them out—the creation of a mental appetite for study rather than the crowding of the mental digestion up to an exalted and arbitrary standard. The true secret of avoiding mental strain is to give light tasks and have them well mastered; to bring out the latent powers of the mind by the proper development of interest in the actual work in hand.

Very many teachers, with the best intentions toward their pupils, entirely lose sight of this requisite for educational advancement. Particularly is this the case with those who hold positions in our public schools. Not only is it impossible by the present system of wholesale teaching to meet the requirements of individual pupils, but the standard of requirements are too high and too absolute to meet the wants of even a goodly majority of the scholars. Besides this, the most uninteresting studies are forced upon them, the proper mastery of which requires careful and mature training. Take, for instance, chemistry, botany, physiology, and advanced physics, which form parts of the ordinary school curriculum of these mere children. The fear of failure, the inevitable penalties, so dreadful to the sensitive scholar, which are inflicted by the unthinking teacher, the necessary effort to keep up with the class, and the consequent continual worry which is necessary to such an end, has an effect upon the mind and body of the child which every physician is able to appreciate and which every instructor should properly understand.

It is not necessary here to refer to the influences of bad hygienic surroundings upon the pupils in our public schools—the lack of ventilation, the imperfect light, the number of hours spent in the school-room, the short time allowed for recess. These are matters concerning which much has been said by the profession, and against which many protests have been made, but with very little avail. Our present purpose, however, is to protest against a system of education which, if persistently carried out, must end in the mental ruin of many a promising pupil, and

which must inevitably defeat itself in the premature mental decay which it so directly and so inevitably invites. Let us have fewer studies in our schools, shorter lessons, more recreation, less severe discipline, and less ambitious teachers.

Laziness and apparent stupidity in a scholar are ofttimes safeguards against overcrowding and mental strain. The balky period in school-life is too frequently induced by overloading. If the lessons are not mastered at that time the physical stamina is at least preserved. A writer in a recent issue of the *Post* alluded, in a forcible manner, to the necessity of making allowance for these seeming defects in a scholar's mental constitution by properly considering the demands of the growing period.

It is well known that the stupid, rollicking lad turns out the brightest scholar in the end, and that the proverbially bad boy at school, as a rule, makes the accomplished and respectable member of society. This understanding of the physical requirements of the pupil lies at the bottom of the best systems of mental training. The late Dr. Seguin, whose long experience in the training of idiots enabled him to use to advantage the smallest amounts of mental and physical forces understood, perhaps more perfectly than any other educator, how to complement one requirement with the other. His astonishing results are now matters of history. It would be well for our present and future generations if the principles which he so triumphantly vindicated during his lifetime were properly understood and duly appreciated by all engaged in teaching. We maintain that the best results can be obtained by studying the inclinations of the scholars, by appreciating the demands of their physical systems during all periods of their pupilage, and weighing them in the balance of that common sense which we would exercise toward ordinary animals in training for future usefulness.

The editor of the *Rondout Freeman*, in referring to the article in the *Post* already noted, brings out a point evidently from his own experience, which has served to make its due impression upon him, and which may have a tendency to explain one reason for his success as a leading journalist. At all events, it shows in a striking manner how well his teacher understood some of the many requirements of her scholars.

"We recall a dear old teacher of blessed memory, who, now that we think of it, must have understood the principle under discussion. She was a rigid disciplinarian in all things but one—she let her pupils sleep. The trustees remonstrated, but she said a few words to them; what they were we do not know, but she set the subject of body vs. brain before them as clearly as the *Post* has done, for she came off victor and the sleeping went on. She kept the school so still that anybody could sleep. When the little heads began to nod she stepped more softly or settled down into her uncushioned chair. There was one little girl, barefooted in summer, and always sparsely clad, whom she would reverently cover with her own shawl when she stretched herself each afternoon for a nap upon the level side of a slab bench. When the awakening took place she was always ready with a word of incident or illustration to recall the interest of the rested little ones to their studies, and the lessons seemed easy and delightful then. We think she must have understood the whole subject that the *Post* writer takes so much pains to elucidate, for she had been a mother herself, and her own boy, a hard student, had died during school-term. Teachers must be more merciful nowadays than they were then, for she was the only one we ever knew who appeared to think more of the comfort of the children than of persuading their parents that they were making brilliant progress."

NEW SANITARY LAWS OF NEW YORK STATE.

Not only the State Board of Health, but every local board and health officer is to be congratulated upon the improvements that have been made in the public health laws by the New York Legislature in 1881.

The adulteration act and the safety-standard oil-test act we have mentioned in another column. We here present a few points relating to the general Health Law as amended by Chapter 431 of the present Session Laws. The old laws of 1850, as amended in subsequent years, had failed to make the sanitary organization and service of local boards of health sufficiently definite and obligatory. The several laws relating to vaccination, to the registry of vital statistics and the proceedings against nuisances remained practically inoperative. The State Board of Health succeeded in awakening numerous local boards to their duties and in applying the provisions of the act of 1860 for protecting school-children by vaccination; but in its first year's experience the State Board seems to have found that the effectual action of local boards, their timely response to notices of needed official acts, and their need of a recognized responsibility for the supervision and enforcement of the registration of vital statistics, has led to such an amendment of the general health laws as will, it is hoped, secure these ends.

This amendatory act provides that the Board of Health in every city in the State of New York (Brooklyn, New York, Yonkers, and Buffalo being excepted, as they are already provided with small appointed boards) shall consist of six persons who are not members of the common council, appointed as follows: Two for one year; two for two years; two for three years (one of whom at least shall be a competent physician). The mayor to be a member *ex-officio* and president of the board.

Every village board of trustees shall appoint,

once in each year, a board of health, of not less than three, nor more than seven persons (who shall not be village trustees). Every township shall once in each year organize its board of health, consisting of supervisors, town clerk, justices of the peace, and a citizen whom they shall elect.

Thus three classes of local boards of health are provided and established. Each of these boards is required to appoint a competent physician, not a member of the board, to be health officer.

In order to secure prompt and necessary action by town boards of health (of which there will be upwards of nine hundred in the State) it is made the duty of the State Board of Health (or its president and secretary when the board is not in session) to notify the supervisor and other members of the local board of any cause and necessity for special action, if such action has not already been ordered; also to cause any unfilled vacancy and any dead-lock in such a board to be temporarily provided for by the nearest county judge.

Ample authority and specific obligation of the local board are conferred by this act to adopt any necessary sanitary measures when danger to the public health is impending; to provide for vaccination, and even to offer it gratuitously whenever and wherever necessary, to have supervision of registration of deaths, diseases, and causes of death, and the findings of coroners' juries; also to designate and regulate the permits and other sanitary rules relating to the burial of the dead, to "supervise and make complete the registration of births, deaths, and marriages within the limits of its jurisdiction." The registration fees are to be charged against the towns or municipalities concerned, and are not to exceed fifty cents for each completely verified record.

The autonomy and entire independence of village health governments are provided for, and, under section 9, townships are relieved from bearing any part of the burden of village sanitation and official service, while each incorporated village is in like manner independent of the townships as soon as its sanitary government is organized.

Thus a mutual relationship of interest is established between local boards of health and the State board, and the prudent principle of least interference consistent with the general public welfare secured.

The Free System at Dispensaries.—The plan of obliging dispensary patients to pay a small sum for the medicines given them has just been adopted by the Northern Dispensary. This plan is now adopted by all the six large dispensaries of the city, except the Northwestern. The fee charged is ten cents, and the per cent. of those who cannot pay varies from five at the New York Dispensary to twenty-five at Demilt Dispensary. The rule is thought to have some beneficial effect in lessening the number of "loungers" and persons able to pay a doctor.

Reviews and Notices of Books.

The Medical Register of New York, New Jersey, and Connecticut, for the Year commencing June 1, 1881. Published under the supervision of the New York Medico-Historical Society. William T. White, M.D., editor. New York: G. P. Putnam's Sons. Vol. xix.

This indispensable volume, with commendable promptitude, makes its appearance in all the trimness of clear, legible type. The preface informs us that there are registered the names of 5,674 physicians, accounted for as follows: New York State, 2,565; New Jersey, 665; Connecticut, 449; New York City, 1,527; and Brooklyn, 468; all of whom claim allegiance to the regular school of medicine. The subject-matter is well condensed and arranged, the reasonable expectations of the profession having been in the main anticipated. Dr. John Shrady continues his "Contributions to the Medical History of the City of New York," which so far have not extended beyond the British occupation. These, although somewhat given to detail and occasional repetitions, are nevertheless interesting. Prof. Frederick Hyde, in a like historical vein, follows with "A Sketch of the Fairfield Medical College; or, College of Physicians and Surgeons of the Western District of the State of New York, Fairfield, Herkimer Co.; and of the Geneva Medical College, Geneva, Ontario Co.; while Dr. E. A. Davis gracefully urges the claims of the late "New York Medical College" upon the gratitude of the professional community. In both of these last, official lists of officers and graduates are published. Dr. L. S. Horton, the diarist of the society, in his "Chronological Record" for the year, has performed his task with scrupulous care, omitting nothing, so far as we have observed, deserving of mention.

Meteorological and statistical tables add not a little to the permanent value of the work.

