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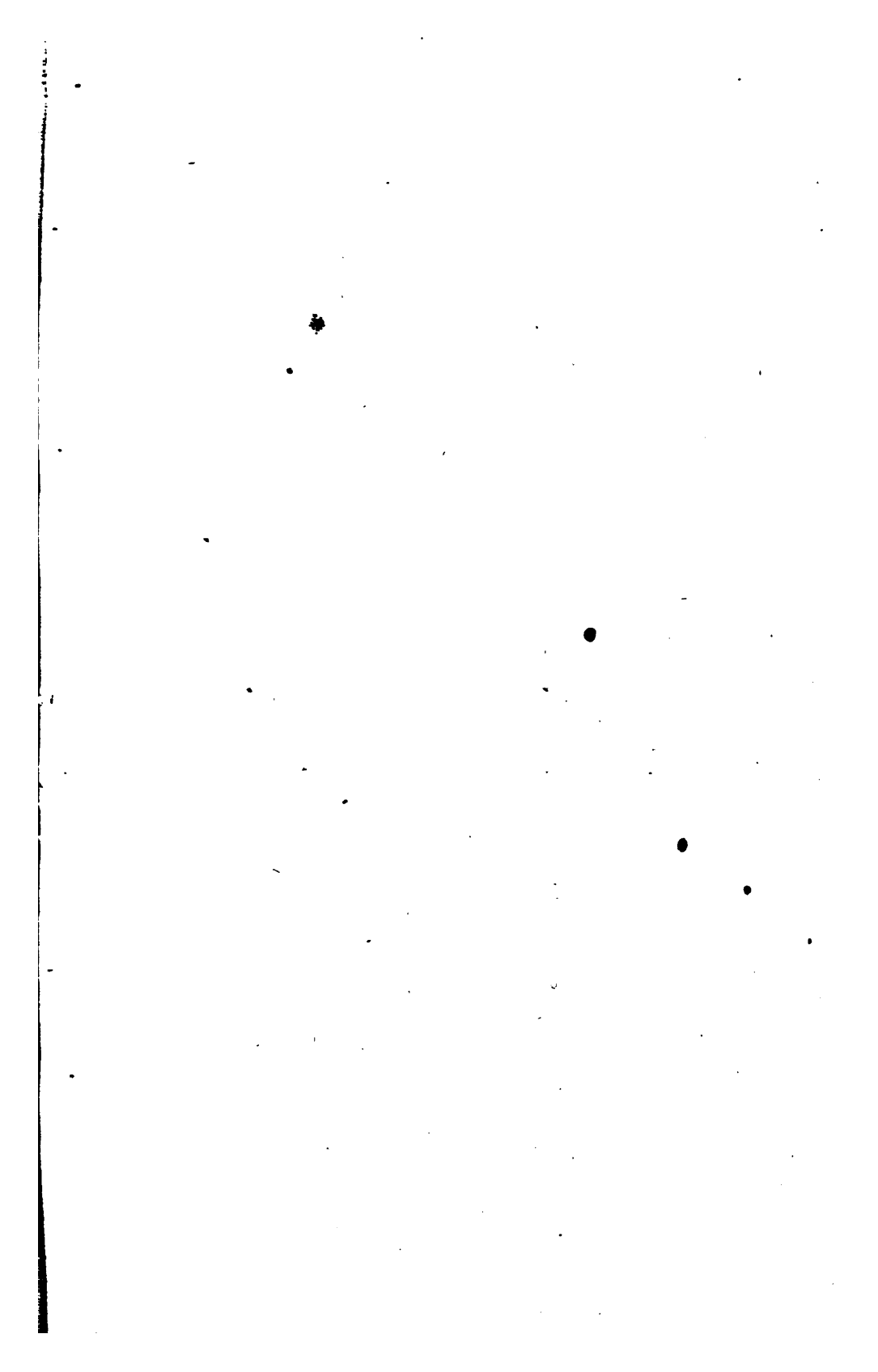
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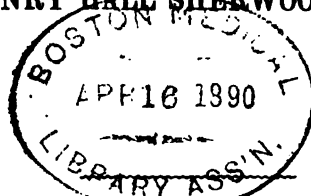
AND THE COLLATERAL SCIENCES,

WITH THE

MYSTERIES AND FALLACIES OF THE FACULTY.

EDITED BY

HENRY HALL SHERWOOD, M. D.



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# THE DISSECTOR.

Vol. I.]

NEW-YORK, JANUARY, 1844.

[No. I.]

## ARTICLE I.

### The Mysteries of the Faculty.

Physicians of learning and experience know that no dependence can be placed on the old astrological symptoms, by which they have been taught to distinguish tubercular disease, nor on the common imbecile remedies for it, as is seen by the following declarations of the distinguished professor, M. Lugol, of Paris, to the students of medicine, 1841\*.

"Tubercles may exist in parenchymatous organs, may even partly annihilate them, without their existence being revealed by any external symptoms. Our want of success in the use of the ordinary means of diagnosing tubercles, proves that those means are inadequate, that we follow an erroneous course in our investigations, and that we must resort to new modes if we wish to be successful. The numerous checks and repeated deceptions to which physicians are daily exposed in the diagnosis and treatment of tuberculous diseases, do they not prove that it is necessary to leave the beaten track of inquiry and pursue some other which is less fallible?"

Few physicians, however, will leave the old beaten track for a new one, until they are driven from it by public opinion; no matter what the consequences may be to their patients.

"Wherever we have any thing like principles to guide us, our prescriptions are extremely limited; wherever we have no fixed principles to guide us, our prescriptions accumulate with empirical rapidity. But what, it may be reasonably enquired, is the principal cause of all this complexity of formulæ in chronic diseases? Undoubtedly it arises from that vagueness of opinion which exists respecting the nature of these diseases in their onset, and in the greater part of their progress; and so long as we attempt to cover our ignorance by such terms as *nervous*, *bilious*, *dyspeptic*, *spasmodic*, and the like, so long shall our practice be mere experiment in most chronic affections. We may make a sort of druggist's shop of the stomach of every patient laboring under chronic disease, by alternately cram-

ing it with most of the articles of the pharmacopœas; but we shall not, probably, advance in the treatment, until we deduce pathological principles, from *cautiously marking the rise and progress of the symptoms, and exploring their seats and effects.*—Dr. ARMSTRONG.

"The whole science of healing is built upon fortuitous and chance discoveries. Like the alchemists of old, we have discovered a thousand valuable things, where we never thought of looking for them; and while uselessly seeking for talismanic gold, we have lighted on a pearl of great price. Every thing, in fact, is presented to us as the result of experiment; and, in the treatment of disease, the most valuable remedy can boast of no higher origin than its more humble neighbor."—G. B. CHILDS.

In addition to the testimony of the distinguished physicians above mentioned, is the following extract from the *London Lancet*, for January 14, 1843, to the same effect; and this brief paragraph is only one of the many evidences afforded by that very high medical authority, and indeed by the medical literature of the day, that a brighter era is beginning to dawn upon this momentous subject:

"How much have we yet to learn, how little do we really know, of the nature and rational treatment, not only of the diseases of the cerebro-spinal system, but of diseases in general! Assuredly, the uncertain and most unsatisfactory art that we call medical science, is no science at all, but a jumble of inconsistent opinions; of conclusions hastily drawn; of facts badly arranged; of observations made with carelessness; of comparisons instituted which are not analogical; of hypotheses which are foolish; and of theories which, if not useless, are dangerous. This is the reason why we have our homœopaths, and our hydropathists; our mesmerists, and our celestialists!" (and he might have added an army of arrant quacks.)—Dr. EVANS. EDINBURG.

Mr. Wakley, M. P., in his editorial article, in the same number, advises the members of the medical profession, to commence collecting facts, in their several districts, *de novo*, on which to found, at a future period, a rational and effectual mode of treating diseases.

\* The professors of our medical colleges, like the ancient astrologers, who were physicians, priests and astronomers, pretend to distinguish chronic diseases by feeling the pulse, the aspect of the urine, the odour of the stools, &c. &c., and they will continue to teach such nonsense as long as it is of any value in the market.

The illiberality with which I have been treated, by many of the leading men of the profession, while I have been alone engaged, through a long series of years, in establishing the true character and great importance of the new symptoms and remedies, in chronic diseases, and in the only way in which I could hope for success, will fully justify me, in thus exposing to the public in the years of my triumph, the heartless impositions those men are constantly practising.

The following observations upon the mysteries and fallacies of the faculty, are from one of the most intellectual men of the age.

Observers of passing events cannot have failed for some years past to recognize the approach of a new era in the science of medicine. The practitioner who has imbibed his dogmas during his hospital pupilage, who, from inertness, indifference, or incompetency, rejoices in the conjectural nature of his art, who contemns its principles, closes his ears against its reasoning, and his understanding to its improvements, may proceed self-sufficiently, and empirically, to the termination of his career. The practitioner of this stamp may boldly vaunt his experience as the infallible criterion of the means that are available by man in alleviating misery and prolonging existence, and may continue to play upon the weaknesses and sufferings of humanity, and the contingencies of life, regardless alike of the advancement of learning, and of the useful practical results which flow from it.

But the disciples of a truly rational medicine, who are now daily filling the ranks of the profession, who, being active, emulous, and competent, are watching with a vigilant eye the progress of science, and are drawing continually from its tributary streams, for the means of rendering more complete their knowledge of the animal economy—who seize with avidity every newly developed truth, view it in all its relations, compare it with previously discovered truths, fix its legitimate value, and assign its proper locality,—who, slow to adopt crude theories, founded upon uncertain data; slower still in resorting to expedients of conjectural utility, both in medicine and surgery; arrive, albeit, imperceptibly, at unerring principles, as the basis of a considerate and cautious, but an energetic and fearless practice. Such men must hail with the liveliest enthusiasm, every new impulse received by the science, at a period of its history when there is promised a richer harvest of beneficial results than at any which has preceded it. HENRY ANCELL, Esq.,

Lecturer on Medical Jurisprudence at the School of Anatomy and Medicine, Grosvenor Place, Saint George's Hospital, and Surgeon to the Western General Dispensary.—LONDON LANCET—Nov. 19, 1842.

## ARTICLE II.

### Symptoms of Tubercular Disease.

Tubercula, or Scrofula, is invariably distinguished by pain, more or less severe in proportion to the intensity of the disease, produced by pressure on the ganglions of the spinal nerves, in the intervertebral spaces along each side of the spine: no matter what name may have been given to the malady by physicians, nosologists, or other medical writers. These ganglions are organs of sensation, and are connected with the skin and serous membranes, as well as the serous surfaces, in every part of the body, through the posterior spinal nerves; while the anterior and motor spinal nerves, are connected with the mucous membranes, and mucous surfaces in every part of the body; and this arrangement of the nerves of sensation and motion, was obviously necessary, both to the inception and existence of the animal creation, to prevent the irritating effects of the atmosphere, of fluids, and semi-fluids, or other non-solid substances, which are necessarily and constantly in contact with the mucous membranes, and mucous surfaces of sentient creatures. The following case, in which nearly all the organs and limbs were affected with tubercular disease at the same time, not only gives a very clear view of the simplicity and accuracy of these symptoms, but also conclusively demonstrates a direct connection between the ganglions of the spinal nerves, and the serous membranes and surfaces:—

Mrs. J. P., of good constitution, light complexion, and naturally full habit, aged 22 years.

Called to see her January 11th, 1835. She has a swelling on the right side of her neck and face, which commenced about the 10th of November last, and has been out of health about three years.

Suspecting tubercula, and without making further inquiries, and in the presence of a number of gentlemen and ladies, we commenced an examination of the lymphatic glands along both sides of the spine, and first with those of the first cervical vertebra, and pressed with the finger upon one lying close

to the right side of the vertebræ, and of the size of a very small bean, which produced a scream from severe spasmodic pain, which, on every repetition of the pressure, darted violently, and with the rapidity of lightning, into the external cervical and submaxillary tubercles, and into the upper jaw, ear, and right side of the head; and on her complaining of its darting also into her throat, we examined it, and found two tubercles rising conspicuously in the right tonsil, and one in the gum of the upper jaw, all of which were very sore, and also painful under pressure. We now applied pressure in the same way to these cervical and submaxillary tubercles on the side of the neck and the under-jaw, which produced the same kind of pain in them, which, at every repetition of the pressure, darted violently along the neck and under the clavicle into the upper portion of the right lung. We now applied pressure to the left side of the first vertebra, on a still smaller tubercle, and she screamed again, and pointed her finger to the spot the pain darted to, on the upper portion of the left side of the neck, and on examination, we found there a large submaxillary tubercle, and on applying pressure to this, the scream was again repeated, and she at the same time applied her hand to the left breast or mamma, and then pointed out the course of the pain from the tubercle along the neck and under the clavicle into the breast. We now examined it, and found it every where literally crammed with tubercles of the size of peas; the breast one-third larger than the right; color of the skin natural. The right breast flaccid every where, and neither gland nor tubercle to be felt in it.

The small tubercles along the right side of the other cervicle vertebræ were sore or tender, and pressure on the upper ones sent darting pains into the right side of the neck, and on the left side of the lower one into the region of the heart, and checked her breathing. Pressure applied now on the sides of the first, second, third, and fourth dorsal, produced pain which darted into the stomach; and on the second, third, fourth, and fifth lumbar, produced the most severe

spasmodic pain, and darted violently into the uterus. Pressure on the sides of the other vertebræ produced no pain or effect whatever.

We now inquired at what time she first discovered tubercles or swellings on the side of her neck? She answered, about the first of June, or the first of July, her attention was first directed to one on the side of her face, in front of the ear, that was very sore, and at times painful, and that at such times there was "soreness along the chords" of the neck, but "never thought of examining there for tubercles." We now told her she must have white swellings of some of her joints or limbs, besides that of the neck and face, when she presented her left arm permanently flexed into an obtuse angle. On removing the clothing from this arm, it presented a white swelling of the elbow joint and arm. The swelling of the arm was united to that of the joint, and extended more than half way to the shoulder, and there was plainly felt along the under side of this swelling, or under and inner side of the arm, a large or wide ganglia of tubercles, extending from the elbow six or seven inches above it. These tubercles were of the size of peas, near the elbow, but became gradually smaller, and of the size of small seeds where they were lost in the upper part of the swelling.

We inquired now whether she had any other swellings about her, when she answered, "no, that's all," but I told her it would not do,—she must have white swellings of the limbs and joints of the right side, as well as of the left; and after viewing me for a moment with an expression of hesitancy, she began to make preparations to show me her right leg. It was swelled from the ankle to the knee, and had an elastic and puffy feel, and I plainly felt along the front and sides of the tibia, small tubercles from the size of small seeds to that of a small pea. She now told me she would show me the other one. It was swelled, and in all respects like the right leg.

Diagnosis, tubercula of the uterus, both legs, left arm, left breast, heart, stomach,

right lung, cavity of the ear, right lobe of cerebellum, right side of the neck, upper jaw of right side, and right tonsil.

On applying the stethoscope to the region of the heart, we found its action strong, and it appeared to strike hard against the ribs, but its sound was subdued or muffled, and its action was felt and heard under the clavicle of the right side, very nearly as plainly as in its own region, but could hear it very slightly under the left clavicle, and left and right side of the back. The respiration was natural in every part of the chest, except in the upper portion of the right lung, where it was very slight, and at times inaudible. *Diagnosis by stethoscope:* Hypertrophy of the heart and tuberculated upper and front portion of the right lung.

We now inquired into the history of this case, which is as follows:---

The disease commenced about three years since, when she was living in Cincinnati, and soon after an attack of cholera, with the usual symptoms of chlorosis. Her catamenia commenced when she was fifteen, but appeared but twice during that year, and only two or three times a year since that time, and then only from the influence of medicine, up to the first of December, 1833, when she was married.

Previous to her marriage, they had been absent eleven weeks, but appeared in a day or two after, and have re-appeared since that time oftener than before, in a proportion of about two to one, but have always been very slight or small in quantity. About three years since, a discharge commenced from the uterus which was adhesive, and of a white or milky color, and after few months became of a yellow color, with cheesy matter or flocculi, and has continued to this time. Her feet and ankles began to swell about six months after the discharge commenced, and about a year from that time, her legs began to swell and be painful. Her back became very weak soon after the discharge commenced, and has continued so to this time, and she has frequently more or less pain along the lumbar vertebræ. About the middle of December, 1833, and two weeks after

her marriage, her left arm began to swell and be painful, and in the first part of June last, her left breast began to swell, and she soon began to feel darting pains in it at intervals of from one to five or six days, which still continue, and are gradually becoming more frequent and violent. In the first part of July last, her right ear began to swell, was very red, and soon became very painful, and the pain extended through the cavity of the ear into the right and middle portion of the head, and in three days the swelling of the ear subsided and left a tubercle of the size of a pea, on the upper side of the jaw, near the ear; but the pain in the internal ear and head has continued with intervals of ease. On the 10th of Nov. last, this tubercle began to enlarge, and to be irritated; and the external cervicle and submaxillary tubercles of the same side began to increase in size, and to be painful, and soon after the throat, with the gum of the upper-jaw of the right side became sore and painful; and in a few days after, the right side of the neck, with the lower and upper-jaw, began to swell, and with the ear and right side of the head became very painful. Her heart began to beat very hard about the last of November, and this strong or hard beating continues. On the 26th of December she began to cough and expectorate, and this cough and expectoration continue.

Her stomach, from the commencement of the disease in the uterus, has been more or less disordered with first mild and then acute symptoms of dyspepsia: bowels confined.

The marasmus has been slow but constant, and is now much advanced, with flaccidity of the muscles.

The disease, it will be seen by the history of this case, was traced with great accuracy to the different organs and limbs. It was then in an active state, in consequence of a cold; for when we repeated the examination, about two weeks from that time, after the cold had subsided, and the disease had consequently become passive, the pain produced by pressure did not dart into the diseased organs as before.

We can, therefore, not only determine the



character of the disease by these symptoms, which are constant in all the cases, but we can determine whether it is in its active or passive state, in patients of all ages and conditions, without any previous knowledge of them.

When the disease commences in one organ or limb, it is frequently propagated to the other organs or limbs, as is seen in this and the following cases:—

Mrs. T. S., aged 31 years. She came to see us August 14, 1836, and says she has been out of health about five years. The examination in her case was commenced as usual, by an examination of the spine, and first of the first cervical vertebra.

Pressure on a small tubercle of the right side of it produced severe pain, which darted into the right side of the throat, and right side of the head. Pressure on the right side of it produced pain, which darted into the left side of her throat. Pressure on the sides of the second joint also produced pain, which darted into the upper and front part of the neck. Pressure on the 2, 3, 4, and 5 dorsal, produced severe pain, which darted into the stomach. Pressure on the right side of the 7, 8, and 9 produced severe pain also, which darted into the region of the liver. Pressure on the 3 and 4 lumbar dorsal was painful. Pressure on the other cervical dorsal and lumbar vertebrae, produced no pain or effect whatever.

We now examined the line of glands along the neck, and under the jaws, and found them very much enlarged, and told her that her tonsils and palate were enlarged, and that she had the dyspepsia, chronic disease of the liver and leucorrhœa, besides swellings of some of her limbs.

She said that was right, and that the disease commenced in the uterus five years before, and about a year after it commenced in her liver, and in a few months after that, in her stomach; and that it was now nearly three months since her ankles and legs began to swell. It is now a year since her catamenia disappeared, and they have not since returned. On examining her throat, found the tonsils and palate very much enlarged,

and the tongue one-third larger than natural. The tonsils are very sensible to pressure, and have, with the palate and rest of the throat, a dark red color, and during the last few weeks the act of deglutition, or of swallowing solid food, has been difficult and painful. She has had more or less pain in the right side of her head with dizziness, during the last few months. She is also very pale, feeble, and emaciated.

Mr. W., merchant, aged 28 years, called upon me May —, 1836, who told me he had been out of health a number of years, and had been growing much worse during the last few weeks.

On applying pressure to the 2, 3, and 4 dorsal it produced a dull pain in these vertebrae. Pressure on the right side of the spine, between the 7 and 8 and 8 and 9 dorsal, produced the same kind of pain. Pressure on the right side, between the 12th dorsal and first lumbar vertebrae, produced severe pain, which darted into the region of the right kidney, showing the disease in an active state in the last organ, and in a passive state in the liver and stomach. There also appeared to be a swelling along the right side of the spine, extending from the 9th dorsal to the 5th lumbar vertebrae, which had a puffy or elastic feel, and on comparing this with the left side of the spine, this swelling and puffiness was very conspicuous. Diagnosis: Tubercula of the liver, stomach, right kidney, and spine.

The disease, he informed me, commenced in the liver about three years before, and that it was about a year since it commenced in his stomach, and three weeks since it extended to his kidney, and gave him the most serious alarm for his safety. He has, as usual in such cases, consulted and employed a number of physicians in this case, and rigidly followed their prescriptions, and yet the disease in the liver continued to grow worse—was extended to the stomach, and has now extended to the right kidney, and right side of the spine.

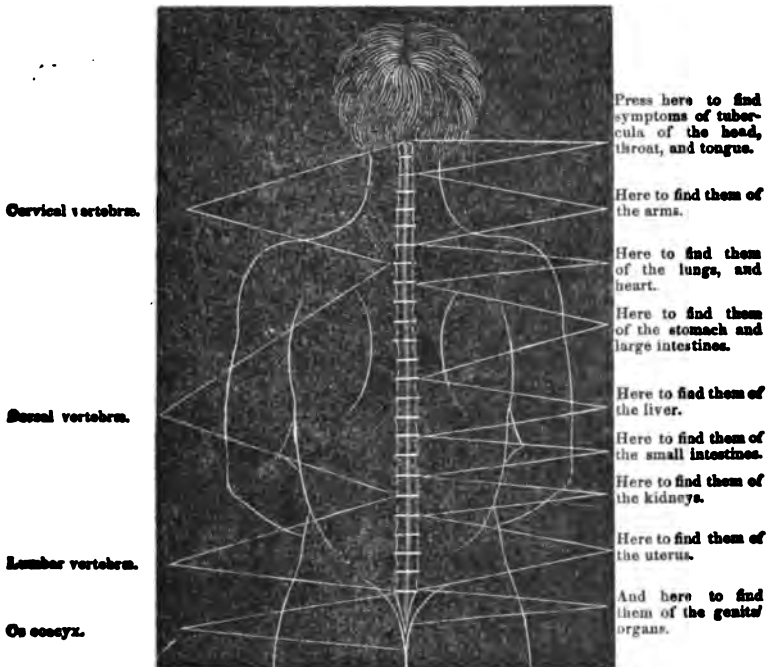
These symptoms point to the disease in every other part of the system that may be tuberculated, in the most arbitrary manner; as in these cases without any regard to the classifi-

cation of nosologists, or the pedantic theories of the schools.

They are the natural and scientific symptoms of the disease in its active and passive state in the organs—they are produced by natural causes, and are very plain, *invariable*, and easily understood.

When the disease has commenced in one organ or limb, it is frequently propagated from that to another organ or limb, as in the case of Mrs. J. P.—cases in which it is propagated from the tonsils and uvula to the lungs, and from the stomach, to the lungs, and from the liver to the stomach, and from the uterus to the ankles, legs, and stomach, are very common

In examining patients with chronic diseases, it should not be forgotten that the disease is sometimes in an active, but *most commonly* in a passive state. If the disease were constantly in an active state, patients would die with it in a few weeks, like those with acute diseases, instead of living as they do months, and sometimes years. We can always tell, in an instant, whether it is in an active or passive state, in the organs, by pressure in the proper places on the spine. If the disease is active, the pain produced by the pressure will dart into the diseased organ with a violence proportioned to the intensity of the disease, but if it is in a *passive state*, pressure produces pain in the spine only



In distinguishing the disease, and in tracing it in the different organs and limbs, we commenced and pursued the examinations as detailed in the cases appended to this work as we commonly do, without any previous knowledge of them. Any person of common education and capacity may easily distinguish the disease in the same way, in any of the organs or limbs.

which does not dart into the diseased organ as in its active state, but is more or less severe in proportion to the progress of the disease.

In many cases of the disease affecting the different organs, pain more or less severe is felt along the vertebrae, when none is felt in the diseased organ. We frequently find the same phenomenon in disease of the hip

joint, where the pain is in the knee instead of the hip.

Patients consequently refer the disease to the place where the pain is felt, and some physicians who have no more knowledge than they, agree with them, and apply their remedies to the same place. Large blisters have been applied to the knee, and cupping, blistering, setons, issues and the moxa to the spine in such cases without mercy during many months, and an enormous amount of suffering has been frequently inflicted in this way with little or no benefit to the patient.

These symptoms are magnetic, for when we press on the ganglions of spinal nerves, in the active state of the disease, and the pain produced by pressure darts into the diseased organ, a force passes into the organs, and consequently produces pain in it, and that force is magnetic.

#### ARTICLE III.

##### Recent European discoveries in Tubercular Disease.

In the preceding article, the editor has presented three cases out of many thousands that have occurred in his own practice during the last thirty years, to illustrate the symptoms of tubercular disease, upon which his peculiar mode of treatment has been founded. If those symptoms and that treatment have remained, for so long a period, comparatively unknown to, and unacknowledged by the profession in general, it is to their prejudices and their attachment to the old visionary theories and practice of the schools, that the consequences must be charged; for he has published more than fifteen thousand copies of several works which he has written upon the subject, and transmitted them far and near.

It is due, however, to some of the members of the profession, to state, that their intelligence and candor have already, within a few years past, cleared away much of the dense mass of bigotry and hostility which surrounded them, and opened a fertile field of extensive usefulness. To those enlightened and liberal coadjutors, scarcely less than to the editor himself, it must afford a high and

cheering satisfaction, to see exhibited, to the whole medical world, so triumphant a confirmation of the truth of their theory and practice, as is obtained from the recent discoveries of several of the most distinguished physicians and anatomists of Europe. And first for the direct connection which we have claimed between the posterior spinal nerves and the organs, we extract the following notice from a late number of the London Lancet

#### [ANATOMY OF THE GANGLIONIC NERVES.]

The researches of Volkmann and Bidder have confirmed—what, indeed, the march of science had previously caused to be little doubted by physiologists—that the ganglionic or sympathetics not a mere offset from the cerebro-spinal nervous system, but an independent system of itself. The above anatomists have, by the aid of the microscope, verified a great difference in the arrangement of the nervous fibrillæ in the two systems. The fibrillæ of the sympathetic nerves are distinguished from those of the spinal cord, by being paler, thinner, and containing less granular matter. Collected in bundles they have a greyish-yellow tinge. Where they communicate with the spinal nerves, the fibrils of each system of nerves may be distinctly traced by the aid of the microscope. Those of the sympathetic system are seen not only to penetrate to the centre of the spinal nerves, but to spread themselves around the circumference of the latter, where, by a careful measurement, the greater number are found to be distributed. If the sympathetic nerves originated from those of the spinal cord, say Volkmann and Bidder, we ought to find fibrils belonging to them in the roots of the spinal nerves. Now, if these roots be examined, scarcely one sympathetic among fifty medullary fibrils will be found; though they ought in such a case to be met with there in greatest number. *The sympathetic nerves in reality originate in the ganglia*; but not only in the ganglia of the sympathetic cord, but those also on the posterior branches of the spinal nerves. These latter ganglia especially give origin to the sympathetic filaments destined to unite with the posterior ramifications of the spinal nerves, a fact which gives probability to the hypothesis of Weber respecting the use of the spinal ganglia.—*Froriep's Notizen*, xxxi., 20.

Now, we many years since discovered, with the magnetic symptoms, (by which tubercular disease is distinguished in little children, with the same certainty as in adults,) a direct connection between the posterior spinal nerves, and the ganglionic or sympathetic system of nerves, connected with the organs, which connection, has been constantly denied by the advocates of the ridiculous notion of

referring tubercular disease of the organs, to "spinal disease," "spinal irritation" "nervous affections of the spine," "spinal neuralgia," &c., with all their horribly torturing appliances. We also traced this connection with *clairvoyants*, and Volkmann and Bidder have now traced it with the microscope, and as this connection is now confirmed by foreign authority, it will be taught in our medical colleges, in connection with the magnetic symptoms, as soon as the conceited professors of these schools can be replaced by men who have talents and industry to keep pace with the improvements in our profession. The quackery which these professors have practised and disseminated in their lectures, and the amount of suffering they have inflicted upon their patients, while they were literally groaning under the weight of their knowledge of "SPINAL DISEASE"—"SPINAL IRRITATION"—"NERVOUS AFFECTIONS OF THE SPINE"—"SPINAL NEURALGIA," &c., which it is now seen were never favored with a real existence, is absolutely appalling; yet they have the vanity to establish rules of practice, and the barefaced effrontery to denounce every physician who varies from them.

In confirmation of the views which we have so long maintained on this continent, of the general prevalence of tubercular disease in the organs and limbs, against the combined influence of the professors of our colleges, we present the following abstract of the second lecture of M. Lugol of Paris, on Scrofula.

*Tubercles in particular Organs.*—The consideration of this part of the subject belongs rather to Pathological Anatomy. The diagnosis of tubercles in particular organs, is *very difficult* at least in the first period of their existence.

When tubercles exist in the sub-cutaneous regions, the mere local examination of the part at once enables us to convince ourselves of their presence, although, as we have already stated, these morbid productions develop themselves gradually *without pain*, and without swelling of the surrounding parts, in a word without giving rise to any perceptible phenomena.

When, therefore, we consider, that sub-cutaneous tubercles only become manifest during the first stages of their existence, because they are external, we can easily understand how it is, that in the mediastinum and the parenchymatous organs, this source of diagno-

sis being closed, it should be, always difficult, and often impossible to recognize their presence.

Tubercles may exist in parenchymatous organs, may even partly *annihilate them without their existence being revealed by any external symptoms*; or if they are discovered it is at an advanced period of their existence, when they have so far progressed that treatment is no longer of any avail. In such cases it can scarce be said that the malady has been recognized during life; they belong in reality to Pathological Anatomy.

*Our want of success in the use of the ordinary means of diagnosing tubercles, proves that those means are inadequate, that we follow an erroneous course in our investigations, and that we must resort to new modes if we wish to be successful.*

When pulmonary tubercles are suspected, we resort to auscultation and percussion, but in many cases these fail us, even when numerous tubercles are disseminated, through the lungs, and for this reason it is that many physicians, after having greatly exaggerated the value of the stethoscopic signs, now declare them of little value, at least during the first stages of the disease. There is here another mode to which we may resort, induction; for instance, a patient complains for some time of slight pain and uneasiness in the thoracic cavity, we resort to auscultation and percussion, the resonance of the thorax is every where normal, pulmonary expansion free and easy, respiration perfectly natural, and guided by these data the physician declares that there are no tubercles in the lungs. But he is *deceived*, the method of investigation which he has followed has been inefficient. If we consider that the patient is born of tuberculous parents, that he has lost brothers or sisters from phthisis, or that they are suffering from cervical tubercles, white swelling or other scrofulous affections, that his health is delicate, his growth has been deficient, in a word, if we consult with care antecedents and coincidences, we shall acquire the conviction that his lungs contain tubercles, although *auscultation is powerless to demonstrate their presence.*

One of two things happens, either auscultation agrees with the data furnished by induction, then it affords a valuable concurrent testimony, or it disagrees, and then I think we should follow induction as less likely to deceive us. Especially would I rely on the evidence of hereditary taint.

*Tubercles in the Brain.*—Out of four cases, in which tubercles were found in the brain after death, there were two in which symptoms were noted which might be referred to their presence, but in the other two, though the lesions were more serious, no signs revealed the tuberculous disease. In one of these cases, the left hemisphere had nearly disappeared, being replaced by a cyst filled with tuberculous matter. It is remarkable that the brain should undergo such extensive

alterations *without any external symptoms*, informing us of the gravity of the lesions which had taken place in its substance.

It is equally difficult to ascertain the presence of tubercles in the cerebellum, in most cases indeed their existence is *not even suspected*. M. Lugol has met with several instances in which tubercles as large as a *walnut* or a *horse chestnut*, have been found in the cerebellum, in subjects who presented during life no indication of encephalic disease. One of the cases he relates in illustration of this fact, is interesting in a physiological point of view. A young girl, though 17 years old, presented no indications of puberty, the breasts and genitals were completely rudimentary. The head was always thrown backward, and it was only by an effort of the will that it could be brought forward.

M. Lugol has seen tubercles in the tuber annulare, (pons varolii, l, fig. 4) without any symptoms.

*Tubercles in the Lungs.*—In the lungs, tubercles are so commonly met with, that M. Lugol believes it to be a rule having very few exceptions, that they always co-exist in that organ with other scrofulous disease, if the patient have attained to the age of puberty. They may appear very early in life, and *obstinate cough in children* sometimes depends on their presence. The period of life at which they are most commonly developed is the few years after puberty. At this period we too often observe in scrofulous patients the terrible array of symptoms which characterize phthisis.

Puberty then is the time at which tubercles in the lungs most commonly appear, and this is a rule so general, that in the only three cases in which M. Lugol recollects having assured himself of the absence of tubercles from the lungs of scrofulous patients of adult age, the organic signs by which puberty is commonly manifested were entirely absent. Scrofulous patients, however, occasionally advance in years, without any manifestations of tubercles in the lungs, and it happens sometimes, though rarely, that at that period the symptoms of scrofula gradually diminish, and finally disappear entirely—but the predisposition still exists and the malady may return sooner or later. Sometimes the invasion of tubercles in the lungs is sudden, and their generation progresses with frightful rapidity. This form of phthisis is rapidly fatal. This may be assimilated to what occurs in the cervical region.

Tubercles in the lungs *follow precisely the same course as elsewhere*. At first disseminated in the tissue of the lung, they gradually converge as they increase in size, and uniting, form *tuberculous masses*. These when they soften and are evacuated, leave behind them *tuberculous caverns*, which are cavities in the substance of the lungs, the walls of which are formed by pulmonary structure or by what remains of the tuberculous matter. When a tuberculous mass empties itself into the bron-

chus, and is rejected by expectoration it constitutes a *vomica*. It is just possible that one of these caverns may heal, but even if they do, other tubercles remain, or if not, the predisposition to generate tubercle still remains, and in nearly every instance the patient will eventually fall a victim to the disease.—These cavities become the seat of a more or less abundant tuberculous suppuration, this is of course absent till the tubercle has made its way into the bronchus. We shall here only allude to the existence of a tracheal, pleural or costal fistula, the history of these does not belong to our present subject.

On examining the lungs of a patient who has died with tubercles, we are often tempted to ask ourselves, why did not this patient, in whom so large a portion of the lungs is destroyed, and what remains is so compressed and condensed that it is no longer capable of receiving air, die of asphyxia? It is evident that they cannot be said to breathe by the lungs, for a long period before they die; now in such cases, which of the organs takes the place of the pulmonary tissue? M. Lugol had no facts which authorize him to attempt an answer to this difficult question. The presence of tubercles in the lungs may coincide with an otherwise healthy state of the organs; indeed M. Lugol questions whether the lungs may not be healthy even in the advanced stage.

*From all that has been said, it results that pulmonary tubercle is in fact but tuberculous scrofula.* This is the position which the disease ought to occupy, and pathologists would never, in all probability have attributed phthisis to inflammation if they had studied it as *what it is*, a manifestation of scrofula.

Nor would thousands have been hurried into their graves, as they have been every year with rail-road speed, if phthisis or consumption, had not been treated as inflammations, by bleeding, antimonials, cathartics, blisters, &c. &c. Hundreds of these, would have been saved every year, by nature alone, from the change of seasons, who are now mouldering in their graves, the victims of the scientific quackery of the schools.

*Tubercles in the Liver, Kidneys, Ovaria, and Testes.*—The liver is often found to have undergone the fatty degeneration in scrofulous patients, but it is not often the seat of tubercles. They are rare in the biliary ducts, though M. Lugol has seen one the size of a large walnut in the cystic duct. They are more common in the spleen than in the liver, and when they co-exist in these two organs, those in the spleen are most advanced. M. Lugol has never seen tubercle in the pancreas. In the kidneys tubercle is common, it invades both the cortical and the tubular portions, and sometimes acquires the size of a walnut. There are seldom more than three

or four. M. Lugol has seen *tubercle* in the *urters*. He has only once seen it in the ovaries, when it co-existed with tubercle of the folds of the mesentery, the cerebellum and the lungs. Tubercles in the testes are not uncommon.

*Tubercles in the Muscles, Bones, and Blood Vessels.*—Tubercles may be generated in the muscular as in other tissues. M. Lugol has however only seen it in the *psos*, in that case, the tubercle was in the midst of the muscle. There was no lesion of the bones in the neighborhood, the tuberculous matter had evidently been generated there.

More than twelve years ago, M. Lugol satisfactorily demonstrated the existence of tubercles in the bones, developed in the osseous tissue and increasing as tubercle does elsewhere at the expense of the tissue in which it is developed. They have been found in the centre of bones surrounded by healthy osseous structure. Tubercles are often developed around large blood vessels, but that dropsical effusions so common in scrofulous diseases, depended on the pressure of these tumors upon the vessels, M. Lugol has not been able to convince himself. He has never known one of these tuberculous tumors penetrate the coats of the vessel around which it was developed.

*Tubercles in the Blood.*—M. Lugol has found tubercles swimming in the blood of the iliac veins at the origin of the vena cava. It was impossible to admit that the tubercles had originated externally to the vessel. They were of an ovoid form, ten in number.

Having now studied tubercle in the different organs, we pass to the consideration of

*The Formation of Tubercles.*—Pathologists are by no means agreed upon this subject, some believe tubercles the product of inflammation, others a product or an alteration of secretion, others again a degeneration of the normal tissues. M. Lugol regards tubercles as *parasitical organs* generated in the economy with an organization which enables them to increase by intusseption, so that their progressive development is explained by their anatomical structure. Tubercles are not the normal tissue degenerated, else during their first stage we should be able to recognize the tissue which is undergoing the morbid change, but this is not so, wherever generated, tubercle is in every thing but form the same; the organ in which it is developed never modifies its nature.

M. Lugol, however, I may say with great deference to his opinion, is mistaken in the true character of tubercles. They are, as I have found them by numerous dissections, diseased lymphatic glands, and the new symptoms I have introduced to distinguish this disease, and which depend entirely on the motive power of the system, demonstrate this fact in the clearest manner.

As to the doctrine which attributes tubercles to inflammation, it deserves a more detailed notice.