Anomalies of Perspiration. By J. H. Pooley, M.D. (reprinted from *Ohio Medical Recorder*), pp. 81. Columbus, O. 1881.

This reprint makes a pamphlet of considerable size, but the contents justify the length to which the author has gone in discussion of the subject. It is a very complete collection of the facts bearing on the anomalies of perspiration, and shows evidence of much labor and research, as well as clinical knowledge, on the part of the author.

Consumption as a Contagious Disease: with its Treatment according to the New Views; to which is Prefixed a Translation of Professor Cohnheim's Die Tuberkulose vom Standpunkte der Infections-Lehre. By Daniel Henry Cullimore, pp. 124. London: Baillière, Tindall & Cox. 1881. 8vo.

Not long ago we reviewed a book upon this same subject, by Dr. Clapp, of Boston. Dr. Clapp's work consisted mainly of a number of clinical histories, with deductions from them. Dr. Cullimore has attacked the subject more on its theoretical side, and argues from pathological grounds the probability that phthisis is a specific contagious disease. He prefaces his argument with Professor Cohnheim's monograph, which is now quite familiar to English readers. To this he adds his own facts and theories, and comes, finally, to this conclusion: Phthisis is a

specific infectious disease. Its special germ is one capable of reproducing itself in the animal system. "It is ever present, though in varying quantities, in the crowded haunts of men; exhibiting by traits, such as freshness and others, which we do not well understand, considerable mutability as to its vitality and generative power; and tracing its ancestry back to a period of antiquity long anterior to that of syphilis." This agent is always present in persons of a "phthisical habit," but it may remain localized or latent until developed by special causes. It is probably of a parasitic nature, and is, no doubt, capable of being destroyed by heat and many chemical and antiseptic reagents.

The author's views are practically only an enlargement of those of Cohnheim. And Cohnheim's views, we may say, as given in his monograph, are very poorly substantiated. Indeed, if they were put forth by any less eminent authority, they would have attracted attention, if at all, only on account of their novelty.

For our part, we do not at all believe in these zymotic theories of phthisis, and perhaps we are, on this account, hardly competent to do Dr. Cullimore justice. He has, it seems to us, made a specious and interesting plea for his peculiar views, and that is all. The ordinary cases of phthisis pulmonalis we believe to be originally only cases of a catarrhal inflammation set up generally in constitutions having the peculiarity known as "scrofulous." At least the inflammation is a "scrofulous" one. Tuberculosis is an entirely different thing. It may seriously or slightly complicate the regular phthisical changes, and that is all. The ordinary catarrhal phthisis has never been produced directly by the inoculation of a specific virus, so far as we have seen the evidence, and we do not believe it can be. The cases illustrating the supposed contagious character of the disease are comparatively very rare indeed. Tuberculosis may indeed be produced by inoculation. But that means only that the injection of certain substances can easily produce a nodular lymphangitis, which in some persons leads to serious or even fatal disturbances of nutrition in other parts. But there is nothing really specific, however, in the agents which produce even this. It is analogous to producing embolism by injecting solid particles into the blood-vessels, or bronchitis by driving irritating vapors into the lungs. It is bad for a healthy and a phthisical person to sleep together; but so it is for the healthy and unhealthy, no matter what the disease.

Books of the kind before us are useful, no doubt, from the stimulation they give to hygiene, pathology, and therapeutics. But we fail to see how any one can be convinced that their arguments in any degree prove the theory they all enunciate.

Experimental Researches on the Temperature of the Head. By J. S. Lombard, M.D. I. On some Points Relating to the Temperature of the Head. II. Effect of Voluntary Muscular Contractions. III. Influence of the Temperature of the Air. London: H. K. Lewis. 1881.

The great diversity of results obtained by experimenters in studying the temperature of the head, has, very naturally, led conservative people to think that there must be a great deal of what Mr. Mantalini would call "demnition nonsense" about it. This view is, to some extent, corroborated by the very extended and careful experiments recorded in the work before us. Dr. Lombard's results are valuable, but are so chiefly in a negative way. In his first chapter he deals with the subject of the normal temperature of the two sides of the head. His experiments, which are numerous, and are made both with thermometers and the thermo-electric apparatus, do not confirm the view of many previous observers, that the left side is uniformly hotter than the right. Their absolute temperatures vary, and vary independently, but sometimes one side is higher, sometimes the other, and no definite law can yet be established. The cause of the variations are thought to be partly intracranial, partly peripheral.

Dr. Lombard repeated the experiments of Dr. R. W. Amidon upon the effect of willed movements on cranial temperatures. He failed, as have Berte and Franck, to obtain any confirmation of Amidon's results. His experiments were eighty-one in number, and conducted mostly with the thermo-electric apparatus. He found, however, that there did seem to be some changes in the cranial temperature following voluntary muscular movements, but in only four per cent. of cases were there rises of temperature.

A series of experiments were conducted by the author to discover the influence of changes in the temperature of the air upon the temperature of the head. He found that changes in the former medium had a tolerably uniform, though slight influence upon the cranial temperature.

Dr. Lombard's experiments show that we cannot as yet infer much from changes discovered in the temperature of the head.

Practical Points on the Selection and Use of the Microscope. By John Phin. Third edition. New York. 1881.

This is a handy little volume, which has met with a well-deserved success in the field it occupies. Intended for beginners only, and therefore elementary, it gives the sort of useful information that physician, chemist or botanist needs who is looking about for a microscope to use in his particular department. Attention is given chiefly to the microscope itself, its parts and accessories, while enough illustrations accompany the text to render the matter clearly intelligible. The uses of the instrument, and the methods of preparing and mounting objects are also duly set forth. The book occupies a field which now belongs exclusively to this special topic, for histological, chemical and botanical text-books are already so much crowded, that they cannot give proper space to such matters. The book may be safely recommended to any one who is anxious to buy a microscope, and is desirous of acquainting himself rapidly with the sort of an instrument and the kind of adjuncts he needs for his works.

Lectures on the Practice of Medicine. By Francis Delafield, M.D. Adjunct Professor of Pathology and Practice of Medicine in the College of Physicians and Surgeons, etc. Phonographically Reported, Arranged and Published by M. Josiah Roberts, M.D., New York.

This octavo volume of three hundred and nine pages does not pretend to be a treatise upon the practice of medicine. Indeed, Dr. Roberts, who collected the material from Professor Delafield's oral lectures, assures us that the book was prepared for medical students chiefly. Simplicity and directness were therefore the great desiderata, and these qualities are certainly conspicuous, and as such are doubtless thoroughly appreciated by every medical student who is preparing himself for the final examination.

The material is arranged in the form of fifty-three lectures, which are devoted to inflammations, and affections of the brain and cord, pharynx, larynx, pleura, gastro-intestinal tract, liver, and kidneys. The subject of internal medicine is, therefore, far from being treated exhaustively, after the manner usually adopted in the standard books on practice of medicine that students are recommended to buy. We hope accordingly that this volume is but the first of a series; or, at any rate, that Dr. Roberts will see fit to give us an additional course of lectures under the same general form.

Meanwhile, it may be said that that the manner of presenting these topics will not only gratify the college student, but the practitioner, who often is glad enough to be ranked with the medical student, if only he can get access to material that is concise and well digested. It is well for us at the present time to have the sum both of our knowledge and of our ignorance stated in plain language, and this Dr. Delafield does with great frankness and an evident desire to be thoroughly impartial. Such rare opportunities for studying the pathological and clinical sides of medicine as the author has had and diligently employed, give his teachings the greatest possible force—that of experience.

Reports of Societies.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, March 8, 1881.

DR. H. B. SANDS, PRESIDENT, IN THE CHAIR.

DR. H. GULEKE presented a patient whose history was included in the communication he made to the society

NASO-PHARYNGEAL TUMORS.

The following is an abstract of the three cases reported:

CASE I.—William K——, aged seventeen years [presented to the society], has suffered for nearly a year from an impediment to breathing. The right side of his nose was nearly closed, and there was some catarrhal discharge. When moving, or when asleep, the boy was obliged to keep his mouth open. Unable to pronounce the nasal letters. Hearing unaffected. No headache. Examination by sunlight, through the aperture of the right nostril, revealed far back a bright red tumor with smooth surface. The fauces were swollen, red, and covered with some mucus. Examination with the finger revealed that the pharynx was filled, on the right side especially, with a number of small and soft bodies, and a larger one that sprang from the upper wall and the outside of the pharynx. Free hemorrhage followed the examination, but it soon ceased. No clue to the origin of the disease could be obtained. The patient had occasionally had bleeding from that region, but not sufficient to render him anæmic, and he was well developed. Medical treatment had not afforded any benefit.

On the 17th of January, Dr. Guleke applied the galvano-caustic loop and removed several of the small growths and a portion of the large one. After the operation the patient could force more air through the nostril than previously. Dr. Sessel examined microscopically the portions removed, and reported that they were adenoid vegetations. Dr. Guleke had gained a little more space by two more operations with the loop, but he finally regarded the instrument as inapplicable in that case, because it slipped from the cone-shaped vegetation before it had time to burn a groove in the tumor.

CASE II.—A. G——, aged fifteen years, was sent to him by Dr. Simrock in July, 1875. The boy was well developed, healthy-looking, but could not breathe through his nose. There was a slight discharge from the nose, and the patient complained of constant headache, especially on the left side, and had pain in the left orbit. His hearing was unimpaired. The fauces were swollen, and were thickly coated with greenish mucus. On examination with the finger a large, flat body was found just above the lower edge of the velum on the back wall of the pharynx, and a second tumor, softer, and more cone-shaped, closed the entrance to the left nostril. The history of the case shed no light upon the origin of the tumors. His speech was seriously affected.

On the 5th of August, 1875, Dr. Guleke, in the presence of the late Dr. Krackowizer and Dr. Simrock, removed with the galvano-caustic loop all of the first or lower tumor and the greater part of the second or upper one. He subsequently tried several times to remove the base of the upper tumor, but was unable to keep the loop in position properly. The tumor began to grow again, and he then scraped it off with a sharp spoon, and the disease had not returned.

CASE III.—A. K——, aged eight years, came to the German Dispensary, September 2, 1876. The boy was small for his age and pale, his eyes were dull and his mouth constantly open. His voice was without sound. His hearing was unaffected. Examination of the fauces revealed a tumor, over which the lower edge of the soft palate was stretched and pushed forward. The finger could enter only the naso-pharyngeal space upon both sides of the tumor. The galvano-caustic loop was applied at once, and the tumor completely removed, and there had been no recurrence of the disease. The attachment of the tumor was in the middle of the posterior wall of the pharynx.

Remarks.—The description of these growths, first given by Dr. William Meyer, corresponded with the conditions found in these cases; and even the absence of the most frequent symptom, the more or less aggravated conditions of the ear, Dr. Guleke thought, did not exclude them from Dr. Meyer's class of cases. Meyer had reported one hundred and seventy-five cases, of which about forty-five had no affection of the ear. The most constant symptoms seemed to be the inflamed and swollen condition of the fauces and palate, especially the posterior arches. Then followed the affection of the speech and the consequences of the impeded breathing. A very frequent complaint was the headache, which Meyer believed was caused by the pressure produced by the vegetations on the nerves of the roof of the pharynx. The affection of the ear was mainly caused by the position of the vegetation in the neighborhood of the Eustachian tube. The latter was the gravest among the symptoms, because of the liability to the development of serious disease of the middle ear. It seemed that chronic catarrh of the fauces was the most common cause of this affection, and climate the next. At least, the great number of cases which Meyer observed in Copenhagen spoke for its frequent occurrence in a cold and damp climate. It occurs most frequently between seven and fifteen years of age.

and rarely in persons over twenty-five years old. Meyer advised operation as soon as possible, before the muscles of the palate have lost their normal tonus, so as to prevent permanent impairment of speech. In operating, he avoided those vegetations that are situated under the mouth of the Eustachian tube, fearing that he might lacerate the musculus salpingopharyngæus. Dr. Guleke had not seen harm attend the use of the galvano-caustic loop, although Meyer objected to its use, because of the danger involved in operating in a place which cannot be seen; but he had been compelled to proceed slowly, and with his finger in the immediate neighborhood of the loop.

In response to questions, Dr. Guleke remarked that he proposed to remove what remained of the tumor in the patient presented by scraping it away either with a sharp spoon in a bent handle, or with a spoon arranged so that it could be slipped over the finger. These growths are not attached to the bones, may spring from any part of the pharyngeal wall, and are entirely distinct from ordinary mucous polypi.

The President referred to a case in St. Luke's Hospital, in which Dr. George A. Peters removed a naso-pharyngeal tumor, which was so large that it projected from one of the nostrils and nearly filled the other. The first examination led to the conclusion that it was a small-celled sarcoma, but subsequently it was proved that it was a fibroma. He thought that the tumors in Dr. Guleke's cases were of unusual size for simple vegetations.

Dr. Lange thought that the tumor in Dr. Guleke's patient was about as large as a small hen's egg. To his finger it gave the sensation of a tumor which had been covered with degenerated mucous membrane. Perhaps the growth itself originated in some deeper structure.

Dr. Peters said that it felt very much like the tumor which he removed at St. Luke's Hospital.

Dr. Guleke said that the tumors in his other cases were larger than that in the patient presented. He thought they corresponded to the description given by Meyer, who had observed flat ones three centimetres in thickness, and pendulous ones three or four centimetres in diameter.

Dr. Lange suggested that tumors of that size might disappear spontaneously.

Dr. Guleke thought that they would probably, and Meyer had stated that they doubtless would disappear after the age of twenty-five, but that they should not be allowed to remain, because of the liability to permanent impairment of hearing and speech.

Dr. McBurney remarked that he had seen adenoid growths in the upper and posterior part of the pharynx, but none of them had been larger than a small white bean. He had seen cases in which there were numerous growths, adenoid in character, but most of the tumors were very much smaller than those in Dr. Guleke's cases. He had treated several cases by pulling the small tumors off, and had seen them treated by the application of caustics.

Dr. E. L. Keyes referred to a case in which he supposed he had to deal with a simple mucous polypus that entirely filled one nostril, and caused bulging of the nasal bones, in a boy sixteen years of age. The mass presented at the nostril as a mucous polypus. After the patient was anæsthetized, he found that the growth was solid, and filled the entire right nostril posteriorly, and by conjoined manipulation with two fingers he succeeded in removing it. It consisted of two portions, one of which was about three-fourths of an inch in diameter, perfectly spherical, fleshy-looking, and from the end of this came a growth which exhibited the usual features of a mucous polypus. The more solid portion of the tumor was submitted to Dr. Heitzman for microscopical examination, who reported that it was an adenoma. The softer portion Dr. Keyes examined, and found it to be an unmistakable mucous polypus. The disease returned twice, and in each instance he removed the growth with the fingers. The patient at the last operation was about twenty-one years of age. He was of a strumous habit. His nose was permanently bulged on the affected side.

Dr. Guleke remarked that he had not seen any report of cases belonging to the class which he intended to describe, in which the tumor grew forward and occupied the nose.

Dr. Stimson recalled a microscopical examination which he made of the tumor first removed in Dr. Keyes' case, and recollected distinctly that he found nothing except fibrous tissue.

Dr. Briddon referred to a case in which he removed what he supposed was an ordinary mucous polypus. The patient had a fit of coughing, and threw out a tumor about three inches in length, with a very tender pedicle. To the end of it was attached a fibrous mass that had evidently grown from the superior meatus, turned around the vomer, and extended into the opposite nostril. It originated in the nasal fossa.

STRANGULATED INGUINAL HERNIA REDUCED EN MASSE—OPERATION—RECOVERY.

Dr. Erskine Mason narrated a case as follows: A man, aged fifty-five years, and single, gave a history of having first suffered from hernia in 1863, while in the army, and after lifting heavy weights. He had kept the hernia up part of the time with a pad and bandage, and lately had worn a truss, which was inefficient. On Saturday morning he was taken with diarrhœa, and after he had had three or four movements his hernia came down and he was unable to reduce it. He suffered great pain in the region of the hernia, went to the station-house, and from there was sent to Bellevue Hospital in an ambulance, where he arrived at about three o'clock in the afternoon. The house surgeon said that he was not at that time suffering from the symptoms of a strangulated hernia. On examination, however, an incomplete hernia was found in the right iliac region about the size of an orange, which he tried to reduce by taxis, but failed. The patient was then placed in a hot bath, where he remained thirty minutes, after which a hypodermic injection of morphia was given, when the house surgeon again tried taxis, as also did other members of the staff, and the manipulation was kept up for about fifteen minutes. The mass then began to recede at once from the inguinal canal, and at the same time the house surgeon noticed the development of a tumor of about the size of that to which taxis had just been applied, and dull upon percussion above and outside the internal ring. A bandage was applied, and a stimulating enema was given, which produced no movement from the bowels. On the following morning the man complained considerably of pain, and it was found that the hernia had again descended. Taxis was applied, and the tumor ascended as it had previously done, but vomiting supervened, pain returned and radiated over the abdomen. At five o'clock in the afternoon Dr. Mason saw the patient, whom he found much prostrated

and suffering from severe pain in the abdomen, which was somewhat tympanitic. He found a swelling in the region above the internal ring, with slight fulness in the inguinal canal, and by forcing the finger into the canal, and at the same time pressing upon the tumor from above, he could just reach the coil of intestine.

The patient was put under the influence of ether, and Dr. Mason proceeded to operate. The sac contained a good deal of fluid, but it did not have a bad odor. At the neck of the sac a small knuckle of intestine was found, which was quite congested. He divided the neck of the sac and then proceeded to press against the intestine, when he found that it did not recede into the abdominal cavity. He drew the intestine down, but could not push back the part which protruded. The finger was then swept around the intestine, and in the posterior part of the neck of the sac a rent was found, which had permitted the coil of intestine to escape into the subperitoneal tissue, from whence it was gently drawn and readily passed into the abdominal cavity. The edges of the sac were united with catgut sutures. No unpleasant symptoms had followed the operation. The incision was made directly upon the cord, and the inguinal canal was opened. A drainage-tube was placed to the outside, and about the neck of the sac. The method of closing the sac with catgut sutures was one adopted by Mr. Southam, who had reported in the last number of the *Lancet* six cases in which it had been practised successfully.