Inflammation is a peculiar and complex state, having some symptoms which are inherent in its nature and essential, and others which vary according to its particular location. Now the products of inflammation differ in different organs and tissues. The liver does not suppurate as the lungs do, nor the serous as the mucous tissues. Tubercles on the contrary, are as we have said *always identical, never varying*, whatever organ they may attack. The generation of tubercles has been most studied in the lungs, let us examine it there in reference to inflammation as its cause. Pneumonia is a common disease, so common that did there really exist any connexion between it as a cause, and the generation of tubercles as an effect, that connexion would assuredly be discovered. But this is not the case. Nay more, the labors of Bayle and other pathologists prove that pneumonia has no connexion whatever with the generation of tubercles. Bayle examined the bodies of numerous patients dying with pneumonia; he found the lungs hepaticised, carnified, but never tuberculous. Again, epidemic pneumonias are by no means uncommon, and where they have prevailed, a great mass of the population ought to be affected with tubercles, yet this has never been noted as a consequence of epidemic pneumonias by any of the authors who have left us descriptions of them.

M. Lugol hesitates to allow pneumonia any influence even in augmenting the secretion of tubercle, his facts however, do not authorize him in pronouncing a positive opinion. He thinks that many pathologists have attributed pulmonary tubercle to inflammation, who never would have thought of adopting such an etiology, for any other form of tubercle, as tubercle in the liver, the spleen, the mesentery, &c.—*Med. Gaz.*

The following are extracts from M. Lugol's fourth lecture on the formation of tubercles in internal organs:

"The numerous checks and *repeated deceptions* to which physicians are daily exposed in the *DIAGNOSIS and TREATMENT* of tuberculous diseases, do they not prove that it is necessary to leave the beaten track of inquiry and pursue some other which is less fallible? You all know that auscultation and percussion are useless in the diagnosis of pulmonary tubercles.—Both alike insufficient to announce the commencement of the mischief, they are superfluous at the very time that they become capable of indicating the presence of tubercles; for then these are discoverable by other means, and alas! are too far advanced in their development to warrant our hopes of arresting their progress—at least in the generality of cases. I will even go a step farther, and say that the unlimited confidence placed by the greater number of practitioners of the

present day in auscultation and percussion, has had the effect of too often inspiring a fatal security in many tuberculous diseases, which are thereby allowed to advance in their progress, until this is revealed by physical phenomena at a period when remedial measures have but little chance of effecting any good.

But what are the means, you will say to me, that are to be substituted in the room of auscultation and percussion? I answer, gentlemen, induction. Examine by these boasted methods this patient, and tell me what results you obtain. Negative results you will reply. And yet I maintain that he is tuberculous; for his father, his mother, and his brothers, have all died of tuberculous disease; and he himself is affected with it in his chest at the present moment. Believe me, this plan is much less deceptive than the other one. I tell you, the inductive method cannot mislead you; for nature is invariable in its causes as in its effects; and the external signs of tuberculous scrofula must give you assurance that similar morbid productions exist in internal organs, especially in the lungs.

M. Lugol is mistaken in regard to the certainty of this method; for nothing is more common than to find all the external signs of tuberculous disease, without tuberculation of the lungs, and this fact is disclosed by the absence of the magnetic symptoms, while their presence gives the first notice of the commencement of the disease in the lungs even before the cough commences.

"It is by viewing the question from this elevated point of view, by studying it in all its ensemble, that you will be best enabled to comprehend it in its details; and these cannot be understood by the special methods of examination which have been so much recommended of late years.

The tuberculation of internal organs exhibits in its development the same phenomena as tubercles which are outwardly situated—there is no pain and nothing of mechanical derangements.

The existence of tubercles in the lungs is so frequent, that I must admit that they are present in all scrofulous persons. You know that all, or almost all patients, who have pulmonary tubercles, are, or have been at some time, affected with tubercles in the neck; the majority have had during infancy this external sign of scrofula; while others have had it at a later period of life. I believe that pulmonary tubercles frequently exist in early youth, but it is frequently about the age of puberty that they are apt to be developed. Puberty in truth seems to have a fatal specific influence in promoting their development; and in our wards at the present moment there is a case which seems to confirm this opinion. A scrofulous patient, who, although 22 years of age, exhibited none of the usual characters of marriageableness, has just died, and in him no tubercles were found in the lungs.

To the Royal Medical and Chirurgical Society, Jan. 25 1842. Dr. WILLIAMS, President, in the Chair, the following facts concerning Tubercles of the Brain in children, with a Tabular View of 30 cases of the affection, was communicated by Dr. T. H. BROOKES.

An analysis of 30 cases of tubercle of the brain is laid before the society by the author, preparatory to a more extended communication on this subject, which he promises to afford.

After noticing the importance of extended post-mortem researches, with a view to the pathology of the brain, so as to comprehend lesions of the medulla oblongata, he concludes with some general remarks on his Tabular View. In his 30 cases, the ages he observes, varied between 19 months and 12 years.

With respect to sex, 14 were boys, 16 girls.

In four cases, no cerebral symptoms existed during life; in two, only periodical head-ache: in two, deafness and purulent discharge from the ear. In the remaining cases, head-ache, vomiting, amaurosis, convulsions, weakening of intellect, were observable; the duration of this chronic state varying from one month to three years.

Nine died with acute hydrocephalic symptoms, a few with symptoms of softening, the rest of consumption, small-pox, &c.

The number, volume, and site of the tuberculous masses, varied considerably in different cases.

A discussion took place, relating chiefly to the degree in which the pathology of tubercles in the brain was known in England; Dr. Addison, particularly, stating that he believed the disease was so familiar to practitioners, that in many obscure chronic affections of the brain it was almost confidently expected that tubercles would be found either in the substance of the brain or in its membranes.

These are all cases of children. The disease in the brain is besides very common in adults, as we always have cases of it on hand, which yield to the influence of the magnetic remedies, as it does when affecting other organs. Very little, however, is known of the pathology of tubercles in the brain in this country. There are even professors of the theory and practice of physic in our Medical Colleges, who have often exposed their ignorance by denying the existence of tubercular disease of the brain, "except in extremely rare cases."

#### ARTICLE IV.

##### The Sequel of Homœopathy.

PROFESSOR HAHNEMANN divested himself of the shackles which bound him to the old visionary theories and routine practice of the schools, and undertook to effect a most important object by the most extraordinary

means. His object was a revolution in the theory and practice of physic. This he avowed; and he supported its necessity and importance with great ability; but the means by which he intended to effect it, like the general who contemplates storming an enemy's camp, he kept a profound secret. His enemies in the distance, as well as his most obsequious proselytes, were equally in the dark, and while the first were amused, the latter were astonished at the novelty and profundity of his pretended expedients to demolish "the old allœopathy castles in the air." He had too much good sense to think for a moment, of attacking these aerial fortresses with "gross inanimate matter," after he had seen in the clairvoyant or somnient state, the astonishing effects of the "spiritual, self-moved, vital dynamic power, which moves our systems, and preserves them in harmonious order."

Besides this knowledge of the moving power of the human system, that of the identity of the magnetic or spiritual forces of nature with the powers of medicine, was one of those discoveries which he considered too far in advance of the intelligence and candor of the age to be entrusted to the rude resistance of established prejudices; and, therefore, in imitation of the wise examples of antiquity, he cautiously veiled it, under the specious garb of the magical effects of infinitesimal doses of medicines, for the purpose of preserving its advantages through this, to a more enlightened and liberal period.

The following are the corollaries on which he founds his theory, and practice; his other corollaries being chiefly intended to veil his discovery in its application to practice, by the gratification of the marvellous propensities of his readers; and while he depends entirely on the action of the magnetic or spiritual forces, which he condenses in his homœopathic doses, for the success of his system.

#### Prelude.

"To presume that disease (non surgical) is a peculiar and distinct *something*, residing in man, is a conceit, which has rendered allœopathy so pernicious."

#### Corollaries.

1. "During health, the system is animated by a *spiritual, self-moved, vital power*, which

preserves it in harmonious order." That is, it is magnetized, with the forces in equal proportion.

2. "Without this *vital dynamic power*, the organism is dead." Or, it is unmagnetized.

3. "In disease, the *vital power* only is primarily disturbed, and *expresses its sufferings* (internal changes) by abnormal alterations in the *sensations and actions* of the system." Or one of the forces predominates.

4. "By the extinction of the totality of the symptoms in the process of cure, the *suffering* of the *vital power*, that is the entire morbid affection, inwardly and outwardly, is removed."

5. "The *sufferings* of the *deranged vital power*, and the morbid symptoms produced thereby, as an indivisible whole, are one and the same."

6. "It is only by means of the *spiritual influence* of the morbid agent, that our *spiritual vital power*, can be diseased, and in like manner, only by the *spiritual* (dynamic) operation of medicine that health can be restored."—ORGANON OF MEDICINE, xviii.

The following extracts from his "Organon," will bear conclusive evidence of the fact, that he does not depend on the natural quantity of the spiritual or magnetic forces in their medicines to cure diseases.

1. "It is only by the use of the *minutest* homœopathic doses, that the reaction of *vital power* shows itself, simply by restoring the equilibrium of health. p. xx.

2. "But the signs of amendment furnished by the mind and temper of the patient, are never visible (shortly after he has taken the remedy,) but where the dose *has been attenuated to the proper degree*—that is to say, as much as *possible*. A dose stronger than necessary (even of the most homœopathic remedy) acts with too great violence, and plunges the moral and intellectual faculties into such disorder that it is impossible to discover quickly any amendment that takes place. p. 193.

3. "A judicious physician will confine himself to an internal application of the remedy which he has selected as homœopathically as *possible*, and will leave the use of ptisans, little bags filled with medicine herbes, fomentations of vegetable decoctions, washes, and frictions with different species of ointments, injections, &c., to those who practice according to routine." p. 202.

4. "The best mode of administration is to make use of small globules of sugar, the size of mustard seed; one of these globules having imbibed the medicine, and being introduced into the vehicle, forms a dose containing about the three-hundredth part of a drop, for three hundred such globules will imbibe one drop of alcohol; by placing one of those on the tongue, and not drinking any thing after it, the dose is considerably diminished. But if the patient is very sensitive, and it is necessary to employ the smallest dose possible





or ten such movements would render the mixture much closer—that is to say, they would develop the medicinal virtues still further, making them, as it were, more potent, and *their action on the nerves much more penetrating*. In proceeding therefore to the dilution of medicinal substances, it is *wrong* to give the twenty or thirty successive attenuating glasses *more than two shakes*, where it is merely intended to develop the power of the medicine in a moderate degree. It would also be well in the attenuation of powders not to rub them down too much in the mortar; thus, for example, when it is requisite to mix *one grain* of a medicinal substance in its entire state with *ninety-nine* grains of sugar of milk, it ought to be rubbed down with *force* during *one hour only*, and the same space of time should not be exceeded in the subsequent triturations, in order that the power of the medicine may not be carried to too great an extent." p. 307.

The common dose of the solution of the thirtieth or decillionth development of power is one drop, and in the dry state one globule; and these doses are generally repeated in from one to seven days. The action of these medicines is thus described by Hahnemann.

"The action of medicines in a liquid form upon the body, is so penetrating, it propagates itself with so much rapidity, and in a manner so general, from the irritable and sensitive part which has undergone the first impression of the medicinal substance to all the other parts of the body, that we might almost call it a *spiritual* (dynamic or virtual) effect.

"Every part of the body that is sensible to the touch, is equally susceptible of receiving the impression of medicines, and of conveying it to all other parts. Homœopathic remedies operate with the most certainty and energy by *smelling* or inhaling the medicinal *aura* constantly emanating from a saccharine globule that has been impregnated with the higher dilution of a medicine, and in a dry state, enclosed in a small vial. *One globule* (of which 10, 20 to 100 weigh a grain) moistened with the thirtieth dilution and then dried, provided it be preserved from *heat* and the *light* of the *sun*, retains its virtues undiminished, at least for *eighteen or twenty years*, (so far my experience extends,) although the vial that contained it had during that time been opened a thousand times. Should the nostrils be closed by coryza or polypus, the patient may inhale through his mouth, holding the mouth of the vial between his lips. It may be applied to the nostrils of *small children while they are asleep*, with the certainty of success. During these inhalations, the medicinal *aura* comes in contact with the *nerves*, which are spread over the parieties of the ample cavities through which it freely passes, and thus influences the *vital power* in the mildest yet most powerful

and beneficial manner. All that is *curable by homœopathy* may with the most certainty and safety be cured by this mode of receiving the medicine. Of late I have become convinced of the fact, (which I would not have previously believed,) that *smelling* imparts a medicinal influence, as energetically and as long continued as when the medicine is taken in substance by the mouth, and at the same time that its operation is thus more gentle than when administered by the latter mode. It is therefore requisite that the intervals for repeating the smelling should not be shorter than those prescribed for taking the medicine in a more substantial form." p. 206.

#### Caution to Practitioners.

"The smallest homœopathic dose, when properly applied, effects wonders. It not unfrequently occurs, that patients are overwhelmed, by incompetent homœopaths, with a rapid succession of remedies, which though well selected and of the highest potency, yet produce such a state of excessive irritability, that the life of the patient is placed in jeopardy, and another dose, however mild, may prove fatal. Under such circumstances, *the hand of the MESMERISER gently sliding down*, and frequently *touching the part affected*, produces an *uniform* distribution of the *vital power* through the system, and *rest, sleep and health* are restored." p. 211.

How beautiful the description! how charming! and how astonishing the effects! not of infinitesimal doses of medicine, but of the hand of the mesmeriser, when the immaterial (dynamic) or spiritual virtues of his medicines fail! What art! What a magician! Hahnemann "frequently touches" his readers organs of marvellousness, and then "gently sliding them along" to the end of his work, when behold, poor puss is at last exposed to the glaring light of the sun. Hahnemann deserves, and fate has decreed to him, immortal honors, for his success in introducing, in a most adroit manner, against the indomitable prejudices of the age, so simple and so important an agent for often palliating and sometimes curing diseases in a safe and satisfactory manner.

#### Fundamental Errors in the Homœopathic System.

The following propositions are those on which Hahnemann's apparent or popular theory and practice is founded:

1. "Every curable disease is made known to the physician by its symptoms." (*The old ever-varying symptoms.*)
2. "The morbid symptoms which medicines produce in healthy persons, are the sole indi-

cation of their curative virtues in disease." (*Similia similibus*, or, in vulgar phraseology, "the hair of the same dog.")

3. "The *totality* of the symptoms is the sole indication in the choice of the remedy."

These propositions, however simple and plausible they may at first appear, are nevertheless, in their application to practice, the most complicated, and most deceptive, that were ever, perhaps, presented to the human mind; and having disposed of Hahnemann's homœopathic doses of medicine, we propose to devote a few moments to the investigation of the pretensions of these propositions.

There never were propositions more apparently true in the abstract, and yet more positively fallacious in the practice; and no man was more aware of this fact than Hahnemann; for the number of the common symptoms of diseases is infinite, as well as the number of morbid symptoms medicine produces in healthy persons, and both are infinitely varied in different cases, and in the same persons at different times, as every physician knows; and hence the number of Hahnemann's pretended remedies are infinite, presenting in the whole, an infinitely varied and complicated system, and therefore an unnatural and erroneous one. He however, had no confidence in it, or in his "spiritual" or magnetic remedy for *all* diseases, and consequently wisely provided a cause for the disappointments of his proselytes, from the frequent failures of their homœopathic medicines, in *their own errors* in selecting the proper ones, for the *totality* of the symptoms.

The truth is, there are very few causes of disease, and the chief of those are atmospheric, uncleanliness, and intemperance; and very few symptoms (pathognomonic) which physicians should regard, and consequently they should prescribe very few remedies. These facts are now so well understood by men of sense and observation, as to induce them to regard physicians, and the latter one another, in an inverse ratio to the number of medicines they prescribe. And the soundness of these views is demonstrated in the clearest manner, in the unity

of the true pathognomonic symptoms, and simple specific remedies in truly acute, and in a very large class of chronic diseases.

Hahnemann confounds the true symptoms of acute diseases with the sympathies they produce, and knew nothing of those of chronic diseases, which are truly magnetic and pathognomonic; nor of the great natural divisions of positive and negative matter; nor of the important therapeutical relations of the "spiritual" or magnetic forces with these great divisions of matter; nor of the natural laws of these forces which govern the human system. His theories, like those which have preceded them, are consequently founded on a medley of facts and fictions, and his practice empirical, like the old allopathic practice of the schools. He has, however, shown that a great variety of different kinds of matter can be magnetized, and their natural distinctive qualities thereby greatly increased, and that therefore there may be truly "magnetic remedies." He has also shown the existence of intimate and important relations between magnetized remedies and the magnetism of the human system, and has consequently added much to our knowledge, as well as to the mortification of those who are constitutionally, as well as from motives of interest, opposed to such innovations.

There have been many explanations given of the action of Hahnemann's minute doses of medicine, by a number of Homœopaths at different periods, to all of which, many objections have been raised. The following from Professor Doppler, seems to have given the greatest satisfaction to these physicians.

**Professor Doppler's Explanation of the action of Homœopathic Remedies.**

The main points are briefly the following:—  
"The active strength of a medicine is not to be judged of according to its weight, but according to the size of its effective surface. The physical surface is to be distinguished from the mathematical one; the general physical surface increases by trituration of the medicine with another body (sugar of milk) in a greater proportion, than the diameter of the individual particle diminishes itself. Now, if we only consent to the hundred-fold diminution of an atom by each trituration, calculation will show, that the physical surface, after the third trituration, amounts to about two square

miles, and that the small point of a knife full of the thirtieth trituration, offers a surface of many thousand square miles. If, therefore, the power of action is measured by the extent of surface, the apparent minuteness rises to a real and truly astonishing magnitude. The cause of the action of surfaces rests on the argument, that with the division of a body, electricity is developed, and that the quantity of free electricity increases in an equal ratio with the increased surface."

Jahr, the great and prolific champion of homœopathy, adopts this explanation or theory of the action of these medicines, which is, in fact, nothing more than another medley of facts and fictions. The active strength of a medicine should not be judged by its weight, nor by the extent of its atomic surface, but by the quantity of its distinctive properties in a given space, the action of which is increased by magnetizing the dormant forces in the atoms of the medicine in which they are condensed, as we do those of iron or steel, which is conformable to theory and observation. The amount of these innate and all pervading forces in iron and steel, is very great; yet their effect upon the magnetic needle, like the unmagnetized homœopathic doses upon the human system, is inappreciable until their power is developed by magnetizing, when it becomes very great, or is increased and expanded in direct proportion to the amount of the forces, in a given space, in the body magnetized.

In assuming this explanation to be, as it really is, mathematically correct, the veiled novice may be overwhelmed with astonishment, upon the first announcement of the fact that medicine, from the mineral, vegetable and animal kingdoms, as well as man, can be magnetized; yet there is nothing more certain; and these, with a great many other corresponding facts, establish the existence of a magnetic medium by which we are surrounded, and by which we are thus connected with the earth and even with the sun.

Sir H. Davy says, "Electricity (or magnetism) seems to be an inlet into the internal structures of bodies, on which all their sensible properties depend; in pursuing therefore, this new light, the bounds of natural science may possibly be extended beyond what we can now form any idea of; new

worlds may be opened to our view, and the glory of the great Newton himself, may be eclipsed by a new set of philosophers, in quite a new field of observation." Sir H. supposed the heat of the animal frame to be engendered by electricity; taking it furthermore, to be identical with the nervous fluid.

Dr. Griffith has lately made some researches on the nature of molecular motions in substances impalpably divided. With respect to those occurring among particles of insoluble bodies in water, he denies that they are to be attributed, as has been supposed, to the evaporation of the fluid; inasmuch as they continued, when this process was cut off, by inclosing the fluids and particles between two pieces of glass, evaporation at the edges also being prevented by a rim of olive or almond oil, or lamp-black mixed with gold-size. He says:—(Med. Gaz.)

"I have examined a large number of inorganic substances powdered in a mortar to the finest powder, and have found no difficulty in detecting the *peculiar* motion in any substance save semi-fluid bodies, or solids which cannot be reduced to a sufficiently fine powder. The motion is quite destroyed by immersion in oil, thick gum, or syrup; here the viscosity of the liquids seems to prevent its taking place. It has appeared to me to ensue most readily in water, less so in spirit and least of all in ether. The movement is *totally different* from that of particles which are moved by currents excited by evaporation. These latter hurl a number of molecules in vortices with great rapidity; in the true molecular movement the molecules *oscillate* or *vibrate*, moving but very slowly from place to place; in some cases we can clearly perceive a single molecule quite distinct from others and enjoying its own *spherical* movements." True molecular motion is due, 1st, to an extreme subdivision of the matter: 2dly, to a relation between the specific gravity of the molecule and the medium that shall admit its free suspension; 3dly to absence of all viscosity in the liquid. Under these circumstances any kind of matter, organic or inorganic, will exhibit this motion. The *cause* of the motion is yet *unknown*, it has not appeared, in the hands of Dr. Griffith, to be influenced by electricity.—*London Lancet*, July 8 1843.

The peculiar oscillating or vibrating motions in these molecules or atoms, uninfluenced by currents, is conclusive in regard to the cause of the motion; there is no longer any room to doubt that it is magnetic—that these molecules are magnetized in the process of re-

duction to the atomic state; for besides the corresponding oscillating motions, the power of the innate unmagnetised forces in matter, is well known to be too weak to overcome the resistance of the magnetic medium which surrounds them, and produce such results.

#### Effects of Galvanism known to the Ancients.

(From the *London Lancet*, Saturday, July 23, 1843.)

In calling attention, as we last week promised to some of the "OLD FRIENDS WITH NEW FACES," to whom we then referred, we shall for obvious reasons, not follow any exact order of presentation, but shall introduce them in chronological succession, or in the sequence that is best suited to the illustrations that we have proposed; or else in an insulated form, just as they may occur to us. Following the last named method,—or what must, perhaps, rather be regarded as a deviation from method,—we shall on the present occasion, direct attention to the medicinal applications of galvanism, as adverted to by the Greek and Roman writers on medicine.

"Galvanism applied to medicine by the Greeks and Romans! Why, the existence of any such principle was not known until the year 1790!" Very true. Yet that galvanism was, virtually, applied by the ancients to the treatment of disease, we now propose to demonstrate, citing, with that view, certain passages from Greek and Roman writers, and translating them for the benefit of all Fellows of the London College of Physicians and other unlearned persons who need English versions thereof.

There is a certain living voltaic battery called a *torpedo*. The ancients were acquainted with that fish, and were in the habit of employing the shock which it communicates as a remedial agent. The following passage of GALEN is in several respects remarkable:—

"Some persons think that certain bodies can affect others in their vicinity by contact only, in consequence of the mere force of their virtue, and that this is plainly shown in the case of the marine torpedo, the power of which is so great that when it is transmitted to the hand of the fisherman through his spear, it suddenly renders the whole hand torpid. From these conjectures it is easily understood that certain things of small bulk induce, by contact alone, the greatest alterations; as may be seen, also, in the Heracleon stone, which is called the magnet; for iron which it has touched adheres to it without any fastening; then if another piece of iron touch that which was first touched, it will adhere to it as the first did to the magnet; a third piece of iron will, in like manner, adhere to the second, so as to make it evident that most intense powers reside in certain substances."—(GALEN, "De Locis Affectis," lib. vi., c. 5. Edit. Basii, Græce, 1538.)

We have here three things worthy of notice; first, a recognition of the power that has since been known as animal electricity; secondly, a knowledge of the fact that this power is capable of transmission through a conducting medium; and, thirdly, a conjecture of its affinity to the magnetic power. In another place the same author says,

"But some persons write that a whole torpedo (I speak of the marine animal) will cure headache when applied to the part, and will cause a prolapsed anus to return. But I, having tried it in both cases, found the assertion true in neither. Bethinking me, however, that the fish should be applied to the aching head alive, and that it might have an anodyne power, and allay pain like other things which obtain the sense, I found such to be the case."—("De Simpl. Medic. Facult.," lib. xi. Ed. cit., tom. ii. p. 150.)

ÆTIUS writes to the same effect:—

"The torpedo, applied alive, cures chronic headache, and causes the prolapsed anus to return. When dead, it produces these effects either not at all, or only in a small degree." ("Lib. Medicinal," lib. ii., c. 186, Ed. Ald.)

SCRIBONIUS LARGUS, a miserable Latin writer, of the age of CLAUDIAN, recommends the application of torpedoes, both in headache and in gout:—

"A headache, however inveterate and intolerable, is immediately removed, and permanently cured, by placing a live black torpedo on the painful part till the pain cease and the part become benumbed. As soon as these effects have taken place, the remedy should be removed lest the sensibility of the part be destroyed. Several torpedos of this kind should be procured, because sometimes the cure scarcely responds to the action of two or three, that is, the torpor which is the sign of the cure."—"Compositiones Medicæ," c. i. Apud Medicæ Artis Principes, 1567.)

"In both species of gout (the hot and the cold, to wit) a live black torpedo should be placed under the feet, the patient standing, not on a dry shore, but one washed by the sea, till the whole foot and leg is benumbed, up to the knees. This both removes the pain at the time, and prevents its future return."—(Op. cit. c. 41.)

MARCELLUS EMPIRICUS, who, unless there has been some confusion of manuscripts, is the most impudent of plagiarists, has copied whole passages from SCRIBONIUS, without acknowledgement; among others, the two just quoted, the former *verbatim*, the latter, nearly so.

So much for torpedos. It is not to this apparently whimsical remedy, that we now request attention, but to the facts that the activity of galvanism on the human system, and its applicability to medicine, were known to the experience of the ancients, although the principle of galvanism was unknown to their philosophy. Might not the intelligent perusal of the first passage that we have quoted from GALEN, have led to the discovery of the galvanic power before the latter end of the eighteenth century?

Is not a germ of electro-magnetism also to be found in the same passage? It may, however, be asked on the other hand,—If galvanism had been discovered and applied to medicine sooner than it was, would the latter science have been any great gainer thereby? Do the trials that have hitherto been made of electricity, as a therapeutic agent, justify us in reposing much confidence in its powers? We answer that it has not yet received a fair trial, having, in a majority of instances, been unscientifically and inefficiently applied. Some of the results that have been obtained have, nevertheless, been sufficiently striking. It is probable, that a very moderate galvanic influence, sustained for a length of time, will be found of more extensive utility than the more intense but transitory application of the same agent in the way of shocks; but we cannot persuade ourselves that an agent which so powerfully affects the nervous system, as well as the coagulability and other properties of blood, would not, if we knew how to handle it properly, admit of very important applications to the treatment of disease.

These views of the Editor of the London *Lancet*, corresponds with those we long since formed, and which we have practised upon, through a long series of years, with great success, and as he has advanced so far upon this important and interesting subject, we may now venture to say a word to him on the subject of magnetic remedies in chronic diseases, by which a very moderate galvanic influence is "sustained for a length of time, and the nervous system, as well as the coagulability and other properties of the blood, are effected in the most sanative and beneficial manner. It will not do to say a word to him about magnetised gold pills, in the present state of his knowledge, for with them there would be associated in his mind the idea of "pill monger," and perhaps "animal magnetism" either of which would be fatal to his progress in favor of "galvanic influence."

We may however say, that the magnetised steel rings, (which may be gilded by the electro-magnetic process,) when worn on the fingers, maintain a moderate magnetic influence in some persons, and a strong one in others, who are very susceptible. They, with the influence of the magnetised gold pills, removed a large tubercle of the size of a small hen's egg, from the side of a person's neck, the last summer in six weeks, which

had maintained its position there during five years. They have alone removed tubercles from the necks of more than twenty children, during the last six months; in about the same time, which had remained there from three months to two years, and rendering them liable by a propagation of the disease, to attacks of white swellings of the limbs, and disease of the hip-joint, &c. Scrofulous ulcers heal faster under their influence, and they apparently affect very favorably persons affected with tubercular disease of the organs and limbs.

In what manner do they produce such effects, is a question which is frequently asked, but in the present state of our knowledge is very difficult to answer in a satisfactory manner. We may however, be assisted in forming an opinion on the subject, by the statement of certain facts connected with it, among which are the following:

The rings are magnetised with two poles, which are connected by a magnetic axis, and have a magnetic equator at right angles with the axis, both of which pass through the finger at right angles—they consequently pass through the blood vessels and nerves; and besides the magnetism in the surface of the ring, is connected with the numerous nerves in the surface of the skin. The nerves are good conductors of the magnetic forces, or as the editor of the *Lancet* will have it, the galvanic influence, and connect the forces in the ring or rings of one hand, with those of the rings of the other. Now the poles, and the forces in the rings, are negative and positive, and negative and positive forces attract each other; and as the tubercles in the neck are necessarily formed and sustained under the influence of the repulsive force which expands, there is a well grounded suspicion that the forces in the rings, attract the repulsive forces in the tubercles, and thereby enable their attractive forces to contract, and reduce them to their natural glandular state.

May not the use of these magnetised rings banish hereditary tubercular disease or scrofula from the face of the earth? The number of cases of this disease is increasing rapidly in Europe and in this country. They

have increased fifty per cent. in the last hundred years from the abuse of mercury alone, by physicians, and by the quacks, disguised in their panaceas and syrups of sarsaparilla, yet we should never despair in our efforts to effect an object so important, as that of reducing the very germs of hereditary disease in infancy and adult age.

The physicians of Europe are aroused from their slumber on this subject which is now discussed in some of the medical journals in a very elaborate manner.

Besides the passage of laws to prevent the increase of hereditary disease, Dr. Prater, of London, suggests the following,

**Plans for Preventing the Transmission of Hereditary Diseases from Parent to Child.**

1. Let those on whose side the taint exists, adopt for some years, (or at all events, for a year) previous to marriage a diet and plan of life, which has been found by general experience most conducive to the palliation of the disease under which they are laboring.

2. As a part of the same system, let them, if their circumstances permit, even remove to a climate where the affection which they wish to subdue is rare, or unknown; and if they cannot continue there during life, let them, at all events, remain there for a period of six or eight years.

3. After marriage, if the hereditary taint be on the male side, the mother may suckle her children herself, living, as we are now supposing, with them, in a climate very unfavorable to the growth of the disease; or, at all events, bring them up by a system of diet and regimen (aided by medicine if proper) calculated to subdue it.

4. If the disease be on the mother's side, she is, of course, for some years previous to marriage, to live in a manner, the best calculated to eradicate it; and if, indeed, this be impracticable, she ought particularly to do so during the whole time of pregnancy. In case of issue, the child as soon as possible is to be separated from her, as far as nourishment, &c., is concerned, and to be brought up either by the hand or a wet nurse (of which the former is preferable), that it may not derive a further disposition to disease from her milk; for this, although not possessing a direct power of communicating the disease, still, as a nutritive fluid, has, in all probability, that defect in composition or structure, (for milk is globular common to the solids, on which hereditary diseases seem mainly to depend.— Since, moreover, the other secretions of the mother may partake of the same diseased disposition as the milk, it should be a general rule that the child, although, of course, it may be allowed to remain in her house or

apartment, should not be kept for any long period in very intimate contact with her.—*London Lancet.*

We can here hardly resist the temptation to show the great superiority of the influence of the magnetised rings, over the influences suggested by Dr. Prater, in preventing the transmission of hereditary disease, but must defer it until we have demonstrated, as we propose to do in the next number, the magnetic organization of the human system.

ARTICLE V.

LUNAR INFLUENCE.

Being a Fourth Contribution to Proleptics.\*

By T. LAYCOCK, M. D.

Physician to the Dispensary, York.

The opinions hitherto held by scientific men on the validity of the doctrine of lunar influence have been remarkably discordant. The skeptics have always been unphilosophical in their skepticism, and the believers up to the time of Mead were credulous in their belief; both agreed, however, in admitting or rejecting the doctrine without much examination. As it has had, and may have, an important bearing on proleptical science, I propose to review the subject in a spirit of impartiality.

The phases of the moon have measured time from a very early period. Mr. Cullimore traces evidence of a lunar division of time on the bricks of Nineveh and Babylon, and Sir G. Wilkinson is of opinion that the circumstance of the god Lunus being the dispenser of time, and represented as noting off years upon the palm-branch, leads to the idea that in former years the Egyptians calculated by lunar instead of solar years. The hieroglyphic of a month, which is a lunar crescent, shows also, that their months were originally lunar. The derivation of the word *month* in our language, and of *monat* and *Men* in the German and Greek, sufficiently proves that the moon was likewise the measurer of the months at a very early period in the history of European nations.

This connection of the moon with the measure of time seems to have brought that planet into relation with the religious rites of ancient nations, as the Egyptians and Jews; and also to have given origin (in part) to the mythological idea so extensively prevalent of a lunar influence on marriage and child-bearing. Even the barbarous Greenlanders, as Egede informs us, believe in this superstitious notion. They imagine that the moon visits

\* See LANCET, Vol. I., 1842-3.

their wives now and then; that staring long at the full moon will make a maid pregnant, &c. Among the ancient nations the general idea was, that the lunar influence varied according to the age of the moon. Bombastes, the Egyptian Diana, was not equally favorable to putrid females and their offspring in her different phases. Among the Jews the full moon was believed to be lucky, and the two other disastrous. "The full moon," says the Rabbi Abravanel, "is propitious to newborn children, but if the child be born in the increase or wane, the horns of that planet cause death; or, if it survive, it is generally guilty of some enormous crime." The Greeks and Romans entertained a similar idea respecting the lunar phases. The general opinion seems to have been that the moon was propitious in proportion as its luminous face was on the increase.† The ancient Greeks considered the day of the full moon to be the best day for marriage. Euripides makes Agamemnon answer, when asked on what day he intends to be married,

"When the blessed season of full moon is come.—  
*Iphig.*, act v., 717.

Hesiod asserted that the fourth day of the moon was propitious, but the eighteenth was bad, especially to the female. The Lacedæmonians thought it unlucky to march to war before the full of the moon, or to make commanders at any other time than the new moon.‡ But illustrations of this kind might be multiplied to a great extent. Those who are curious in the matter will do well to refer to Dr. Prichard's work already quoted, to "The Doctor," vol. iii., p. 186, to Dr. Milligan's "Curiosities of Medical Experience," vol. i., p. 113, and (if they can get it) to "Astrologia Restaurata, by William Ramsey, Gent., Student in Astrology, Physick," &c., folio, Lond., 1653. This Ramsey was probably the son of Davy Ramsay, celebrated by Scott, in the "Fortunes of Nigel," and who says of the nativity of the Duke of Buckingham,—

"Full moon and high sea,  
Great man shalt thou be;  
Red dawning, stormy sky,  
Bloody death shalt thou die."—Chap. vi.

The influence of the moon was acknowledged in magic and alchemy, as well as in mythology and astrology. Trallian directs a magical ring for the colic to be prepared on the seventeenth or twenty-first day of the moon.§ In Ben Jonson's "Alchemist," a play which, from the known accuracy

of its author, may be considered as representing the swindlers in that line who were his contemporaries, TRIBULATION says,—

"But how long time,  
Sir, must the saints expect?"

"SUBTLE.—Let me see,  
How's the moon now? Eight, nine, ten days hence,  
He will be silver potate; then three days  
Before he citronise,—some fifteen days."

Act iii., scene 1.

Medical science could not escape being involved in these notions. Indeed, the idea of a physiological and pathological influence is directly connected with the mythological; but this idea was conjoined with the doctrine of septenaries, and necessarily so, because the observed vital period of seven days was contemporaneous with the lunar period of seven days, or one week. In the second century we find Galen discussing this connection between the moon's influence and critical days, *in extenso*, and with great ingenuity, and his doctrines revived, but not improved, by Actuarius in the twelfth. That these doctrines influenced medical language and practice to a great extent might be proved by various historical facts. For example, in Matth. xviii., verse 13, of a person described as falling off into the fire and off into the water, it is said that he (*seleniazetai*) is affected by the moon. Trallian, using the same word, terms *epileptics*, *seleniakos*.\* Apuleius, a Latin author, also terms epileptics *lunatici*. In Mr. Wright's "Biographia Literaria" it is stated, that one day John of Beverley entered the nunnery of Wetadun (supposed to be Wetton, in Yorkshire), where the abbess called him to visit a sister in whom the operation of bleeding had been followed by dangerous symptoms. When he was informed that she had been bled on the fourth day of the moon, he blamed the abbess severely for her ignorance; "for," said he, "I remember that Archbishop Theodore, of blessed memory, said, that bleeding was very dangerous at the time when both the light of the moon and the flood of the ocean were on the increase." This notion influenced medical practice to the time of Van Swieten.

Mead was the first of modern writers who considered the doctrine of lunar influence in a truly philosophical spirit. His work on the subject is still worthy of perusal.† He anticipated the doctrine of atmospheric tides. He declared that the moon's influence would be found to be greatest at apogee and perigee.—He showed, from various calculations, that the atmospheric pressure on the body might vary in consequence of the moon's influence on the atmosphere, to the extent of three thousand and sixty-two pounds, forcibly adding, "Fieri

\* Basnage, Histoire des Juifs, IV. chap. xi.

† Prichard, Analysis of the Egyptian Mythology, &c., Lond., 1819, p. 72.

‡ Archæol. Atticæ, by Z. Bogan, 5th ed., 4to., Oxford 1668, p. 327.

§ Lib. 1., cap. i.

\* Lib. i. cap. xv.

† De Imperio Solis ac Lunæ in Corpora Humana, et Morbis inde Oriunda." Ed. Altera, &c., Lond., 1748.

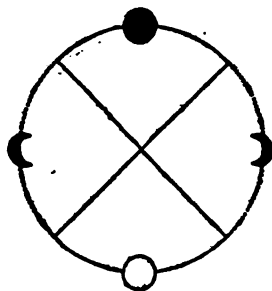


tamen nequit quin magnum esse momentum habeat tam insignis variatio."—P. 28. In short, Mead brought the subject before the profession as completely as the state of science at the time would permit. The last century has been more prolific in correct and extended observations on the subject than the preceding ten. These I shall attempt to collate and arrange.