[At the stated meeting, held March 22, 1881, Dr. Mason reported that the patient made a rapid and satisfactory recovery.]

The President referred to a case of hernia that had been reduced *en masse*, in which he succeeded, after making an incision through the upper part of the scrotum, and upward as high as the external abdominal ring, in seizing the sac, which was at the far end of the inguinal canal, with vulsellum-forceps, and in causing the hernial tumor to redescend to the level of the scrotum. He then relieved the strangulation and reduced the hernia without injury to the aponeurosis of the oblique muscle. He was uncertain whether that could be done as a rule.

Dr. Mason referred to a case of femoral hernia, in which, after dividing the constriction, the sac and its contents slipped up, and then he pulled it down, opened the sac, and liberated the intestine.

Dr. Lange referred to a case of "reposition *en bloc*," made by the patient himself in the forcible attempt to reduce an incarcerated inguinal hernia. The inguinal canal was wide and completely empty. One could feel at the end of it a stretched band, representing, as shown during the operation, the spermatic cord, pulled upward and outward by the sac, which was laying in the retroperitoneal tissue a short distance above Poupart's ligament, and was slightly marked by an insignificant elevation of the abdominal wall above it. A longitudinal incision was made above Poupart's ligament, and it was found that the sac was pushed upward, making an acute angle at its attachment to the internal ring, the latter being displaced backward toward the peritoneal cavity, and allowing in this way the sac to slip in an upward direction behind the peritoneum. The sac was closed by suture and removed. The patient had a good and speedy recovery. Dr. Lange did not know whether or not the hernia had recurred. The patient had been advised to wear a truss for a larger hernia.

ACUTE SEPTICÆMIA—INFLUENCE OF GERMS IN THE PUTREFACTIVE PROCESS.

Dr. L. A. Stimson narrated a case as follows: A man, aged twenty-eight years, was brought to Bellevue Hospital last July, having fallen from the roof of a four-story building while asleep. There was evidence of injury of the spine in the lumbar region; there were two small, round wounds at corresponding points on each side of the internatal fold near its upper extremity; slight extravasation of blood in the left foot, and rupture of the sheath of the tendon of the tibialis posticus, allowing that tendon to slip forward. There was loss of sensibility on the outer side of the left leg, and it extended partly over the dorsum of the foot. On the fourth day, without previous complaint referable to that region, Dr. Stimson found deep emphysematous crackling in the swollen foot, about its inner side. The patient had had a chill; his temperature was 104° F. Immediate amputation was advised and accepted, and performed through the condyles of the femur. The patient died on the second or third day following.

Dissection showed that the foot and leg was infiltrated with thin, brown serum, having an extremely offensive odor.

The case was interesting, *first*, because of the supposed influence of germs in the production of septicæmia. It was a case in which putrefactive changes took place without the presence of an external wound.

Second, because two somewhat similar cases—acute septicæmia—had been reported quite recently before the Clinical Society in London, in which immediate amputation was performed in one, and in the other twenty-four hours after the development of the first symptoms. In the first case the patient recovered; the second terminated fatally.

In the discussion which followed, the principle of immediate amputation was laid down—that is, that in all cases of spreading gangrene, amputation should be performed immediately, without waiting even for consultation.

Dr. Lange remarked that the case reported by Dr. Stimson was interesting, because of the fact that putrefactive changes occurred in so short a time without external wound. But the absence of an external wound does not exclude the presence of bacteria. It is quite common to find bacteria in large quantity in places far from the external surface, as, for instance, in acute osteo-myelitis. In order to be sure about the absence of germs, microscopical examination could not well be dispensed with.

Dr. Stimson thought that if bacteria could reach the inner parts of the body without external wound, the theory which claimed that the grave complications of surgical wounds were due solely to their entrance from without, was too exclusive.

Dr. Weir referred to two cases which he thought might throw some light upon the subject. One was a double compound fracture of the ankle-joint. He attempted to save the limb, and adopted Lister's method. The man did well for a time. Suddenly one leg became gangrenous, while the other was doing well, and the patient died. Prior to death the discharges were examined microscopically, and no evidence whatever of the existence of organisms was found.

The second case occurred in the New York Hospital. It was also a compound fracture of the leg in which gangrene occurred while under antiseptic treatment, but no bacteria could be found in the discharges.

Dr. Stimson thought that when the nutrition of the cellular elements of tissue were modified by a partial loss of vitality, or by changes in the vascular supply or innervation, the catalytic process carried on by them in the liquid in which they are bathed may be so modified as to result in the production of substances which are themselves poisonous.

A reason by analogy for this supposition is found in vinous fermentation. This is ordinarily due to the growth and multiplication of a germ; but it is also known that under certain circumstances, such as the retention of a grape upon the vine after complete maturity, vinous fermentation may take place within the fruit by the continuing life of the cells of the fruit itself, without the aid of the specific germ. In like manner it is not unreasonable to suppose the cell of animal tissue, by continuing to live after the normal conditions of its existence have been modified, may be expected to have a correspondingly modified action.

Dr. Lange said that in that case alcohol would be found in the grape.

Dr. Stimson said that it had been found, as shown by the experiments of Pasteur and two of his associates some eight or ten years ago.

BLOOD FROM BENEATH THE PERMANENT ANTISEPTIC-DRESSING.

Dr. F. Lange presented a specimen of blood, with the following history. It was removed from a patient who two weeks ago submitted to amputation of the breast and removal of the contents of the axilla. The permanent antiseptic-dressing was applied. On account of the extremely nervous condition of the patient, he removed the dressing on the fifth day, when it was found that the wound had healed by first intention. In attempting to remove the dressing one of the flaps was raised, and hemorrhage occurred beneath it. The blood underwent the same changes as occur in cases of subcutaneous injury, but considerable remained, which was aspirated *six* or *seven* days afterward. To ascertain its character, about two ounces of a dark, entirely fluid blood, were withdrawn, which was examined microscopically, and found to contain living bacteria. The number of the white blood-corpuscles was not increased, Some of the blood-globules, both red and white, were undergoing disintegration. A number of the red ones were almost colorless, hardly visible; in the majority they were stellated and shrivelled.

Dr. Lange thought that the bacteria entered during the operation and remained, but, because of the antiseptic measures, were of such low vitality that they were unable to act upon this mass of blood. The patient has remained entirely well.

IDIOPATHIC PYOPNEUMOTHORAX.

The President asked if any of the members had examined microscopically the fluid withdrawn from the chest in cases of idiopathic pyopneumothorax. A patient, with phthisical history, came under his care at Roosevelt Hospital, who entered for injury of the elbow, and, on examination of the chest, the usual signs of pneumothorax, with effusion, were discovered. Amphoric breathing and succussion were well marked. Ten days ago he was aspirated, and seventy ounces of fluid removed, which was free from evidence of putrefaction. Nine days afterward he was again tapped, and sixty ounces of yellowish, thin, purulent, odorless serum were withdrawn, which Dr. Sands examined very carefully with the microscope without detecting the presence of bacteria. Some of the pus-corpuscles were partly disintegrated. He asked whether it was the rule in idiopathic pyopneumothorax for the fluid withdrawn from the chest to be free from odor? He had an impression that idiopathic pneumothorax, with empyema, was often marked by the absence of putrefaction in the effusion, the explanation being that the lung tissue through which the air has passed had filtered the air, and thereby prevented the entrance of germs.

The President further remarked that it was difficult to understand why, if the perforation of the lung no longer existed, and communication with the exterior had ceased, pneumothorax should continue at all; because in pneumothorax due to a penetrating wound of the pleura, the air frequently disappears in a very short time, provided the wound is carefully closed. It might be, however, that in cases of empyema the pleural surfaces were so altered as to have lost their absorbing power.

THIRTY-FIRST ANNUAL MEETING OF THE INDIANA STATE MEDICAL SOCIETY.

Held at Indianapolis, May 17, 18, *and* 19, 1881.

The meeting was called to order by the President, Dr. Thomas B. Harvey, about three hundred delegates being present.

On the first day, Dr. William Commons, of Union City, read a paper on "Trichinosis," with a report of a case which came under his observation. Dr. J. H. Alexander, of Clifty, also reported two cases of trichinosis which he had attended.

A paper on "Cretaceous Biliary Fistula," by Dr. R. A. Davis, was read by the Secretary.

Dr. L. D. Waterman, of Indianapolis, next read a paper on "The Cold Bath in Pneumonitis," which proved of much interest to all present.

Dr. R. E. Houghton, of Indianapolis, read a paper on "Amputation of the Knee-Joint: An Effort to Determine its Value Relatively, its Defects and its Failures, in the Light of the Experience of Surgeons."

Majority and minority reports were presented by the Committee on Medical Legislation. One advocated the Edwin's bill, the other thought that the Young bill would answer for the present.

A report on the State Health Commission was presented by Dr. Thad. M. Stevens, and a report on Sanitary Progress by Dr. J. W. Crompton.

In the evening the President, Dr. Harvey, delivered an address on "The Advance of Medicine." Referring to the subject of medical education and legislation, he made the following happy hit: "If the law-making element fails in its duty to make provisions for the unprincipled and ignorant practitioners who infest every community and extort money from the sick and suffering, we may, at least, gain a small degree of consolation from M. Raimon's metempsychosis, according to which the souls of ignorant and unworthy practitioners pass into the animals upon which vivisection is performed. Probably the Indiana Legislature has concluded to rely upon this mode of punishment. But if this solution of the question is accepted, we will have a demand for more medical colleges to use up the material."

On the second day, Dr. W. F. Cody, of Lafayette, read an interesting paper on "Remarkable Gunshot Wounds."

Dr. Hibbard, of the Committee on Necrology,

read the annual report, showing fourteen deaths in the profession during the past year.

A paper on "Quinine as a Tonic" was read by Dr. John S. Dare, of Bloomington.

Dr. E. W. King, of New Albany, read a paper at some length on the subject of "Placenta Prævia," citing the results of one hundred and twenty-eight cases which had come under his observation.

A paper was read by Dr. T. Wertz, of Jasper, upon the subject of "Nasal Catarrh." Dr. L. C. Johnson, of Fountain City, read a paper at great length upon "The Study of Infectious Diseases," which was regarded as a very able paper.

The Nominating Committee reported the following officers of the society for the ensuing year:

President.—Dr. Marshal Sexton, of Rushville.

Vice-President.—Dr. Flavius J. Van Vorhis, of Indianapolis.

Secretary.—Dr. E. S. Elder, of Indianapolis.

Assistant Secretary.—Dr. G. W. Burton, of Mitchell.

Treasurer.—Dr. G. W. H. Kemper, of Mundie.

Librarian.—Dr. N. L. Todd, of Indianapolis.

Various reports were made and approved.

A new Committee on Medical Legislation was appointed.

Resolutions were adopted to the effect "That it is not the sense of this society that we have observed deleterious effects to the public health from the use of cooked pork; the disease called hog-cholera, and the disease called trichinæ is seldom met with in this country."

Correspondence.

PHARMACEUTICAL TRADE-MARKS.

To the Editor of The Medical Record.

Sir: At the last meeting of the American Medical Association, held in Richmond, Dr. Dunster offered the following resolution, which was referred by the Section on the "Practice of Medicine and Materia Medica."

"*Resolved*, That the spirit of the code of ethics forbids a physician from prescribing a remedy controlled by a patent, copyright, or trade-mark. This, however, shall except a patent upon a process of manufacture or machinery, provided said patent be not used to prevent legitimate competition; and shall also except use of a trade-mark used to designate a brand of manufacture, provided that the article so marked be accompanied by working formulæ, duly sworn to, and also by a technical, scientific name under which any one can compete in manufacture of the same."

This was offered, so it is claimed, to harmonize antagonism between pharmacists, and to so regulate the prescriptions of physicians as to be in accord with the written or unwritten spirit and letter of the code. Until this shall be reported by the judiciary council and acted upon by the whole body of delegates, it cannot become an ordinance, so that it is well to pause and look into the full meaning and intent of the clause. Sincerely it is to be hoped that this may not be a *ruse de guerre* to involve the physician and pharmacist in a warfare as unsatisfactory as it is unworthy. As professional men, we have little to do with the struggles of rival manufacturers; and it is beyond the pale of legitimate relationship for us to appear as trade reformers or champions of individuals. The practice of medicine is supposed to be absolutely liberal; men's hands and consciences are not to be bound when a human life hangs in the balance, and it is a matter of entire indifference to me whether individual manufacturers protect their names and processes by trade-marks to prevent imitation and fraud, so long as experience teaches me that the products of their laboratories are reliable; that they bring about desired results; and that the formulæ all appear upon the labels. No possible ordinance can restrain the legitimate use of these recent advances in elegant pharmacy; and no action is either just, logical, or of value, that seeks to engage the physician in an open warfare with the pharmacist. As merchants they act as they see proper, and it would be ludicrously puerile to enact a law to regulate trade, which law, from lack of inherent cohesion, would necessarily be inoperative. Again, the ultimate adoption of any such ordinance would be an insult to the very best members of the profession both here and in Europe, who have not hesitated to indorse heartily, above their own signatures, the value of certain agents protected by trade-marks. The trade-mark is a guarantee of good faith; it is the property of the manufacturer, who uses it to protect the reputation of his house. It seems to be almost a preconcerted arrangement to couple trade-marks and patent medicines. We are all opposed to nostrums, but when a manufacturer has a monogram, or symbol, or trade-mark to prevent imitation or fraud, so long as the composition and origin are expressed, there cannot be any valid objection to the use of such preparations. This resolution is one of great interest. It casts a slur upon every physician who has indorsed any trade-mark preparation; upon editors who publish the announcement of the manufacturers; and upon all the manufacturers themselves. If the resolution is to be adopted, let it be general, and let the following amendment be tacked on:

"*Resolved*, That the Fejee Island remedies—tonga, condurango, chaulmoogra oil, manaca, Jamaica dogwood, and such remedies—shall be comprised in the same category as patent medicines, and that physicians will indorse nothing in writing that is unofficinal."

I do not yet go so far as to aver that the original resolution was in the interest of any one manufacturer, or that it emanated from any one firm, though this is the general impression conveyed, and one which it bears upon its face, when the system of winning opinions that was practised at Richmond is duly weighed and considered. Certain it is that it only widens the breach between manufacturers, and embroils the practitioner in an unenviable encounter. It would be wise to let the pharmacist alone, and to allow the fullest liberty to the physician to prescribe or not such remedies the formulæ of which are given upon the label.

If the preparations made by pharmacists are discovered to be so dastardly, will editors and publishers continue to fill their pages with such advertisements?

Horatio R. Bigelow, M.D.

1502 14th Street N.W., Washington, D. C.

Paying Medical Experts.—The Rhode Island Medical Society, at its late session, adopted a resolution declaring that its members will refuse to give expert testimony when summoned as witnesses in court by parties other than the State, unless suitably compensated therefor.

THE LATE MEETING OF THE IOWA MEDICAL SOCIETY.

To the Editor of The Medical Record.

Sir: The fact is indisputable that the general feeling of those attending the late meeting of the Iowa Medical Society was one of disappointment and regret. This has no application to the social features of the meeting, of which nothing but commendation is proper or true. To designate or pronounce upon the sum total of practical scientific results accruing from the occasion, is neither pleasant or easy. The paucity of original or meritorious papers and discussions was, in view of the situation, both humiliating and disgraceful. Could our strictures be solely negative, a decided amount of chagrin might be spared us; but it should be stated that an infliction was borne in listening to certain papers that few men of mature years are liable to submit to a second time. With the professional growth, vigor, and individual enthusiasm of which Iowa may and does properly boast, a widely different state of affairs should exist. That some have come to expect or anticipate nothing better from these meetings, is no evidence that improvement is impracticable, much less impossible. A comparison with some sister State societies, shows that failure is not only unnecessary, but actually reprehensible, and the more so in that the fault lies at our own doors. But one incentive appeared to rule the leading spirits of the meeting, viz.: to hurry through the formal business of the society, and adjourn. Less than one full day was devoted to the ostensible object of the meeting. Talent, like capital, is often timid, and not a few who came with carefully prepared papers and well-digested cases, had the disposition to claim any part of the scant time devoted to this purpose. The evidence of clique influence was clearly observable. The official slate was duly prepared, while the old college rivalry mustered its respective champions and followers, ready upon occasion for battle and blood. Per contra, there were some excellent papers read, not to mention the able address of the accomplished president of the society. The criticism of the Record upon the transactions of a former meeting, allusion to which was made by the president in his address, found a fitting verification in the outcome of the present occasion. The plain truth is that medicine in Iowa has outgrown its short clothes, and no longer needs the tender nursing of three or four gentlemen, who, through the State society, have so long had it in charge. The remedy indicated, and mode of application, is not the object of this communication, but rather a desire to have it understood that we are by no means blind to the situation, and to predict the decline of what should be a vigorous and progressive institution unless a remedy is promptly applied.

Yours respectfully, Member.

PILOCARPINE IN DIPHTHERIA.

To the Editor of The Medical Record.

Dear Sir: There are fashions in everything, even in medicine. The latest fashion in medicine seems to be the use of pilocarpine in the treatment of diphtheria. We have had glowing accounts of the success of a Dr. Guttman (not Dr. Paul Guttman, the author), and, following his example, several physicians have reported from one to three cases each, that have recovered from diphtheria when treated with pilocarpine.

Without attempting to pass judgment upon the merits of pilocarpine as a remedy in diphtheria, I think this much may be said with propriety: First, that not much is known of Dr. Guttman, or the character of the epidemic of diphtheria in which he used pilocarpine with such success; second, that the treatment of one or two or three cases with success by this method (see the communications on this subject in the late numbers of this journal) are not enough to establish the claims put forward for the use of pilocarpine; third, that this plan of treatment neglects a most important measure of treatment that has been proved to be of great value, namely, vigorous local treatment; and fourth, that pilocarpine has failed in the hands of a number of careful observers, Dr. A. Jacobi among others.