*Influence of the Moon on Fevers and on the Spread and Duration of Epidemics.*

Testa quotes Gillespie, or Symmons, as having communicated to the "London Medical Journal," for 1785, cases in which ulcers showed an evident connection with the moon's changes, and also refers to remarks to the effect that the knowledge of lunar influence may be used proleptically in the treatment of intermittents. Balfour republished his tract, at about the same time, at Edinburgh, by the special recommendation of Cullen. It is worthy of remark that Balfour also refers to the proleptical use of the knowledge of lunar influence. His views are as follows:—1. That in Bengal, fevers of every denomination are, in a remarkable manner, connected with and affected by the revolutions of the moon. 3. That in Bengal, a constant and particular attention to the revolution of the moon is of the greatest importance in the cure and prevention of fevers. 3. That the influence of the moon in fevers prevails in a similar manner in every inhabited part of the globe. 4. That the whole doctrine of the crisis of fevers may be readily explained from the premises established respecting the influence of the moon in these disorders at the full and change.\* The fever which came under Balfour's observation in Bengal was a bilious intermittent, appearing most commonly as a tertian or quotidian. The moon's influence was exhibited at full and change by the greater number of attacks and relapses which took place in the three days preceeding and the three days following each of these periods. The first and second propositions are alone substantiated by his observations. In considering his fourth proposition he was quite unconscious of the general law I have before demonstrated. Ambrose Pare observed that people were more liable to be attacked by the plague at the full moon. Diemerbroeck (as quoted by Mead) also relates that in the plague of 1636, two or three days before and after the new and full moon, the disease was more violent, and that more persons were seized at those times than at any other, and in a more fatal manner. Ramazzini asserts that the influence of the new and full moon, but particularly of the former, was mat-

ter of general observations during the prevalence of an epidemic fever at Modena. Balfour quoted Dr. Lind, as entertaining views similar to his own, and he has since been supported by several physicians and surgeons of the Indian armies. Dr. Scot asserted that the influence of the moon on the human body in India was well known to every medical practitioner. It was universally acknowledged by the doctors of all colors, of all castes, and of all countries. Dr. Farquhar corroborated these assertions. Mr. Pearson, an Indian surgeon, declares "that a careful observation of disease in that climate will corroborate the inferences of Dr. Balfour that the attacks and fatal terminations of febrile disease and of dysentery, retention in the intestinal canal, aggravations of spasmodic and nervous affections, take place most frequently during the lunar periods, i. e., in fifty hours before and after the new and full moon." Dr. Kennedy, in his work on the Epidemic Cholera, also declares, "The constitution here [India], both of native and denizen is assuredly under lunar influence, or, what is the same thing, under the influence of the changes of weather, which are invariably accompany the changes of the planet as the ocean." (chap. vi.) No recent writer has entered so fully into this part of the subject as Mr. Orton.† Individual cases which came under his own observations are related in support of the doctrine, and establish it apparently beyond controversy. One gentleman, for example, had a paroxysm of intermittent fever every lunar month, at the new moon, for two years and eight months. For two successive years he had one paroxysm only in the month, and that was invariably at the new moon (p. 204, also 394). Mr. Orton constructs the following diagram in support of Balfour's views:—



The black lines are the unhealthy periods; the dotted lines the more favourable periods. Each period extends for three days and three-

\* A Treatise on the Influence of the Moon in Fevers. By Francis Balfour, M.D., &c. Edinburgh, 1785.

† On the Diseases of Warm Climates. London Medical and Physical Journal, vol. xi., p. 204.

† On the Epidemic Cholera of India, 2nd ed., 1821.

quarters before and after the full and new moon, or the quarters. Mr. Orton then enters into a number of details as to the day of the moon on which the cholera appeared at various places in India, and presents the result of forty-six instances in the following table:—

Appearances of the cholera.	Days before and after full or change.						
	1	2	3	4	5	6	7 and 7 1-2 (the quarter.) No instance.
	16	15	5	5	2	3	

The first column contains the instances in which the cholera appeared on the day of the *syzygie*, as well as that before or after. The attacks which commenced on the plenilunar, or light half, of the moon, were twenty-eight; on the novi-lunar, or dark half, eight. Mr. Orton consequently infers, "that the moon's syzygies have a very marked influence in producing the disease, and the quarters in removing it." The progress of the cholera in York, Glasgow, and Manchester, did not exactly corroborate Mr. Orton's views, as the following tables show:—

Progress of cholera in York from June 2d to August 13th, 1832,—

	New Cases per diem.	Deaths per diem.
At quadratures, including the day preceding and following.	5.40	1.93
On other days	5.63	1.72
On three days at new and full moon,	5.46	2.00
On three days at quarters,	5.33	1.96

In Glasgow, from Feb. 13th to May 24th, 1832,—

	New Cases per diem.	Deaths per diem.
On three days at quadra- tures.	9.52	5.69
On other days,	11.42	5.80
On three days at new and full moons,	8.09	4.30
At quarters,	11.90	6.76

In Manchester, from 1st to 23d August,—

On three days at quadratures	17.77 new cases per diem.
On other days	20.71 new cases per diem.

The difference in the results between these tables and Mr. Orton's may, indeed, be attributable to the difference of climate, for we have seen how more regularly the atmospheric tides recur within the tropics than the temperate zones. Besides, we can scarcely set off *negative* results against the numerous *positive* observations detailed by various individuals, and all leading to the same result. And, in fact, these observers are borne out by what is noticed in other tropical countries. "Him fever," says the Negro in the West Indies, "shall go when the water come low. Him always come hot when the tide high."\* "Major Moore says that near the tropics, especially in situations where the tide of the sea has a great rise and

fall, scarcely any person, and certainly no one affected with feverish or nervous symptoms, is exempted from extraordinary sensations at the period of the spring tides."† The arriero, or muleteer of Peru takes care not to unsaddle his mules in the *creciente* or increase of the moon, until they have cooled, otherwise they would be disabled by abscesses, which would rapidly form on the shoulders or loins.‡

#### Lunar Influence in Affections of the Nervous System.

It is yet a popular opinion that epilepsy, insanity and asthma, recur at intervals regulated by the moon. Mead mentions a case of convulsions in a young female, the paroxysms of which corresponded in their cessation with the flow of the tide, and in their accession with the ebb. Brookes, a popular writer in his day, recommends the remedies for epilepsy to be given a day or two before the new and full moon, as the disease returns at the periods of the moon, especially the new and full. He mentions another convulsive disease in which the accessions of the fits keep exact pace with the phases of the moon.‡ A very minutely detailed case of periodic asthma was communicated to the royal academy at Madrid, by Dr. Franzieri, physician to the court.§ The history extends over a period of twenty one years; but it is enough to state here, that for four years the days of intermission counted from the very day of the new moon, to that preceding the eve of the full moon, and from the day of the full moon to the day before the eve of the new one. In a case of hystericalgia, detailed by Dr. Rutter, he says, "the pain was also greatly increased at the new and full moon. She first directed my attention to this circumstance, and I observed it for many years afterwards to recur with a degree of regularity which leaves no room to doubt the fact, to whatever cause it may be ascribed."|| Dr. Ebers, of Breslau, has lately published an interesting example of somnambulism in a boy, aged eleven years, and which he watched himself closely. The paroxysms came on regularly every full moon.¶

\* The Doctor, vol. iii. p. 179.

† Peru as it is; by Dr. Smith.

‡ Gen. Pract. of Physic, vol. i. p. 279, 6th ed.

§ See Lond. Med. and Phy. Journal, vol. iii., p. 401.

|| Edin. Medical and Surgical Journal, vol. iv., p. 170.

¶ Casper's Wochenschrift, numbers, 46, 47, (1833.)

\* The Doctor, vol. iii. p. 179.

*Influence of the Moon on Insanity.*

The evidence on this point is conflicting. Dr. Arnold says that he could never clearly and certainly perceive any such lunar influence.\* In the annual report of the State Lunatic Asylum, Worcester, Massachusetts, a table of fifty cases of periodical excitement is given, and their relations to the moon.

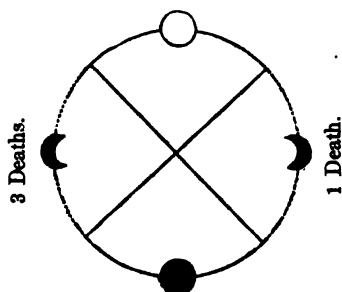
There occurred on the average,—

At the new moon, . . . . .	20
middle of ditto, . . . . .	13
At the first quarter, . . . . .	16
middle of ditto, . . . . .	11
At full moon, . . . . .	12
middle of ditto, . . . . .	11
At last quarter, . . . . .	13
middle of ditto, . . . . .	18

The periods however, in one half were not exoteric, but esoteric, in their origin; for in twenty-five the paroxysms occurred at very nearly regular intervals of four, six, eight, and twelve weeks. In one the intervals were tertian. These cases should have been separated from the others. M. Daguin, physician to the Lunatic Hospital at Chambery (Savoy,) made numerous observations and was decidedly of opinion that the moon exercises a constant and real influence on insane people. Dr. Michael Allen strenuously advocates the doctrine.† He divides the phases of the moon into four periods of increased and diminished excitement; the former commence two days before new and full moon, and continue for four days after; the latter commence three days before the quarters and continue for four days after. In fact, the division of the lunation corresponds almost exactly with Mr. Orton's; his unfavorable periods answering to Dr.

Allen's periods of increased excitement, as the following diagram shows:

*Diagram of Dr. Allen's Observations.*  
15 Deaths.



The latter author appeals to a table of deaths which occurred in his establishment, the result is as follows:—At full moon, 11 died; new moon, 15; first quarter, 1; last quarter, 3 died. But even this table is nullified by the experience of the Retreat.

Mr. Thurnam kindly furnished me with details.

Deaths at the Retreat for forty-four years, arranged on Dr. Allen's hypothesis:—At full moon, 33; new moon, 40; first quarter, 34; last quarter, 32.

The plus negatives the minus. I may add here that MM. Leuret and Metivie made observations on the frequency and irritability of the pulse of insane people at the moon's phases during August and September. The patients at the Salpêtrière and Maison de Sante d'Ivry were examined:—\*

	Last quarter.	New moon.	First quarter.	Full moon.
Frequency of the pulse at . .	86.67	81.62	80.56	79.90
Per cent. in whom it was quickened at . . . . .	57.12	34.72	34.72	23.52

I have had asthmatic and epileptic patients who complained of lunar influence, but I could never satisfactorily ascertain that it was exerted. The paroxysms certainly occurred at intervals of a lunar month, and about the time of a lunation; but this might be simply a coincidence of the esoteric cycle with the lunar, and nothing more. A medical friend informs me of a case in which the patient is much more easily excited by alcoholic drinks at the full moon than at any other time. Chatterton, like Milton, imagined his intellect was more vigorous at the full moon.‡

*Other Diseases and Functions under Lunar Influence.*

The very ancient doctrine that the periodical change in the sex is under lunar influence has still its advocates. Dr. Flachs, a German critic, in a review of Dr. Davis' work on Midwifery, controverts an opinion of that writer to the contrary. He says that the fact is well ascertained, and that the full moon is most influential. Mead quotes cases to prove that leucorrhœal discharges are under lunar influence. "It is a fact worthy of remark," says Mr. Lambert,† "that the new and full moon are the periods at which the Kookies generally

\* Observations on Lunacy, &c., vol. i., p. 324.

† Cases of Insanity, 8vo., 1831.

‡ Works edited by Southey, 1808, vol. i., p. 34.

\* London Medical and Surgical Journal, vol. iv., p. 669.

† Account of the Bos Frontalis, or Gyal. Linn. Trans. vol. vii., p. 306.

commence their operation of catching the wild gyaals, from having observed that at these changes the two sexes are most inclined to associate. The same observation has often been made to me by our elephant catchers." In the earlier volumes of the "Philosophical Transactions" are histories of *hemorrhages* which broke out at lunar periods. Mead relates a curious instance of this kind. Dr. Pitcairne was seized at a country seat near Edinburgh, with a bleeding from the nose and faintness, at the exact hour of the new moon, namely, nine o'clock, a. m. On returning to Edinburgh, he was informed that Mr. Cockburn, professor of philosophy, had died, suddenly, at the same hour, from hemorrhage from the lungs, and also that five or six of his patients had been seized with hemorrhages. The barometer was lower at that hour than either he or his friend Dr. Gregory had ever observed it. *The births and deaths of mankind* generally have been supposed to be under lunar influence. It was formerly supposed in the Netherlands that fat people died at the flood, and thin spare people at the ebb. Among the wonders of the isle and city of Cadiz, one is, that the sick never die there while the tide is rising, but always during the ebb. Dr. Mosely made out a list of persons who had died aged from one hundred and thirteen to one hundred and sixty-nine years, to prove that very old people die at the new or full moon. He also infers from the times of death of forty illustrious persons, that the same rule holds good with mankind in general. Three or four years ago, Mr. Proctor (now resident medical officer at the York County Hospital) made me out a list of the births, with their dates, which had occurred in the practice of Mr. James Allen of this city, during the five years from 1831 to 1835, inclusive. On arranging these according to the changes of the moon, the result was as follows:—Number of births at new moon, 151; first quarter, 129; full moon, 131; last quarter, 154. The day before and the day after the day of change were included in the estimate. The whole number of births were 1403; of lunations, 247; of days included in the lunations, 741, or  $247 \times 3$ .

It is remarkable that the ancient doctrine of lunar influence on vegetation is still practically applied in some tropical countries. "Herbs set in the wane of the moon," says William Ramsay, quoting this doctrine, "do not thrive well; vines, to check their growth, should be pruned in the wane; timber cut to keep well," &c. Dr. Robertson asserts that in the West Indies all sorts of vegetables are fuller of sap at the new and full moon; the colonists, therefore, abstain from cutting

wood at these periods, but sugar-canes are cut and castor-oil nuts are gathered at these seasons, the latter being supposed to yield one fifth more oil at those times than at any other. This influence of the moon is still acknowledged, at least in Cuba, as Mr. Backhouse informs us, in the account of his travels lately published. The moon also guides the agricultural operations in Peru. "The maize crops," says Dr. Smith, in his work before quoted, "the farmers always harvest in the '*menguante*,' or decrease of the moon; for it is a fact, known to every husbandman, that if they collect the crop in the '*creciente*,' or increase of the moon, it will not keep free of moths for three months, even though allowed the advantage of being left in the husk." Around Lima the farmer takes care not to sow in the *creciente*, or the wood-cutter to cut timber, especially willow and elder, or it soon decays, as Dr. Smith found out by his own experience.

It has been supposed that the moon exercises an attractive power on the fluids of living structures, like that exhibited on the great masses of water on the globe. I think this hypothesis need not be discussed or noticed further. It has also been supposed that the light of the moon has a direct influence on vital function. The sun's rays may certainly be so altered by impinging on the moon, that when reflected from the latter they may have a chemical and physiological action very different from those proceeding directly from the former. Testa discusses the question at considerable length\*. Supposing it to be proved that the moon's light have an injurious influence I think it scarcely belongs to my subject. Shutters or an awning will at any time effectually neutralize it, so far as man is concerned. Be this as it may, there are no observations extant worthy notice.

In accordance with my previous plan I shall next proceed to compare physiological and pathological observations with meteorological phenomena and consider whether there be any changes in the density, electric tension, or hygrometric condition of the air at the lunar phases, whether there be changes in the direction of its currents, and whether these changes have any connection with the observed changes in vital function, and how it takes place. This will form the subject of another communication.

\* *Bemerkungen über die periodischen Veränderungen und Erscheinungen im kranken und gesunden Zustande des menschlichen Körpers*, Leipzig, 1790, p. 337, seq. This is a translation from the Latin of Testa. Testa's Book, I may observe, contains more rational facts and arguments on the subject of vital periodicity than any work of the time that I am acquainted with. He took it up where Mead left it.

### The Law of Seven.

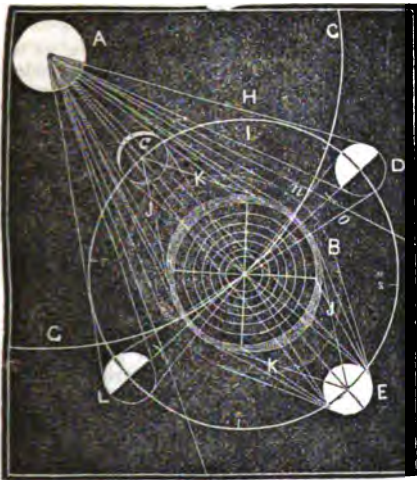
*To the Editor.*—Sir: In your widely-read Journal the periodic law of seven, in health and disease has been illustrated, both physiologically and pathologically by Dr. Laycock; by Dr. Robert Williams, on Consumption; and by "Chirurgus" on Menstruation and Delivery (LANCET, 11th March, 1843.) and I some time ago, observed what may be considered to be another illustration of it, in a paper (by Dr. Stratton) in the "Edinburgh Medical and Surgical Journal" for, Jan., 1843, page 112, where the result of several series of observations is to the effect that in health the human pulse is more frequent in the morning than in the evening for six days out of seven, and that on the seventh day it is slower. Verily it seems as if the days of mathematical medicine were about to return. I am, sir, your constant reader and faithful servant,

PITCAIRN SECUNDUS.

Kingston, Upper Canada, May 21, 1843,

### Hemorrhage from the Lungs.

NEARLY all the cases of hemorrhage from the lungs occur within four days of the new moon or of the full moon, and the natural and regular periods of hemorrhage from the uterus occur within the same time. These facts



were well known to the ancients, and a knowledge of them is a matter of great importance to both sexes who are predisposed to hemorrhage from the lungs, to enable them to avoid any exciting causes of hemorrhage at these periods, and particularly to females, for obvious reasons.

A solution of this lunar influence is found in the more rarified state of the atmosphere, from its expansion at K J and J K; at the new moon, c, and full moon, E, from the combined action of the sun and moon upon it, at these periods, in the direction seen in the figure, and in consequence of which the pressure of the atmosphere on every square inch of the body, and of the cavities exposed to its influence, is greatly reduced.

The diminution of pressure commences three days and a half before the new and full moon, and gradually increases until it arrives at its maximum, at the time of the new and full moon; when it begins to decrease, and goes on decreasing to the end of three days and a half, when it is minimum, or 0, and so continues through the intermediate periods.\*

When the moon is in its syzygies, c E, its forces are extended to the atmosphere of the earth, B, by the action of the forces from the sun, A; but when the moon is in its quadratures, D L, the extension of its forces beyond the ) parenthesis ( is interrupted by the forces from the sun, and the density of the atmosphere is then at its maximum.

The periods of excitement and repose in chronic diseases are generally very regular, the first occurring in the periods of the new and full moon, and the latter in the intermediate periods.

When hemorrhage commences from the lungs, the arms above the elbows and the legs above the knees, should be bound with handkerchiefs, moderately tight, until the hemorrhage ceases, for the purpose of checking temporarily the accumulation of blood in the heart and lungs. The patient should at the same time drink freely of alum water, or salt water. The violence of the hemorrhage soon ceases under this treatment; the use of these drinks should, however, be continued until the bloody expectoration has ceased, when these safe and efficient remedies will finish their work by exciting the action of the intestines. Drawing blood from the arm in large quantities under such

\* Consumptive persons of the valleys are frequently attacked with hemorrhage from the lungs in passing over the mountains in the intermediate periods.

circumstances, as is commonly practised, is not only positively injurious in a great majority of cases, but it is often fatal; and such patients are never in greater danger than when they are in the hands of a physician whose knowledge is bounded by inflammations. When the quantity of blood raised, exceeds a wine glass, a blister should be applied between the shoulders, and rest and quietness, with a light diet, strictly observed, until the system has recovered from the exhaustion produced by the hemorrhage.

The acetate of lead (sugar of lead,) if at hand, may be also used in these cases, 3 or 4 grains, or a quantity that will lay on a six-penny piece, made into 3 or 4 pills, with moist bread, may be taken at once, or at intervals that may be determined by the urgency of the symptoms.

The few cases of hemorrhage from the lungs, which occur when the moon is in its quadratures, or when it is moving from the octant; r, to that at m, and from the octant at s, to that at I, are those that occur in chronic bronchitis, or chronic disease of the mucous membrane that lines the inside of the bronchial or air tubes, which rarely amounts to more than a wine glass, and is in general a matter of little consequence, requiring only the exercise of common prudence at those periods to prevent its recurrence.

Hemorrhage from the serous substance of the lungs, or from its serous membranes, occur in the rarified state of the atmosphere, at the periods when the moon is in syzygies or apogee and perigee; while hemorrhage from the mucous substance, or the mucous membranes of the lungs, occur in the dense state of the atmosphere, at the periods when the moon is in its quadratures, as we have ascertained in the most satisfactory manner, by a long series of observations.

#### Diagnosis by the Pulse. Hemorrhage from the Lungs.

TO THE EDITOR OF THE LANCET.

SIR—The number of the pulse in one minute is generally a multiple of twelve; I believe that this fact has not hitherto been noticed; yet will it be found not less useful and important than curious. In extensive practice, when advice gratis necessitates rapid conclu-

sions, it is easy to determine, in a few seconds, to which number the pulse may be referred, and in many cases the nature and intensity of a disease may be suspected from the number of the pulse alone. In accordance with this law of numbers we meet with pulses of 60, 72, 84, 96, 108, 120, 144, 168. I have recently prescribed for a lady who has twice suffered from excessive nervous irritability; her pulse I clearly ascertained to be 240, twenty times twelve, nor was there any difficulty, as some have asserted there must be, in accurately counting it.

A pulse of 144 and 168 is often met with in pneumonia in children; it is remarkable that a pulse characteristic of a special disease will be the same in number in individuals of widely different ages. The pulse in rising and falling from accidental and temporary excitement, rises and falls through a series of duodecimal degrees; when within the first few minutes of an interview the pulse of a patient rapidly subsides from 120 to 108, 96, 84, a knowledge is at once afforded of the highly excitable and therefore susceptible constitution of the patient: beware of treating such subjects during periods of excitement, as for acute or serious disease, by violent measures; many such individuals are destroyed by continual cupping and bleeding, and mercurialising, for alleged determination of blood to the head; inflammation of the spinal marrow; inflammation of the lungs; pleurisy; disease of the heart, &c., when a recovery is often easily effected by merely allaying nervous irritability.

The pulse in many chronic diseases, as in consumption, is generally 108, and, under moderate excitement, 120, but not unfrequently only 96; a pulse not slower than 96 in an adult should always excite suspicion.—It sometimes happens that in bulky, leucophlegmatic, or hydroæmic, phthisical subjects, having, too, a finely-developed chest, that the pulse does not rise above 72 or 84; the practitioner, misled by first appearances, is apt to cheer the patient with an assurance of certain recovery, but from the continuance of the cough, after one or two visits, is induced, almost carelessly, to auscultate the chest, and is dismayed at discovering a considerable excavation in the lungs. In such subjects, not very frequently met with, recoveries do sometimes indubitably occur; the treatment consisting of an almost entire restriction to the most stimulating animal diet; of salt largely administered at every meal; of quinine and preparations of iron; and of lotions of spirit of wine and tincture of iodine applied to the surface of the chest. To such subjects sea-air is especially beneficial. I have known the audible evidences of consumption disappear and reappear in individuals visiting the East Indies, the disease at last proving fatal, as in one instance very lately, apparently in consequence of the individual having prolonged his stay in England longer than usual: in such subjects I have known a well-marked excrea-

tion continue for many years, apparently stationary. The rapid progress of consumption in more irritable subjects, in whom the pulse is 100 or 120, is in many instances, I have reason to believe, as much attributable to the highly absurd and reprehensible practice of bleeding to arrest hæmoptysis, as to the unresisted progress of tubercular disease; chronic disease invades the system when the vital powers are depressed, and always acquires growth and rapidity from exhaustion of the vital and opposing force: bleeding for hæmoptysis in subjects suffering from tuberculous cachexia, may be denominated fashionable homicide. I am at present acquainted with many delicate individuals who have been expectorating blood, at intervals, for several years; I am convinced that every one of them would be destroyed by even a moderately large bleeding; why should such panic be excited by ordinary hæmoptysis as to confound all common sense and sober judgment? The hæmoptysis may doubtless be arrested by bleeding, but though the triumph of arresting it be great, the patient is merely placed upon his legs to stagger to the grave. In nineteen cases out of twenty the hemorrhage will cease by judicious treatment, without the adoption of the desperate expedient of bleeding, which, though it continue for days or weeks, a natural hemorrhage is far more easily borne than detraction of blood by the lancet; calmly and judiciously advise and administer, and seldom will danger or difficulty result from the mere hæmoptysis, though the patient may ultimately die from the natural progress of the disease. With every sentiment of respect, I am, sir, &c.

ANTHROPUS.

April 5, 1843—LANCET.

#### SPINAL MENINGITIS.

A new name for tubercular disease of the organs and muscles. The old names, such as spinal disease, spinal irritation, spinal neuralgia, and nervous affection of the spine, are becoming rather stale and unpopular, and hence the policy of giving a new name to these maladies of the imagination, which were never favored with a real existence.

#### Treatment of Spinal Meningitis.

TO THE EDITOR OF THE LANCET.

Sir: In looking over the *Lancet* for May 27th last, my attention has been arrested by the case of spinal meningitis related by Mr. Tyte (p. 267.) The length of time required to accomplish the cure, by the treatment employed, notwithstanding its severity, will furnish a speedy excuse for the suggestion of a more speedy, certain, and, at the same time, less painful method. Had Mr. Tyte applied eight or twelve leeches over the tender part of the back, repeated them on the next day, if much tenderness on pressure remained, and afterwards used friction with croton oil until a copious crop of pustules was produced, instead

of six weeks elapsing before the patient became *decidedly better*, the same happy result would probably have occurred within as many days. The functional derangement of the liver, stomach, or kidneys, which is generally present, would, of course, require to be treated at the same time (by means of decoction of aloes, carbonate of potass, &c., as the particular case might require).

I have treated about a dozen cases of this disease during the present year, and in only one have required to use calomel and opium. The patient was a man of very weak constitution; for a week the disease was supposed to be enteritis, all the symptoms of which were present. He was bled, and calomel and opium were administered, but the disease not yielding, I had a consultation with another practitioner, when great tenderness was discovered over one of the lumbar vertebrae.—The patient was cupped over this part, counter-irritation was afterwards applied, the mercurial action maintained for a few days longer, and he was discharged, cured, in five weeks from the commencement of the attack. I usually find about ten days sufficient to accomplish the cure, but occasionally more is required, and sometimes recovery proceeds more rapidly.

I believe that a great proportion of these cases is not recognised by the medical attendants; and also that many cases exist, supposed to be obstinate dyspepsia, which are owing to that subacute form of the disease which is termed spinal irritation. A case of this sort occurred to me lately. The patient presented the usual symptoms of functional derangement of the liver and stomach, and during the last five months, *these symptoms* had been treated by four medical men. On placing himself under my care it was only by *very careful* examination that I discovered tenderness over one part of the lumbar spine. I cupped him, used croton-oil friction, ordered a powder composed of calomel, one grain, aloes, one grain, and calumba, eight grains, to be taken every night and morning, and within three weeks the patient was cured.

I am, sir, yours truly,

June 26, 1843.

C.

The writer has authenticated his statements privately, by forwarding his real name and address to the editor.

These cases including that of Mr. Tyte referred to, were all cases of tubercular disease of the organs, and not that of meningitis, nor of functional disease of the organs; for there is never magnetic symptoms of tubercular disease, as in these cases, in mere functional derangement of the stomach, liver, or any other organ, and Dr. Tyte had the candor to acknowledge that the symptoms of meningitis in his case was not well marked, although it was much more so than any of

those described by Dr. C. But the sequel of these cases like thousands of the same kind, is not yet told, and I hope the gentlemen will pardon me for saying that neither of their cases are cured—that they have only passed through a temporary period of excitement, to a temporary period of repose. We have seen a great many thousand such cures of the same disease, and in the same or a very similar manner, during the last ten years; but these cures were very temporary; for these patients would not “stay cured,” and in fact, nothing was effected by the common remedies in any of these cases, but a temporary palliation of the urgent symptoms, while the patients were passing through the periods of excitement to that of repose.

#### Tubercular Consumption.

Dr. Hastings, of London, has recently commenced treating this disease with naphtha, and apparently with success, so far; and other physicians in that metropolis are now engaged in testing its effects in this disease.

There are a number of different articles in commerce, which are sold under the name of naphtha. The naphtha used by Dr. Hastings is obtained by the destructive distillation of an acetate, as the acetate of lead, or of lime. This product has been called by chemists, pyroacetic spirit, mesilic alcohol, or acetone, and is miscible in all proportions with water, without producing milkiness. The dose is from 10 to 20 drops, three times a day. We are now testing its effects in a great variety of cases in this city, both alone and in conjunction with the compound chloride of gold, an article which we have been long in the habit of using with uniform success, in the first stage of tubercular disease of the lungs.

Dr. Hasse, of Königsberg, cauterises the parts affected in laryngeal phthisis with a strong solution of nitrate of silver, consisting of one part of the nitrate to four, and afterwards two parts of water.—LONDON LANCET.

#### Vomiting, a Cure for Phthisis.

It is stated that 176 patients under consumption, 47 in the incipient, and 129 in the advanced stage, admitted during a period of four years into the military hospital at Capua were ultimately discharged, perfectly cured,

their treatment having consisted in the administration of a tablespoonful night and morning of the following mixture:—Tartarised antimony, three grains; syrup of cloves, an ounce; decoction of marsh mallows, six ounces; mix. The dose was to be repeated until vomiting ensued.—ANNALI UNIV. DI MEDICINE.

#### Statistics of Cancer.

The following are results of researches on the prevalence of this disease throughout France, which have been made with much care and accuracy on the part of M. Le Roy d'Etoilles:

Of 3781 cases occurring in the practice of 174 surgeons, 1227 happened in individuals above forty, and 1061 to others above sixty years of age. The cases of cancer of the uterus were about thirty per cent.; of the breast twenty-four per cent. Cancer of the mouth was in women only as one to one-and-a-half per cent., while in men (probably from the use of the tobacco-pipe) it was as much as twenty-six per cent. Cancers supposed to have been of hereditary transmission figured only as 1 in 278 [?]: while those induced by scrofula were as 1 in 10; and by syphilis as 1 in 5.

The most useful part of the inquiry is that that which is brought to bear upon the utility or otherwise of operating on cancers. Out of 1172 patients not operated on, 18 lived for more than thirty years after the first appearance of the disease; while out of 801 operated on by excision or caustic, the existence of only 4 was prolonged for a similar lapse of time; 14 patients operated on, and 34 not operated on, lived for a period of from twenty to thirty years; and 88 in the first category, and 228 in the second, lived from six to twenty years after the first appearance of the disease. The ordinary duration of life after this period among persons not operated on, is said to be five years for men and five and a half for women; while among those operated on, it is no more than five years and two months for men, and six years for women.

From these results the natural conclusion is that the ablation of cancer (leaving out of account the risks attending the operation itself) does little, even when successful, to prolong life and is therefore (in France, at least) of very questionable utility. Results like these, startling as they may seem, and however they may demand subsequent corroborations, are, at least indications of the light which statistical science is enabled to throw upon the actual and relative value of many of the aids in medicine and surgery of which we at present avail ourselves.—LONDON LANCET.

#### Case of Enlargement, Scrofulous Abscess, and removal of the Testis.

BY GEO. LANOSTAFF, ESQ., SURGEON, LONDON LANCET.

This was a common case of tubercular disease of the testis on the right side, in which an ulcer was formed, and discharged



its matter through an opening upon the surface, during the use of the common remedies, including iodine, when it was removed in the usual manner. I have noticed this case for the purpose of saying that I have cured cases of this disease of the testis with the magnetic remedies for it, where they were enormously enlarged and discharging scrofulous matter from one to seven abscesses.

#### Suppression of Pus.

The discharge from a child's ear, or a gleet in a man, is suddenly suppressed. Pain and danger ensue, and are ascribed to the suppression; but they ought to be attributed to the increase of inflammation to an extent which is inconsistent with the secretion of purulent matter. Leeching and fomentation are obvious. In wounds and ulcers the secretion must be re-established by wine, bark, and stimulating fomentation.—SIR CHARLES BELL.

#### Derangement of the Brain by a sudden Shock, and its Recovery by similar means.

(*Similia Similibus*)

By S. PATTERSON EVANS, M. D., Edin., Newmarket-on-Fergus.

A laboring man brought to me his son, nineteen years old, for my advice. Having attended him for a cut leg two months previously, I was much struck now with his altered appearance. When coming to me before, I thought him remarkably acute and intelligent; he now had become *idioti*: in countenance and manner. He did not know my name, his own or his father's; continually talked to himself indistinctly; sang; made grimaces; laughed with a foolish look; would leap about, and otherwise behave ridiculously. His answers were peculiarly short and snappish, nor could he keep steady a moment, but was altogether restless and irritable. At home he attempted to injure his sisters with a knife. Appetite good; sleeps pretty well, but often starts with a scream in his sleep, as if frightened. When asked a question he did not appear to comprehend its meaning until repeated. When questioned as to pain, he put his hand to his head, but did not reply; and from frequently applying his hand all over that region, it appeared to be the seat of some general pain or uneasiness. The head, generally, felt hot, and especially the forehead; the temporal and carotid arteries pulsated rather strongly; the pupils were contracted, and the sclerotic vessels more minutely injected than I had ever seen those vessels before; no vomiting, nor any lesion of the muscular system. Upon my asking his father whether he could account for this alarming state, he gave me the following singular history:—

Up to the 22nd of Nov., 1842, he was perfectly well and able to work. On that day he happened to kill a hen belonging to a woman, who complained of him to his mother, who told his father of what he had done. The boy, knowing that his father would punish him, did not come in to go to bed until he supposed his father was asleep. However, the old man, who was very apt to be guided by King Solomon, and not "spare the rod and spoil the child," stole to the bed when the boy lay asleep, and, catching him by the hair, gave him a few smart strokes of a small sally rod. He then left him, going out to his work. That day his mother remarked that the boy looked rather silly, and talked incoherently, and then daily got worse.

I therefore ordered the head to be shaved, cold applied, leeches to the occiput and neck, colocyath and calomel. He was ordered to be kept quiet, in a dark room, and on low diet. Owing, however, to his father's being constantly out at work, and he being the only person who could manage him, my directions were not followed up, with the exception of giving him the purgative, and throwing cold water over his head every morning. After some days I saw him again, but he appeared no better. The bowels were particularly obstinate. (Prescribed accordingly.)

Five or six days after this I saw him again, and was surprised with the change in his manner, as well as his altered appearance. He now knew me; answered questions rationally; talked quietly; had lost the restless manner; and, in fine, he was quite another boy. His pulse soft; tongue pale and moist; head cool; eyes natural, intelligent, and uninjected; but, upon inquiry, I found that though he had taken all my last medicines regularly, he was not indebted to them for his recovery, for up to the day previous he was as bad, if not worse, than before; but his father gave me the following singular account of his recovery, which I consider inexplicable upon any other principles than those advanced by Hahnemann in his axiom, *similia similibus curantur*:

The day before that upon which I saw him last, he was on the road-side amusing himself; a carman was going by; the boy flung a stone at the man, who caught the boy, and gave him a good beating with his whip. The boy ran home crying told his mother what had happened, and from that day, as if a devil had been cast out of him, became quiet and rational, and he is now perfectly well, though not as steady, sharp, or intelligent, altogether, as he was before the accident.

How much we have yet to learn, how little we really know, of the nature and rational treatment, not only of the diseases of the cerebro-spinal system, but of diseases in general. Assuredly, the uncertain and most unsatisfactory art that we call medical science is no science at all, but a jumble of inconsistent opinions; of conclusions hastily drawn; of facts badly arranged; of observations made with carelessness; of comparisons instituted

which are not analogical; of hypotheses which are foolish; and of theories which, if not useless, are dangerous. This is the reason why we have our homœopaths, and our hydro-paths; our mesmerists and our celestialists!

I will offer no comments upon the foregoing case. My experience in diseases of the mind has been too limited, and my observations would perhaps only destroy the impression which the case is calculated to make. At the same time, I cannot conclude without directing the attention of parents, and those who have the charge of children, to the lamentable results which may follow the infliction of corporeal punishment upon young children, of tender age and delicate constitutions. It enfeebles their minds; it undermines their attention and memory; it breaks down the finest of their moral feelings. But especially is it followed by terrible results when unexpected or sudden. Indeed, at any time taking the nervous system by surprise, with violence, may be followed by consequences equally awful.—*Abridged from Dub. Jour.*, Jan. 4th.

This was a case of derangement of the magnetic organization of the brain, called functional derangement of the brain, we long since traced the magnetic organization of the brain by the direction of its fibres, and this organization is constantly confirmed by clairvoyants.

#### Making believe to Administer Arnica.\*

TO THE EDITOR OF THE LANCET.

SIR:—It is just two years since I drew the attention of the medical profession, through the medium of your journal, to the invaluable benefits to be derived from the use of arnica montana in bruises, incisions, sprains, and other affections more particularly regarded as belonging to surgery. Since that time the numerous additional cases illustrative of the value of arnica, have increased so fast, that I have given up recording them particularly. My attention has, however, been arrested to a case so strikingly illustrative of these benefits, that I have thought it to be my duty to forward it to your Journal.

To the Royal Jennerian London Vaccine Institution, last Thursday, a mother brought her child to receive the certificate of protection. After receiving it she exclaimed, "You sir, saved this child's life," and a fine little fellow he was. I had quite forgotten the circumstance. I asked the name, and on reaching home, examined my book of cases, and found the following:—Alfred Wyatt, June 20, aged three months and a fortnight; child apparently dying. A little girl that nursed the child had let him fall, and he, in falling, fell

upon his head. The mother had obtained somewhere a powder, but the child became worse. He had been in a severe fever ever since the accident. His eyes were half closed, and the peculiar cast of countenance indicative of affection of head was present; in fact, I feared the child would die before he reached home. I told the mother to let me know the state of the child on the following day, my belief being that I should hear of his death. I ordered three globules\* of aconite in two ounces of water, a fourth part immediately, and four hours after the first dose of aconite a dose of arnica, three globules, in two ounces of water, a fourth part as a dose, and to repeat the aconite and the arnica alternately, every four hours.

21 [i. e. the next day.] The mother came to me, and said, weeping with joy, "He is laughing to-day." Her gratitude was great; she said she thought that before she should reach home yesterday, he should have died. I ordered another aconite mixture and another arnica mixture, a dose of each once a day, and the result was *then* health, and on Thursday last the agreeable notice, "You, sir, saved this child's life."

Arnica is now used most extensively by allopathic practitioners, so much so that the following notice has been deemed necessary;—"The great and increasing demand for tincture of arnica has led many drug merchants to vend a root which is not that of the arnica montana."—BRITISH JOURNAL OF HOMŒOPATHY.

Yours Sincerely,

JOHN EPPS, M. D.

May 27, 1843.

We have frequently prescribed arnica and aconite, and find them very useful medicines. In regard to the minuteness of the homœopathic doses, as in this case, it is in general a matter of little consequence if they are well magnetised, according to the directions of Hahnemann and Jahr; when they will magnetise the water in which they are diluted, and impart to it the distinctive qualities of the medicine, with a power fully equal to the common doses prescribed by physicians of the old school, or alloepathists, for the amount of magnetism in the doses increases with each dilution an hundred fold, until the distinctive quality of the medicine is exhausted.

\* Our worthy correspondent has entitled his letter "Arnica and its Uses," but an examination of his prescription in the note, induces us to prefix a more correct heading.—*Ed. L.*

\* The child did not use arnica externally, and the globules of aconite were impregnated with aconite tincture at the *octidilution*, and the globules of arnica tincture at the *millimoth* dilution.

## Determination to the Skin.

A correspondent (*Anthropos*) writes as follows:—The iodine of potassium possesses the remarkable property of causing determination of diseased action to the skin. In cases of what may be termed "suppressed measles" and "scarlatina," it will frequently induce a healthful reaction under the most desperate circumstances. One or two grains, according to the age of the patient, under twelve years, may be dissolved in a quantity of *sugared water*, and administered, *repeatedly*, as an ordinary drink, the whole quantity being given in *twenty-four hours*, for three or four days. In measles, a small plaster to the chest assists the peculiar action of the iodine. In scarlatina, the compound tincture of iodine, diluted with three or four parts of water, may be frequently applied by means of a camel hair brush, to the front and sides of the throat and neck. Milk is injurious during the first two or three days, in cases either of measles or scarlatina. I have not had an opportunity of giving iodine to individuals suffering from small pox, but think it might prove serviceable especially after the appearance of the eruption, as anticipatory of secondary fever. Let those readers of *THE LANCET* who doubt the sufficiency or efficacy of so small a quantity of the iodine test it by their practice. Those to whom experience has demonstrated the utter insufficiency of other measures in malignant cases cannot reasonably object.—*LANCET*.

*Clinical Lectures on Cases of Diseases of the Nervous System, delivered at King's College Hospital.*

BY R. B. TOWN, M. D. F. R. S. E.

We have waded through these lectures and those of Dr. Marshall Hall on the same subject, with all the patience of Job, without being able to find any thing in them, of any value to the physician or his patients. When these distinguished physicians have practised the magnetic symptoms of tubercular disease among their patients through the different seasons of a year, and have compared them with the old astrological symptoms with which they are so familiar, they will begin to have some knowledge of the subject on which they have been delivering these lectures to the students of medicine.

*Beobachtungen über den Nutzen und Gebrauch des Keilichen Magnet Elektrischen Rotation-Apparatus in Krankheiten, &c. Von J. E. WETZLER, &c. &c. &c.*

Observations on the Utility and Mode of applying the Magnetic, Electric, and Rotatory Apparatus of Keil.

We may give one or two cases to illustrate the efficacy of this agent.

The first we select is detailed at pp. 14, 15, and is as follows:—

"The Rev. M—, a little above 40 years of age, of a robust frame, had suffered for six years from pain in his head and face. He was in other respects well. The pains began at the forehead, and extended over the temples to the cheeks and upper-jaw, where they were so violent as to compel the patient to lie down in bed, and keep perfectly still. At one time, they were worst on the right, at another, on the left side; but generally worst on the left. His exposure to wet, wind, and cold, in the discharge of his duties, generally brought on an attack. I magnetised him twice, and he left his place of sojourn (Kessingen) perfectly free from pain. I inquired at the expiry of a year, whether he had remained free from pain, and received for answer, that for three months he enjoyed perfect immunity; but that after that, the pain returned. Eight days, indeed, was altogether too short a time to effect a radical cure. In his case, the second branch of the fifth pair of nerves was chiefly affected. Over this nerve he could not bear the weakest power of the apparatus, but I was obliged to transmit the current through my finger; and when I placed the point of the finger on the spot, he felt as severe a pain as during an attack. Whenever I removed the finger, the pain instantly subsided. Here we have an example of the homœopathic *simile similibus*."

At page 20 we find this curious case:—

"Madam E—, from Eisenach, suffered three years from gout, and then from typhus fever, which confined her to bed six months. Her recovery was slow. The previous summer she had employed the Ems baths. Her right arm was lame from rheumatism. She gradually recovered her strength, and the use of her arm likewise. The two last phalanges of the fore and middle fingers, however, still remained stiff, and bent inwards; and when she tried to move them in laying hold of any thing, the attempt made her whole hand shake. I was able to magnetise her only seven times. But even in this time there was considerable improvement—the trembling of the hand, was almost gone, and the finger more flexible. On the following summer she returned to Kessingen, and shewed me with joy her finger, now straight and flexible—telling me, that after her return home, her finger gradually recovered its flexibility, and the shaking of the hand entirely disappeared. So prolonged an effect I had, indeed, not expected!"

At page 34—

"Mr. R., a book-keeper, a middle-aged man, became affected, two years and a half ago, with trembling of the right hand, and cramp of the middle finger and thumb, so that he got ill on with his writing. The arm felt heavy as lead, was colder than the other, and the trembling and cramp were so severe that he could not write his name distinctly. The trembling was worse in the morning, and after any exertion. When he wrote, the middle finger, as well as the thumb, were affected with

cramp. After the first operation, he wrote more easily; after the fourth, tolerably well, and improvement followed all the subsequent operations. For fourteen days he was magnetised daily, and then dismissed, as the sense of weight, and coldness of the arm, as well as the trembling and cramp were all gone, so that the patient could write as well as when in perfect health. After the fourth day the patient took some exercise, to see whether it would recall the pain, but it had no such effect."

Again, at page 44—

"Madame St. — (whose mother was deaf), thirty-four years of age, small in stature, and slight in frame, very sensitive to change of weather, for eight years married, but childless, began, fifteen years ago, to have difficulty in hearing. The consulted physician applied caustic behind the ears, and the ulcer thus produced continued to discharge for three months without any benefit. Two years afterwards she was affected with chlorosis. Venesection proved very injurious to her. For several years she suffered from dyspepsia to such an extent, that she could not bear the slightest ailment. She was cured of this by a homœopathic physician, so that she was enabled to eat even the heaviest food, such as roasted goose, without any inconvenience. Deafness and painful noise in the ears, always worst at the menstrual period, and after exposure to cold were her chief complaints. She also suffered from weakness of the eye, so that she could not read by candle-light. The deafness was not, indeed, very bad, but annoying, as it prevented her mixing in society, as she could not understand what was said. I began to magnetise her on the 18th of October, once every day. On the first day after the operation she heard somewhat better. By the 8th of November the ringing in the ears was gone; the menses occurred on the 10th of November, and with them aggravation, after that amelioration. Again, once or twice, after unusual exposure to cold, aggravation. In this state she remained, having lost all hope of further magnetising doing her good. The weakness of sight was so far improved, that she could again read by candle-light. A scaly eruption (psoriasis) on the neck, about the size of a shilling, disappeared, after she had been magnetised three times."

In all these forms of disease the magnetic electricity effected rapid improvement (with few exceptions, as in the case of deafness), and, in a comparatively short time, perfect cure. According to the experience of Dr. Wetzler no good is to be expected from it, if no trace of benefit be derived after the 3d or 4th application. Its operation being so speedy, and its application so free of danger, the surgeon should always try its effect in cases of squinting, stuttering, and contraction of the limbs before he proceeds to use the knife.—For, if unsuccessful, nothing but a little time, which in these cases is of no value, is lost; if successful, a painful, dangerous and uncer-

tain operation may be avoided. "How then," our author asks, "does it operate? On what principle?" Observation shows that it is equally useful in preternatural excitability as in paralytic torpor of the motory nerves, in weakness and stiffness of the limbs, in swellings, pyalism (of a particular kind,) and various other diseases. If the conductor be moved slowly along the skin of a person in health, a tingling (knistern) and slight pain are produced; if the conductor be allowed to remain for a little time upon one spot, when a high power of the apparatus is employed, the most violent pain is produced, as intolerable as the most agonizing neuralgia, and the muscles underneath are excited into convulsive movements or spasms. The moment the conductor is removed the pain and spasms cease. If a conductor be held in each hand, the most violent contractions of the joints of the hand are produced, and, on the removal of the apparatus, a sense of torpor, which is soon followed by unusual lightness. Even the momentary action of the magnetic electric apparatus upon the brow, leaves a sense of tension or uncomfortable sensation, that remains some time after its removal: and by its application to the tongue, an increased secretion of saliva is excited, which sometimes attends its application to the face. The allopathic school will here recognize a stilling and exciting energy, a calmative, stimulant, and irritant, combined with the power of at once increasing deposition and absorption; the homœopathic school, on the other hand, will explain its curative influence, in the principle "*Simile simili*." The homœopathic smallness of dose, however, does not hold here universally good. It is true that neuralgias require and bear only the feeblest power of the instrument; but in spasms and paralysis the highest power is required. Pain is felt only at the point of contact with the conductor; it does not spread either up or down the nerve; in this respect it is unlike the galvanic action on the motatory nerves. For, if placed over one of these, it produces movement of the muscular fibres along the whole course of the ramifications of the nerve. The effect of the negative pole is the same in kind in my opinion, as that of the positive—different in degree. I have healed affections of the nerves of motion and sensation, swellings, stiffness, &c., as well with the positive as the negative pole applied to the part. But the negative is much stronger, 30 or 40 per cent., perhaps, than the positive.

"The magnetised part becomes warmer and redder; and at the spot whereon the cylinder was held, turgescence and a red spot appear; the pain is burning like fire, and a blister would be produced, if the person had resolution to endure the action. On the other hand, redness, heat, swelling, as in neuralgia of the face, acute rheumatism, sprains, &c., are removed by it. (On this the homœopaths lay much stress.)

"I have never observed any effect on the

pulse from the magnetic electricity, even in cases where I have exerted the highest power of the instrument for half an hour. Farther, in upwards of two hundred cases in which I have applied the apparatus, I have never in any (with the exception of two) observed a general effect to be produced upon the nervous centres—the brain and spinal cord. The exceptions were as follows:—A young woman—tight-laced—came to me to be magnetised on account of migrain. I employed the feeblest power of the instrument, and transmitted the current through my finger. In two minutes she fainted, but soon recovered, when some cold water was sprinkled on her face. The second was that of a gentleman of about fifty years of age, of a nervous-sanguineous temperament, who had suffered from hemorrhoids and rheumatism. Two days before he was to leave Küssengen, he was attacked with rheumatism in the neck. I first magnetised him very gently, and then as he said, he felt nothing. I increased the power. Suddenly he fell into a faint, and on coming to himself, told me, that he always fainted at the sight of blood. He was cured of the rheumatism, however. Magnetic electricity is only available against local diseases, as its operation is confined to the place of its application; and a main point to be attended to is, that the application should be made as near the affected part as possible. If, for example, the muscle of the arm is affected with rheumatism, it is not to be cured by exciting violent contraction of the whole limb by laying the conductor on the bend of the arm, but by passing the conductor gently over the affected muscle, and holding it fast there. Of course, in the cure of neuralgia, paralysis, &c., these must arise from no incurable disorganization, if any but transient benefit is to be derived from the application of the galvanism."

We are repeating these experiments with a rotary magnetic machine, in a variety of cases, and shall be able to give some of the results in the next number, when we propose to try the effect of this powerful machine upon the *seat* of knowledge of some of the professors of our medical colleges, as the forces emanating from magnetic machines remove opacity of the organs with great facility as will be seen in the following article on the

#### Effects of Galvanism in certain organic diseases of the Eye.

The following experiments were made by Dr. Lerche in St. Petersburg, with the assistance of Dr. Crusell, the discoverer of this method of applying galvanism.

1st. A complete leucoma of the cornea, as being a disease which has hitherto baffled all attempts to cure, was chosen for the first subject of experiment. The patient, a boatman, 68 years old, had entered the Institution on

account of an inflammation of the other eye. The apparatus used was a simple chain, consisting of a zinc and copper plate, immersed in diluted sulphuric acid. The wire in connection with the copper plate was brought in contact with the leucoma, while the wire from the zinc plate was placed upon the tongue of the patient, and the stream of galvanism was kept up for two minutes. As the patient did not suffer in the least from the operation, and no bad consequences ensued; on the contrary, the white opacity on the edge of the cornea appeared thinner and clearer, the operation was repeated after three days. A distinct change for the better was gradually visible in the consistence of the leucoma, and the patient affirmed upon his part, that his perception of light had increased.

Dr. Lerche now determined to apply galvanism to the cure of internal opacities of the eye, such as those of the crystalline lens; and the results which Dr. Crusell had obtained in his experiments on the eyes of animals, confirmed him in his resolution. The first experiment was made on a pig. A fine cataract needle, fastened to the zinc pole, was pushed through the cornea into the crystalline lens of the right eye, and the wire in connection with the copper plate was put upon the external ear. After the eye had been galvanised for four minutes, the pupil began to look opaque, and the operation was concluded. Similar experiments were made upon the left eye. After a few days, a *perfectly developed lenticular cataract* was observed on both eyes, and the animal had become blind. "According to the theory," observes the operator, "the opposite pole of the galvanic battery should dispel the artificially formed cataract." (!) In the course of ten days the operation was performed. After the eye had been exposed to the operation of the galvanic stream for three minutes, the process of resolution appeared to commence with the evolution of gas vesicles upon the pupil, and the operation was straightway concluded. The pupil appeared rough, and less opaque. In the course of four days it had recovered almost entirely its former clearness; and the vision so far as could be learnt from the behavior of the animal, was restored. On the cornea alone, at the circumference of the puncture of the needle, a dim spot remained.

2d. A coppersmith, aged 40, was recently successfully operated on for cataract of the left eye. In compliance with his desire to do something for the right eye also, which was affected with a capsular cataract firmly adherent to the iris, depression and other means were tried, but without permanent benefit. The very large cataract lay immediately behind the somewhat irregular and perfectly immovable pupil; the patient, however, had perception of light. Galvanism was applied. It was most astonishing to see how, after the very fine cataract needle in connection with the copper pole had been run into the centre of the lens, while the zinc pole was laid on the patient's tongue, almost before a minute had

elapsed, the cataract appeared to expand, increased in volume, and pressed against the cornea; then suddenly burst into three parts, one of which entered inwards and above, the other towards the temple of that side, and the third projected downwards into the anterior chamber; and yet the triangular fissure appeared perfectly clear and black. From the novelty of the thing (it was the first attempt of this kind upon a living man,) it was deemed advisable to desist, and the patient immediately saw and recognised a finger held before him, while the left eye was covered, and likewise the faces of persons before him. He had experienced no pain during the operation, which did not last a full minute, nor did inflammation or any other bad consequences ensue.

3d. The third case was that of a peasant aged 40, of a feeble constitution. The patient suffered from considerable amaurotic amblyopia of the right eye, while the left was affected with capsular lenticular cataract, and synochia. The breaking down of the cataract was attempted, but was of no use. On the 17th November galvanism was applied (and this time by means of a Becher-apparatus.) After half a minute, the adherent part toward the internal canthus gave way, and an excavation formed around the puncture, while the cataract expanded and protruded. The patient complained of headache; and so the operation, which had lasted about two minutes, was concluded. Towards evening considerable inflammatory action occurred, attended with great intolerance of light, and constant severe pain, deep in the eye and head. For a considerable time great sensitiveness to light remained, yet the patient was able to recognise small objects when the eye was turned away from the light, the pupil remaining very much contracted. The operation was repeated on the 1st of December, but this time only with the weak apparatus of two plates, such as was used in the first trial, and the negative pole remained only one minute in contact with the eye. Even after this inflammatory reaction followed, but in less degree, and of shorter duration. The vision improved to a certain point, only there remained fragments of the cataract still in the pupil. After this had been expanded by belladonna, a few lymph filaments were discerned connecting the fragments of the cataract with the edge of the iris, which were easily and entirely removed by the needle. No unpleasant consequences followed the last operation, and the patient was dismissed on the 6th of April, with perfectly restored vision.

4th. The third was the case of a woman, aged 56 years, who had lost the sight of her left eye under severe headache. The capsular lens, which had the appearance of the mother of pearl, adhered in its whole circumference to the pupil, the eye was tremulous, and the conjunctiva injected. On the 15th of November 1840, a cataract needle connected with the negative pole-wire of a pair of plates, was

passed through the cornea into the upper segment of the lens, the positive conductor being put into the patient's mouth, and the galvanic current continued for a minute and a half. The upper part of the cataract disengaged itself from the iris, and the pupil contracted. Upon the same day also slight inflammatory reaction occurred, requiring for some weeks severe antiphlogistic treatment. On the 18th of December, the patient became affected with erysipelatous catarrhal ophthalmia of both eyes, and in consequence, the palpebral conjunctiva appeared hypertrophied, and covered with large granulations. This condition, combined with great intolerance of light, was extremely obstinate. In the meantime, however, the vision improved, and the absorption of the cataract continued. After the inflammation had partially subsided, belladonna was dropped into the eye; and then it could be observed that the lens was absorbed, but vision prevented by the remains of the opaque capsule, which were easily removed by means of a needle. The pupil appeared a beautiful black, and the vision was perfect.—(Lerche in Berlin Med. Vereinsig. 1841, No. 35; Beilage, s. 171, 172; also Hygæa, xv. Band. v. Heft.)

#### *The Agent in Animal Magnetism.*

A writer in the Rochester Daily Advertiser, who signs himself T. J. Smith, states that he has succeeded in producing the various effects of what is called Mesmerism, by means of common electrical machines, and infers from this fact that electricity is the magnetic agent. He says:

"In the commencement of my examination of animal magnetism the impression was forced upon my mind, that its agent was the same, or near akin to electricity.

"This led me to test, by actual experiment, their similarity. I have used a small, common electric machine, and with it, by repeated trials, succeeded in producing all the effects usually produced by the will and passes of an operator. I have put a subject in the magnetic state by the machine, and awakened the subject without its aid, by the usual passes.

"Again: I have put a subject into the magnetic state by the will and passes, and aroused the subject to all his powers with the machine only.

"These experiments repeated several times, go to prove that electricity is the agent that produces all the marvelous results of animal magnetism.

"The machine, in the first instance, put the subject into the magnetic state, and the passes restored again to the natural state. In the second instance, the will and passes produced the same unnatural state, and the machine restored the subject.

"I have succeeded in putting a person in communion with the subject, by connecting him with the machine during the operations, and the person thus in communion, had control alone over the subject; could excite the organs,

paralyze the limbs, &c., and awaken the subject in the same manner as when put to sleep in the usual way.

"Others have repeated the experiments with like success; and all who have witnessed them, were satisfied that electricity is the agent in all the mysterious effects of Mesmerism."

Some persons who are very susceptible to magnetic influence, cannot wear magnetised steel rings on their fingers, in consequence of their constant liability to fall into the magnetic sleep. Some pass into that state in one minute, while others of this class, feel no other inconvenience but that of slight shocks, which soon cease. The rings are magnetised with two poles—having a magnetic axis which passes through the finger, and a magnetic equator at right angles to it.

#### Remarkable Case of Magnetism.

Communication to the Editor of the *Phrenological Magazine*.

BY THE REV. DR. BRECHER.

In October, 1842, on my way to the Synod of Genesee, I spent the night at the house of Mr. Hall, at Byron. In the evening I called on Rev. Mr. Childs. On entering the room, I found his son, an intelligent boy, aged ten years, then in a cataleptic fit, sitting in his father's arms, and his feet in warm water.

In a few moments he recovered. He frequently had from three to six fits a day. Had received the best medical attendance in the region. Was no better—daily worse. He lost entirely the power of speech for several days. Great fears were felt that he would never recover. There was a sore place on the back part of his head and on the spine, occasioned by a fall some months previous. When the fits passed off he became hungry, and not at all drowsy; and during the interval appeared prematurely bright; and engaged in sports as usual.

After I had conversed a few moments, I said, 'I would have him magnetised; to which his father replied, 'I don't believe in it at all,' and the mother added, 'if you'll put me to sleep I'll believe, and not without.' I replied, 'I would try it—it may do good, and can do no harm.' During this conversation I made a few passes in front of the child, chiefly with one hand, and without any particular concentration of the mind or will, and mostly with my face toward the mother. In less than a minute the father said, 'he is in another fit!' 'No he isn't I declare; I believe he is asleep.' Much surprised, (for I had never magnetised one,) I

said, 'It surely cannot be what I have done, but if so I can awaken him;' then with a few reversed passes he awoke. 'Well, this is strange,' said I, 'but I can put him to sleep again if it is real.' I then seriously repeated the passes with both hands for one or two minutes, and placed him in the perfect mesmeric sleep. I then fixed my eyes on a lady on the opposite side of the room, the boy not yet having spoken for three days, and said 'Henry, what do you see?' He gave a name unknown to me; I looked to his father, who replied, 'it is her maiden name.' I then took vinegar into my mouth, and said, 'what do you taste?' 'vinegar' speaking with great tartness, and at the same time making many contortions of the face. The mother now whispered to one of the children, who left her seat, and I said, 'Henry, what is she going for?' 'Sugar, and I love it.' She went to the closet and brought the sugar. I put some in my mouth, which seemed to give him the same pleasure as if I had put it into his own. I then said, 'What kind of sugar is it?' 'Muscovado.' 'What is its color?' 'Well, sir, a kind of light brown.' A small glass jar with a large cork was now placed in my hand, when immediately I observed the olfactory nerves affected, and the muscles about the nose contracted at the same moment. I said to the girl, 'What is it?' 'To which the boy answered, 'Hartshorn.' 'How do you know?' 'I smell it.' I myself neither knew nor smelt it. I then took out the cork and applied it to my nose, when he instantly placed his fingers on the part of his nose next to the forehead, and said, 'I feel it here,' just where I myself experienced the burning sensation.

During all these experiments he sat on his father's knee, with his head down on his breast, and reclining against his father.

I now asked him 'what is the matter with you?' 'My brain is sore.' 'Where?' 'At the bottom of it.' 'Where it joins the spinal marrow?' 'Yes.' 'What occasioned it?' 'I fell from the great beam in the barn.' His mother here asked him, 'why didn't you tell us before?' 'I feared you would not let me play there.' 'Can Dr. A. cure you?' 'No.' 'Why not?' 'He don't know any thing about it,' (very decidedly). 'Can Dr. C.?' 'No.' 'Why?' 'He don't understand it.' 'Will the medicine you now use do you good?' 'No.' 'Of what is it composed?' 'There is turpentine in it.' 'Does the Doctor give it to you for tape worm?' 'Yes.' 'Have you any?' 'No.' 'Would you like to walk?' 'Yes.' 'Well, walk.' He arose promptly, stepped between the chairs, and said, well, sir, where shall I go, 'From the wall to the door and back.' This he

did, avoiding every obstruction, and, at my direction, returned and sat again with his father. I now, without notice to any one, placed my fingers on the organ of benevolence, thinking at the moment it performed the office of Veneration, and said, 'Would you like to pray?' With some lightness, he said, 'No.' Some questions were asked by his mother and myself, about the bible, &c., but no veneration appeared. I then recollected the true office of the organ, and said, 'Have you any thing in your pocket?' He took out a knife. 'Give it to me for my little boy,' which he did promptly. I removed my hand. 'Have you any thing else?' 'I have a pencil.' 'Will you give me that for my other boy?' 'It has no head.' 'Never mind, give it, won't you?' 'I should not like to.' 'Well, but you will.' 'I couldn't come it,' (with peculiar emphasis.) Azubah said, ask him where the head of the pencil is. 'Where is it, Henry?' 'Well, sir, in the parlor.' 'Where?' 'On the window.' Azubah: 'Why, I picked it up and put it there to-day.' (He certainly did not know this.) I then said, 'Henry, can you get it?' He arose and went into the parlor in the dark, and took the pencil case head from the window, to the great surprise of us all. Indeed, we were all so astonished that it seemed a dream, during these and subsequent proceedings. He spoke with a promptness, boldness, and propriety, in advance of his years, and beyond himself in his natural state; and so perfectly evident was it that he was in a somnambule state, that no skeptic, I verily believe *could* have doubted.

At my request, he returned to his seat. I touched benevolence, and instantly he handed me the pencil case. 'For my boy?' 'Yes, sir.' I then silently, and without any 'willing,' and with a feeling of curiosity to see and test the matter, touched reverence. His countenance at once assumed a softened and solemn aspect. 'Henry, would you like to pray?' 'Yes, sir.' 'You may.' He commenced praying inaudibly. 'You may pray aloud.' He then prayed in a low audible voice. On touching tune, he sung a tune, though not in the habit of singing. On touching combativeness and destructiveness, he raised his clenched fist to strike me. He was ignorant of phrenology, and also of my intention to touch any particular organ; nor did I in any case will the activity of the organ. I now took out my watch, and holding the dial towards myself, and above the line of his vision, his eyes being closed and his head bowed forward, and my hand also between him and the watch. 'Henry, what time is it?' 'Eight o'clock, sir—which was

exactly the time by the watch, though by the clock in the room it was fifteen minutes faster. 'Henry, how long ought you to sleep?' 'Well, sir, I must sleep two hours and five minutes.' 'Will you then awake?' 'Yes, sir.' 'Very well.' This I did for the purpose of testing his knowledge of time, as stated by Townsend, an English clergyman, whose work on this subject I had read.

I then said, 'Will you go with me to Mr. Hall's?' 'Yes.' 'Well, now we are there; now we are in the parlor; who are here?' 'Mr. and Mrs. Hall, Mr. and Mrs. Bardwell.' 'Who else?' He did not give their names, but intimated that they were strangers. He described the room and the position of things, all of which I found correct on going to the house shortly after. These persons were not in the habit of being there in the evening, but company having come in, they were all together at that moment. As this was in his own town, I did not deem it proof, and so said, 'Will you go to Batavia?' 'Yes.' 'Now we are there—now we are at my house—now we will go into my room—what do you see?' 'I see a large table covered with black cloth, and with books and papers scattered over it.' 'How large is it?' 'It is about five feet long.' 'How many book cases?' 'Three, sir.' 'What sort of a stove?' He could not describe this, for it was so queer a thing as not to be easily described. Nor did I press him, for all his answers had been correct, and I was sufficiently astonished, for he had never seen my study, and no other minister, I am sure, has such a table (5 feet by 3 1-2) or left it in such confusion as mine was at that moment.

I may here say, that during the whole period of his sleep, he could hear the questions of others put to him, and would answer them, if I were willing; but if I willed otherwise, or forbade him to speak, as I often did, he then would answer no one but myself, not even father or mother; nor could he hear their conversation with me, nor with each other.

I now left him for an hour, and went back to Mr. Hall's, giving him leave to converse only with his father. On my return I found him in the same state. He utterly refused to speak to any one but his father, and told him he should not have another fit till the following Sabbath, (this was Monday evening,) which proved true; but when that day came he had several.

At nine o'clock and three minutes, holding my watch as before, and standing eight or nine feet from him, I asked the time. He gave nine o'clock and five minutes. 'Look sharp,' said I. 'O! three minutes,' said he.



We were now curious to see if he would awake himself at the two hours and five minutes; and as the clock in the room reached that time he did not awake, I said, 'Henry, did you mean by my watch or by the clock?' 'By your watch, sir.' 'Very well.' At the exact moment, he opened his eyes and looked around, and that without any act or willing of mine; and what was very affecting and convincing, he could no longer speak at all, and was unconscious of all that he had said or done.

I have said that he had no return of fits till the next Sabbath. One day after that Sabbath, he came in to his mother much agitated, and apparently going into a fit, and making the passes, he solicited his mother to do it, who, merely to pacify him, passed her fingers over him, and soon he fell into a mesmeric sleep, and escaped the fit. After this he was so highly charged by his sister, that when she was in the next room in the closet, he would instantly taste any thing she tasted, eat what she eat, &c.

In ten days I returned and magnetised him again, and went through several of the above experiments. He always, while in the mesmeric state, declared that it benefitted him, relieved all pain, and would cure him.

After I left, at my suggestion, he was daily magnetised: his fits left him, his voice returned, the sore spots on his head and back were removed, and he recovered rapidly till the family could no longer mesmerise him. A man in the village was found who could, and daily did, till he appeared entirely well. On omitting it he had a fit or two, and it was resumed; and when I last saw the father, he informed me that they considered the child cured.

I may add, I have since cured toothache, greatly relieved tic doloureux, and removed other pains and swellings, as well as headache. I am not, however, a full believer in all which is affirmed of clairvoyance—what I see and know, I believe. In respect to many well authenticated facts, I neither affirm nor deny. That there are many cases of gross deception and imposition I fully believe. On such a subject it can hardly be otherwise. This, however, is a reason why men of character and intelligence should investigate it, rather than otherwise. 'But it is deception.' 'Well, then, let us expose it by a fair trial.' 'But it is the work of the devil.' How do you know? What is the evidence? What harm has it done? 'Oh, bad men have used it for bad ends!' And what is there in the world that has not been so used? If it is the work of the devil, then we need not be ignorant of his devices, and

should make the examination for ourself, for ignorant and bad men will not expose his devices. From experiment and observation, I have no doubt, that, as a remedial agent, mesmerism is yet to accomplish much good, and no harm can result from it, except like all other blessings, it be abused.

W. H. BEECHER.

Boston, June 28, 1843.

Observations on *Spermatorrhœa*,  
Or the involuntary discharges of the Seminal  
Fluid.

BY W. H. BANKING, M. D. CANTAB.,  
Physician to the Suffolk General Hospital.

That important and most afflicting class of affections of the sexual organs, which is characterised by the frequent involuntary discharge of the seminal fluid, although sufficiently familiar to the majority of practitioners engaged in the large towns of this and other countries, has not met with such public notice on their part as it would seem to demand. For this reason, and to the great detriment of society, the treatment of the effects of sexual abuse or excess, exclusive of syphilitic and blennorrhagic affections, is too generally confined to a section of that horde of unprincipled pretenders, which the government of this country, to its shame, by tolerating, continues to patronise; and from whose obscene advertisements it condescends to derive a portion of its revenues. It thus happens that a subject fraught with the deepest interest, both as regards the individual and society at large, is rarely, in all its extensive details, submitted to honest and scientific investigation. It is to be hoped, however, that as the eye, the ear, the teeth, have one by one been rescued from the unclean grasp of quackery, so in its turn, this most wretched of all the curses which man's imprudence entails upon him, may be thought worthy the attention of the educated practitioner.

If a person after the age of puberty, and more especially if he have indulged in regular sexual intercourse, be from any cause induced to lead a life of perfect continence, he will experience involuntary emissions during sleep in greater or less frequency. The secretion of semen being continuous, and not, as is by some believed, accidental, upon erotic excitement, nature adopts this mode of disembarassing the system of a product which ought, in correspondence with her laws, to be expended in the wholesome sexual employment of the organs. Emissions, therefore, occurring under such circumstances in robust individuals, so far from being injurious, must be regarded as a salutary provision. But, although beneficial, or at

least, harmless, at first, these nocturnal discharges may, if the continence be prolonged, be, by an acquired habitude of the parts concerned, repeated to an extent which becomes positively injurious, and, as in the case of other habitual discharges, then produce inconveniences proportionate to their frequency, and the original constitution of the individual.

But the cases in which spermatorrhœa is consequent upon unnatural continence, *per se* are comparatively rare. The involuntary emissions which occur in such abundance as to constitute a really morbid phenomenon, are usually to be traced to one or other of the causes hereafter to be mentioned.

#### Symptoms.

From the almost insurmountable objection to speak of their ailments which is generally observed in the unhappy subjects of this complaint, it is difficult to procure a complete account of its origin. The history of a case of seminal emissions, however, will usually be found to be somewhat as follows.—After a greater or less amount of abuse of the genital organs, either natural or unnatural, the individual makes the discovery that he has become infested with seminal emissions during sleep. The emissions are at first accompanied by erection, but soon occur with diminished rigidity of the penis. If he at this time indulge in sexual intercourse he experiences more than usual difficulty in consummating the act; he is frequently disappointed altogether, or, if not, the erection is incomplete, and ejaculation more than ordinarily precipitate, and in some cases painful. As the disease advances the nocturnal emissions increase in frequency and abundance, at length occurring without either erection or pleasurable sensation; in fact, the patient is often only made conscious of them by the sense of feebleness on waking, and by the marks upon his linen. In sexual intercourse ejaculation becomes more and more hurried, till at length mere contact with or even sight of the female will induce it, and complete impotence is thus established. The pernicious effects of these discharges upon the general economy is soon evinced. The mind becomes enfeebled and incapable of protracted attention, the memory fallacious and uncertain, and the patient feels that he is no longer fitted for his usual avocations. His disposition undergoes an equal change, he becomes morose and suspicious, fond of solitude, lachrymose upon trivial occasions, and exhibits those apparently causeless contrarities of temper, which are commonly received as evidences of hypochondriasis or eccentricity. Cerebral and thoracic symptoms, as giddi-

ness, noises in the ear, palpitation, and cough, present themselves in greater or less intensity. The body gradually emaciates, especially about the lower extremities. The aspect becomes dejected, the patient seldom raises his eyes to the person he addresses as if conscious that the expression of his countenance would reveal his wretched condition. Digestion is impaired and accompanied by pain and flatulence. The bowels are invariably costive; indeed, I know scarcely any disease short of mechanical obstruction, in which they so obstinately resist the powerful cathartics. That this state of bowels is intimately connected with the emissions is shown, by the fact, that upon the suspension of these the bowels at once resume their normal action. A case has lately come under my care in which the bowels resisted two-minim doses of croton oil, but acted spontaneously and regularly after the cure of the emissions by cauterisation of the urethra.—The urine is passed frequently, three or four times perhaps during the night. The aspect of the genitals is generally though not always enfeebled.

I have seen the most complete impotence co-exist with sexual organs of large size and vigorous appearance, but usually the penis is flaccid and without elasticity, the scrotum pendulous, and the testicles soft and tender to the touch. After the lapse of a certain time if the disease makes progress, the nocturnal emissions cease, and the patient is buoyed up with the hope that his ailments are removed; but his increasing feebleness soon proves that his hopes are without foundation. If at this time, the patient's attention be directed to it, it will be found that an alteration has taken place in the character of the urine, it has become turbid and nauseous to the smell. The turbidity is not, as in chronic affections of the bladder, persistent throughout the entire act of micturition, but appears chiefly towards the end, the urine being clear at the commencement. In other cases the seminal fluid, is not emitted till the bladder is emptied, when a glutinous fluid is observed to accompany the last few drops of urine. The evacuation of the bowels is accompanied by the same discharge, so that, in fact, there is a daily draining away of seminal secretion.

The case is now complete, and in that condition which, until Lallemand directed our attention to it, was utterly misunderstood.—The medical attendant being misled by the fact of the absence of nocturnal pollution, was invariably in such instances occupied by the more prominent features of the case, which was considered as cerebral, cardiac, or gastric disease, accordingly as one or other organ happened to take the lead in the symptoma-

tology. This is doubtless the description of an extreme case; the majority present themselves while the emissions are nocturnal,—before, in fact, the disease has assumed its worst aspect; but it is of importance to be aware that the seminal fluid may pass away with the urine, and that it is not to be concluded, in a suspicious case, that spermatorrhœa does not exist, because a nocturnal emission has not occurred for a long time. The tendency of every case of morbid nocturnal emissions, if unchecked, is to become diurnal. The nocturnal discharges cease for the plain reason that the semen is removed continuously in the evacuations of the bladder and rectum.

#### Causes.

It has been the custom with most writers, from the time of Hippocrates downwards, to attribute seminal pollutions in all cases to previous abuse of the sexual powers. More recent investigations have determined that, although such indulgence is the more common cause, there are other circumstances capable of inducing the disease, independently of any blame on the part of the patient.

It is well known that some individuals support with impunity a degree of sexual irregularity which inevitably plunges another into the miserable condition in question.—We must, therefore, admit in the case of *spermatorrhœa*, as in other diseases, the existence of predisposition.

The application of lunar caustic to the urethra in cases of *spermatorrhœa* was first the suggestion of Lallemand; for although Sir E. Home had previously cauterised the canal, it was with the object of overcoming a stricture, Lallemand prefers, in all cases, the application of the solid nitrate, but it may likewise be used with benefit in the form of solution. In the hands of the French surgeon the success of this mode of treating involuntary emissions has been most remarkable. Nearly one hundred cases are reported in which it was adopted by him, and in all, with very few exceptions, its effects have been rapid, and, where the patient has been commonly prudent subsequent to the treatment, permanent. The experience of British surgeons, though not so extensive, is as far as it goes, equally satisfactory. In an excellent critique upon Lallemand's works, in the "*British and Foreign Medical Review*," are collected the written testimony of several English practitioners. One gentleman writes as follows:—"I can recollect eleven cases in which I have found Lallemand's treatment successful, and one in which it did not completely succeed. In seven of the eleven cases a single application of the caustic was sufficient; in four it

was necessary to apply it a second time. . .

The effects are immediate; a person in whom the discharge has continued for months will have none for some days after the use of the caustic." Another writes thus: "I have carefully noted twenty-seven cases treated by the nitrate of silver. . . . Of these, thirteen were completely cured, eight so much benefited that the emissions only recurred occasionally, and produced but little effect upon the system; the remaining five were benefited, but not to the same extent." A third surgeon states that with regard to Lallemand's method of cauterising the urethra, he has tried it in a dozen cases, and in the majority of them with decidedly good effects. Mr. Phillips, in the paper before alluded to, thus speaks of the caustic bougie:—"In nineteen cases I used the caustic. Of these cases ten were completely relieved by a single application; in three the amelioration was decided, though the complaint was not cured; in six there was no relief. In the nine cases in which the first application was insufficient, the remedy was again used,—in three cases with complete relief." So that "in thirteen cases out of nineteen it succeeded, in six it failed; but in no case was there any aggravation." It appears, then, from these remarks, that of fifty-eight cases, exclusive of those of Lallemand, in which caustic was applied, it failed only in six, was beneficial in fourteen, and completely successful in thirty-seven, or two-thirds of the whole, a result sufficient to establish its character as a remedy of the utmost value.

Physicians of much experience will recognise in this practice an old acquaintance, and will see the fallacy of the great majority of these pretended cures; for they are nearly all cases of tubercular disease of the prostrate gland, involving more or less the organs with which it is connected, and complicated with tubercular disease of the cerebellum, in which the checking of the seminal discharges forms but a small part of the cure. The story of the subsequent suffering and death of many of these patients from disease of these organs, and from tubercular disease propagated from these to other organs, is not yet, and for obvious reasons never will be told. We have seen and treated a great many such cases so well described by the author of the above article, many of which had been nearly quacked to death with Lallemand's and other common remedies. In all

these cases the magnetic symptoms disclosed tubercular disease of the prostrate gland, and cerebellum, and in many others it had been propagated from these organs to the cerebrum, stomach, intestines, and liver, and in others at last to the lungs.

Besides the moral treatment in these cases of tuberculous habits, in which the natural inclinations are much stronger than they are in other persons, they should be put under the use of the remedies for tubercular disease, and should continue under the use of them until their healths are restored, and it is only in the few cases, in which the urgent symptoms described in the above article, do not readily or really yield to their influence, that Lallemand's, or any similar remedy should be used.