The theory of the treatment by pilocarpine evidently is that the increased secretion of saliva induced by the remedy tends to dislodge the diphtheritic membrane. This theory seems plausible enough, until we reflect that the membrane in diphtheria is not only *upon* the mucous membrane, but *in* it and *beneath* it, and sometimes involves the muscular layer beneath.

Without going into the discussion of this method any farther, I wish to protest against its neglect of local treatment, and to say that my own limited experience with it has proved that it is not by any means a specific in the treatment of diphtheria.

I wish briefly to give the method of treatment that I have found of most value in diphtheria. I do not advance it as something *new*, but to direct attention to measures that are of approved value, but are liable to be forgotten in the rush after specifics.

I have treated in the last few months fifty-four cases of diphtheria. These cases were all well-marked examples of the disease, accompanied by fever, swelling of the glands of the neck, membrane in the pharynx, and many of them proved to be contagious, by attacking more than one person in the family.

In this series of cases but five have died. In three of the fatal cases the disease invaded the larynx, and was beyond the reach of local treatment.

The whole success of the treatment I attribute to the active local medication. My plan of treatment is briefly the following: in the first stages of the disease, while fever is present, I give a prescription containing tr. aconiti rad. and sulphocarbonate of soda. Later I stop the aconite, and order tr. digitalis and ferri chlor. with glycerine; stimulants are used in the later stages, and a supporting diet throughout the whole course of the disease.

For local treatment, I have the tonsils and other spots that are affected brushed with the pure oil of eucalyptus, and the nose syringed with a saline solution. Inasmuch as I attribute the success of my treatment to the local medication, I superintend this part of the treatment at first, and do not leave the house until I have instructed the attendants how to apply it, and have had them make the application in my presence. I usually carry the eucalyptus and a brush with me, to save the time that would be wasted in sending for them. After giving the necessary instructions, I inform the attendants that the result of the case depends more upon them than on myself; that if they are firm (and it requires great firmness at first to brush the throat of a struggling child), and thorough, the child has usually ten chances to one for recovery. If the attendants are timid, and neglect the local treatment on account of the objections of the child, after a fair warning, I

refuse to attend the case. In the majority of cases, the children submit to the treatment with a good grace if the attendants are firm at first.

If the case is a severe one, I have the application made not every three, four, or five hours, as is often done, but every hour. In an ordinary case once in two hours is sufficient. If there is the least suspicion of the affection having invaded the posterior nares the nose is syringed with salt and water every two hours. I am of the opinion that the nose is affected in the majority of cases, and that unless attended to it acts as a fountain of infection to poison the system.

My reasons for preferring the oil of eucalyptus to any other application are that it is a powerful antiseptic, and, unlike other antiseptics that I am acquainted with, may be applied freely, and in full strength without acting as a caustic, or without having a poisonous action when absorbed into the system. The application of the eucalyptus is not at all painful, but the pungent odor is at first very disagreeable.

During the last three years I have used for local treatment dilute tincture of iodine, tr. ferri chlor., carbolic acid, thymol, lime-water, common coal-oil, and oil of eucalyptus. I have had good success with all of these, but now depend upon the latter.

My opinion is that success depends more upon the *frequent* and *thorough* use of the application, than upon the remedy itself. Both antiseptics and astringents may be used with benefit.

I shall not detain you with a recital of cases, for the symptoms and history of diphtheria can but be known to every practitioner.

As bearing upon my statistics (I know that statistics are not always to be depended on), the weekly reports from the Board of Health show that diphtheria in this city during the last winter and spring has been of a rather fatal character.

In closing, I wish to say that this communication is a plea, not for any specific, or for a new method of treatment, but simply for a more thorough local treatment with astringents and antiseptics than is frequently employed.

W. E. Forest, M.D.

1 Charlton Street, N. Y.

HOÀNG-NÀN ONCE MORE.

To the Editor of The Medical Record.

Sir: I have within a few days received a letter from the Rev. Father Etienne Brosse, from which I here extract a few paragraphs:

"I have read with pleasure the analysis you have given, in the Medical Record of March 12th, of my letter of January 27th. The abstract as published is correct. Permit me, however, to further develop one point that was but briefly referred to, but which nevertheless appears to me to be of great importance. I allude to the action of hoàng-nàn as an intellectual stimulant. It sharpens the wits and renders the body more active and disposed to work. (*Il rend les idées singulièrement faciles, nettes et vives; l'esprit est plus ouvert et gai et le corps plus alerte et dispos.*) This action is maintained all day after a single morning dose. Further, this stimulant action is not followed by an enfeebling reaction. The dose may be repeated daily for years without impairment of the general health. I have used the drug for the purpose indicated for four or five years, and several of my colleagues have had recourse to it in order to facilitate their labors both of pen and tongue.

"Cocorite, April 26. 1881."

Further interesting information concerning the drug will be found in a recent thesis by Baralt, entitled "Du Hoàng-Nàn et de son emploi contre la Lèpre," Paris, 1880.

Planchon has carefully examined the crude bark, but fails to find any characters that will enable him to distinguish it from the bark formerly known as the "false angostura." It will be remembered that at the beginning of the present century angostura (*cortex cusparie*) was in high repute as a febrifuge, tonic, etc. In 1804, however, a quantity of bark appeared in the European market that purported to be angostura, but the use of which was followed by serious and even fatal results. Subsequent investigation revealed the fact that this spurious angostura was nothing more than the bark of the *strychnos nux romica*, the effects of which appear to be similar to, though probably not identical with those of the officinal portion of the plant. It may turn out ultimately that the hoàng-nàn of to-day is the same bark reintroduced into commerce under its Indian name, for nux vomica bark under its own name is not, I believe, in market at present. However this may be, there can be no doubt as to the activity of the substance in question, and little doubt as to its usefulness in several directions, although it is questionable if future experience will give it the high place that its missionary friends appear to accord it.

In this connection it may be proper to state that the young leper exhibited by me at the Academy of Medicine in January last has improved, while taking hoàng-nàn, in the most striking manner, both as to appearance and in general condition, and is now so far recovered that he works daily at the oar as one of the crew of the barge that plies between Charity Hospital and the city.

Respectfully yours,

Henry G. Piffard, M.D.

June 9, 1881.

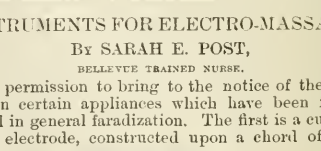
New Instruments.

INSTRUMENTS FOR ELECTRO-MASSAGE.

By SARAH E. POST,

bellevue trained nurse.

I beg permission to bring to the notice of the profession certain appliances which have been found useful in general faradization. The first is a curved-plate electrode, constructed upon a chord of four



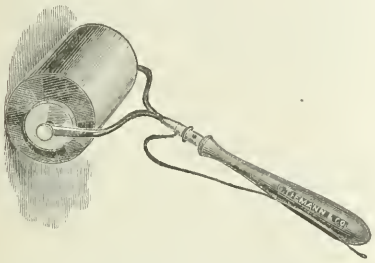
and three-fourth inches, with arcs of 50° and 114°, and a width of three and one-half inches. It has been applied by its convex surface to the hollow of the foot, the suboccipital and lumbar regions, and the concavities of great joints; by its convex surface

to the hypogastrium over the thigh, etc. In one end is a removable screw for filling the ear with warm water, by which means any desired temperature may be given to it; also a weight of about six ounces, which enables it to apply itself closely to a part and to maintain its own position. It was designed as an improvement upon the plain plate and the flat sponge, compared with which it is stable in position, of an agreeable temperature, adapted to the curves of the body, and does not require moisture other than that furnished by the skin.

With this article to the surface of the patient and a plain plate at the feet of the operator, there is possible a comfortable and effective electro-massage as practised by me during the past two years, the current being distributed through the hands of the attendant, the movements being those of a true massage.

The second is an application of the roller lately introduced in connection with certain induction machines.

This instrument consists of a cylinder, having a length of two and five-eighths inches and a diameter



of one and three-fourths inch, revolving in a substantial frame to which the handle is attached and connection with the battery effected. It was designed as a substitute for the manipulator in the process previously described, and without equalling the delicacy of the human hand presents a cheap and convenient means for approximating a like result. It differs from other machines of its kind in being merely an electrode suitable for attachment to any battery; in having the handle inclined for the convenient division of force into progression and pressure; also in having the cylinder hollow for filling with warm water, which renders it more agreeable for bedside use.

The third is a modification of the ordinary wire hair brush, requiring the variety in which the pins rest upon a metallic plate. For its adaptation a hole

is bored through the wooden back, lined with conducting material, and fitted to the battery key. In use the insulated wire is grasped with the handle of the brush. If kept moving all shock may be avoided. It has been applied to the entire surface of the body, force enough being used to thoroughly redden the skin, and is especially agreeable to very fat people.

Medical Items and News.

Contagious Diseases — Weekly Statement. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending June 18, 1881.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
June 11, 1881.	37	6	114	15	109	116	50	0
June 18, 1881.	16	10	103	14	93	100	48*	0

* Eleven emigrants.

Rötheln.—Dr. A. L. Hall, of Fair Haven, N. Y., writes: In recent numbers of the Record I find the attention of the profession in different parts of the country, especially the cities, is being directed to what is styled by one class of observers as rötheln, and by another class as an epidemic of roseola. As it has been my privilege to see some thirty or more cases of this mooted disease during the past few weeks, I am led to offer you a summary of the results of my observation.