#### The Power of the Human Will.

The following extract on this subject, is from the *New Orleans Crescent*.

*Extraordinary Power of the Human Will*—A long time ago we recollect hearing of some experiments performed by two ancient graduates of Ecole Polytechnique. A drop of quicksilver hermetically sealed in a small nut-shell covered with wax, and attached to a thread, on being held over a parcel of dimes placed in a straight line will move from one end of the silver to another, and its motion can be stopped by a mere effort of the will! If this ball be held over a gold watch a rotary movement can be obtained, and the motion reversed by the action of the mind! We tried the experiment yesterday, and found it to be perfectly successful.

We have been much pleased with a repetition of this experiment. Another extraordinary example of the power of the human will is that exercised by the magnetiser.—From numerous experiments in mesmerism, about one-seventh of the adult population, and children generally under ten years, are supposed to be very susceptible to its influence, and these it is now ascertained can be easily put into the mesmeric or magnetic state, by the exercise of the will of the magnetiser, without the use of manipulations, under certain favorable circumstances, and these are principally strict attention to the magnetiser or some other object, when he exercises his will upon them. Persons too, who have been once magnetised, although not

before very susceptible to its influence, can afterwards be put into the magnetic state by the mere exercise of the will of the magnetiser, and even at great distances from him.

There is besides a still more extraordinary phenomenon in regard to the power of the will, for we find we can bring the true images of different persons from any part of the world into the room before clairvoyants, in an instant of time, even persons we never saw or heard of before, whether dead or alive, when they will see and describe them, with apparently the same accuracy they would if these persons were really before them, in their natural waking state, and solves the mysteries displayed by a travelling magician at Cairo, as described in the following article, as well as those that are practised by the same gentry in this country.

"Lord Prudhoe and Major Felix being at Cairo last autumn, on their return from Abyssinia, where they picked up much of that information which has been worked up so well by Captain Bond Head in his life of Bruce, found the town in a state of extraordinary excitement, in consequence of the recent arrival in those parts of a celebrated magician, from the centre of Africa, somewhere in the vicinity of the Mountains of the Moon. It was universally said, and generally believed, that this character possessed and exercised the power of showing to any visitor who chose to comply with his terms, any persons, dead or living, whom the same visitor pleased to name. The English travellers, after abundant inquiries, and some scruples, repaired to his residence, paid their fees, and were admitted to his *sanctum*. They found themselves in the presence of a very handsome young Moor, with a very long black beard, a crimson caftan, a snow white turban, eighteen inches high, blue trowsers and yellow slippers, sitting cross-legged on a Turkey carpet, three feet square, with a cherry stalk in his mouth, a cup of coffee at his left elbow, a diamond hilted dagger in his girdle, and in his right hand a large volume, clasped with brazen clasps. On hearing their errand, he arose and kindled some spices on a sort of small altar in the middle of the room. He then walked round and round the altar for half an hour or so, muttering words to them unintelligible; and having at length drawn three lines of chalk about the altar, and placed himself upright beside the flame, desired them to seek a *seer*, and he was ready to gratify them in all their desires. There were, in the old days, whole schools of magicians here in Europe, who could do nothing in this line without the intervention of a *pure seer*, to wit, a *maiden's*

eye. This African belongs to the same fraternity—he made them understand that nothing could be done until a virgin eye was placed at his disposal. He bade them go out in the streets of Cairo, and fetch up any child they fancied under ten years of age.

They did so; and after walking about for half an hour, selected an Arab boy, not apparently above eight, whom they found playing at marbles. They bribed him with a few halfpence, and took him with them to the studio of the African Roger Bacon. The child was much frightened at the smoke and the smell, and the chatter and the muttering—but by and by he sucked his sugar candy, and recovered his tranquillity, and the magician made him seat himself under a window—the only one that had not been darkened, and poured about a table-spoonful of some black liquid into the boy's right hand and bade him hold the hand steady, and keep his eye fixed upon the surface of the liquid—and then resuming his old station by the brazier, sung out for several minutes on end,—‘What do you see? Allah bismillah—what do you see? Illala Resoul Allah! What do you see?’ All the while the smoke curled faster and faster. Presently the lad said, *Bismillah!* I see a horse—a horse-man—I see two horsemen—I see three—I see four—five—six—I see seven horsemen, and the seventh is a *Sultan*. ‘Has he a flag?’ cries the magician?—‘He has three,’ answered the boy. ‘Tis well,’ says the other ‘now halt!’ and with that he laid his stick right across the fire, and standing up addressed the travellers in these words:—‘Name your name—be it of those that are upon the earth, or of those that are beneath it; be it Frank, Moor, Turk, or Indian, prince or beggar, living and breathing, or resolved into the dust of Adam, 3000 years ago—speak, and this boy shall behold and describe.’

“The first name was William Shakspeare. The magician made three reverences toward the window, waved his wand nine times, sung out something beyond their interpretation, and, at length called out, ‘Boy, what do you behold?’—‘The Sultan alone remains,’ said the child—‘and beside him I see a pale-faced Frank, but not dressed like these Franks—with large eyes, a pointed beard, a tall hat, roses on his shoes, and a short mantle!’ The other asked for *Francis Arrouel de Voltaire*, and the boy immediately described a lean, old, yellow-faced Frank, with a huge brown wig, a nutmeg grater profile, spindle shanks, buckled shoes, and a gold snuff box? Lord Prudhoe now named Archdeacon Wrangham, and the Arab boy made answer, and said ‘I perceive a tall, gray-haired Frank, with a black silk petticoat, walking in a garden with a little book in his hand. He is reading on the book—his eyes are bright and gleaming—his teeth are white—he is the happiest looking Frank I ever beheld.’ Major Felix now named a brother of his, who is in the cavalry of the East India Company, in the presidency of Madras. The magician

signed, and the boy again answered. ‘I see a red-haired Frank, with a short red jacket, and white trowsers. He is standing by the sea-shore, and behind him there is a black man in a turban, holding a beautiful horse richly caparisoned.’ ‘God in heaven!’ cried Felix. ‘Nay,’ the boy resumed, ‘this is an odd Frank—he has turned round while you are speaking, and, by Allah, he has but one arm!’ Upon this the major swooned away. His brother lost his arm in the campaign of Ava!”

#### Mental Powers of Clairvoyants.

There is apparently, as much difference in the mental powers of clairvoyants, as their is in these individuals in their natural waking state. There is also a great difference in the relative clearness of their visions, and in the same individuals at different times. Some again will see very clearly, and describe very accurately an hour or two, and then become weary or exhausted, when they will make mistakes, and little or no dependence can be placed upon any thing they say. They also sometimes become displeased, and aware of their superior mental powers, give vent to their spleen by attempts to deceive those around them. One of the best examples of their extraordinary mental powers, is that described in the following account of some phrenological experiments in Hartford, Conn., in January, 1842.

“The subject was an interesting married lady, of high intellectual cultivation, most respectably connected, and of unimpeachable integrity.

“An eminent lawyer being introduced to her, she began with him the discussion of some legal question, astonishing us by the clearness of her conceptions, or keeping us in a roar of laughter by the lively sallies of her wit. During this conversation, some one behind her placed his hand near her head, without touching it. She instantly evinced embarrassment, forgot the subject of discussion, and could not go on until the hand was removed. The magnetiser then placed his hand upon her forehead, her recollection was restored and the conversation renewed. The magnetiser then touched the organ of veneration, when she abruptly terminated the discussion, assuming an attitude of devotion, and refused all farther communication with the physical world. Her devotions being ended, she was put in communication with a scientific gentleman, with whom she held a long and interesting conversation on the subject of Animal Magnetism; boldly controverting his arguments and giving her own view of this extraordinary science with great clearness of

thought and beauty of expression.● And here she seemed like an ethereal being—a being of another creation—and in the language of the eminent divine, to whose church she belongs, “she appeared perfectly sublimated.” After this she astonished all by determining with wonderful accuracy the phrenological character of various individuals present, and describing with most minute exactness, their several diseases, acute or chronic, incipient or confirmed. A gentleman present was requested to sing and play a German song for her. The first note struck brought her to the piano, when during the prelude she persisted in standing, but the instant he commenced the song, she sat down by him, and with a full, sweet voice, accompanied him in the very words he sung, although in her natural state she has no knowledge of that language. She then accompanied a French gentleman in one of the songs of his country, and afterward began again the German song, which the pianist had been requested to sing once more. During the performance of this she was demagnetised, and of course, discontinued her accompaniment. Being asked by the writer why she stopped, and if she would not still accompany the other voice, she replied that she knew neither the words nor the air.”

These feats, in the somniscient state, of understanding and speaking in unknown tongues, or in a language unknown to these persons in the natural state, have been frequently repeated in this city. They were, moreover, practised in the ancient Pagan Temples, and by the apostles of the Christians. See Acts of the Apostles, chapter 2.

“Magnetism appears to have been well understood by the Egyptian hierarchy, not only from some of the effects we find recorded, but in one of the chambers (of the Temple) whose hieroglyphics are devoted to medical subjects, we find a priest in the very act of that mesmerism which is pretended to have been discovered a few years ago. The patient is seated in a chair, while the operator describes the mesmeric passes,\* and an attendant waits behind to support the head when it is bowed in the mysterious sleep.”—DUBLIN UNIVERSITY MAGAZINE, Oct. 1843.

The higher orders of the Christian priesthood continued to be initiated into the mysteries taught in the temples, long after the Christian era; and this was a matter of great importance, for it was necessary for them to get up

shows and theatrical performances, on holidays, in imitation of the Pagans and of the lesser mysteries, to amuse their audiences, and these were continued, even in England, as late as the last part of the sixteenth century.—HONE'S ANCIENT MYSTERIES, &c., LONDON, 1823.

St. Cyril, Bishop of Alexandria, in A. D. 412, in his VIIIth book against Julian, gravely observes: “These mysteries are so profound and so exalted, that they can be comprehended by those only who are enlightened. I shall not therefore attempt to speak of what is most admirable in them, lest by discovering them to the uninitiated, I should offend against the injunction not to give what is holy to the impure, not to cast pearls before such as cannot estimate their worth.”

Theodoret, Bishop of Cyzicus, in Syria, A. D. 420, in his dialogue, entitled, “The Immutable” introduces Orthodoxus, speaking thus: “Answer me, if you please, in mystical and obscure terms, for, perhaps, there are persons present who are not initiated in the mysteries.”

#### Cases successively treated with Sulphate of Quinine

By C. SEARLE, M. D., M. R. C. S. L., Bath.

*Scarlatina*.—I was requested by a lady, twenty miles distant, to visit her family as soon as possible, as a son and daughter were dangerously ill with scarlet fever. I reached the place of her abode the same evening, when the son, I found, had died two hours before. The daughter, a delicate girl, aged seventeen, I found delirious in bed, with great difficulty of deglutition, a small irritable pulse at 120, and an excited skin. Leeches were then being applied to the temples, and powders of calomel and antimony being administered every two hours. The leeches I directed to be immediately removed, and sent for the medical attendant, on consultation with whom, on his arrival, as he declined any responsibility in the measures I thought it necessary to pursue, the cure was thrown altogether into my own hands. The patient's skin I now had sponged with tepid water, and the throat gargled, or rather mopped, occasionally with a large hair pencil, dipped in a mixture of strong chilly vinegar and honey, which produced a copious muculent salivation. Soon after this a grain of quinine, in solution, was administered, with a table-spoonful of port wine; and the same was repeated every two hours throughout the night, and two or three spoonfuls of sage and

\* “One of his hands is raised above the head of the sick person, and the other is on the breast.”

wine between each dose. On the following morning the throat was much better, the fever had declined, and she expressed herself as feeling in every respect better. The remedies were continued, and in the evening all danger was at an end. After this she continued the quinine in doses of three or four grains during the day, and was up and well by the end of the week.

Another son and a servant of the same family were attacked the day after my arrival at the house, the disease being of epidemic prevalence in the town and for many miles around. They were both treated by an emetic in the first instance, followed up by a dose of calomel and jalap; and after the operation of this by a tea-spoonful of bark-powder, with two table-spoonfuls of port wine, every two hours, with immediate convalescence; and this treatment becoming now general in the town, was very successfully pursued.

**Erysipelas.**—An infant, fourteen months old, was attacked with erysipelas on the face, which extended down the neck to the chest, and down the arms to the finger ends, the hands becoming edematous. Calomel, antimony, and purgatives were freely administered for more than a week without permanent benefit; on the contrary, the disease was extending itself, and the child had become comatose. Under these circumstances half a grain of quinine was given every two hours, and a blister applied to the thigh. The amendment was almost immediate, and the child was two days after convalescent.

I have only to add, in conclusion, that the above are not a few choice cases selected from among many, in support of the opinion I have previously advanced, that quinine is a remedy which of late years has been too much neglected in the treatment of these varieties of fever; but as I am out of practice, these are, although few, the only cases of the kind with the treatment of which I have had anything to do. June 10, 1843.

#### In Sub-Arachnoid Hemorrhage.

False membranes never occur, but in the intra-archnoid hemorrhage they are always found around the effused clot on the fourth or fifth day. Paralysis of motion rarely accompanies sub-archnoid hemorrhage, but commonly intra-archnoid hemorrhage; paralysis of sensation is rare in both kinds. Deviation of the mouth does not occur in these cases, but sleep and coma are almost constant symptoms. Delirium and fever accompany intra-archnoid hemorrhage alone, but from this disease the patient may recover; while sub-archnoid hemorrhage has been found constantly fatal within eighty days.

#### Treatment in Cholera.

A physician of Freienwalde has it said, in the "*Medic. Zeitung*," proved the acetate of lead, with strychnine, to be effectual in causing the immediate cessation of the vomiting in sporadic cholera and in tending to the speedy cure of that disease. The urinary secretion is, however, suspended under its employment, sometimes for as long a time as two days. Dr. Steinbach, of Brandenburg, is an advocate for the acetate in the same disease, but in combination with a solution of pure tannin. This mixture, he says, is specially indicated in the cases in which a softening of the gastro-intestinal mucous membrane is present.

#### Nervous Headache, &c.

A physician of Marseilles has found headaches of a kind dependent on nervous disturbance, obstinate tic douloureux, &c., curable by the application of liquor ammonia (*l'ammoniaque depuis le vingt-cinquieme degre jusqu' au trente-deuxieme*), on a dossil of lint, to the alveolar border of the palate. The solution is to be retained in contact with the mucous membrane immediately within the teeth, until an abundant effusion of tears is excited, when the exacerbation of pain will suddenly cease. This remedy proves more efficient against tic douloureux attacking the frontal and facial than the occipital nerves; but it has been successful in several authenticated instances in which the latter have been the seat of pain.

#### Pathology of Tetanus.

At the autopsy of a patient who died in the Hotel Dieu of Paris, with tetanus supervening on fracture of the leg, numerous ecchymoses were found on the fibrous sheath of the spinal cord; and external to that membrane a collection of black and liquid blood occupied the lower part of the vertebral canal to the height of five or six inches. The spinal cord itself was softened throughout its lower two-thirds, and closely adherent to its pia mater; and the ramollissement continued though in a less degree, to the occipital foramen, terminating just below the corpora pyramidalia. Within the cranium the pia mater was observed to be greatly injected, and there was extensive softening of the left anterior and middle lobes of the brain. In the sciatic nerve of the right side the side of the fractures ecchymosis and inflammation were perceptible, but there was neither in the nerve of the opposite side. (It should be stated that the autopsy was not made until fifty hours after death.) Numerous other cases are cited, in which softening of the nervous organs and similar appearances have been observed; but tetanus has occurred without such having been afterwards discoverable.—*Archiv. Gen. de la Med.*, April, 1843.—*London Lancet*.

The pathology of these cases, confirms what we had formed of the disease in a case of a lady, to whom we were called in consultation about 15 years since. Tetanus came on in consequence of an injury (from a puncture of a nail,) to the fore-finger of the right hand. After suffering a number of days, we found her in a comatose and apparently hopeless state with opisthotonus, from which she could not be aroused, but shaved the top of the head, and cupped her freely and obtained about 12 ounces of blood, when she awoke, and from that time became convalescent, and soon recovered her health.

#### Tetanus.

*To the Editor.*—Sir. —In a late number of *THE LANCET*, I find an account of the post-mortem appearances in a case of tetanus. As the pathology of the disease does not appear to be understood, I would ask whether, *a priori*, we should not suppose it to depend on an irritable and, in some cases, an inflammatory state of the spinal cord? If this inference be correct, what is the treatment indicated?

I. Large bleeding, to subdue irritation and control the spasms.

II. Blistering along the whole spine.

III. Calomel in large doses, combined with opium, continued until its specific action on the system is induced.

I am aware that each of these means has been tried, severally, and with various results, but I have not met with any case of their conjoint use. I am, sir, your obedient servant,

H. WHITWORTH.

*St. Agnes, Aug. 22, 1843.*—LONDON LANCET.

#### Paralysis of the Bladder, cured by the Tincture of Cantharides.

A patient was lately admitted into the Hospital de la Pitié with paralysis of the bladder, for the relief of which all ordinary methods of treatment had failed. M. Lisfranc ordered the direct application of tincture of cantharides to the bladder by the following mode: One drop of the tincture was let into the organ through a catheter, and followed by an injection of simple lukewarm water. Next day two drops were similarly instilled, and the like operation was repeated night and morning for several succeeding days, an additional drop of the tincture being added on each successive occasion. By this method of treatment a cure was soon effected. M. Lisfranc found no perceptible irritation to result from the use of the tincture in an undiluted form, while the direct application of the remedy to the organ affected, was clearly preferable, in every respect to its internal administration.—*London Lancet.*

Violent inflammation would have been the result, if this tincture had been applied to a

serous surface connected with the nerves of sensation; but in this case it was the motor nerves only in which it came in contact, and hence the importance of the distinction as in this case between the sensibility of the one, and the insensibility of the other.

#### Pathological Researches into the Local Causes of Deafness

Based on One Hundred and Twenty Dissections of the Human Ear By JOSEPH TOYNBEE, F. R. S., Surgeon to St. George's and St. James's Dispensary.

The researches of which this is a summary view, are in continuation of a previous paper contained in the 24th volume of the Society's "Transactions." The principal practical conclusions to which they lead is, that the most common cause of deafness is chronic inflammation of the mucous membrane which lines the tympanic cavity; and that by far the greater majority of cases commonly called nervous deafness ought, more properly to be attributed to this cause. The pathological conditions to which inflammation of the mucous membrane gives rise are divided in the papers into three stages.

In the first stage, the membrane retains its natural delicacy of structure though its blood vessels are considerably enlarged and contorted; blood is effused into its substance, or, more frequently, at its attached surface. Blood has also been found between the membrane and the membrane of the fenestra rotunda, and in very acute cases lymph is effused over its free surface.

The second stage is characterized by the following pathological conditions:

First, the membrane is very thick, often pulpy and flocculent. In this state the tympanic plexus of nerves becomes concealed, the base and crura of the stapes are frequently entirely embedded in it, while the fenestra rotunda appears only like a superficial depression on the swollen membrane.

Second, concretions of various kinds are visible on the surface of the thickened membrane. In some cases, these have the consistence of cheese, and are analogous to tuberculous matter; in others they are fibro-calcareous, and exceedingly hard.

Third, by far the most frequent and peculiar characteristic of this second stage of the disease is the formation of the membranous bands between various parts of the tympanic cavity. These bands at times are so numerous as to occupy nearly the entire cavity; sometimes they connect the inner surface of the membrana tympani to the internal wall of the tympanum, to the stapes, and to the incus. They have also been detected between the malleolus and the promontory, as well as



between the incus, the walls of the tympanum, and the sheath of the tensor tympani muscle, as well as between various parts of the circumference of the fenestra rotunda; but the place where the adhesions are most frequently visible is between the crura of the stapes and the adjoining walls of the tympanic cavity; this was the case in twenty-four instances out of a hundred and twenty dissections, being a fifth of the number. These kinds of adhesions sometimes contain blood and scrofulous mater.

In the third state of inflammation of the membrane, it becomes ulcerated, the membrani tympani is destroyed, and the tensor tympani muscle is atrophied. The ossicular auditus are diseased, and ultimately discharged from the ear, and the disease not unfrequently communicates itself to the tympanic walls, affecting also the brain and other important organs.

#### Changes of Mercurials in the System.

The fact that calomel could be converted into corrosive sublimate in the system, was known many years ago. But the exact circumstances of this transformation were not sufficiently understood. Mialhe, in an elaborate set of experiments on the subject (*Ann de Chimie*, v. 160,) says, the action occurs when calomel is brought in contact with a solution of an alkaline chloride, that the quantity of sublimate formed is in proportion to the amount of alkaline chloride present, and the action increases in proportion to the concentration of the alkaline chloride. His experiments were made with common salt and sal-ammoniac. The action is much increased by the presence of air and dextrine, but is retarded by fat and gum. By simply boiling calomel in distilled water, sublimate is formed. Mialhe extended his observations to all the compounds of mercury, and obtained similar results. He concludes that it is corrosive sublimate which is the active agent in medicine. If this idea should be confirmed, it should lead to the substitution of this form of mercury for all others. The same chemist recommends the hydrated proto-sulphuret of iron as a complete antidote to corrosive sublimate. To prepare it copperas is to be precipitated with hydrosulphuret of sodium, the precipitate washed and preserved in an air-tight bottle.—*Dr. R. D. Thomson in Proceedings of Glasgow Philosophical Society, No. 4.*

#### Statistics of Lithotomy.

In the five years, 1836 to 1840 inclusive, twenty-four operations for stone in the bladder took place at the Hotel Dieu in Paris. In six

of these, which were cases of lithotritry, all the patients survived. Of the other eighteen cases in which lithotomy was performed, eleven were attended with perfect success, and the recovery of the patient, but the seven remaining terminated in death, in one case two months after the operation; and in the rest only from two to five days. In these seven, two of the patients were upwards of seventy years of age. Of the whole twenty-four individuals operated on, thirteen were from three to twenty-five years, three from twenty-five to fifty years, and eight from fifty to seventy-five years;—a proportion which seems to indicate that calculus is more frequent in youth than in age, and that middle life is nearly exempt from its access. In 1841 six patients were operated on in the same hospital by M. Roux, on four of whom lithotomy, and on two lithotritry was practised. The mortality in this year was greater than in any of the five preceding; five out of the six patients died; and the case of recovery was one in which lithotomy had been employed.—*Gazette Med.*, No 47.

#### Statistics of Anal Fistula.

During the five years from 1836 to 1840 inclusive, 119 patients were operated on at the Hotel Dieu, Paris for fistula in ano. Of these persons 110 left the hospital cured, and 9 (or 1 in 12) died. The mortality from the operation was progressively less in proportion from the first to the last mentioned year. Of the 119 individuals operated on, 32 were of ages between 15 and 25 (4 only being under 20 years of age,) 55 from 25 to 40, and 32 between 40 and 60 years old (only 3 being more than 51 years old.) Only 12 of the whole 119 were females. Sedentary occupations, and whatever is productive of habitual constipation, have been considered fruitful cases of fistula; but the evidence elicited from the individuals suffering from the disease was by no means corroborative of such statements. The patients included indifferently sawyers, carpenters, masons, bakers, porters, and other persons accustomed to perpetual exercise, as well as tailors, bootmakers, cutlers, cabinet-makers, and others employed in sedentary pursuits. Some connection of fistula with a tuberculous diathesis seemed, however, to be apparent.—*Gazette Medicale de Paris.*

The Hartford Journal says, that Dr. John S. Wolcott, son of the late Governor Wolcott, and the last of the Wolcotts in Litchfield, died suddenly on the 22d instant, from putting arsenic in a tooth to alleviate the toothache.

Dr. F. BIRD, Physician to the Metropolitan Free Hospital, has lately successfully extirpated a dropsied ovarium, on which paracentesis had been performed no less than *ten times*. The incision was made on the right side, a little below the umbilicus, and the tumor, after being discharged of its contents, was withdrawn to the outside of the abdomen, and separated, with the greater part of the Fallopian tube, by the help of silken ligatures placed round its pedicle. The recovery was at first slow and doubtful, but at the end of three weeks, the patient was quite convalescent, and is now in the enjoyment of perfect health. The solid portion of the tumor was little larger than an orange, but when filled it would contain about two gallons of fluid, and weighed upwards of twenty pounds.—*London Lancet*.

These ovarian tumors which terminate in dropsy, are cases of tubercular disease of the ovaria, in which there is more or less pain produced by pressure on the lumbar vertebrae, as in the case of tubercular disease of the uterus, of which the ovary are an appendage. Disease of the ovaria may however be distinguished from that of the uterus, by the difference in the size of the breasts—the largest being on the same side of the diseased ovaria, in consequence of atrophica of that on the opposite side. We have found these symptoms to be constant in twenty-six cases of undoubted disease of the ovaria, in which eight had terminated in dropsy.

#### Spontaneous Cure of Ovarian Dropsy.

The following case is recorded by M. Hay, at Altena, in Prussian Westphalia. A woman, aged forty-eight, who had previously been in perfect health, was the subject for some time of great uneasiness in the hypogastrium, when at length, on the right side of the abdomen, immediately above the ramus of the pubis, there appeared a large tumor, somewhat moveable, and unequally distending the abdominal parietes. The accompanying symptoms were pain in the thighs and the right leg; the lower extremities œdematous, dyspnoea, &c. The clear diagnosis furnished of ovarian dropsy had induced the practitioner to advise the operation of paracentesis, which was on the point of being performed, when a large serous discharge issued from the vagina and lasted about four days, at the close of which time the tumor and all its concomitants disappeared. It should be mentioned that this affection had no influence either in stopping or diminishing the menstrual discharge; only one ovary therefore, appears to have been affected.—

*Medicinische Zeitung.*

#### Muscular Motion.

Numerous experiments on the relative heat and pulsation of animals, under different latitudes have shown that men in this climate, pulsate, on an *average*, 78 times in a minute, while in the Canadas they do not exceed 57. This circumstance affords proof positive of the fact that the transitions from heat to cold, vary the powers of pulsation. The common *watch* is computed to tick 17,154 times in one hour. This is 411,686 times a day, and consequently 150,165,390 in a year, supposing the year to be but 365 days: and as some watches do, by care, preserve their powers of action for 100 years, we have the gross number of 15,016,539,000 times for one time-piece. Now, although the watch is formed of *hard* metal, and therefore, to all appearance, is likely to endure long, yet, man possesses, within him a piece of machinery composed of an extremely soft material, which beats nearly 5,000 times every hour, 120,000 times each day, and 43,000,000 times per year; and consequently 4,380,000,000 times in 100 years—an age frequently attained by healthy persons who lead temperate lives. This piece of machinery is the *Heart*.

#### New Pessaries.

Mr. Snow laid before the Westminster Society at its last meeting, some pessaries which he had invented, consisting of sponge cut into a globular form and tied up in oiled silk, in such a manner that, when compressed, the air contained in the interstices of the sponge was displaced from the instrument, which was thus reduced in size, but gradually returned to its original dimensions when the pressure was discontinued. He said that, by this capability of being reduced in size, the pessaries were very easy of introduction; he had found them more effectual and create less uneasiness than any other kind which he had used; and as the oiled silk protected the sponge from all extraneous matters, they were calculated to be durable. He had got Mr. Read, Regent-circus, to make them for him.—*LANCET*.

This new invention, like many others in our father land, is an old invention in this country. It was used here more than 20 years ago, in cases of prolapsus uteri, with ulceration, when the pressure of no other pessary could be borne. Its use here is now mostly confined to these cases. The glass pessary, is, however, on many accounts, much the *newest* and best for common cases.

**Tuberculous Deposits in the Pia Mater.**

The following case is selected from a number of others of a similar kind in a late number of the "Journ. de la Soc. de Med. de Nantes." A young man, twenty-five years of age, had long suffered from disease of the heart; he was seized with inflammation of the left pleura, which became afterwards complicated with pneumonia and pericarditis. His disease proved fatal, and towards the termination of his life he daily had fits of an epileptic character, losing consciousness for some minutes, his face becoming purpled and his arm agitated by involuntary movements. After death, on the middle and posterior portions of the right hemisphere of the brain, many tuberculous deposits, of a grey or bluish color, underneath which parts, the brain was in a softened state. Deposites of the like nature were discovered on the inferior surface of the cerebral lobes, on the upper surface of the cerebellum, and in other parts of the pia mater. In the thorax, the heart was found hypertrophied, and adherent to the pericardium; adhesions also existed between the right pleura pulmonalis and costalis; the left lung was partially hepatised, and there were numerous tubercles in the bronchial glands, but none existed in the lungs. It is singular also that the patient is not stated to have ever been delirious during his malady.—LANCET.

Tubercular disease of the brain is a common cause of insanity. We have a case of a lady who had been insane about a year, and in whom we detected tubercular disease of the brain by the magnetic symptoms, and who became perfectly sane in seven weeks thereafter, under the influence of the magnetised gold pill. She has continued sane to this time, now more than six months.

**Another Wonder.**

We learn from the Bangor Democrat, that a successful surgical operation was performed on a woman in Bangor on Monday, while she was in the magnetic sleep. The lady is the wife of Mr. Ebenezer Davis, of Jarvis Gore, (Penobscot Co.) She was thrown into the mesmeric state, when a tumor was removed from her shoulder by Dr. Rich. While he was performing the operation, Mrs. D. exhibited no other symptoms of suffering than a slight twitching of the muscles and a compression of the lips. When awakened, she was unconscious that any thing unusual had taken place in regard to herself—she did not know that the tumor had been removed until informed by others. The parties are all respectable, says the Democrat.

**Physiology of the Spleen.**

Our professor of anatomy, Dr. Hargrave, has paid some attention to the subject, and he concludes that its chief use is to receive the blood, as a temporary reservoir, or diverticulum, when any obstruction in the heart, lungs or liver, renders it necessary that they should be relieved from the pressure of that fluid. The absence of valves in the splenic veins permits of regurgitation, and other circumstances render this opinion probable. He always conceives that it performs a similar office for the mucous membrane and the skin. When the blood is driven from those membranes by cold or rigors, it is received into the spleen for the time, and returned to the general circulation as soon as the balance of the circulation is restored in those organs. Certainly the phenomena of intermittent fevers go far to support this opinion.—Dr. Benson's Lectures; Dub. Med. Press.

**Post Mortem Spleens.**

To the Editor.—Sir: The quantity of crude speculations which your readers have lately been presented with on the office of the spleen was brought to a conclusion by your lengthened summary, showing the result to be even more jejune than might have been feared by those who were aware of the inanity of the subject. To sum up your summing up, nothing is yet known of the functions of the spleen. Still these canvassings of opinions, if brief, are agreeable enough. Every one, perhaps, has his peculiar opinions on the use of the spleen. I expect however, that you will never know the truth until you meet with a case of opening in the abdomen opposite the spleen, as there was with regard to the stomach, permitting the changes to be observed as they occur, and then my opinion is that you would see,—what you would see.

But I would beg to know whether the pathology of the spleen be not as defective as its physiology? Whether the cases you have published (*passim*) of spleen disease be not erroneously stated? And I would add an appendix to this spleen dispute, in a few words on the morbid appearances thereof.

I had an opportunity, when assistant to Dr. Hodgkin, of carefully observing the state of the spleen in many hundred inspections, and I noticed the singular variations of character that it presented, particularly the very soft and pulpy state, which was usually ascribed to the effects of inflammation or specific disease. "See how inflamed the spleen is?" Cases have been thus described in your journal. Now, this is only the result of a general atony, or relaxation of fibre, but,

owing to the peculiar structure of the spleen, most marked or pronounced in that organ. It follows chronic diseases, prostration, typhus in hot weather, gangrene, hæmorrhagic diathesis, purpura, petechiæ, &c. The worst case was where the spleen was quite a pulpy, &c.

Along with the spleen, the kidney, liver, heart, brain, &c., are in a degree softened.—There is cadaveric exudation; the course of the veins conspicuous. Other splenic phenomena are very interesting and important as concerned in fatal accidents. The duties of a coroner will be badly performed by one ignorant on these points. Your obedient servant, H. P.

April 16.

The editor of the London Lancet continues to rail against animal magnetism, to gratify the prejudices of a certain class of his readers—the old ladies in breeches, who imagined they had monopolised all the knowledge in the healing art.

Weak and bigoted men always gratify their vanity in opposing the introduction of additions to our knowledge, which not being taught in the schools in which they were educated, are consequently, above their comprehension. The fury with which self-sufficient philosophers opposed the introduction of the theory of the Copernican system of astronomy is equalled only by that with which they now oppose the introduction of the theory of the magnetism of the human system. "Do we not see the sun rise in the east,—move through the heavens and set in the west? and must we now believe against the plain evidence of our own senses, that the earth moves around the sun! and does not the Bible say that the sun rises in the east and sets in the west? What sacrilege! Bring the faggots, and we'll consign these new philosophers to the flames!" exclaimed the bigots, and Copernicus barely escaped those flames, by refusing to allow his work to appear until the day of his death!

#### Medicinal Employment of Iron and Iodine.

*Diabetes cured by Iodine of Iron.*—B., a man, forty years of age, of a naturally strong constitution, and who had usually enjoyed good health, became subject, without any known cause, to a difficulty of digestion, ac-

companied by a feeling of tightness in the epigastric region, diminished appetite, insatiable thirst, increase of urine, and, in short, all the other symptoms of diabetes, on which account, a few months since, he went into the Hotel Dieu at Paris. For three weeks previously he had passed daily between three and four gallons of saccharine urine, when he was put on a course of ioduret of iron to the amount of about fifteen grains in the twenty-four hours, in four doses, accompanied with a generous diet, which, however, had been previously employed alone without any salutary effect. Under this treatment the quantity of urine began at once to diminish, and in three days the quantity passed daily was less than three gallons, and the urine contained much less sugar. The thirst also was considerably lessened. Within a short time afterwards the quantity of urine had decreased to a gallon daily. The same treatment was continued which had been pursued throughout, and five days afterwards the patient was discharged cured.

*Prurigo.*—A solution of iodide of potassium has been found of considerable benefit as an external application in prurigo; and in M. Lisfranc's practice the use of iodine has prevented the extension of cancerous sores, though it has not superseded the use of the knife.—*Gaz. des Hop.*, Oct. 1842.

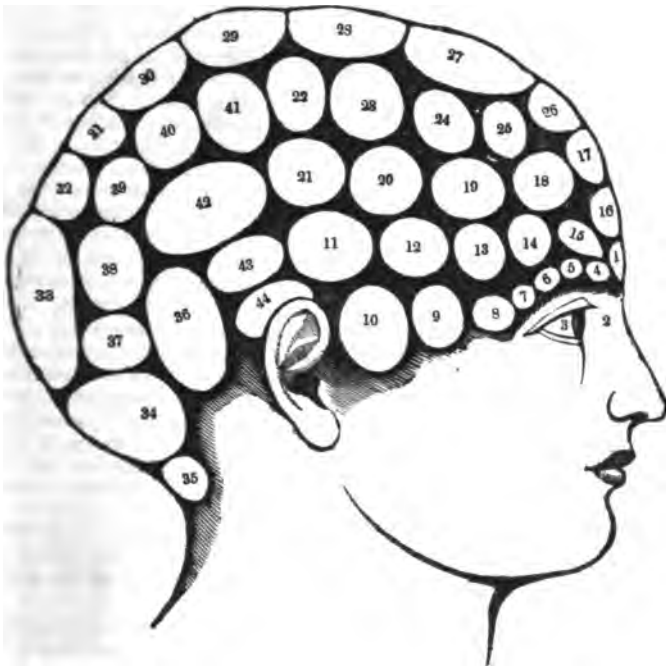
*Hydrocele.*—M. Serre also recommends the employment of this remedial agent in solution (one part of tinct. iod., to four parts of water) as an injection into the tunica vaginalis after the operation for hydrocele, in preference to wine, to which he seems to show it is generally superior in every point of view.—*L'Experience*.

#### Tendinous Re-union.

M. Berard lately exhibited to the French Acad. of Med. a preparation of the tendo-Achillis, which had been divided six months previously, but had become united again by an intermediate substance of a character different from the tendo-Achillis itself, to both cut extremities of which it was, however, closely adherent. M. Berard finds that by dividing this tendon in the case of fracture of the fibula with dislocation of the foot outwards, this accident, otherwise so difficult of remedy, becomes easily repaired.—*London Lancet*.

#### Active Ointment of Mezereon.

Herr Hoffmann, a chemist, of Landau, makes a very active preparation by dissolving a drachm of the alcoholic extract of mezereon in four drachms of alcohol, and mixing the solution with about 4½ lbs (avoird.) of lard. This ointment is said to be a very efficient counter-irritant.—*Lancet*.



**New Phrenological Organs.**

On a comparison of the great and fatal disparity in the results, both in the number and situation of the new phrenological organs, obtained in exciting different parts of the brain in the mesmeric state, by Messrs. Fowlers, Sunderland, Buchanan, and King, they are now satisfactorily accounted for, with a very few exceptions, (marked †,)—some by their having excited opposite sides of the same organ, and others by their having excited portions of different organs, at the same time. With such a license with the brain, we can, like an old fiddle, play any tune upon it that may suit the propensities of the marvellous.

There appears, however, to be no doubt but some of these are true organs. The vermiform process in the median line of the cerebellum, is apparently the organ of voluntary motion. This motion is interrupted in chorea, or St. Vitus' dance, which is tubercular disease of this organ, as is disclosed by the magnetic symptoms.\* In fifteen skulls

of different nations, we found a prominence in thirteen on the under and back part of them, or under the natural situation of that process in the skull. The accuracy of the organs of penetration and thirstiness are also confirmed by our observations, independent of those made by exciting the organs in the mesmeric state.

- |                       |                           |
|-----------------------|---------------------------|
| 1. Individuality.     | 23. Marvellousness.       |
| 2. Form.              | 24. Imitation.            |
| 3. Language.          | 25. Suavity. †            |
| 4. Size.              | 26. Penetration. †        |
| 5. Weight.            | 27. Benevolence.          |
| 6. Color.             | 28. Veneration.           |
| 7. Order.             | 29. Firmness.             |
| 8. Calculation.       | 30. Self Esteem.          |
| 9. Thirstiness. †     | 31. Concentrativeness.    |
| 10. Alimentiveness.   | 32. Inhabiteness.         |
| 11. Acquisitiveness.  | 33. Philoprogenitiveness. |
| 12. Constructiveness. | 34. Amativeness.          |
| 13. Tune.             | 35. Voluntary Motion. †   |
| 14. Time.             | 36. Combativeness.        |
| 15. Locality.         | 37. Connubial Love. †     |
| 16. Eventuality.      | 38. Adhesiveness.         |
| 17. Comparison.       | 39. Orientation. †        |
| 18. Causality.        | 40. Approbativeness.      |
| 19. Mirthfulness.     | 41. Conscientiousness.    |
| 20. Ideality.         | 42. Cautiousness.         |
| 21. Sublimity.        | 43. Sportiveness.         |
| 22. Hope.             | 44. Destructiveness.      |

\*Cataplexy and Epilepsy are cases of tubercular diseases of the cerebellum in which this organ is more or less involved.

Mr. Burritt, the "learned blacksmith," to the Rev. Le Roy Sunderland.

"A few months ago I received a communication from a gentleman residing in a remote part of the State, to this effect. He had sent a lad, in the *clairvoyant* state to the moon, where he made many discoveries with regard to the inhabitants, &c. Having found his way into a building resembling a school-house, he detected a book, which, upon opening, he was unable to read. At the request of the magnetiser, he copied off twenty-eight well-formed characters, as different from each other as the letters of our alphabet. These were forwarded to me to compare with the characters employed in the Oriental languages. A few weeks afterwards I received another letter from the gentleman, containing the results of another tour of discovery to the moon. The lad saw things more definitely this time; and took drawings of a monument and a metallic horn. Upon the monument was an inscription, written in the very characters which the boy found in the book. I have just written to the gentleman, requesting him to begin a new series of experiments upon the moon, simultaneously with Mr. Shepherd, and send the result to me. I would therefore propose that you do the same with your subject, and to publish the result of the three series together, should there be a striking correspondence.—The course I have proposed to Mr. S. and the other gentlemen, was, to take their subjects to the north-east side of the moon, and let them proceed through to the south-west side; then, from the west to the south-east; from north to south; and from east to west; describing what they saw, as would be natural to a traveller journeying through a new country. When each of the three subjects has been through in the above order, it might be of great interest to compare their notes on the moon."

We understand that at the meeting of the Royal Society on the 8th instant, a paper by Dr. Martin Barry was read, announcing his discovery of spermatozoa within the mammary ovum. The ova were those of a rabbit, taken, twenty-four hours post coitum, from the Fallopian tube.—LANCET.

**Commentaries on some Doctrines of a Dangerous Tendency in Medicine.**

*And on the General Principles of Safe Practice.*

BY SIR ALEX. CRICHTON, M.D., &c.

A work proceeding from an individual of high standing, who has passed the greater part of a long career in the active pursuits of the profession of medicine,—in early life an hospital physician and a teacher in London,

—the contemporary of Drs. Reynolds, Warren, (the elder,) and Pitcairn, and numbering amongst his pupils the late Dr. Young—favorably known to the public as the author of "An Inquiry into the Nature and Origin of Mental Derangement;" also holding, for many years, the appointment of physician to the late Emperor Alexander, of Russia,—one who has retired from practice, and from whose bosom is withdrawn (we may presume) in such a production as this, every motive save that of a desire to confer a benefit upon his fellow creatures, being in the 79th year of his age:—a work from such a source demands attention and respect.

There are three commentaries. The greater part of the first is occupied in demonstrating the erroneous notion entertained by Haller and many of his successors, including Dr. W. Philip, of the possession by the arterial tunics of a muscular power, with the fatal tendency of such an error; but the physiological writers in our own Journal having generally held the same opinion as that of the author, we need not dwell upon it now. One or two statements, however, in this part of the book call for notice.

Upon mathematical data, furnished by the late Dr. Young, the conclusion is arrived at, that a quick pulse is indicative of a slow circulation:—

"The pulse may beat 130 times per minute, and yet the progressive motion of the blood from ventricle to auricle may be slower than in health."—P. 9.

The pulse being both quick and weak, its two most frequent concomitant qualities, the above proposition becomes self-evident, the quantity of fluid to be moved being the same, and provided the admission be made that its motion depends mainly on the action of the heart; so that the rate of pulsation, taken alone, is no index whatever of the progressive motion of the blood; and the only case in which a quick pulse corresponds with the increased celerity of the blood, is where the action of the heart is stronger, as well as being more frequent than natural, and accordingly the quantity of blood expelled at each ventricular contraction is either increased, or but little or not at all diminished. In a majority of cases the heart's action being increased in frequency, it is also more feeble, and, as a general rule, it would appear, that the frequency is proportionate to the loss of ventricular power. In these cases it is that a quick (it should rather have been written frequent) pulse becomes indicative of a slow circulation of blood.—LONDON LANCET.

## Operations in disease of the Ovaria, and Spina Bifida.

**Quackery.**—The following ingenious notice, professedly of a new bi-monthly periodical, which appeared in a New York paper of the 15th inst., is a fair sample of the daily puffing process, by which a certain class of physicians in this city sustain each other—no matter how unimportant or unsuccessful their practice—and is now re-published for the benefit of their brother chips in other cities.

*New-York Journal of Medicine and the Collateral Sciences—Edited by Samuel Forrey, M. D.*

The second number of this valuable Journal has come to hand. The original department is, as usual, rich and instructive. Dr. Foltz has again contributed largely to its pages. Dr. F. reports one of the most extraordinary surgical operations which has ever been performed in this country. It was a case in which both ovaria had been successfully removed. It seems from the bibliographical account of this operation, that Dr. McDowell, of Kentucky, performed it first, and more successfully than any other man in the world—and that Dr. Alban Goldsmith, of this city, is the second most successful operator in this, the greatest feat of modern surgery. Dr. David L. Rogers, of this city, has likewise performed it once. We notice this particularly, because we take it to be a matter of congratulation, that New-York talent has been able in this, as in many operations, to perform successfully that which has again and again baffled the skill of the best talent in Europe. Some idea may be had of the immensity of this operation, when it is remembered that it is done by laying open the intestines tumors as large as a man's head. This, too, while the patient is writhing in agony, and the operator moving his knife through the mass of intestines that protrude from the wound. We notice also, from the note book of that talented and able operator, Dr. John Watson, of this city, an interesting case of *spina bifida*, successfully operated upon by Dr. Stevens.\* The resume of Dr. Lee's work on *diastasis*, by the able editor, is full of practical interest, so much so that we mean to present a digest. We commend this journal to the support of the profession. And we assure the editor that when he can command for his pages the contributions, of such men as Francis, Mott,† Goldsmith, Stevens, Watson, Foltz, and the like, he can easily outstrip, with our immense hospital facilities, any journal in the country.

The following extracts, from Cooper's Dictionary of Practical Surgery, with notes and additions by D. M. Reese, M. D.—J. & J. Harper, New York, 1830—will give a fair view of the dependence that may be placed upon the statements of the class of physicians before mentioned:—

## Ovarian Tumors.

"The first attempt to remove them by an operation was made in 1776, by L. Aumoniér, surgeon in chief of the Hospital in Rouen, (France) and is reported as a successful case. See Good's study of Medicine, p. 423."—(This operation was performed many years before Dr. McDowell was born.) "In the London Medical Gazette for 1829, Dr. Hoper, of Biberback, has reported three cases of

extirpation of diseased ovaria, by Carrysman. The first was performed in 1819, and proved fatal in thirty-six hours after the operation. The second in 1820; this case was successful, and the woman has since borne children. The third case occurred in the same year, and the patient never recovered from the shock of the operation." "M. Lizars, in the Edinburgh Journal, for October, 1820, relates an attempt to extirpate an ovarian tumor, but unfortunately, on cutting into the abdomen, he found no tumor to remove.†

Besides these cases by "the best talent in Europe," Dr. Jefferson, of Ipswich, has performed the operation once, which was successful—Dr. West, Tonbridge, once—and Dr. Clay, of Manchester, twice, and all successful. Dr. Phillips, of London, once, which proved fatal.—See Braithwaite's Retrospect, part 7th, pp. 99–100. "Professor Smith, of Yale College, has given an interesting case of the successful removal of an ovarian dropsy, by an operation. See Am. Med. Rec., 1822. Dr. D. L. Rogers, of this city, removed an ovarian tumor in 1829. The operation was successful. "The tumor was composed of a large sac, which contained a fluid drawn off in different operations for tapping. One third of the tumor was solid, containing a fibro-cartilaginous substance. It weighed three and half pounds." "Dr. McDowell, of Kentucky, has reported three cases in which he operated successfully for tumors in the abdomen, ovarian and hydatid. A doubt exists in regard to these cases; and certainly the mode of describing them is calculated to confirm that doubt."—See Med. Chir. Rev., vol. 5, page 216.

Thus much for the operations in cases of ovarian tumors, and of the notice of the New-York Journal of Medicine, and the collateral sciences, in the New-York paper referred to, which it will now be seen was intended only for the "green horns" in the community and of the profession. But "we notice also from the note book of that talented and able operator, Dr. John Watson, of this city, an interesting case of *spina bifida*, successfully operated upon by Dr. Stevens." Bah! see Cooper's Surgical Dictionary, before quoted; article Spina Bifida, in which it will be seen Sir Astley Cooper fully succeeded in one case, in 1809. See also the New-York Medical Repository for 1813, p. 28, where it will be seen that Dr. H. H. Sherwood, of this city, operated with equal success in one case in 1811.‡—*New-York Herald*, Sept. 28, 1843.

\* See the symptoms I have introduced to distinguish diseases of the ovaria.

† I have since operated in three cases, the first of which (by ligature) proved fatal in 36 hours—the two last (by excision) like that of 1811, were both successful.—Ed.

\* Professor of Surgery in the old Medical College.

† Professor of Surgery in the new Medical College. The other gentlemen mentioned are all either professors, or adjuncts, and professors in expectancy of these Colleges.

**Effectual Reduction of Strangulated Hernia by Ether.**

M. Vela has been enabled to effect the reduction of strangulated hernia in many cases by the external application of sulphuric ether, accompanied with friction; in which plan of treatment he was successfully followed by other French surgeons. M. Barbon, of Bordeaux, was called to a case inguinal hernia in a woman fifty-seven years of age, forty hours after strangulation had occurred. When all other attempts at reduction had failed, he had recourse to irrigations of ether over the surface of the tumor, which, to his surprise, disappeared in the space of five or six minutes, and was followed by a copious evacuation of the bowels, and the prompt recovery of the patient. The same practitioner reports another case, occurring in a man thirty-six years of age, to which also he was called. The hernia formed a tumor eight inches in length, by an equal breadth, and extending to the base of the scrotum; it was hard, and so painful that the taxis was impracticable. Copious blending, baths, and frictions with belladonna, &c., having proved of no use, the patient was raised by means of a bolster under the hips, so that the tumor would present for the manipulation of the operator its whole surface which was accordingly irrigated with ether gently rubbed over it by the hand.—Three minutes after the commencement of this process the hardness of the tumor began to give way, the hernia diminished in volume, and seven or eight minutes were sufficient to produce its total reduction, followed by the speedy cessation of all the previous alarming symptoms. The ordinary operation for strangulated hernia is sufficiently difficult and doubtful in its result to render any medical agent tending to supersede its necessity a valuable adjunct to surgical science.—*Gazette des Hôpitaux*, Sup. Oct.

**Nitric Acid in Internal Hemorrhoids.**

Dr. Houston, of Dublin, is greatly in favor of the employment of nitric acid in cases of vascular tumors, in preference either to excision or to any other chemical application. The acid, he says, may be applied in the following manner:—

“Let the patient strain as at the night-chair, so as to bring the tumors fully into view; and, while they are so down; let him either lean over the back of a chair, or lie down in the bent posture on the side on which the disease exists, with the buttocks over the edge of the bed. Let a piece of wood, cut into the shape of a dressing-case spatula, be dipped into the acid, and then, with as much of the acid adhering to it as it will carry without dipping, let it be rubbed on the tumor

to the extent desired. The due effect of the acid on the part is shown by its changing it to a greyish-white color. If a superficial slough be all that is required, a single application may be enough; if a more deep one, then two or three applications of the wood, dipped in the acid may be made in quick succession, which being finished, let the part be well smeared over with olive oil, provided beforehand for the purpose. The prolapsed parts should then be pushed back within the sphincter, the patient put to bed, and an opiate administered. The pain of the application is sharp and burning at first, but goes off in two or three hours, and does not return again in the same form. A general uneasiness about the anus on motion, together with a slight sense of heat, fulness, and throbbing, are felt for a few days, and there may be some little feverishness; but I have not seen or heard of any more serious effects from the remedy.”

“The symptoms following the application of the acid are usually so mild as not absolutely to require confinement to bed more than a few hours, although for many reasons such confinement may often be desirable. On the third or fourth day, a purgative draught should be administered, when the bowels will be found to yield to the medicine, generally without either pain or prolapse of the rectum. The progress after this to healing is rapid, and free from any disagreeable symptoms.”—*Dublin Journal of Medical Science*, March, 1843.

**Analogy between Diseases of Different periods of Life and Corresponding Periods of the Year.**

Some of the French physicians, adopting the notions of the ancients, have lately promulgated the doctrine of an analogy between the diseases occurring at different periods of life, and those which are produced at corresponding periods of the year. Thus in *spring*, they say, it is the young who suffer most from disease,—the maladies that are chiefly produced in that season, such as inflammatory diseases, and others which are dependent on too copious a general or partial supply of blood, to which persons of early age are more especially subject. The diseases which prevail in *summer* are mostly those attacking persons of middle age, as, for instance, diseases affecting the biliary organs; and the *autumnal* complaints are principally experienced by individuals of more advanced years. The *winter*, they observe, is fertile in rheumatisms, neuralgia, catarrhs, apoplexies and other diseases which infect the aged, who, for the most part, pay the debt of nature at this season.—*Lancet*.



## Ancient Ruins.

A gentleman who has traversed a large portion of the Indian country lying between Santa Fe and the Pacific, informs the editor of the Houston [Texas] Telegraph, that there are vestiges of ancient cities and ruined temples on the Rio Puerco and Colorado of the West. On one of the branches of the Rio Puerco, a few days travel from Santa Fe, there is an immense pile of ruins that appear to belong to an ancient temple. The building occupies nearly an acre of ground—portions of the old wall are still standing, consisting of large blocks of lime-stone regularly hewn and laid in cement. The ruins bear resemblance to those of Palenque or Otolum. There are many similar ruins on the Colorado of the West which empties into the Californian sea. Neither the Indians resident in the vicinity, nor the oldest Spanish settlers of the nearest settlements, can give any account of the origin of these buildings.

An antiquarian at my elbow, with no small pretensions, suggests the great probabilities of the antediluvian origin of these remains of ancient cities, which with the extinct mammoth races of animals of the same period have been buried, one after another in one common ruin.

## Amputations in Paris.

Medical statistics receive much attention on the continent. In the hospital of Paris, from 1833 to 1840 inclusive, 852 amputations were reported to have been performed, the general results of most of which were as follows:—of 201 cases of amputation of the thigh 126, or 62 per cent., were followed by death; of 192 amputations of the leg, death ensued in 106 cases, or 55 in 100; in 38 do. of the foot, the subsequent mortality was only 9 cases, or 24 in 100; in 91 of the arm there were 41 deaths, or 45 in 100; in 28 of the fore-arm 8 deaths, or 21 in 100; The mortality after amputations of the toes or fingers was comparatively inconsiderable; 564 of these operations took place on male subjects, of whom 267 died; 165 were on females, 56 of whom succumbed. The autumn appears to have been the season most unfavorable to happy terminations of these cases, and next to it the spring; the summer and winter are the most favorable seasons; the latter preeminently so. Such researches have great practical utility; but in none of our own hospitals are similar attempts at generalising results pursued by the medical establishment.—*Lancet*.

## Formula for Rheumatism.

M. Pereyra, of Bordeaux, who has adopted the use of guaiacum for rheumatic affections in preference to any other vaunt-

ed remedy, employs the following formula:—Finely powdered resin of guaiacum, a drachm; orange leaves, powdered, half a drachm; acetate of morphine, three-quarters of a grain. These ingredients, are mixed, and divided into sixteen powders, one of which is to be taken every two hours. The acetate of morphia is useful both for enabling the stomach to tolerate the guaiacum and in moderating the stimulant effects of this substance which so often compels its disuse.—*LANCET*.

## Digestion of Alimentary Substances.

An account of experiments, in order to ascertain the elements necessary for digestion in the stomach.—Messrs. Sandras and Bouchardat, the authors of this paper, state that the digestion and absorption of albuminous and feculous substances are performed exclusively by the stomach:—whereas, greasy substances are not there acted upon, but pass into the duodenum in the state of emulsion, by means of alkalies, which are given out by the liver and pancreas. This emulsion is to be found in abundance in the whole of the intestine. The chyle appears to be the same whether the food be albuminous or feculous; but there is a sensible difference where greasy food is taken.—*PARIS ACADEMY OF SCIENCES*.

## Prevention of Sore Nipples.

To the Editor.—Sir: I think that sore nipples would seldom occur did mothers pursue this plan which I always advise to my female friends on occasions of suckling, namely, after the child has left the breast, to wipe the nipple very dry, and apply to it a piece of linen cloth. I have had much practice among the ladies for the last twelve years, and never had a case of sore nipple where this plan was adopted. Although it may appear to be a trifling communication, yet trifles are not to be despised, especially in the obstetric department of medicine; they lead to more practical advantage than a great deal of the theoretical nonsense of the present age.

Your obedient Servant,

T. C. Wood, M. R. C. S., L. A. C.

Surgeon to the Reading Dispensary,  
London-street, Reading, LANCS.

Nov. 1842.

## Rhus Toxicodendron.

Van Heddeghem mentions the case of a Creole in Louisiana, who was so susceptible to the action of *Rhus Toxicodendron* that he could not drive along the roads where the rhus plant grew, or shake hands with a person who had been exposed to the effluvia of the plant, without being almost immediately attacked with the *rhus erysipelas*, which

affected his face, neck, hands, arms, chest, and genitals, in particular. He had used very many remedies in vain, in order to deaden his susceptibility, when, finally his physician, Bressa, determined to give him the rhus grandiflora which produces effects very similar to those of the rhus toxicodendron. At first it caused an erysipelatous affection of the eyelids and nose; in course of time, however, it no longer produced any perceptible effect, and he was enabled not only to expose himself to the effluvia of the rhus tree, but could even handle it without suffering the slightest inconvenience.—*Precis analytique des travaux de la Société Méd. de Dijon pour l'année, 1832. Dijon, 1838, p. 48.*

Rau (*Nouvel Organe*, p. 55) relates a case also illustrating the action of rhus. A laborer, in the botanical garden at Giessen, a few hours after being employed in expressing the sap from the leaves of the rhus radicans was attacked with violent vesicular erysipelas of the face and hands attended with a high state of fever.—*Barrish Jour. of Hom.*

#### *Arsenic in the Chronic Pleurisy of Sheep.*

M. de Gasparin communicated to the Academy of Science (January 2, 1843) the results obtained by M. Cambessedes with arsenious acid in sheep affected with chronic pleurisy. A hundred and twenty of these animals each swallowed thirty-two scruples of this poisonous preparation, mixed with common salt; with the exception of one, all entirely recovered; whilst before the administration of this remedy, the flock was actually decimated by the disease. M. Cambessedes was induced to try it from its being vaunted as a specific by the country people. He considered that it is not a poison to the sheep; but the experiments performed previously by a commission, prove this opinion to be erroneous, and also shew that arsenic is homœopathic to pleurisy in the sheep. In an experiment by MM. Flander and Danger, six grains (trois décigrammes) of arsenious acid were introduced under the skin of the sheep, symptoms very soon manifested themselves, and in five days the animal died. The autopsy shewed pleuropneumony with effusion on the right side. The production of serious effusion into the pleura of animals poisoned by arsenic, has also been observed by M. Chatin. It is difficult to account for the seemingly innocuous effects of the large dose administered, by M. Cambessedes.—*Annales d'Hygiène Publique, etc. April, 1843, p. 469.*

*Dr. Gaspari of Berlin, upon the employment of Carbo Animalis in Buboes.*

The rapid resolution of Buboes in three

instances in which Dr. Gaspari gave Carbo an., not as homœopathic to the buboes, but to the other attendant symptoms, led him to try it in several cases, and with great success. In the *Mat. Med.* of Hahnemann, buboes are not given as one of the pathogenetic effects of Carbo an.; its therapeutic use can therefore be only established as yet *ex usu in morbis*. The buboes he treated were principally venereal, and though the medicine seemed specific to the bubo it appeared to exercise no effect upon the primary venereal affections; so that after the resolution of the bubo, other remedies had to be given. The treatment lasted three, five, or at the most, eight days. In numerous cases where the bubo appeared as if about to suppurate, still resolution was affected.—*Annales de la Méd. Hom. tome i, p. 11.*

#### *Poisoning by Stramonium (Datura.)*

A girl four years old ate a few seed of this plant. Towards evening tinnitus aurium and sleeplessness occurred; the child sang and wept, and spoke uninterruptedly confused nonsense. The eye was lively, the pupil dilated and insensitive to the light; she snatched continually in the air as if to seize something; to stand was impossible, for on rising the knees knocked together, and the child on attempting to exert herself, she staggered and fell like one drunk. Vomiting was induced, and she got rid of the poison and recovered.—(*Caspen's Wochenschrift 1842, No 25; also Osten. Med. Wochenschrift bim. No. 32, August 6, 1842.*)

#### *Effects of an over dose of Cina; observed by Dr. A. Noack of Leipzig.*

Theodore Georgi, aged 2 1-2, of a scrofulous constitution, had been early very delicate, but latterly in good health till three months before; since when, he was subject to diarrhoea, and only lately freed from it. He received from his mother, for ascarides, a heaped tea-spoonful of powdered cinna-seed, with *syrupus communis*, on the 23d November, 1841, about 11 o'clock in the morning. About ten minutes afterwards, violent repeated vomiting of yellow water came on together with watery diarrhoea and general convulsions. After this state had lasted about half an hour, I was called in, and found the child in the lap of its mother, still in convulsions, which, according to the mother's account, had not decreased in violence. They consisted in distortions of the limbs in all directions, from which the fingers and toes alone remained free; head and body were drawn backwards, forwards, sideways, by turns, whilst the boy beat about with his arms and legs. There were, besides, from

time to time, violent shocks through the whole body, with stamping of the feet downwards, and pushing with the head upwards and backwards; the shocks were particularly violent in the lower part of the breast, and felt on laying on the hand on the epigastrium. The face, which I was told had been pale at first, and had become by degrees gradually more livid, was now quite blue, the eye-balls were soon after turned upwards convulsively, so that only the white was visible; soon they became fixed straight forward, the pupils considerably dilated, and insensible to light. The tongue was sometimes drawn together in the form of a cylinder, and spasmodically passed through betwixt the lips without efforts of vomiting having taken place. Breathing natural, temperature of the skin low, skin dry, pulse small, contracted, neither frequent nor quick, regular. (Tinct. Ipecac. 1, every quarter of an hour 1 gt. to be taken on sugar.) The child afterwards vomited light yellow water twice, but not again; the cramps abated, passed by degrees into slight twichings, and after the lapse of half an hour the fits ended with a peaceful sleep, which lasted an hour, with the return of *turgor* of the skin, a breaking out of general perspiration, and rising of the pulse. The little patient awoke lively and well-pleased, and continued so during the following days.—FROM HYGEA, vol. xvi. p. 81.

*Cicuta.*

A widow, 50 years old, of a slender frame, who had never regularly menstruated, and had suffered much from urinary affections, attended with pain in the renal region, to relieve which numerous warm baths were employed, was attacked, in September 1838, with frequent vomiting in the course of the day, by which all she eat, and latterly a frothy white fluid, was ejected. When the narrator of the case visited the patient, her countenance was of an earthy hue, the skin was dry, there was great weakness, depression of spirits, little sleep; the pulse was small, but not frequent, the tongue dry. Urgent thirst, the abdomen normal to the touch. Only on the right epigastric region, under the false ribs, there was a painful induration about the size of an orange. This induration seemed to arise from an inflammatory abscess of the liver, the vomiting from excessive irritability of the stomach, or disease of the pylorus. As the vomiting had not continued long, the narrator diagnosed chronic gastritis complicated with hepatitis. From this view of the case he ordered copious leeching, embrocations, with belladonna, and enemata, and purgatives. As this treatment

was of no use, after having been pursued for three or four days, pill of saffron, and then opium pills were given—these diminished the pain and procured sleep, but the vomiting and the other symptoms continued. Other two experienced physicians were called in, who gave it, as their opinion, that there was likewise induration of the pylorus present, and ordered opium and blisters on the epigastrium. Neither was this treatment of any use. The patient visibly declined. From the recommendation of Stoerk, pills made of the extract of *cicuta*, and a large blister and an opiate enema were used. By this means the threatening danger was removed, and a steady, though slow convalescence ensued. *Cicuta* was given, first half a grain daily, then half a grain three times a day. [The reporter of the case, in Oppenheim's Journal, observes, naively enough, it is evident that this wonderful cure was effected by the morphia and blisters, for the dose of *cicuta* was too small to have done it. Be it observed, that opium and blisters had been diligently employed before *with no benefit, the patient daily getting worse*. Did they acquire a new power when "too small" doses were administered?]—JOURNAL DE SOCIEDADE DAS SCIENCIAS DE LISBOA. Tom. ix. 1<sup>o</sup> Semestre de 1839. Extracted in the Zeitschrift für die Gesamte Medicin. Von F. W. Oppenheim. No. 11. November, 1842.

*The Murias of Tin in Chorea—By Dr. Person.*

A girl 11 years old, after a dreadful fright, became affected with headache, and occasional twitches of the angle of the mouth and extremities of the right side of the body, which gradually increased in frequency, until at length they became constant during her waking hours. As the examination of the spine shewed that there was considerable tenderness between the 2d and 6th cervical vertebrae, twelve leeches were applied, and unguent merc. rubbed in near the sensitive part, and calomel and zinc powers prescribed. On the 12th, salivation occurred, and the calomel was supplanted by hyosciamus. Leeches were again applied, and afterwards a blister. Notwithstanding these active measures the disease got worse, and the blister seemed to aggravate the excitement. Upon this, Dr. Person determined to try the *urias stanni*, as recommended by Dr. Schlesinger (Hufel. Journ. 1837,) and began with the one-sixteenth of a grain as a dose, morning and evening, gradually increasing the amount until he gave one-fourth of a grain twice a day. After the very first small dose, improvement appeared, which almost hourly advanced. By the tenth day, after the patient

had taken altogether five grains of the muriate of tin, all the convulsive symptoms were gone, and she was perfectly recovered. This medicine effected the cure without producing any re-action,—it occasioned neither primary aggravation (according to Fischer,) nor dryness of the mouth (according to Schlesinger,) but seemed to operate as a pure sedative, quieting the powerful excitement of the nervous system, to which, perhaps, the previous antiphlogistic treatment might have contributed.—*OESTER. MED. WOCHENSCHRIFT*, No. viii., 1843, p. 216.

[Had Dr. Person consulted Hahnemann's *Materia Medica*, he might perhaps have been induced to try the muriate of tin at first, instead of at last; and thus the patient might have been saved the blood letting and the blistering. He would also have found the occasional aggravations, and the other symptoms of the action of the medicine that have been observed, explained.—*EDITORS.*]—*BRITISH JOURNAL OF HOMOEOPATHY*.

#### Chronic Bronchitis.

Cough and expectoration, but no pain produced by pressure on the intervertebral spaces between the last cervical (7th) and first dorsal vertebra.

R. Hard Bal. Copa, and Cubebs 3iiss, Ext. Hyos. 3ss. Make 100 pills. Dose 1 pill 3 times a day—after eating.—*Specific*.

*COUGH.—Troublesome at night.* R. Solu. Morphine 3j. Syr. Bal. Tolu. 2 oz. Mix. Dose a tea-spoon, at night on going to bed.

*HAWKING—with expectoration.* Tubercular disease of the throat.

*HOOPING COUGH.—*R. Cochineal pulv. 10 grs. Cream Tartar 30 grs. Sugar 1 oz. Hot water, half a pint. Mix. Dose—a tea-spoon 3 times a day—*Specific*.

#### Purpura Hemorrhagica.

R. Creosote half a minim (drops), alcohol a sufficient quantity to suspend it in an ounce and a half of mucilage, to be taken every six hours.

In cases where the gums are bleeding, the following may be used frequently as a gargle. R. Creosote, half a drachm; alcohol, a sufficient quantity to unite it with twelve ounces of water.

#### Increase of Knowledge.

A Professor of one of the Medical Colleges in this city, in his introductory lecture to the students of medicine, has announced the brilliant discovery of the important fact, that the uniform curative effects of a remedy in any disease, was no evidence of its applicability to the case; from which it would seem to follow by a strict parity of reasoning, that the fatal effects of a prescription are no proof either of its perniciousness or of the ignorance of the physician!—a conclusion, which if not very gratifying to the friends of the patient, cannot fail of being extremely consolatory to the practitioner.

#### The Magnetic Poles and the Moon.

In 18½ years the magnetic poles of the earth and line of no variation advance from east to west 10°, in which time the moon's nodes perform an entire revolution in their retrograde motion from east to west. In 3 times 18½ or 55½ years, these poles and line of no-variation advance 30° in which time the nodes perform 3 revolutions. In 3 times 55½ or 166½ years, these poles and line of no-variation advance 90°, in which time the nodes perform 9 revolutions. In 4 times 166½ or 666 years, these poles and line of no-variation perform an entire revolution of 360°, in which time also the nodes perform 36 revolutions. These numbers are all perfectly exact, as expressions of mean or true time and motion, and are applicable to the magnetic clock-work of the whole solar system, which shows that the retrograde motion of the moon's nodes is the consequence of the motion of our magnetic poles, at the same time that these poles are moved around the earth by the magnetic forces from the sun. It will be recollected by some of the readers of this Journal that in our *Astro-Magnetic Almanac*, for 1843, we demonstrated the annual rate of motion, and time of revolution of these poles and line of no-variation; a work which should have been continued for the present year, but which has been superseded by the claims of this Journal upon our time.

City Hall, New York Jan. 1, 1844.  
Lon. 74° 01' 08" W.—Lat. 40° 48' 40".—Variation, 6° 33' 11" W.

# THE DISSECTOR.

Vol. I.]

NEW-YORK, APRIL, 1844.

[No. II.]

## ARTICLE I.

### **Magnetic Organisation of the Human System.**

It has been truly said, that "life itself, is only known to us empirically. We acquire a knowledge of disease in the same way; and the same method is adopted in the cure;" and it may be doubted whether we shall advance much in a scientific knowledge of diseases, or of the remedies for them, until we first obtain a scientific knowledge of the organisation which constitutes animal life. We have a very accurate knowledge of the anatomical or animal organisation, but none whatever of the invisible motive powers which constitute animal life. Few, very few physicians ever had any conceptions of even the existence of such an organisation—yet there cannot be motive power without such organisation. We can see the ropes, the levers and the pulleys, by which motion is produced, but nothing of the spiritual, sympathetic and invisible forms that use them for the purposes of motion—yet it is on these forms in the different organs and other structures which the immaterial or spiritual powers of medicines act, and it was the obvious importance of a knowledge of these forms that induced us many years since, to commence an investigation of this subject which has at last resulted in a development of their organisation.

We commenced with the brain, and traced by the direction of its fibres, an organisation representing five magnetic poles; two in the organs of causality, two in the organs of amateness, and a very large one in the centre of the brain, requiring at least two magnetic axes, which must cross each other in the centre of that organ.

Some of these fibres were seen to be connected with the white and others with the grey substance, divided by a thin neurilema or membrane. Those in the white substance (fig. 1) were also seen to diverge from the centre, or great inferior ganglions (dd) to the neurilema connected with the grey substance, in the circumference of the brain, while those in the grey substance diverged from the circumference to the centre through the corpus collosum and great superior ganglions (pp). The diverging fibres were, therefore, found to connect the white, and the converging fibres the grey substance, which was seen to be a mechanical arrangement of the different fibres, with the different kinds of matter of the brain; for different kinds of matter maintain opposite forces, which are necessary to the production of motion. Having apparently traced the poles of those forces, we resolved to test their identity, and for this purpose it was necessary to know whether the magnetic forces would of themselves without artificial aid, take these forms under favorable circumstances; and for this purpose a circular plate of steel, eight inches in diameter, with a round hole in the middle of one inch, corresponding with a middle section of the brain, was placed on a pole of a large Galvanic Battery, covered with white paper, and iron filings strewed over it, when they were immediately arranged by the forces in the plate, in the manner seen in figure 2.

On applying the dipping needle to these poles, that in the centre and those in the circumference at *c c*, were found to be positive, and those at *d d*, negative poles. When, however the order of magnetising on the

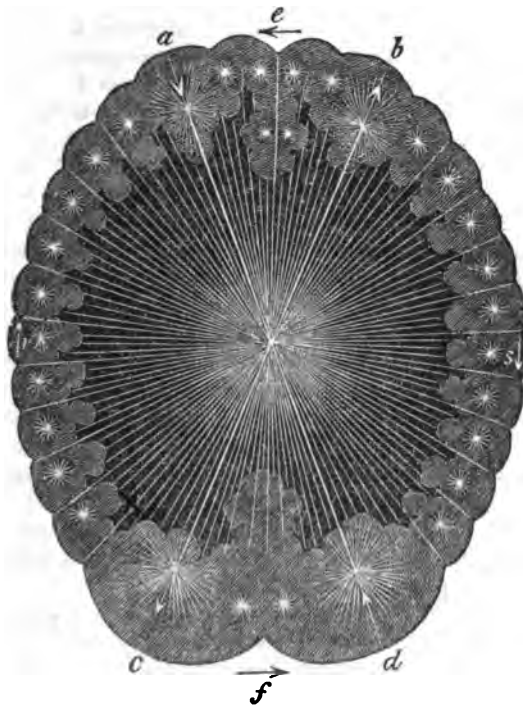
different poles of the battery was reversed, the character of the pole in the centre was changed from a positive to a negative pole, and the positions of the positive and negative poles in the circumference were also changed; the positive occupying the positions of the negative, and the negative those of the positive poles.

The magnetic axes of the positive and that of the negative satellites cross each other in the centre of the open space in the inside of the disc, each forming two sides of an inverted plane triangle, the base of each of which, from the form of the disc, necessarily forming a spherical side of a triangle, and as the latter is in the circle of the disc, and as this disc is a middle section of a hollow sphere, it necessarily follows that when a hollow sphere or body, more or less round, is magnetised in the same manner, inverted cones are formed. For as the disc is a section of a sphere, so are the plane

and spherical sides of the triangles, sections of inverted cones.

This experiment was repeated eleven times on plates of from four to fifteen inches in diameter, and always with the same result. It may therefore be inferred to be constant. It presents one large and strong pole in the centre of the plate, and four smaller and weaker poles in the circumference, like those in the brain.

There is here disclosed the existence of five poles united with two magnetic axes: one in the centre of the space in the centre, and four in the circumference of the plate, corresponding in the most exact manner with those we had traced in the brain by the direction of its fibres, as seen in figure 3, representing a horizontal section of the brain, through the organs of causality, *a b*, and amateness, *c d*, in which the relative characters of the poles are reversed.



When the heart is laid open and distended in a circular manner (*d d*, walls of the heart; *e e*, septum or division between the auricles and ventricles; *f f*, pericardium) as seen in figure 4, it is found by the manner



in which it is constructed to have four large poles in its circumference; *a a*, and *c c*, the axes of which cross each other in the centre pole of the heart, like those of the circumference of the brain. The forces from the poles, *a a*, radiate along the ligaments or braces, called *columnæ cornæ*, to the sides of the ventricles; *b b*, and the forces also radiate from the poles in the oracles *c c*, along their ligaments, as seen in the figure: all of which are first expanded and then contracted in the motions of the heart, by the action of the forces from the poles.

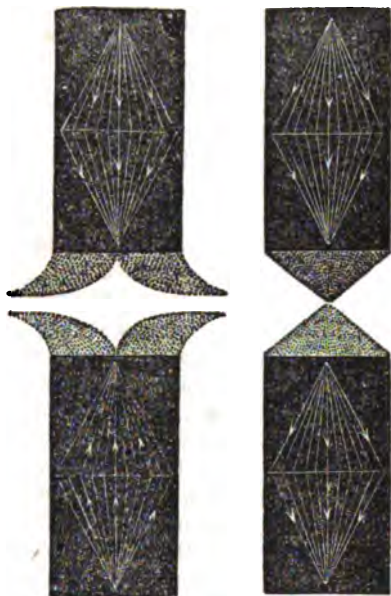
The number and situation of these poles are from this view of the construction of the heart so self-evident as to preclude the necessity of a solitary remark, but it may be asked if the motions of the heart are produced by the action of these poles upon its muscles, from whence are the forces derived which sustain these poles?

The answer is, from the serous and mucous surfaces of the body, which are maintained in negative and positive states, for such purposes—the serous including the skin supplying the positive and the mucous including the alimentary canal, the negative force, which are conducted to the poles in the organs through the nerves in these surfaces—

\* Magnetic poles cannot be long maintained, any where, without a constant supply of these forces from some source.

the negative poles attracting the positive, and the positive poles the negative force.

It is a matter of common observation that magnetic poles of the same denomination repel, and those of opposite denominations attract each other, and in order to ascertain the degree of force with which they repel and attract, it is found by experiments, conducted on the most rigid principles of inductive philosophy, that they repel and attract each other with a force proportioned to the quantity of these forces in given spaces, or the spaces they occupy. It is also ascertained, in the same manner, that when they repel, they expand, as seen in the case of iron filings attached to poles of the same denomination.



And when they attract, they contract, as seen in the case of iron filings attached to poles of opposite denominations, with a force proportioned to their quantities in the spaces they occupy. The two poles, then, of the same denomination in the opposite hemispheres of the brain may, through the spinal nerves attached to these hemispheres, expand one set of muscles on one side of

the body, limb, or organ, at the same time that those of the opposite denomination, contract the antagonist muscles on the other; for the muscles, like the organs and nerves are necessarily double for the purpose of producing motion by their simultaneous action.

They may also expand one set of muscles by the repulsive, and contract their antagonists by the attractive force; in the same way that one metallic wire is expanded with the repulsive, and another contracted with the attractive force. Thus when by the mere exercise of an inclination, excited by a sensation, we incline to expand one set of muscles to extend a limb, we incline to contract their fellows at the same time; so that when one muscle expands, its fellow necessarily contracts; and when another contracts its fellow expands.

These motions called attracting and repelling are, in other words, the pushing and pulling motions: and if motion is produced in man and other animals by the action of these forces, we ought to be able to recognise the same motions in the fluids of the body, whether æriform or aqueous, and also in the organs by which they are moved.