First.—It is a contagious, self-protecting disease, much less contagious than either rubeola or scarlatina, affording no immunity from these, and *vice versa*. There are some reasons for believing it to be infectious as well as contagious.

Second.—The period of incubation is from two to three weeks. In seven cases it was exactly fifteen days.

Third.—The prodromata are in most cases wanting, especially in children. In young and middle-aged adults the prodromata were more marked, there being in one case a severe chill, accompanied by fever and slight nausea, followed the next day by the eruption.

Fourth.—The eruption, on its first appearance, may resemble either scarlet fever or measles, usually the former is oftener simulated, and this tendency appears greater upon the face than elsewhere. In a majority of cases the eruption presents strong distinctive features which readily distinguish it from its *congeners*, rubeola and scarlatina. It may first appear upon the face, although many times the body and limbs are first covered. In some cases the eruption appeared simultaneously upon the face, body, and limbs. The color is not so dark as that of measles, nor so bright as that of scarlet fever; during the last twenty-four hours the color changes to a livid or purplish hue. It is slightly elevated and papular, not crescentric, or evenly diffused, and whenever it coalesces it is in small circumscribed patches, which give to it a scarlatinal appearance. These patches are mainly found upon exposed portions, as the hands and face, whereas those portions of the body protected by clothing present a more striking resemblance to rubeola. The eruption fades away usually by the end of the second day, or, at longest, the beginning of the third day marks its termination. Desquamation is wanting, or if it occurs it is so slight that it is seldom noted.

Fifth.—Temperature is usually slightly elevated. In two cases it was 101° F.

Sixth.—Angina is present oftener than bronchial

catarrh, although neither are severe. Coryza and slight conjunctivitis are occasionally present. The tongue is usually furred and presents a slight or even well-marked "strawberry appearance," according as there is more or less angina present. In some cases there was slight temporary enlargement and tenderness of the cervical glands. Itching is often present and may be intense.

Sereuth.—As yet no sequelæ have been noted in these cases. As the disease is of so mild a character nothing need be said of its treatment.

Diseases of Shop-girls.—In a paper on this subject by Dr. D. E. Chace, read before the Medical Society of the County of Kings, the subject of the diseases of shop-girls was discussed. From a statistical table it appears that in one hundred and fifty cases examined the most frequent trouble was amenorrhœa, then dysmenorrhœa, anæmia, and phthisis. Dr. Chace thought that the long hours of standing had little to do with injuring the health of this class. It was rather the hard work with poor pay and consequent anxiety about living, the poor diet and unhygienic surroundings at home, and the often voluntary disregard of the ordinary hygienic rules that produced the trouble.

Dr. Chace, we think, belittled the evil effects of long standing. His statistics were not sufficiently large to contradict the amount of evidence against his view. And though long standing is only one of the evils, yet since it is one that can be remedied without harm to the employer, efforts in such direction should be encouraged.

Bichloride of Mercury in Diphtheria.—Dr. Wm. Pepper, in his address before the section on Practical Medicine, related a very remarkable case of recovery from diphtheria when the patient was almost moribund. The child, aged five, had been treated in the usual way with stimulants, chlorate of potash, quinine, etc. But the diphtheritic process, which was in the larynx, did not seem at all controlled, and on the seventh day the patient seemed dying from suffocation and asthenia. Bichloride of mercury was then given in doses of $\frac{1}{12}$ gr. every second hour, administered in elixir of pepsin and bismuth, with two drops of tincture of nux vomica. No other treatment was used. In the next forty-eight hours $\frac{1}{3}$ gr. of corrosive sublimate was taken. No diarrhœa or intestinal irritation was produced. On the contrary, the child began to improve, nourishment being taken readily, and the membrane growing less. The medicine was continued in gradually decreasing doses for a week, by which time convalescence was established.

Venesection in Pneumonia.—Dr. Thomas K. Cruse, of Wappingers Falls, N. Y., asks that in the closing sentences in his letter, in the last number of the Medical Record, the word *ear* be inserted after the word "the," in the sixth line from the top of the column, that the words "orbicularis oris" be changed to orbicularis palpebrarum; and that the name "Barnett" be changed to Burnett.

Notes on New Remedies.—*Viburnum prunifolium*, or black haw, as a remedy for threatening abortion, should be given in doses of ʒ j. of the fluid extract, repeated every one or two hours. It may be combined with hydrate of chloral. *Cascara sagrada*, as a remedy for chronic constipation is best given with one or two drops of the fluid extract of belladonna. *Berberis aquifolia* has been recently reported to be efficient in scaly skin diseases, and even in syphilis, as a substitute for mercury. Not much can be positively said for it, however. *Cereus bonplandii* has apparently acted well in severe cases of heart disease, relieving dyspnœa, strengthening and slowing the heart; such is the statement of Dr. C. R. Cullen (*Transactions of Medical Society of Virginia*). *Petroleum* in phthisis, given in two to four grain doses, is recommended as a supplement to other remedies by the same authority.

Annual Report of the Western Pennsylvania Hospital for the Insane, 1880.—The number of patients in the hospital at the beginning of the year was 609, while 238 were admitted during the year. The proportion of recoveries is about twenty-five per cent., with a nearly equal percentage of improved. The hospital is overcrowded, as it was built for only 450 patients, but it is expected that this evil will be done away with. The superintendent accepts the fact that insanity is increasing out of proportion to the population.

Hydrobromate of Quinine in solution, in proportion of m. ij. to gr. j., can be injected subcutaneously, it is said, without harm. One grain of the hydrobromate thus used is further claimed to be equal to five grains of the sulphate, and its use does not easily produce cinchonism.

As hydrobromic acid is such a help to quinine, it is suggested by Dr. Semper that this acid united with morphia would be a useful one.

Sympathetic Inflammation following Operations for Cataract is of rare occurrence, but Dr. David Webster thinks that more cases occur than would be supposed from an examination of ophthalmological literature. He therefore sets an example by reporting eleven cases which he has seen or collected. In a subsequent discussion it appeared that the per cent. of such accidents could not be more than one or two.—*Trans. Amer. Ophthal. Soc.*

Rapid Breathing as an Anæsthetic in Labor.—Dr. Addinell Hewson, Sr., reports several cases in which he has successfully resorted to anæsthesia in labor to secure relief from suffering. He recommends that the rapid breathing be kept up for five or even seven minutes, the patient breathing as fast as possible.—*Col. and Clinical Record.*

The New Method of Depilation recommended by Dr. L. Duncan Bulkley for favus is by using the following preparation:

℞.	Ceræ flavæ	ʒ iij.
	Laccæ intabulis	ʒ iv.
	Resinæ	ʒ vi.
	Picis Burgundicæ	ʒ x.
	Gummi dammar	ʒ jss.

M.

This is made into sticks of different sizes. The end is heated until soft and then applied to the diseased scalp, the hair having been cut short. As soon as the wax is cool it is carefully withdrawn, bringing away the diseased hairs. The head is then washed with a lotion of bichloride of mercury, gr. iv. to ʒ j. Dr. Bulkley considers depilation quite essential in favus, a view not held by all.

The Progress in the Adulteration of Food and Drugs in the past year, as far as Great Britain, and probably this country, are concerned, is something as follows:

Milk is neither better nor worse than it has been; the substitution of artificial for genuine butter has largely increased. Among grocers, wine merchants, and druggists there is a decrease in adulterations on

the whole. Bread and flour are adulterated twice as much as they were two years ago. As regards city and country the former gets the worst milk, the latter the worst of everything else.

The statements are based chiefly on the number of indictments under the law against adulterations.

Billroth's Clinic.—From January 1st, 1877, to the end of November 1880, there were 91 of the greater amputations and enucleations done at Billroth's clinic, being an annual average of 23; and of 3.2 per cent. of all the patients treated antiseptic precautions were adopted in every case. Seventy cases were cured, 3 remained uncured, 18 died.

If we remember rightly, the annual average of amputations in Prof. Wood's clinic at Bellevue Hospital is nearly thirty. It is known that in four or five years he had only one fatal result, so that, according to these statistics, Prof. Wood, LL.D., is, after all, a "bigger man than old Billroth."

Sir Isaac Newton on the Value of Sleep.—The following quaint letter from Sir Isaac Newton to a medical friend has only been recently published:

"London, December 15, 1716.

"Dear Doctor—He that in ye mine of knowledge deepest diggeth, hath, like every other miner, ye least breathing time, and must, sometimes at least, come to terr; alt for air.

"In one of these respiratory intervals I now sit doune to write to you, my friend.

"You ask me how, with so much study, I manage to retene my health. Ah, my dear doctor, you have a better opinion of your lazy friend than he hath of himself. Morpheous is my best companion; without 8 or 9 hours of him yr correspondent is not worth one scavenger's periike. My practizes did at ye first hurt my stomach, but now I eat heartily enow as y' will see when I come down beside you.