On a minute examination of this subject, we find that in the formation of the organs, the same order is observed in the distribution of the membranous surfaces as in the formation of the external and internal surfaces of the body. The brain, heart, lungs, stomach, intestines, liver, spleen, kidneys, uterus, and cystis are all covered with a serous membrane, and their inner surfaces are lined with a mucous membrane. On observing the action of the air and of the lungs in breathing, we instantly recognise those motions.

In reflecting on the great power which it was necessary to give to the heart, it was easy to see that the diagram or plan for its construction must conform to that necessity. This consideration, however, presented no difficulties, for the sources from which it might derive the necessary strength and durability, under the action of these forces, were abundant and we accordingly find it strong muscles supported by braces and sur-

rounded by additional membranes, presenting extensive surfaces for the accumulation of these forces.

On an attentive examination of the action of this organ, and of the motion of the blood in the arteries, we again recognise in both, and in the clearest manner these motions.

The heart is constructed and acts on the principle of the pump; the fluids being attracted through the veins and other absorbent vessels in steady streams to the heart, with an intensity of force equal to that with which the ventricles repel them through the arteries.

Every repulsion of a fluid, in elastic bodies, produces expansions, and every attraction is succeeded by contractions of these bodies, according to a law of these forces, viz: repulsions expand, and attractions contract with powers proportioned to their quantities in given spaces.

Every repulsion of the heart, repels or pushes the fluids in the arteries, and every attraction pulls the fluids in the absorbent vessels.

The motions of the pulse correspond exactly with these laws and these motions; for every repulsion is succeeded by an expansion in the artery, and every attraction by a contraction of it. The same phenomena is found in the hose of the fire engine when in motion. The water moves in the hose from the cistern or hydrant in a steady stream to the engine, and from the engine through the hose with the motions of the pulse.

Sensations and inclinations, like repulsions and expansions, and attractions and contractions, are attributes of these forces. The inclinations belong to the sensations, whether repulsive or attractive, as the expansions do to the repulsions, and the contractions to the attractions, and follow them in the same order.

These spiritual, or male and female forces, are innate in every kind of matter, without possessing any character in common with it, whether ponderable or imponderable; and in their organised or magnetised state, were the foundations on which matter was laid, in the formation of the solar system, and of the mineral, vegetable, and animal kingdoms. Repulsions, expansions, attractions, contrac-



tions, sensations, inclinations, *sympathetic* action, motion, and form, are then, in this order the attributes of these forces, by which that system and these kingdoms were formed with a precision, and adorned with a beauty that defy imitation.

Nothing can therefore equal the adaptation of these forces to produce such results; for besides their unlimited power, which can make a world tremble like a leaf, the great velocity of their motions and their great and almost inconceivable tenuity, enable them to penetrate the most minute orifices, and construct an infinite variety of bodies of every form and size, and produce motion in the smallest with the same geometrical accuracy as in the largest structures.

These views of the dynamics, or moving powers in animate and inanimate matter may at first appear very strange and unaccountable to even men of science who have little or no knowledge of this subject, and I may therefore direct their attention to another example of the repelling and expanding and attracting and contracting powers of these forces, in illustration of these views, and which may be seen and tested in the most satisfactory manner in the recently discovered process of gilding metals by the action of these forces in solutions of gold.

I may also direct the attention of physicians and surgeons to the experiments of Doctors Laroche and Crusell of St. Petersburg, given in our last number, in which cataracts were formed in the eye with the attractive and contractive force, and were afterwards dispelled, in two minutes, with the repulsive and expansive force, and which cannot fail to suggest to them not only the great importance of a knowledge of the magnetic organization of the human system, but that of the magnetic character of their remedies for diseases.

**THE VAGUS NERVE THE MOTOR OF THE STOMACH.**—Longet experimented on dogs. He irritated the vagus nerve by galvanism, or mechanically, and found that contractions of the stomach followed, which constricted itself into two portions, a cardiac and pyloric, and aliment was forced through the pylorus. The organ was most susceptible of such

stimulus and movement during digestion. Irritants applied to the *semilunar ganglion* or splanchnic nerves produced little, if any, movement of the muscular fibres of the stomach.—*Annales Med. Psych.*

**SEAT OF TUBERCLES IN PHTHISIS.**—In M. Lousis' experience, out of 80 cases of pulmonary tubercle, the cervical glands also were found the seat of tuberculous matter in 8 instances; out of 102 cases, the mesenteric glands were tuberculous in 23 instances; the meso-cæcal and meso-colic glands were similarly affected a little less frequently than the mesenteric; and out of 60 cases, the lumbar glands were found tuberculous in 5 instances. Attention is naturally excited to the eminent frequency of tubercle in the lacteal glands, and some authors have asserted that they are the original seat of tubercles in consumption. M. Louis states, however, that all his experience has gone to confirm that after the age of fifteen, tuberculous matter never presents itself in any tissue or organ unless it exist also in the lungs.—

#### A LECTURE

On the Magnetism of the Human Body, Delivered before the Apprentices' Library Society of Charleston, by ROBERT W. GIBBS, M. D. OF COLUMBIA, S. C., 1843.

"The facts of nature, not the theories of man, are the only infallible tests of the verity of alleged discoveries."—*Bacon*.

"The power & corrigible authority of this, lies in our wills."—*Shakespeare*.

Sir David Brewster has said truly, "Man has, in all ages, sought for a sign from heaven, and yet he has been habitually blind to the million of wonders with which he is surrounded. Modern science may be regarded as one vast miracle, whether we view it in its relation to the Almighty Being by whom its objects and its laws were formed, or to the feeble intellect of man, by which its depths have been sounded, and its mysteries explored; and if the philosopher who is familiarized with its wonders, and who has studied them as necessary results of general laws, never ceases to admire and adore their author, how great should be their effect upon less gifted minds, who must ever view them in the light of inexplicable prodigies." And what is there more deserving of our attention than the beautiful and wonderful structure and relations of the human body? "Know thyself" was a maxim of antiquity in relation to moral man. As truly may we call for its application to his physical attributes, and say with the poet,

"The proper study of mankind is man."

Having lately directed my attention to the investigation of the curious phenomena of Mesmerism or Animal Magnetism, by which powerful physical influence is exerted by

one man over another, producing extraordinary effects, both on his mind and body, I became particularly interested in experiments with the magnet.

It had been stated, that during the peculiar cataleptic condition induced by this remarkable influence, the head and hands of the subject were attracted by the magnet—and that the brain possesses *polarity*, one side of the head being attracted by one pole of the magnet, while the other was repelled; and that opposite results were apparent from the application of the other pole. I made the experiment, and found that if the N. pole of a strong magnet be placed near the upper part of the forehead, on the right side, it produces, in a few minutes, a sensation of “pushing” the head from it, and in some cases, a strong repulsion; if placed on the opposite side of the head, it produces a feeling of “pulling” the head towards it. The opposite effects are produced by the S. pole. This experiment I have repeated on seven or eight susceptible subjects with similar results. On two young ladies, who are very sensitive of mesmeric influence, I find these results appreciated by them in their waking state—and the experiments having been repeated under circumstances when there could be no suspicion of deception, I became entirely convinced of the fact, *that the human body is magnetic, and possesses polarity.*

Dr. Sherwood, of New York, in a pamphlet on “the motive power of the human system,” has given experiments of an ingenious character, which tend to shew that the brain has polarity, reasoning by analogy from magnetic experiments, and comparing them with the knowledge derived from the action of the magnet on mesmerised subjects. The Rev. Mr. Sunderland, of New York, is satisfied of the fact, and reasons upon it, in his publication “The Magnet,” to the construction of various theories, in relation to the “*magnetic nature*” of man.

The phenomena of mesmerism, however, being still denied by those who have not had proper opportunities of personal experience of its truth, no influences observed in that state can be considered strictly as settled, which are not supported by direct experiment on the body in its ordinary condition. I will, therefore, for the present, refer to no farther effects on mesmerized subjects, until I give you the opinions of others in support of my proposition.

The influence of the magnet on the body, has been recorded in the works of many medical men of established character, but scientific men have denied it, because the reciprocal influence of the body on the magnet,

has never been shewn. This is the *experimentum crucis* which has been called for to settle the question, but has never been exhibited. Prof. Henry, of Princeton, N. J., who has rendered himself eminent by his discoveries in magnetic philosophy, in a lately published letter says, “Of the electro-magnetism of the human body I know nothing, and I can say, with certainty, that no branch of science bearing this name, has an existence in the circle of the positive sciences of the present day. Nothing like *polarity*, has, as yet, been shewn to exist in connection with the brain.”

I have discovered a mode of shewing *upon the needle directly* the magnetic polarity of the human body—and I anticipate that the study of the magnetic properties of the nervous system will furnish us with a key to unlock the mysteries of Animal Magnetism.

The limits of a single lecture will not allow me to go into a full consideration of the arguments which have been brought forward, founded upon experiment, to prove the identity of Electricity, Galvanism and Magnetism, but such a belief is very general among scientific men of the present day. Nor can I enter very fully into the enquiry as to the identity of the nervous fluid with this power or these powers. Dr. Faraday, who is high authority, says of the former:

“After an examination of the experiments of Walsh, Ingenhous, Cavendish, Sir H. Davy, and Dr. Davy, no doubt remains on my mind as to the identity of the electricity of the torpedo, (*animal electricity*), with common and voltaic electricity.” Yet he candidly goes on:

“Notwithstanding the general impression of the identity of electricities, it is evident that the proofs have not been sufficiently clear and distinct to obtain the assent of all those who are competent to consider the subject.”

Whether this be so or not, is not of much importance to my proposition, as I think it will be apparent that, whether there be one or several agents involved in electric, galvanic and magnetic effects, the human body exhibits the results of the several modes of procuring these influences. I am not satisfied, myself, of there being different states of intensity of one fluid, but my opinion should have no weight against the mass of authority on the other side. With regard to the identity of the nervous fluid, or power, with galvanism, electricity and magnetism, in the present state of our knowledge, we have not enough facts to settle that question; still there is much to induce a belief of it.

That the animal body is *electric*, is probably within the knowledge of all who hear me. The phenomena of sparks being seen to follow the removal of flannel or silk from the person in dry weather, and the stroking of the back of a cat, dog or rabbit, are common. Some individuals appear to have less conducting power than others, although their bodies are generally good conductors. In proportion as they are so, they shew the presence of electricity in a stronger degree. Perhaps deficient perspiratory function may be the cause of the accumulation of it.

A correspondent of Silliman's Journal states that, "On the evening of January 25th, 1837, during a somewhat extraordinary display of the northern lights, a respectable lady became so highly charged with electricity, as to give out vivid electrical sparks from the end of each finger to the face of each of the company present. This did not cease with the heavenly phenomenon, but continued several months, during which time she was constantly charged and giving off electrical sparks to every conductor she approached. This was extremely vexatious, as she could not touch the stove, or any metallic utensil, without first giving off an electrical spark, with the consequent twinge.

The state most favorable to this phenomenon, was an atmosphere of about 80° F, moderate exercise and social enjoyment. It disappeared in an atmosphere approaching zero, and under the debilitating effects of fear. When seated by the stove, reading, with her feet upon the fender, she gave sparks, at the rate of three or four a minute; and under the most favorable circumstances, a spark that could be seen, heard or felt, passed every second. She could charge others in the same way when insulated, who could then give sparks to others. To make it satisfactory that her dress did not produce it, it was changed to cotton and woollen, without altering the phenomenon." Similar cases are occasionally reported to our medical journals—and I was consulted, professionally, by a gentleman, as to the reason why his wife should attract a great many fire-flies around her when in the dark, and no others of his family be similarly troubled. She was much annoyed at times, by observing so many sparks about her, and was afraid, for some time, to mention it, as she thought she would be ridiculed.

"Saussure and his companions, while ascending the Alps, were caught in the midst of thunder clouds, and were astonished to find their bodies filled with electricity, and every part of them so saturated that sparks were emitted with a crackling noise, accom-

panied by the same painful sensations which are felt by those who are electrified by art."

Larrey, in his memoirs of the Russian Campaign, mentions his having seen similar effects. On one occasion, he says, when the cold was excessive, the manes of the horses were found electrified, in a manner similar to that mentioned by Saussure. Rousseau has described eloquently the extraordinary elasticity of spirits which he experienced in ascending some of the higher regions of the Alps. Dr. Madden asks:

"Who has ever experienced the effects of the sirocco of the South of Europe, the poisonous Kamsin of the East, or even the summer S. E. wind of our own climate, (England,) without feelings of indescribable lassitude, not to be accounted for by any alteration of temperature, but obviously owing to the electrical changes superinduced? During the prevalence of these winds, the atmosphere is almost altogether deprived of electricity, and the nervous system simultaneously is deprived of its vigor. In damp weather, likewise, when electricity is absorbed rapidly by the surrounding moisture, every invalid is aware how unaccountably debilitated his spirits become, and how feebly the various functions of the body are performed, especially those of the digestive organs. This state of morbid irritability in the whole frame, continues till the north or west wind "awakes," as Brydone has well expressed it, "the activity of the animating power of electricity, which soon restores energy, and enlivens all nature."

In 1835 I was called to see a young lady who had been struck by lightning. She had been sitting near a window, stringing beads. A storm arose, with thunder and lightning—suddenly she saw a blaze of light in her lap, felt hot and became insensible—she fell, and was caught by her mother, who was near—cold water was thrown over her, and she was put to bed—had spasms in the arms and legs. She recovered her consciousness in about ten minutes. When I saw her, a half hour after the occurrence, she complained of great intolerance of light—could not bear to unclothe the eye-lids, although the room had very little light in it—complained of stricture across her chest—numbness in the head, neck, and sides of the face. She had, occasionally, for two days, spasms; but on the third was relieved, and felt better. Although the room was closed from light, *whenever rain clouds passed* near the house, she felt very much oppressed, and when another storm arose, she again had violent spasms, which lasted two hours. On the fifth day she seemed as well as usual, and had no return of the nervous irritability.

"In the south of France, there are whole vineyards in which numerous electrical conductors are attached to the plants, for the purpose of increasing the progress of vegetation, and of invigorating the vines. In the same manner does electricity act upon the animal body, quickening the circulation by its stimulus," &c.

We all know the sensible influences of change of weather on rheumatic and paralytic patients, and old persons, with most chronic diseases.

Sir Humphry Davy speaks thus:

"*Electricity* seems to be an inlet into the internal structure of bodies, on which all their sensible properties depend; by pursuing, therefore, this new light, the bounds of natural science may possibly be extended beyond what we can now form any idea of; new worlds may be opened to our view, and the glory of the great Newton himself, may be eclipsed by a new set of philosophers, in quite a new field of speculation." Dr. Paris, in his biography of Sir H. Davy, mentions that "Sir H. supposed the heat of the animal frame to be engendered by electricity; taking it furthermore to be *identical* with the *nervous fluid*—*sensation being*, in his view, motions of the nervous ether exciting medullary substance of the nerves and brain."

The experiments of Prevost and Dumas induced the expression of the opinion, that "muscular contractions result from the action of a nervous fluid, which, if it be not the electric fluid, possesses at least the same properties; and the analogy which exists between the phenomena of secretion and those produced by the action of an electric pile, is, they say, very remarkable; for when an electric current traverses a liquid containing salts and albumen, serum for example, an acid will be produced at one end of the pile, and an alkali at the other, and the animal substances the liquid contains, change their natures. Now this is precisely what takes place in the organs of secretion; though secreted entirely by the blood, the liquids these organs contain, differ from it in their chemical qualities. The physiologist Milne Edwards says:

"The recent experiments of M. Becquerel on the influence of electricity upon the vegetation of plants, support the opinion at present entertained by many physiologists, that the nutritive as well as the muscular movements of the living body, are carried on by a nervous influence analogous, and perhaps identical with the physical force that produces the electro-chemical phenomena."

Professor Miller of Baltimore, from experiments, has found that a stream of electricity passed through dark venous blood,

will change it at once to a rich colored arterial fluid. This effect is usually attributed to the action of oxygen in the lungs, combining with carbon, and, according to Leibig, with iron. Now carbon and iron are the perfect conductors of electricity, and are *positively* electric—oxygen is negatively so, and we know that it is the agent of essential importance to the support of life. Sir Humphrey Davy, and chemists generally, consider its elasticity owing to electricity, and during its combination in respiration and in the blood, as in all cases of chemical action, there is no doubt *electricity* is set free.

"Pouillet states that all gases, in combining with other elements, give out a certain amount of electricity. He illustrates this proposition by the case of carbon, 15 grains of which, in becoming carbonic acid gas, by union with oxygen, give out enough electricity to charge a common sized Leyden jar. By this estimate, how much electricity would be formed in the body? Let us see—it is estimated that 17,811 grains of carbonic acid escape from the lungs in 24 hours; then, by calculation, enough electricity would be generated by the formation of this gas, to charge 333 common sized Leyden jars, which average two feet each of coated glass. If we assume but half of this, we shall still have a very large quantity of electricity, formed by the union of oxygen with carbon, in the various tissues of the body, traversed by good arterialised blood." (W. H. Muller, M. D., in the *Magnet*, vol. 1, p. 194.)

*Galvanic* phenomena are witnessed in animals. Humboldt discovered that the muscles of a frog have contractions excited in them by touching the nerve and muscle at the same moment, with a fresh portion of muscle. Muller, of Berlin, has repeated this experiment several times, and confirms its accuracy. Buntzen formed a weak galvanic pile with alternate layers of muscle and nerve; and Prevost and Dumas state that a circle, formed simply of one metal, fresh muscle, and a saline solution of blood, affects the galvanometer. If to the conductors of the galvanometer, plates of platinum are fixed, and a piece of muscle of several ounces weight is placed upon one of these plates, the conductors being then immersed in blood, or a saline solution, a deviation of the magnetic needle of the instrument takes place; or if to one of the conductors a piece of platinum, moistened with muriate of ammonia, or nitric acid is attached, and to the other a portion of nerve, muscle or brain, and the two conductors are made to communicate, the same deviation of the needle is produced." Mejdendie, *Journ. tom*, 111.

"Kaemtz has shewn that efficient galvanic

piles can be constructed from organic substances, without any concurrence of metals." Schweigger. Jour. 56, 1.

The magnetism of the living human body has never been satisfactorily shewn, before my experiment. The following one we find in the *Medico-Chirurgical Review* for January, 1837, but thermo-electricity is here concerned, and we have not seen it noticed elsewhere, nor had an opportunity of trying it.

Dr. Donne of Paris, publishes the results of his enquiries, of which one of his corollaries is,

"The external acid and internal alkaline membranes of the body represent the two poles of a galvanic pile, whose effects are appreciable by a galvanometer. For if one of the conductors of this instrument be placed in contact with the mucous membrane of the mouth, and the other conductor be applied to the skin, the magnetic needle will be found to shew a deviation of from 15 to 20, or even 30 degrees; and the direction of the needle proves that the mucous or alkaline membrane indicates a *negative* electricity, and the cutaneous or acid membrane a *positive* electricity.

My experiment was brought about by the following circumstance. I observed that *mesmerizers* (or rather *magnetisers*) after throwing their subjects into the *magnetic state*, direct their fingers with energy towards their eyes, as they say, to render that state more intense, or, in common language, to deepen the sleep. I thought it not improbable that magnetism (motive power), which is not apparent while the limbs are at rest, might shew its peculiar influence during muscular action. I procured a long delicate magnetic needle, made a strong effort as if throwing off something from the fingers, and brought them carefully to the needle, avoiding to produce vibration of the air, and to my satisfaction, I found *my right hand repel its North pole*. I repeated the experiment, and found it *attract the South pole*, proving *north polarity* in that hand. I now tried the left hand, and found it to exhibit *opposite polarity*, attracting the *North* and repelling the *South pole* of the needle.

I have practised the experiment repeatedly, and seen a great many do so, and the fact is positively shewn. The influence is only momentary, but clearly apparent. If it were the result of a current of air, the effects on both ends of the needle would be similar.

This is an important fact in magnetic philosophy, and I think will assist us materially in explaining many interesting phenomena, and most likely give us the means of understanding those of *Mesmerism*.

Bodies similarly electrified or magnetised repel each other, while in opposite states they attract. The *North* pole of a magnet attracts the *South* of another, and repels the *North*, &c. Electrified bodies have a tendency to impart electricity to all surrounding bodies. The magnet communicates magnetism to iron or steel, if placed in contact with it, inducing in the former temporarily, and in the latter permanently, a state similar to its own. All bodies may be more or less magnetic, but not exhibit effects, except under certain circumstances, iron and steel having a greater capacity than others, to acquire and to give out the influence.

The North pole imparts S. polarity, and the S. pole, N. polarity, and the process is called *Induction*. Now, if the right side of the body possesses different polarity from the left, when the magnetizer sits opposite to his subject, they are rightly placed to produce the phenomena of attraction, and for the former to impart to the latter his magnetism. It would seem here, however, to be expected, that the individual of strongest magnetic force would charge the other, as the stronger magnet controls the weaker, and changes its poles—which is the case. The fact of subjects putting the operators into the magnetic state is common, and assists our theory, and the subsequent attraction of the magnetized subject by the magnetizer, is a result to be expected.

A gentleman who is in the practice of magnetism had three attempts made by different persons to influence him, two out of the three fell into the magnetic sleep themselves. I have personal knowledge of one case, where a lady attempted to magnetize her husband, and he, to amuse himself, exerted his will strongly to put her to sleep, and she fell into it herself.

The magnetizer's influence over his subjects is lost if he is exhausted, or becomes weak—if his nervous power is weak; he cannot put them into the magnetic state, or if he should, he cannot keep them so—they wake up immediately on being spoken to or shaken by others. Frequently when I have felt badly and dull, the subject would be sluggish, upon my taking a glass of wine, I could then make them act with more spirit and animation.

Before I attempt to deduce any practical inferences from the success of the experiment detailed, I will continue my reference to others, that will support my proposition.

The facts which I have mentioned being known, the phenomena exhibited by *electric fishes* appear less extraordinary, although the power of producing electric discharges exists

only during life and an undisturbed state of the nervous system. The experiments of Walsh, Fahlenburg, Gay, Lussac and Humboldt are our sources of information relative to these fishes; the *torpedo orcellata* and *marmorata* in the seas of the south of Europe—the electric Eel, *gymnotus electricus*, found in several rivers in South America—the *silurus electricus*, met with in the Nile and in Senegal. Several others have been named, but are less known.

The effects produced by them on animals are perfectly analogous to electric discharges. The shock from the Torpedo, when the fish is touched with the hand, reaches to the upper part of the arm. My late friend, Dr. Cooper, had personal experience of its shocks, which I have frequently heard him describe.

Muller, in his late work on Physiology, observes :

“Substances which are conductors or non-conductors of electricity, are equally so to the influence communicated by the Torpedo or Gymnotus, which are the only electric fishes that have been hitherto accurately examined with reference to their electric action; a shock is propagated through a chain of several persons when those at the extremities of the chain touched the fish. Walsh procured sparks from the Gymnotus, which were seen by Pringle, Magellan and Ingenhous. Fahlenburg also procured them by the same experiment. More recently, Linari and Matteucci, have succeeded in obtaining sparks from the Torpedo.”

Although no effect has been observed on the electrometer, Dr. J. Davy discovered that the electric organs of the Torpedo have really an action on the galvanometer. He also succeeded in decomposing water, and in rendering needles magnetic, and found that the electric discharge was conducted through a bar of iron several feet long. Linari and Matteucci have also communicated the magnetic property to needles, have decomposed water, and have observed marked deviations of the galvanometer at the moment of the discharges. A very remarkable fact is also stated by Muller.

“The power of producing the discharge, is quite voluntary, and depended on the integrity of the nerves of the electric organs, which are largely supplied with them. The heart may be removed, and the shocks will be continued, but with the destruction of the brain, or division of the nerves going to the organs, the power ceases. The discharge does not take place every time the fish is touched, but depends on a voluntary power, hence it is necessary to irritate it.” Some

think it has power to direct the shock, as when Humboldt and Bonpland held the head and tail, both did not always receive the shock. Matteucci, who experimented on one hundred and sixteen torpedoes on the shores of the Adriatic, during two months, is convinced that they can discharge their shocks *when* they please, but not *where*. He says :

“Where the animal is endowed with a great vitality, the shock is felt, whatever part of the body is touched. In the proportion as the vitality ceases the region of its body in which the discharge is perceptible is reduced to that which corresponds to the organs commonly called electrical.”

This fact accords with the loss of nervous power in the human body—the extreme filaments losing their power first. He made a number of interesting experiments which shew that the electric power of the fish increased with the acceleration of the circulation and respiration. Among them was this: He took a very small and weak torpedo whose respiratory motion was at times scarcely perceptible, and from which it was very difficult to obtain a discharge. He placed this torpedo under a bell full of oxygen gas. The animal immediately became agitated, opened its mouth several times, making strong contractions, and at the same time gave him five or six strong electrical discharges, after which it died.\*

He also found that cutting, or tying and compressing the nerves of one of the organs, the discharge ceases on that side, while it continues on the opposite side. Does not this have an analogy with the paralysis of the human body?

He shows that the chief electric organ is the last lobe of the brain, which he calls “the swelling of the elongated marrow, from whence the nerves proceed,” &c., answering to our *medulla oblongata*, which gives our nerves of motion.

He also shews, by experiment, that no trace of electricity is found in the fish, except when it discharges itself. This is very extraordinary, and adds to our theory of the electric or magnetic action of our bodies being under our will, and only apparent during muscular motion. The very curious experiments of Matteucci, may be found in Sturgeon's Annals of Electricity, vol. 2. 1838.

In the last number of the *Medico Chirurgical Review*, which I received a few days

a Gymnotus about four feet long, in New York. He informs me that he procured the spark from it, and that the power of the fish is certainly voluntary.

\* I trust I may be excused in tracing the influence of facts on mesmerism. Mr. Townsend mentions that his mesmerism influence is stronger and developed more quickly when he breathes rapidly.

\* Professor ELLETT, of the South Carolina College, last summer, had an opportunity of experimenting with

ago, is an excellent review of a late work of Dr. Carpenter, on physiology, which is lauded in very high terms. Dr. C. mentions of electrical fishes, that their electric nerves have an origin similar to that of the 8th pair in the human body.

The Reviewer remarks, "Now, the circumstance that the electrical nerves in the Torpedo should be analogous to the 8th pair in the higher vertebrata, is one of a highly striking nature. Of all nerves in the human subject, the 8th pair, (*par vagum*) is that which, with the organs to which it is distributed, appears to exhibit the most intimate sympathizing connection with cerebral impressions. The influences of fear and anger, (which are probably the chief exciting causes of the instinctive electric discharges) of hope, affection, and indeed, of all passions, whether of an exciting or depressing kind, are inevitably manifested more or less on the heart, lungs, and stomach, larynx, &c., and which derive their nervous influence, partly through the branches of the *par vagum*. The analogy is even farther carried out by pathology. For in hydrophobia, a disease in which the nervous energy is in paroxysms, exalted to the highest pitch, and the secretions of parts, to which the 8th pair is supplied, are exasperated into a poisonous quality—the chief lesion discovered after death, has been said to be found in the trunk of the 8th pair, where it issues from the skull."

Dr. Davy observed, that after the removal of the brain of a Torpedo, no more shocks were given when the nerves of the electric organs were irritated. In one instance, when a small portion of brain had accidentally been left in connection with the electric nerves of one side, the fish gave a shock when irritated.

Muller expresses the belief that, "electricity is generated in living bodies," and that it "does not appear possible for the various chemical changes which take place in them, to occur without some development of electricity."

The experiments of Pfaf and Ahrens, reported in Meckel's Archives, (v. iii. p. 161) among other results shewed, that the electricity of the human body in a healthy state is positive—that excitable persons of a sanguine temperament, have more free electricity than indolent persons of a phlegmatic temperament—that when the body is cold, no evidence of electricity is shewn, but gradually it becomes manifest as warmth is restored—that during the continuance of rheumatic affections, the electricity of the body is reduced to zero, but is manifested again as the disease subsides. Humboldt also thinks, that

rheumatic patients have an insulating action on the feeble current produced by a single galvanic circle.\*

To be Continued.

The Major Periods of Development in Man,  
being a sixth contribution to Proleptics,

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The course of human life has been divided into periods from a very remote antiquity. The most casual observer must see that there is a progressive evolution of each individual, through infancy, youth, and puberty, to the climax of complete development, both mental and corporeal; and from thence a gradual involution of the system, and a decline of all the powers, until the man descends into what has been expressively termed his second childhood, and, at last, into the grave. This cycle of change, looked at as a whole, gives to the mind the idea of ascent and descent,—not quickly or irregularly, but step by step; and since certain points are well marked in the course of life (as dentition, puberty, the decline of the sexual functions, &c.), and divide it into distinct periods, these were termed by the Greeks, with reference to this idea, *climacteric*, from *gradus*, *scala*, a step, or series of steps. The modern German term for the climacteric years, *stufenjahre*, step-years, expresses the same idea. These years and periods have also been termed septenary, from an early age, because the latter were supposed to comprise a lapse of seven years, so that the climacteric and septenary periods are synonymous. The origin of this idea of periods of seven years is lost in remote antiquity. It formed a part of the doctrines of Pythagoras, who, it appears, was not the founder, but only the European propagator of these doctrines, he having derived them from the ancient Egyptian or Chaldeans. As applied by the latter, they referred not only to the health, but to the events of a man's life. "Pericula quoque vitæ fortunarumque hominum quæ *climacteras* Chaldei appellant, gravissima quæque fieri affirmat Aristides Samius septenariis." (Aulus Gellius, lib. iii., cap. x.) This doctrine of septennials and septenaries has come down to modern times almost unchanged. Its history presents the singular phenomenon of a mere philosophical dogma passing uninjured through the most extensive revolutions in human society, and surviving the utter overthrow of empires and religions. Long after the age of Pythagoras we trace it in the Hippocratic writings; it is

\* I find since this lecture was written in the *Magnet*, vol 1, p. 193, that Dr Muller, of Pittsburgh, has published experiments to prove that the electricity of the body is developed during motion, so that the electro-meter is affected.

prominent in those of the later Greeks; it flourished in the middle ages; and it is extensively adopted by modern physicians. The editor of the "*Medico Chirurgical Review*," for example, divides life into ten septennials, after the ancient mode, asserting, further, that there is a difference of seven years between the two sexes, not in the actual duration of life, but in the stamina of the constitution, the symmetry of the form, and the lineaments of the face. (*Economy of Health*, second edition, p. 66.) It is manifest that the major vital periods can only be marked by changes in structure or function. By the observation of these changes the ancients professed to subdivide the whole period of life; and this plan, indeed, is the only safe plan for the modern scientific inquirer. He must observe the evolution of structure, of function, and of disease.

Diocles, the successor of Hippocrates both in fame and skill, wrote a book "concerning weeks." Macrobius has a notice of his doctrines, which describe the development of the individual man as follows:—The limbs of the male fetus are distinct at the seventh week and the birth takes place at the ninth month, but if they be distinct at the fifth week, birth takes place at the seventh month. If the infant survive the seventh hour, it will probably live; at the end of seven days the umbilical cord sloughs off; in 2x7 days the infant perceives the light, and in 7x7 days it turns its head to follow with its eyes the objects presented to it. When seven months old, its teeth begin to develop; in 2x7 months it can sit without fear of falling; after 3x7 months it speaks; in 4x7 months it is sufficiently strong to walk firmly; and at 5x7 months it has an aversion for the breast. At the age of seven years it loses its first teeth and speaks distinctly; at 2x7 years it attains the age of puberty; at 3x7 the beard appears and the youth ceases to grow in height; and at 4x7 he ceases to increase in size. In 5x7 years the man is at his full strength, and so continues at 6x7; but at 7x7 the strength somewhat diminishes. Lastly, at 10x7 (the two most perfect numbers) are the limits of life, and those who have passed this term are exempt from all labour. (*Le Clerc, Histoire de la Médecine*, p. 281.) "The days of our years are three-score years and ten." So wrote Moses, a philosopher, poet, historian, and statesman, the supposed fellow-student of Hermes in the college of On, and undoubtedly a man learned in all the learning of the Egyptians; and he adds, almost immediately, "so teach us to number our days that we may apply our hearts unto wisdom," as if he had been pondering over the philosophy then

current, and thinking how stoically it calculated the duration of the health and life of man, numbered his days, and hopelessly demonstrated their termination.

The doctrines of Diocles are distinctly laid down in the Hippocratic writings, especially in the book entitled "*De Carnibus*," and in those "*De Septimestri Partu*" and "*De Octimestri Partu*," written apparently by the same author. The writer refers to the septennial phases, and specially notes the teeth developed in the fourth septenary, which he terms *moderatores*. That the life of man is circumscribed by the number of seven days is manifest, he observes, and then refers, like Diocles, to the periods of fetal development, but introduces *decades of weeks*, and observes that the period of utero-gestation is four decades of weeks. He also states the doctrine of equal and unequal days; connects the periods of fevers with the periods of development; and refers to the full moon as having influence.

Some critics have remarked that the book termed "*De Carnibus*," ought to be entitled "*De Principiis*," concerning principles. It is very probable that this and the two following books constitute an exposition of the Pythagorean doctrines as they were applied to transcendental physiology and medicine when the author wrote.\* Hippocrates was thoroughly imbued with these views, and has left several practical observations. For example, he says that convulsions do not accompany fever in patients above the age of seven years, and that if they do, they indicate danger. According to him, the following diseases do not attack individuals under the age of puberty, or fourteen years:—inflammations of the lungs, pains in the side, gout; diseases of the kidneys, varicose veins of the legs, menorrhagia, cancer, a species of leprosy (*vitiligo*), a disease termed deflexion on the medulla spinalis, hæmorrhoids, and a disease of the intestines termed *chordapsus*. From the fourteenth to the forty-second year, any kind of disease may attack the system, but from the latter to the sixty-third it is exempt from struma, from calculus in the bladder (unless it existed previously), from defluxion on the spinal medulla, from diseases of the kidneys, unless arising in previous years, from bleeding piles, and from menorrhagia, except when connected with antecedent disease. These statements, whether considered physiologi-

\* Burdach, the German physiologist, adopts the decade nomenclature in a work he has published on the periods of life, entitled "*Die Zeitrechnung des Menschlichen Lebens*;" Leipzig, 1829. According to M. Quetelet (for I have not seen the book) he divides life into ten periods of four hundred weeks each, and thus makes an age of the first dentition, adolescence, &c. In the first period is a secondary one of forty weeks, the age of lactation.



cally or pathologically, are correct upon the whole.

The preceding remarks must serve as an exposition of the doctrine of the ancients regarding septenaries. It now remains to inquire how far these doctrines are true, and what practical benefits can be derived from them.

In man, life may be divided into three great periods. The first may be defined as extending from the commencement of intra-uterine existence to the complete evolution of the sexual organs; the second comprises the period in which those organs are active; and the third extends from the period when they cease to act to the termination of life. These are clear and well-defined epochs, but it is difficult to fix their precise dates, for all vital changes are gradual, and do not admit of exact limitation. Similar difficulty is experienced in the attempt at a natural classification of animals, and is only overcome by having transition or insouciant groups. We may adopt a like expedient here. The first period may be stated as comprising 21 years, the second 28 years, and the third 21 years. The secondary periods of the first great period will be seven, namely,—1, intra-uterine life; 2, the period between birth and the first dentition; 3, the time occupied by the first dentition; 4, the period between the first and second dentitions; 5, the time of the second dentition; 6, the period between the latter and commencing puberty; 7, the time occupied in the evolution of the reproductive organs. The second great period will comprise three minor periods. First, the perfecting of adolescence from 21 to 28; secondly, the climax of development, or status of life, from 21 to 42; and thirdly, the septenary of decline in the reproductive powers, extending from 42 to 49, after which latter age conception rarely takes place. The third comprises also three periods, the first from 49 to 63, the grand climacteric; the second from 63 to 70, or old age; and the third from 70 to death, the years of *atas ingravescens*, or decrepitude. In fixing these epochs I have followed the generally received septennial division, being reluctant to make any innovation thereon. It would, I think, however, be more in accordance with modern science to date, not from the birth, but the conception of the individual. If this be done, each great period should be calculated as commencing nine solar months earlier.

Those of the readers of THE LANCET who may have perused the first paper in my series would observe that the periods of development in insects were more particularly alluded to as establishing the minor periods, namely,

those in relation with critical days, the catamenial period, &c. These phases of development, in birds, are indicated in most instances by moulting, a process in which the mucous membrane of the whole system is implicated, as well as the skin and its appendages. In all birds a moult takes place sooner or later after being hatched, but it does not clearly appear what dentition (for this is analogous to moulting) corresponds to this moult. I am inclined to think, however, that its analogue is neither the first nor the second dentition, but both. The plumage characteristic of the sexes begins to appear at this moult, and it is always a period of danger to domesticated birds, as peacocks, turkeys, pheasants, canaries, &c. As iron is recommended for their cure, the state of health seems analogous to the chlorotic condition of young people. Buffon remarks that the period is analogous to dentition in children, meaning, I suppose, the first. In turkeys it occurs in six or eight weeks after the hatch; in peacocks, four weeks; in partridges twelve weeks; in canaries, five or six weeks. The period during which the eyes of some mammals are closed after birth is worthy notice, this being evidently heptal. In whelps it is fourteen days; in bear-cubs, twenty-eight days. It may be possible that the idea of Diocles, respecting the first use of the eyes after birth, may have some foundation in truth. That some change takes place in the infant in the eighth week may be fairly inferred from the fact that the man with ichthyosis, (the porcupine man) whose history is detailed in an early volume of the "Philosophical Transactions," (1731), and who transmitted his disease to his progeny, stated that the cutaneous affection appeared in himself when about seven or eight weeks old; and we find, subsequently, that his six children had the disease first at the same age. The tusks of young elephants are shed in the twelfth or thirteenth year, but the cheek-teeth appear six or seven weeks after birth. But the seventh and fourteenth days of infants seem to constitute periods. M. Quetelet finds that the weight of an infant diminishes sensibly immediately after birth, and does not begin to increase until after the seventh day. In 1810, Dr. Holland published a table of deaths in newly-born infants from tetanus in the Westmann islands, Iceland, and denoted the days most fatal: in 185 deaths, 75 took place on the seventh day. A few hours must be allowed for retarded labor and errors in computation, but if we take the sixth, seventh, and eighth days, the average of deaths is 37 2-3 daily, while the average of the remaining 18 days is only 4. An increased

mortality took place on the fourteenth day after birth. (Edin. Med. and Surg. Jour. vol. viii., p. 207.) The fourteenth day after birth is marked also by changes in the lower animals.