"I have been much amused by ye singular *qeroqeve* resulting from bringing of a needle into contact with a piece of amber or resin fricated on silke clothe. Ye flame putteth me in mind of sheet lightning on a small—how very small—scale. But I shall in my epistles abjure Philosophy whereof when I come down to Sakly I'll give you enow. I began to scrawl at 5 mins frn 9 of ye clk, and have in writing consmd 10 mins. My Ld. Somerset is announced.

"Farewell, Gd bless you and help yr sincere friend,

"(Signed) Isaac Newton.

"To Dr. Law, Suffolk."

Dr. M. Putnam-Jacobi on Specialties and Female Physicians.—In an address delivered before the Woman's Medical College of this city, Dr. Putnam-Jacobi said some very true things in regard to the much-mooted question of specialties in medicine: "From what I can learn, the majority of women who study medicine do so with the expectation of at once becoming specialists, and certainly, the majority of persons who think of consulting them, think of them first and foremost, if not exclusively, in this connection.

"Now, nothing can be more certain than, if women are enabled to practise medicine only in this specialty of gynecology, and for reasons of delicacy, they must, sooner or later, be again excluded from medicine altogether. I say again, because as you know, or should know, women have at many different times been admitted to the privileges of medical studies and practice, but have never gained so firm a footing that they were not liable to be displaced. The motive of delicacy, the motive of self-support, the motive of desire for wider spheres of action, are all perfectly legitimate motives, but they are extrinsic to the real reason for the existence of any class of practitioners. This reason is, that such a class is in possession of knowledge which enables it to understand disease, and to cure the sick, and which justifies its members in assuming full responsibility. This full responsibility cannot be assumed, except after liberal study of the whole field of medicine. If, at present, here and there a specialist may arrive at distinction who really only knows one thing, he can only do so because the mass of the profession know a great deal more. If an entire natural class of people devoted themselves exclusively to one thing, they would soon not know even that. Instead of obtaining a position superior to that of the rest of the profession, they must sooner or later sink to an inferior one. In the case of gynecology and women, the practical experiment has been made; the services of women have been sought on a large scale exclusively from motives of delicacy, and you know in what way. The women were merely assistants—employed to make uterine examinations and report to physicians who were strictly forbidden to make such examinations themselves."—*Chicago Medical Journal and Examiner.*

Four Cases of Painless Labor are related by Dr. J. W. Davis, in the *Nashville Journal of Medicine and Surgery.* In the first case, he says, "The woman started to take a short walk, just after dinner. She had not gone over one hundred yards from her house when she laid down suddenly, and was delivered in a few minutes of a healthy living child. I saw her in half an hour, and took the child from the afterbirth. The woman then got up and walked back to her house, without any trouble or after difficulty. She said she had hardly any pain at all.

"In the second case, the woman was walking in the woods; she lay down beside a log and gave birth to a child with little or no pain. Mother and child both did well.

"The third case was that of a primipara, fifteen years old, low in stature with broad hips. The child was born without a pain, according to the girl's statement."

All this happened in Tennessee. The facts will commend themselves to Dr. King and other advocates of the theory that painlessness is the normal characteristic of labor in primitive women.

The Thirty-Second Annual Session of the Medical Association of Georgia was held in Thomasville, on April 20 and 21, 1881. The following are the officers for the ensuing year:

President, William F. Holt, Macon; First Vice-President, Eugene Foster, Augusta; Second Vice-President, T. M. McIntosh, Thomasville; Secretary, A. Sibley Campbell, Augusta; Treasurer, K. P. Moore, Forsyth.

The next session will be held in Atlanta, on the third Wednesday in April (19th), 1882.

A Case of Fracture of the Thigh in a Child Two and a Half Years Old.—Dr. J. D. Hall, U. S. A., of Fort Randall, D. T., reports a case of the above kind. The account is instructive, because of the comparative rarity of such fractures in persons so young. The child fractured its thigh by slipping on a wet floor. It was restless and irritable after the accident and the doctor speedily found that the ordinary splints on one side were quite inadequate to keep the parts in place. The child was

therefore bound and strapped by each leg to the kind of box-splint described by Dr. F. H. Hamilton. It was found that a weight and pulley were not necessary to keep the parts in place. Extension was made by fastening the leg by adhesive straps and strings to the cross-bar, while the counter extension was made by a perineal band attached to the axillary end of the splint.

It was found very difficult to use the bed-pan, so the doctor took a board about three feet long, and had a suitable hole cut in it. This being placed on two chairs the child could be lifted up and laid on it. It made an excellent substitute for the bed-pan. Dr. Hall used absorbent cotton to wrap the leg in, instead of covering it with a roller bandage. It seemed to be an excellent substitute.

At the end of three weeks the box-splint was removed and short splints substituted, so that some freedom of movement was obtained. At the end of the sixth week the dressings were changed and the patient allowed to walk a little, as firm union had apparently taken place.

The child made an excellent recovery. It is not stated whether there was any shortening.

Cures for Seasickness.—Several physicians have been interviewed by newspaper reporters on the subject of seasickness. Dr. Alonzo Clark recommends a wash-bowl, Dr. Beard bromization, and Dr. Hammond chloroform and bromides. The editors comment upon the uncertainties of medicine and the disagreement of doctors. Without entirely disregarding bromides we think highly of the wash-bowl.

"Hamlet" on Vaccination.—

To vaccinate or not, that is the question.
Whether 'tis better for a man to suffer
The painful pangs and lasting marks of small-pox,
Or to bare arms before the surgeon's lancet,
And, by being vaccinated, end them. Yes,
To feel the tiny point, and say we end
The chance of many a thousand awful scars
That flesh is heir to. 'Tis a consummation
Devoutly to be wished—Ah! soft you now,
The vaccinator! Sir, upon thy rounds
Be my poor arms remembered!—*Punch.*

Inspection of Tenement Houses.—A law of great importance to Chicago is the one recently passed relating to the inspection of tenement houses. The law provides that the plans and specifications of all houses to be built in the city shall first be submitted to the Commissioner of Health, for his approval or rejection, as to their correctness in the provisions for ventilation, plumbing, and sewers. If the law can be executed it will lead to a thorough protection of all the houses of the future in Chicago against bad ventilation, plumbing, and drains, with all their attendant ills to the health of the people. Above all else, the emanations of sewer-gas may be very efficiently guarded against in all new houses. The old houses are not affected by the law.

Mechanico-Therapeutics in Stockholm.—A short description of Dr. Zander's Mechanico-Therapeutical Institute in Stockholm is given by Dr. Gilbert Smith in a recent number of the *Lancet*. It is practically an institution where all kinds of active and passive muscular movements are produced by machinery. There are in all sixty-seven machines in the establishment, seventeen for active arm movements, eighteen for active leg movements, nine for active trunk movements, and twenty-three for passive movements. No springs are used, but all is done by levers. In this way the resistance brought to bear is like the muscular contraction, greatest at the middle and least at the two ends. Many novel movements and muscular exercises are produced. Thus there is a machine for shaking the whole or part of the body. This is found to be excellent in heart and lung diseases, promoting expectoration and improving the circulation. There are foot rubbers, chest-expanders, machines for hammering the muscles, for exercising the trunk-muscles, for rolling the feet, etc. In all cases the amount of exercise can be exactly regulated, and on this account in part the effects are better than those obtained by simple massage.

Practice of Dentistry in Illinois.—The Illinois legislature at its last session passed laws regulating the practice of dentistry and pharmacy, constructed on the model of the acts governing the practice of medicine and which have been in force several years. The dentists are to be looked after by a State board of practising dentists appointed by the Governor, and the pharmacists by a board, similarly appointed, from the ranks of their own profession. Every dentist and pharmacist must be registered and all accessions to the ranks of these professions must give some evidence of education and qualifications.

The Fat and Blood Treatment in England.—Professor W. S. Playfair, in the *Lancet*, writes very enthusiastically about the Dr. Weir Mitchell's so-called fat and blood cure. This method of treatment, though well-known in America, has never before been tried in England. Dr. Playfair relates the histories of four cases which resulted in a perfect cure of most distressing and chronic conditions. They were all cases of nerve-prostration and hysteria, generally connected with some uterine disease. Dr. Playfair urges the more extensive application of the method.

Dr. M. H. Henry, of New York, appeared by invitation before the Academy of Surgery of Philadelphia on Monday evening, June 6th, and described his operation of removal of the redundant scrotum for the relief and cure of varicocele. His new instruments attracted much attention. The treatment of varicocele was fully discussed in all its bearings. Excision of the scrotum found many advocates among the distinguished surgeons who attended the meeting.

The International Medical Congress.—Much interest is being taken in the coming Congress by the profession both of France and Germany. The Executive Committee has chosen Dr. Maurice Raynard, a distinguished physician and accomplished orator, to deliver the fourth of the general addresses. The German medical journals have given complimentary notices of the project, and the Empress of Germany has delegated Professor Keister to represent her at the Congress.

New York Academy of Medicine.—The "venerable" secretary, Dr. J. G. Adams, with Dr. H. P. Farnham, treasurer, have been appointed delegates to the International Medical Congress, to meet in London, on August 2d.

Dr. Paul F. Mundé, of this city, has been appointed Clinical Lecturer on Gynecology for one year at the College of Physicians and Surgeons, N. Y.

INDEX.

I

J

K

T

U