The order of development of the teeth in man is an interesting subject, as upon it we must principally rely for determining the periods of development in the system generally. Mr. Goodair's researches are exceedingly interesting, as marking their gradual hebdomadal evolution in the embryo and fœtus, but are not sufficiently accurate for our purpose as to the *time* when the changes occur. Previously to the *eruptive* stage, or common dentition, there are three phases of development: the *papillary*, commencing about the seventh week of fœtal life, the *follicular* in the tenth, and the *saccular* in the fourteenth week, which continue until the eruptive stage, about the seventh month after birth, when the four central incisors present themselves. After this period the other teeth appear at intervals not yet precisely fixed, the first dentition being terminated, however, by the end of the thirty-sixth month. All is then quiescent for three or four years, or until about the middle or end of the seventh year, when the first true molar makes its appearance, and which, according to Mr. Goodair, is analogous to the milk-teeth in its mode of formation, the permanent central incisors appearing about the same time. Mr. Saunders has proposed to make use of the development of the permanent teeth to ascertain the ages of factory children, and his table, deduced from several hundreds of observations, is as follows:—

The first true molars appear at the			
age of	-	-	7 years.
The central incisors	-	-	8
lateral incisors	-	-	9
first bicuspsids	-	-	10
second bicuspid	-	-	11
canine	-	-	12 to 12½
second true molars	-	-	12½ to 14

The third pair of molars, the *dentes sapientia*, appear later; according to Meckel and Goodair, at from 16 to 20 years.

In animals generally the development of the teeth is closely connected with the evolution of the reproductive organs. The tusks of the stallion, wild boar, and walrus, are sexual, and are simply canine teeth of an unusual size. Upon inquiring how far the teeth are related to the reproductive organs in man, it is interesting to observe that there is occasionally a coincidence of development between the two, which, *a priori*, would seem improbable. From time to time instances of precocious puberty have been recorded, and it would appear that the change in the ovaria or testes, and in the system generally, has oc-

curred concurrently with a period of about forty weeks after birth, or with the first or second dentition. I have collected 17 instances of this kind, with the following results:—5 were males and 12 females; of these, 3 males and 1 female were more fully developed than usual at birth; of the remaining, 1 male and 3 females exhibited the phenomena of incipient puberty at the age of eight or nine months, 1 at two years, 1 at two years and a half; 6 had the catamenia or were fully developed at three or four years, and 3 were perfect women at 8 years. Two of the latter were pregnant at that age, and the remaining one lived to have a numerous family. In all these instances in which the growth of the teeth is alluded to, it is sufficient to state that it was irregular. (*Vide* Lond. Med. and Phys. Jour., vols. vii., xxiv., xxv., lxv.; New Lond. Med. and Phys. Jour., vol. ii.: Med. Chir. Transactions, vol. i., ii., xii., &c.)

It is probable, indeed, that sexual development takes place in these cases, as well as normally, *per saltum*, an effort being made just at the time when certain teeth are appearing; after the tooth is perfected, and the constitutional effort has ceased, so also will the *nisus* in the ovaria or testes. Occasionally the catamenia appear in young females about the age of twelve or thirteen, for once or twice, when the canine teeth are protruding; and then cease, to re-appear only when puberty fairly commences, about the age of fourteen, the period at which the second molars burst forth. Taking the appearance of the teeth as indicating the periods of a constitutional *nisus*, we must look upon the third molar teeth as marking the commencement of that last stage of development in which the individual is perfected.

Upon a review of dental development it will be observed that the periods lengthen as age advances. First, the primary papillæ appear hebdomadally in the fœtal state; then, during the eruptive stage, the teeth succeed each other at intervals of six or eight weeks, but afterwards of three or four months. During the second dentition the interval is at first a year, then a year and a half, or two years, then four or five years. The dentition observed at an advanced age I shall notice subsequently.

What relations have these dental periods to functions, disease, and death? First, as regards function. The development of the thorax in males, concurrently with the testes, alters the functions of the lungs; besides, as plants consume a larger quantity of oxygen while flowering, or, in other words, when at puberty, we may look for an increased consumption in animals and man at puberty. Now, M. Andral has found that the excretion

of carbonic acid from the lungs is greater in males than in females after eight years of age; in the former, at puberty, the quantity suddenly increases, while in the latter, when the catamenia commence, the excretion is as suddenly arrested, and remains stationary in quantity, and almost as small as in childhood, so long as the monthly menses continue: when this ceases, or when pregnancy takes place, the quantity immediately increases. In males the excretion begins to diminish in quantity at the age of 30; between 16 and that age it is double that excreted by the female. M. Bourguery made experiments on the capacity of the lungs in the two sexes at different ages. He found that the volume of the respiration of the male doubles that of the female, and that the plenitude in both sexes occurs at the age of 30. The volume of air required by an individual in an ordinary respiration augments gradually with the age. The relations between the ages of 7, 15, 20, and 80, are geometrical, and represented by the numbers 1, 2, 4, 8. (Dublin Medical Press, March 15, 1843.)

The muscular system acquires additional development during the second dentition, and in boys the respiratory movements are proportionally active; but it appears that they are not so in girls, and we can thus explain the greater prevalence of chorea in the latter sex at the second dentition. The less liability to convulsions, on the access of febrile affections, may be connected with this increased muscularity. According to Quetelet, during childhood the lumbar power of boys is about one-third more than that of girls; towards the age of puberty one-half; and the strength of a developed man is double that of a woman. These data correspond so closely with those of Bourguery and Andral, on the respiratory functions, that the coincidence cannot be casual.

M. Quetelet also shows that the ratio of growth of a child in height diminishes as its age increases, until the end of the first dentition. From the fourth or fifth year the increase of stature is almost the same in each year up to the sixteenth, when it diminishes gradually until the attainment of the 25th year, if a male, but earlier if a female. The weight follows the same rate of increase as the height.

According to Quetelet the viability between birth and complete puberty varies considerably at different ages. From birth to the completion of the first dentition the mortality is great; it then diminishes, and at the age of five years the probability of life attains its maximum. At 13 or 14 a favorable change is again observed; viability is then at its

maximum, or in other words, it is the period when man can most depend upon his actual existence. The periods of dentition (and also the analogous periods of moult in animals) are the times when the individual is most liable to disease, and, during the first dentition at least, to death. Mr. Farr's tables show this very strikingly. The eruption of each individual tooth, both in the first and second dentition, is invariably attended with considerable constitutional disturbance in delicate persons, so considerable, indeed, during even the eruption of the third molars, or *dentes sapientie*, as sometimes to create alarm. The great mortality in the first four months of infantile existence seems to be connected rather with congenital debility, many only breathing once or twice; or with extraneous circumstances, as early exposure to cold, &c. Antecedently to the first dentition infants are remarkably free from the attacks of prevalent and fatal epidemics.

The development of the reproductive organs has a secondary influence on the system at large, and modifies its diseases. In males (as just stated) the thoracic region is more fully developed, the respiration and circulation becoming more active. We can thus explain the liability of youths to diseases of the heart, and to hæmoptysis and other pulmonary affections. In both sexes the kidneys are acted upon by the ovaria and testes, and their functional activity is exalted or diminished. Hence a class of diseases is observed in youth analogous to those observed in spring and autumn. In females with the gouty diathesis this ovarian action upon the kidneys develops those irregular forms of hysteria which so often baffle the skill of the routinist. The irritation set up in various organs connected anatomically or physiologically with the ovaria, as, for example, the organs of voice, the mammae, the pelvic viscera, the dorso-lumbar cord, and those parts of the encephalon associated with the sexual instinct, is so great as to stimulate inflammation, and being founded on an arthritic diathesis it assumes the migratory character of arthritic disease. Thus the diagnosis and the treatment are rendered hopelessly difficult to the practitioner whose "practical" knowledge is not derived from the true source of practical skill, namely, a knowledge and just appreciation of physiological laws.

These views respecting the ovarian and renal origin of the anomalous forms of hysteria are developed at length in my published work; as they are based on the solid foundation of physiology applied to pathology, I venture to hope that in proportion as the solido-humoral pathology of the day is per-

fects, their correctness will be admitted. It is manifest that as the due evolution of the system in youth is necessary to healthy and useful manhood, and to a comfortable old age, the laws of development and their bearing on pathology are of the first importance.

To consider the remaining periods of life, namely, the *status* and decline, would be to review the whole domain of pathology. After the age of 30 or 35 the abdominal viscera play a more important part in health and disease, and often give the latter its distinguishing characteristics. It is worthy of remark, that just as precocious puberty is occasionally seen in infancy, so an attempt at rejuvenescence is sometimes made in old age, about the grand climacteric, or later. There is a fresh eruption of teeth, a complete set sometimes protruding, the reproductive organs reassume their activity, and the catamenia again appear, as well as other phenomena, observed only during the evolution of the system. Stoll, Good, and others, have recorded instances of this kind. That this is not mere chance is shown by the fact that a similar change is observed in the lower animals. Gallinaceous albinos—pheasants, for example,—according to Temminck, will assume all their former brilliancy of plumage, proving (since the latter is strictly sexual) that the reproductive organs are again active. The hen of the gallinaceous and other birds occasionally approximates in plumage to the cock, and ceases laying. It has been shown by Yarrell that this change is connected with a shrinking of the ovaries; but sometimes the male plumage falls off, and that of the female is redeveloped, and then the bird lays eggs again. Nature herself here exhibits something like perpetual youth, and those who wish for this grand desideratum would do well to inquire closely into the circumstances which accompany the rejuvenescence described.

The periods of life have a much more important and practical bearing on the periodic development of hereditary disease. It is as certainly true that *all* the peculiarities of the parent are transmitted to the offspring, as that the whole is equal to the sum of all its parts. Some or many of the peculiarities derived from the one parent may be negated by peculiarities derived from the other, or even by extraneous circumstances, and not be manifest in the offspring; but they are not the less surely there, and may and do reappear in the third or fourth generation. In a previous paper I observed that as conception took place at a minor period (the catamenial), the minor periods, at least, of the offspring, would correspond to those of the mother, and that if twins dated their conception from the same hour, the periods of their life would be

coincident. I gave, also, an illustration of this inference, in which twins (two boys) went through dentition, and were attacked by indisposition and infantile disease always at the same time. Stoll seems to have suspected some coincidences of this kind when he remarked—"Utile est observare necne semper eo tempore quo infans corripitur epilepsia matri fluant menses, necne." (*Ratio Medendi*, Aphor. 209.) What is true of the minor periods is true of the major, and examples in proof are numerous. Phthisis carries off the members of a family as they successively arrive at a certain stage of development; insanity appears at a known age in all the members of another; apoplexy and paralysis in those of a third, &c. Dr. Martin has recorded a striking example of this periodic development of hereditary disease. A person named Moses Le Compte, who was blind, had *thirty-seven* children and grand-children that became blind like himself. The blindness is described as commencing in all about the age of fifteen or sixteen, and terminating in total deprivation of sight about twenty-two. (Quoted from the *Baltimore Med. and Phys. Jour.*, vol. 1., p. 394.) But, indeed, many similar instances might be quoted from numerous writers, which, if less striking, are equally instructive. Such may be found, for example, in Dr. Holland's interesting essay on the *Hereditary Transmission of Disease*. (*Vide Medical Notes and Reflections*, p. 27, 1st edition.) The assiduous cultivation of this branch of vital proleptics promises the most valuable and practical results. Every family should possess its medical history, with exact dates, just as a nation its archives, and illustrated by a series of Daguerreotype portraits. The physician could then have data that might enable him to anticipate hereditary disease, and if not to prevent its development, at least to predict its occurrence and modify its influence. But, indeed, if the laws regulating the hereditary transmission and periodic evolution of morbid states be once clearly ascertained in *all their relations*, much of the imperfection of medical science would be obviated, and its value proportionally exalted.

With our countryman, CLIFTON WINTINGHAM, the school of *mathematical physicians* seemed to expire. With section A, that of "Mathematics and Physics," in the BRITISH ASSOCIATION of Cork, the labours of medical men have as little connection as with any of the departments into which the meetings were divided. Yet the time may come when the data of physiologists will be submitted to mathematicians, and figures be allowed to express the mysterious laws of organic life.—*Edit. L. Lancet.*

## NEW ERA IN THE PRACTICE OF MEDICINE.

Lectures delivered at the Egyptian Hall,  
Piccadilly, London, 1840.

By SAMUEL DICKSON, M. D.\*

## LECTURE I.

## FALLACIES OF THE FACULTY.

*Introduction—Phenomena of Health and Sleep—Disease and its Type—Causes.*

Gentlemen,—We daily hear of the march of intellect, of the progress of perfection of many branches of science. Has MEDICINE kept pace with the other arts of life—has it fallen short or excelled them in the rivalry of improvement? Satisfactorily to solve this question, we must look a little deeper than the surface—for TRUTH, as the ancients said, lies in a WELL,—meaning thereby that few people are *deep*-sighted enough to find it out. In the case of Medicine, we must neither be mystified by the boasting assertions of disingenuous teachers, nor suffer ourselves to be misled by the constant misrepresentation of the medical press—for these publications for the most part are nothing better than mere organs of party, and, like the newspapers of the day, do often little more than crush and cry down any truths that militate against the interest of the schools and *coteries* they are employed to serve. The late Sir William Knighton was at the head of his profession; he was, moreover, physician to George the Fourth. Joining, as he did, much worldly wisdom and sagacity to a competent knowledge of the medical science of his age, his opinion of the state of our art in these later times may be worth your knowing; more especially as it was given in private, and at a period when he had ceased to be pecuniarily interested in its practice. In one of his *private* letters, published after his death, he thus delivers himself:—"It is somewhat strange that, though in many arts and sciences improvement has advanced in a step of regular progression from the first, in others, it has kept no pace with time; and we look back to ancient excellence with wonder not unmixed with awe. Medicine seems to be one of those ill-fated arts whose improvement bears no proportion to its antiquity. This is lamentably true, although Anatomy has been better illustrated, the *Materia Medica* enlarged, and Chemistry better understood."\* Dr. James Gregory, a man accomplished in all the science and literature of his time, was for many years the leading physician of Edinburgh; but he nevertheless held his profession in contempt. On visiting London, he

had an opportunity of being introduced to his equally celebrated countryman and contemporary Baillie. Curious to know Gregory's opinion of the man who then swayed the medical sceptre of the metropolis, his friends asked him what he thought of Baillie. "Baillie," he replied, knows *nothing* but *physic*;" in revenge for which, Baillie afterwards wittily rejoined, "Gregory knows *every thing* but *Physic*." But what was Dr. Baillie's own opinion of his profession after all? I do not now allude to his language during the many years he was in full practice; then, doubtless, with the multitude who thronged his door, he really believed he knew a great deal; but what did he say when he retired from practice, and settled at his country seat in Gloucestershire? Then, without the slightest hesitation, he declared he had no faith in *Physic* whatever! Gentlemen, you must not from this imagine that the fortunate doctor intended to say that the world all along had been dreaming when it believed Opium could produce sleep, Mercury salivate, and Rhubarb purge. No such thing—he only confessed that he knew nothing of the manner of action of these substances on the body, nor the principle upon which they should be used. Now, what would you think of a sailor who should express himself in the same way, in regard to the rudder and compass,—who should tell you that he had no faith in either instrument as a guide to steer a vessel by?—why, certainly that he knew nothing of the profession by which he gained his living. And such really was Dr. Baillie's case. The great bulk of mankind measure the professional abilities of individuals solely by their degree of reputation—forgetting Shakspeare's remark, that a name is very often got without merit, and lost without a fault. That Baillie actually attained to the eminence he did, without any very great desert of his, what better proof than his own declaration?—a declaration which fully bears out what Johnson tells us in his life of Akenside: "A physician in a great city, seems to be the mere plaything of fortune; his degree of reputation is for the most part totally casual; they that employ him know not his excellence—they that reject him know not his deficiency." But still, some of you may very naturally ask, how could Dr. Baillie, in such a blissful state of ignorance or uncertainty, contrive to preserve for so long a period his high position with the *professional* public? This I take to be the true answer: the world, like individuals, has its *childhood*—a period\* when, knowing nothing, it may fairly be excused for believing any thing. When Baillie began practice,

\* The readers of the Dissector will find these Lectures extremely rich.

the profession were slowly and tardily groping their way in the dark; a few practical points they of course knew; but of the true principles of the application of those points, they were, as I shall afterwards show you, entirely ignorant. Most of them were, therefore, very ready to follow any one of their number who should most lustily cry, *Eureka—I have found it!*—that was what Dr. Baillie did. At the commencement of his career, few medical men opened the bodies of their dead patients; for Sydenham, the English Hippocrates, had long before ridiculed the practice. It was, therefore, all but in disuse, and all but forgotten, when Dr. Baillie published his book on Morbid Anatomy, —a book wherein, with a praiseworthy minuteness and assiduity, he detailed a great many of the curious appearances so usually found in the dissection of dead bodies. Had he stopped here, Dr. Baillie would have done Medicine some little service; but by doing more he accomplished less—more for himself, less for the public; for by further teaching that the only way to learn the cure of the living is to dissect the bodies of the dead he put the profession on a wrong path,—one from which it will be long before the unthinking majority can in all likelihood be easily reclaimed. In the earlier part of his career, Dr. Baillie, it is only fair to suppose, believed what he wrote, though by his after-declaration he admitted himself wrong. His arguments nevertheless succeeded but too well with the profession; proving the truth of Savage Langdon's observation, that, "In the intellectual as in the physical, men grasp you firmly and tenaciously by the hand, creeping close at your side, step by step, while you lead them into darkness, but when you lead them into sudden light, they start and quit you!" To impose upon the world is to secure your fortune; to tell it a truth it did not know before is to make your ruin equally sure. How was the exposition of the Circulation of the Blood first received? Harvey, its discoverer, was persecuted through life; his enemies in derision styled him the *Circulator*,—a word in its original Latin signifying vagabond or quack; and their efforts to destroy him were so far successful, that he lost the greater part of his practice, through their united machinations. "*Morbi non eloquentia sed remediis curantur*" is an observation some of you may have met in Celsus, which, if you will allow me, I will translate:—Diseases are cured by Remedies, not by Rhodomontade. Yet strange to say, the generality of great professors who have successively obtained the public ear since the time of the Roman physician, have been most

inveterate against every thing savoring of innovation in the shape of remedies. Let me give you examples. When a limb is amputated, the surgeons, to prevent their patient bleeding to death, as you all well know, tie the arteries. In the time of Francis the First, they followed another fashion: then, and formerly, they were in the habit of stanching the blood by the application of boiling pitch to the surface of the stump. Ambrose Pare principal surgeon to that king, introduced the *ligature* as a substitute—he first tied the arteries. Mark the reward of Ambrose Pare: he was hooted and howled down by the Faculty of Physic, who ridiculed the idea of hanging human life upon a thread, when boiling pitch had stood the test of centuries. In vain he pleaded the agony of the old application; in vain he showed the success of the ligature. Corporations, colleges, or coteries of whatsoever kind, seldom forgive merit an adversary; they continued to persecute him with the most remorseless rancour: luckily he had a spirit to despise and a master to protect him against all the efforts of their malice. What physician nowadays would dispute the value of antimony as a medicine? Yet, when first introduced, its employment was voted a crime. But was there no reason! Yes it was introduced by Paracelsus—Paracelsus the arch-enemy of the established practice. At the instigation of the college, the French parliament accordingly passed an act making it penal to prescribe it. To the Jesuites of Peru, Protestant England owes the invaluable bark; how did Protestant England first receive this gift of the Jesuites? Being a popish remedy, they at once rejected the drug as the invention of the father of all papists—the devil. In 1693, Dr. Groenvelt discovered the curative power of Cantharides in dropsy; what an excellent thing for Dr. Groenvelt!—Excellent indeed; for no sooner did his cures begin to make a noise than he was at once committed to Newgate, by warrant of the president of the College of Physicians, for prescribing cantharides internally. Blush! most sapient College of Physicians—your actual president, Sir Henry Hallford, is a humble imitator of the ruined Groenvelt!—Before the discovery of vaccination, *Inoculation* for Small Pox was found greatly to mitigate that terrible disease. Who first introduced small pox inoculation? Lady Mary Montague, who had seen its success in Turkey. Happy Lady Mary Montague! Rank, sex, beauty, genius—these all doubtless conspired to bring the practice into notice. Listen to Lord Wharnclyffe, who has written her life, and learn from his story this

terrible truth—that *persecution* ever has been, and ever will be the only reward of the benefactors of the human race. “Lady Mary,” says his Lordship, “protested that in the four or five years immediately succeeding her arrival at home, she seldom passed a day without repenting of her patriotic undertaking; and she vowed she never would have attempted it if she had foreseen the vexation, the persecution, and even the obloquy it brought upon her. The clamours raised against the practice, and of course against her, were beyond belief. The faculty all rose in arms to a man, foretelling failure and the most disastrous consequences; the clergy descended from their pulpits on the impiety of thus seeking to take events out of the hands of Providence; and the common people were taught to hoot at her as an unnatural mother who had risked the lives of her own children. We now read in grave medical biography, that the discovery was instantly hailed, and the method adopted by the principal members of that profession. Very likely, they left this recorded—for, whenever an invention or a project, and the same may be said of persons, has made its way so well by itself as to establish a certain reputation, most people are sure to find out that they always patronized it from the beginning, and a happy gift of forgetfulness enables many to believe their own assertion. But what said Lady Mary of the actual fact and actual time? Why, that the four great physicians deputed by government to watch the progress of her daughter’s inoculation, betrayed not only such incredulity as to its success, but such an *unwillingness to have it succeed*—such an evident spirit of rancor and malignity, that she never cared to leave the child alone with them one second, lest it should in some secret way suffer from their interference.”

Gentlemen, how was the still greater discovery of the immortal Jenner received—Vaccination? Like every other discovery—with ridicule and contempt. By the Royal College of Physicians, not only was Jenner persecuted and oppressed; but long even after the benefits which his practice had conferred upon mankind had been universally admitted, the pedants of that most pedantic of bodies refused to give him their license to practice his profession in London; because, with a proper feeling of self-respect, he declined to undergo at their hands a schoolboy examination in Greek and Latin. The qualifications of the schoolmaster, not the attainments of the physician; the locality of study, rather than the extent of information possessed by the candidate, were, till very lately, the indispensable preliminaries to the honours of the

College. Public opinion has since forced them to a more liberal course. But, to return to Jenner;—even religion and the Bible were made engines of attack against him. From these Errham of Frankfort deduced his chief grounds of accusation against the new practice; and he gravely attempted to prove from quotations of the prophetic parts of Scripture, and the writings of the fathers of the church, that Vaccination was the real *Antichrist*! Can you wonder that medicine should have made so little progress, if those only make fortunes by means of it who know nothing more than the jargon and crudities which pass for medical science with the vulgar? How true are the words of the Son of Sirach,—after searching the world he “returned and saw under the sun, that there was neither bread to the wise, nor riches to men of understanding, nor favor to men of skill.”

Gentlemen, the ancients endeavored to elevate physic to the dignity of a science, but failed. The moderns, with more success, have endeavored to reduce it to the level of a trade. Till the emoluments of those who chiefly practise it cease to depend upon the quantity of useless drugs they mercilessly inflict upon their deluded patients—till surgeons shall be other than mechanics, and physicians something more than mere puppets of the apothecary—till the terrible system of collusion, which at present prevails under the name of a “good understanding among the different branches of the profession” be exposed, the medical art must continue to be a source of destruction to the many—a butt for the ridicule of the discerning few. The wits of every age and country have amused themselves at the expense of the physician; against his science they have directed all the shafts of their satire; and in the numerous inconsistencies and contradictions of its professors they have found matter for some of their richest scenes. Moliere, so long the terror of the apothecaries of Paris, makes one of his *dramatis personæ* say to another, “Call in a doctor, and if you do not like his physic, I’ll soon find you another who will condemn it.” Rousseau showed his distrust of the entire faculty, when he said, “Science which instructs, and physic which cures us, are excellent certainly; but science which misleads, and physic which destroys, are equally execrable; teach us how to distinguish them.” Equally sceptical and rather more sarcastic in his satire of the profession was Le Sage. “Death,” says he, “has two wings; on one are painted war, plague, famine, fire, shipwreck, with all the other miseries that present him, at every instant, with a new prey. On the other wing you behold

a crowd of young physicians about to take their degree before him. Death with a demon smile, dubs them doctors, (*leur donne le bonnet*) having first made them swear never in any way to alter the established practice of physic." But it is not our continental neighbors only who have labored to expose medical pretensions. Locke, Smollet, Goldsmith, (all three physicians) held their art in contempt. Swift, Temple, Hume, Adam Smith,—to say nothing of Beron, Hazlitt, and other cotemporaries—were equally severe on its professors. Byron, indeed, anathematized it as "the destructive art of healing;" and when writing to a friend the details of a fever from which he had suffered, he tells him, "I got well by the blessings of barley water, and refusing to see my physician!"—Gentlemen, do you think that all these great men were inferior in observation and reflection, to the herd of doctors and apothecaries who swarm in these times?

But so completely at variance with each other are even the greatest medical authorities on every subject in medicine, that I do not know a single disease in which you will find any two of them agreeing. Take the subject of Pulmonary Consumption, for example: "The celebrated Stohl attributed the frequency of consumption to the introduction of the Peruvian bark. The equally celebrated Morton considered the bark an effectual cure. Reid ascribed its frequency to the use of mercury. Brillouet asserted that it is only curable by this mineral. Rush says, that consumption is an inflammatory disease, and should be treated by bleeding, purging, cooling medicines, and starvation. With a greater show of reason, Salvadori maintained the disease to be one of debility, and that it should be treated by tonics, stimulating remedies, and a generous diet. Galen, among the ancients, recommended vinegar as the best preventive of consumption. Dessault, and other modern writers, assert that consumption is often brought on by a common practice of young people taking vinegar to prevent their getting fat. Dr. Beddoes recommended foxglove as a specific in consumption. Dr. Parr, with equal confidence, declared that he found foxglove more injurious in his practice than beneficial! Now, what are we to infer from all this? Not, as some of you might be tempted to believe, that the science is deceptive or incomprehensible throughout, but that its professors to this very hour have neglected to make themselves acquainted with the true principles upon which remedies act, and know as little of the true nature of the diseases whose treatment they so confidently undertake. And what is the daily, the hour-

ly result of this terrible ignorance and uncertainty? In the words of Frank "*thousands are slaughtered in the quiet sick-room.*" "Governments," continues the same physician, "should at once either banish medical men and their art, or they should take proper means that the lives of people may be safer than at present, when they look far less after the practice of this dangerous profession, and the murders committed in it, than after the lowest trades."

"If false facts," says Lord Bacon, "be once on foot, what through neglect of examination, the countenance of antiquity, and the use made of them in discourse, they are scarce ever retracted." The late professor Gregory used often to declare in his classroom, that ninety-nine out of a hundred medical facts were so many medical lies, and that medical doctrines were for the most part little better than stark-staring nonsense;—and this, Gentlemen, we shall have some amusement in proving to you. In the mean time, we may observe, that nothing can more clearly explain the difficulties which beset the student of physic—for who can understand nonsense, and, when clothed in phrases which now admit one sense, now another, what so difficult to refute? "Nothing," says Sir Humphrey Davy, "has so much checked the progress of philosophy, as the confidence of teachers in delivering dogmas as truths, which it would be presumptuous to question. It was this spirit which, for more than ten centuries, made the crude physics of Aristotle the natural philosophy of the whole of Europe. It was this spirit which produced the imprisonment of the elder Bacon and the recantation of Galileo. It is this spirit, notwithstanding the example of the second Bacon assisted by his reproof, his genius, and his influence, which has, even in later times, attached men to imaginary systems,—to mere abstracted combinations of words, rather than to the *visible* and *living* world; and which has often induced them to delight more in brilliant dreams than in beautiful and grand realities."

Imposed upon by these abstracted combinations of words, we find it difficult to divest ourselves of the erroneous and mystical distinctions by which our teachers have too often endeavored to conceal their own ignorance:—for in the "physical sciences,"—I again quote Sir Humphrey Davy, "there are much greater obstacles in overcoming old errors, than in discovering new truths—the mind in the first case being fettered; in the last perfectly free in its progress." "To say that any class of opinions shall not be impugned—that their truth shall not be called



in question, is at once to declare that these opinions are infallible, and that their authors cannot err. What can be more egregiously absurd and presumptuous? It is fixing bounds to human knowledge, and saying man cannot learn by experience—that they can never be wiser in future than they are to-day. The vanity and folly of this is sufficiently evinced by the history of religion and philosophy. Great changes have taken place in both, and what our ancestors considered indisputable truths, their posterity discovered to be gross errors. To continue the work of improvement, no dogmas, however plausible, ought to be protected from investigation."

In the early history of every people, we find the priest exercising the functions of the physician.—Looking upon the throes of disease as the workings of devils, his resource was prayer and exorcism; the maniac and epileptic were termed by him *demoniacs*, and when a cure was accomplished, the *demon* was said to be cast out.—Even now, the traces of clerical influence on our art are not extinct in England; for though our churchmen have long ceased to arrogate to themselves the exclusive right, as well as the exclusive power of healing, an Archbishop of Canterbury is still permitted, by the laws of his country, to confer degrees in physic! nor does he fail even in these days to avail himself occasionally of his prerogative.\*

In the course of these Lectures, gentlemen, it shall be my business to prove to you the UNITY or IDENTITY of all morbid action, and the unity and identity of the source of power of the various agencies by which disease of every kind may be caused or cured.

More than twenty-three centuries have elapsed since Hippocrates distinctly announced the Unity of Morbid Action,—" *Omnium morborum unus et idem modus est.*" The type of ALL DISEASE IS ONE AND IDENTICAL. These are his words, and that is my Case. That is the cause upon which unprejudiced and disinterested posterity will one day pronounce a verdict in my favor, for the evidence I am prepared to adduce in its support will be found to be as perfect a chain of positive and circumstantial proof as ever was offered to human investigation.

The more you can explain and facilitate the attainment of any science the more you will find that science approach perfection.—The true philosopher has always studied to find out relations and resemblances in nature,

thus simplifying the apparently wonderful; the schools, on the contrary, have as invariably endeavored to draw fine-spun distinctions and *differences*, the more effectually to perplex and make the most simple things difficult of access. "In universities and colleges," says Lord Bacon, "men's studies are almost confined to certain authors, from which if any dissenteth or propoundeth matter of re-dargution, it is enough to make him be thought a person turbulent." Any exposition of the singleness of principle which pervades a particular science will be sure to meet the censure of schools and colleges; nor will their disciples always forgive you for making that easy which they themselves after years of study, have declared to be incomprehensible.

The most perfect system has ever been allowed to be that which can reconcile and bring together the greatest number of facts that come within the sphere of the subject of it.

#### IN THE STATE OF HEALTH,

an equal and medium temperature prevails throughout the frame. The voluntary and other muscles obey with the requisite alacrity the several necessities that call them into action. The mind neither sinks nor rises but upon great emergencies; the respiration, easy and continuous, requires no hurried effort,—no lengthened sigh. The heart is equal in its beats, and not easily disturbed; the appetite moderate and uniform. At their appointed *period*, the various secreting organs perform their office. The structures of the body, so far as bulk is concerned, remain to appearance, though not in reality, unchanged; their possessor being neither encumbered with obesity, nor wasted to a shadow. His sensorium is neither painfully acute nor morbidly apathetic; he preserves in this instance, as in every other a happy moderation. His sleep is tranquil, dreamless.

If we analyze these various phenomena, we shall find that they all consist in a series of alternate motions,—motions, for the fulfilment of which various *periods* of time are requisite; some being diurnal, some recurring in a greater or less number of hours,—while others exhibit a minatory or momentary succession. At morn, man rises to his labor; at night, he returns to the repose of sleep; again he wakes and labors—again at the appointed *period* he "steeps his senses in forgetfulness" once more. His lungs now inspire air, now expel it—his heart successively contracts and dilates—his blood brightens into crimson in the arterial circle of its vessels—again to darken and assume the hue of modena in the veins. The female partner of his lot,—she who shares with him the

\*The present Sir Charles Mansfield Clark, Bart, after practising for many years as a London apothecary and accoucher, was dubbed Doctor of Medicine by the late Archbishop Manners Sutton. I know not if that be the reason he is sometimes called by his lay-patients the divine doctor.

succession of petty joys and sorrows, hopes and fears, which make up the day-dream of life, has yet another revolution, the *Catamenial*; and *Parturition*, or the process by which she brings the mutual offspring into the world, is a series of *periodic* pains and remissions.

Every atom of the material body is constantly undergoing a revolution or alternation;—liquid or aeriform one hour, it becomes solid the next—again to pass into the liquid or aeriform state; and ever and anon varying its properties, colors, and combinations, as, in brief, but regular PERIODIC succession it assumes the nature of every organ, tissue, and secretion entering into, or producing from, the corporeal frame. "It is every thing by turns, and nothing long."

The phenomena of the human body, like every other phenomena in nature have all a three-fold relation,—a relation to MATTER, SPACE, TIME, and there is another word—MOTION, which may be said to bring all three to a unity; for without matter and space, there can be no motion, and motion being either quick or slow, must also express time or *period*.

Moreover, there can be no *motion* in matter without *change of temperature*, and no change of temperature without *motion in matter*. This is so indisputable an axiom in physics, that Bacon and others supposed motion and change of temperature to be one and the same.

The powers by which the corporeal motions are influenced, are the same that influence the motions of every kind of matter, namely, the electric, mechanical, and chemical forces, and the force of gravitation. When rightly considered, the whole of these powers resolve themselves into *attraction* and *repulsion*. It is by *attraction* that the fluid matter of the blood first assumes the solid consistency of an organ; again to pass by *repulsion* into the fluidity of secretion. From the earth and to the earth, the matter composing our bodies comes and goes many times even in the brief space of our mortal existence. In this, the human system resembles a great city, the inhabitants of which, in the course of years, are constantly changing, while the same city, like the body, betrays no other outward appearance of change than what naturally belongs to the *periods* of its rise, progress, maturity, or tendency to decay.

The last, and one of the most important of the revolutions of the healthy state, is

### SLEEP.

Philosophers of all ages have made this an object of their most anxious study, its rela-

tion to death perhaps being their chief inducement to do so. "Half our days," says Sir Thomas Browne, "we pass in the shadow of the earth, and sleep, the brother of death, extracteth a third part of our lives." In the state of perfect sleep, the pupil of the eye will not contract on the approach of light—the skin has no feeling—the ear no sense of hearing—the taste and smell are not to be roused by any of the ordinary stimuli. What is this (figuratively speaking) but a periodic *half-death*—speaking truly, but a periodic *palsy* or cessation of internal motion of the nerves by which we maintain a consciousness of existence, and perceive our relationship to the world around us? Broken sleep consists either in brief remissions of the whole sleeping state, or in a wakefulness of one or more of the five senses. There are individuals, for example, who always sleep with their eyes open, and who should see you, were you to enter their chamber with the most noiseless tread. These tell you they are always half awake. In the condition of body termed *nightmare*, there is a consciousness of existence with a wakefulness of the nerves of sight or feeling; but with a total inability to influence the voluntary muscles by any effort of the will. The subject of it can neither sleep nor turn himself.—The dreamer, portions of whose brain think, and therefore act or move, is partially awake. The *somnambulist* and *sleep talker*, are dreamers, who, having portions of the brain in a state of action, and others torpid, perform exploits of deed or word, that bring you a mind of the maniac and the drunkard, whose powers of judging are defective. A man may be entirely awake with the exception of a single member; and this we still refer to a torpid state of some portion of the brain. Such a man will tell you that his arm or leg is asleep or dead. But, as this is a soporific subject, and may have a soporific influence on some of you, I may as well wake you up with an anecdote a brother medical officer of the army once told me of himself: While serving in the East Indies, Dr. C— one night awoke, or I should rather say half awoke suddenly, when his hand at the instant came in contact with a cold animal body. His fears magnifying this into a cobra capel, he called out most lustily, "a snake, a snake." But before his drowsy domestics had time to appear, he found he had mistaken his own sleeping arm for this most unwelcome of oriental intruders!

Gentlemen, the human body in health is never *asleep* throughout, for when *volition* is paralysed—when we are every thing but dead to all that connects us with the external

world, the heart still continues to beat, the lungs perform their office, and the other internal organs, over which volition has no control, keep on their usual harmony of motion—in other words, the digestion of the food, the circulation of the blood, and the other lesser motions of *organic* life, proceed as in the waking state.

### DISEASE.

Till the hour of sickness comes, how few non-medical persons ever think of a subject which ought to be of interest to all. The same men who discuss with becoming gravity the artificial inflections of a Greek or Latin verb, neglect to inform themselves of the natural laws that govern the motions of their own bodies! No wonder that the world should be so long kept in darkness on medicine and its mode of action,—no wonder that even educated persons should still know so little of the proper study of mankind—MAN! In the throes of disease, the early priests, as I have already told you, imagined they detected the workings of demons. The medical theorists, on the contrary, attributed them to morbid ingredients in the blood or bowels.

One age bowed the knee to an "acrimony" or "putridity;" another acknowledged no cause but a "crudity," or a "humor." The *moderns* hold the notion that a mysterious process, which they term "inflammation," is the head and front of all offending. How absurd each and all of these doctrines, will appear in the sequel! Disease, Gentlemen, is neither a devil to "cast out," an acrimony or crudity to be expelled, nor any fanciful chemical goblin to be chemically neutralized—neither is the state erroneously termed inflammation, so commonly the cause as a *coincident part* of general disorder. Disease is an error of action—a greater or less variation in the motion, rest, and revolutions of the different parts of the body—reducible, like the revolutions of Health, into a systematic series of periodic alternations, in the course of which the matter of a structure occasionally by its atomic changes alters its natural character and chemical relations, so much so in some cases, as to become even completely decomposed and disorganised. Whatever be the cause or causes of corporeal aberration, in obedience to the law of all matter, the first effects are change of *motion* and change of *temperature*. The patient accordingly has a feeling of *heat* or *cold*. His muscular motions, less under the control of their respective influences, become tremulous, spasmodic; or wearied, palsied, the functions of particular muscles cease. The breathing is hurried on slight exertion, or it is maintained slowly and at intervals, and with a long

occasional inspiration and expiration—familiar to you all in the act of sighing. The heart is quick, palpitating; or languid, or remittent in its beats; the appetite craving, capricious, or lost. The secretions are either hurried and increased in quantity, or sluggish, or suppressed. The body shows a partial or general waste; or becomes in part or in whole preternaturally tumid and bloated. Alive to the slightest stimulus, the patient is easily impassioned or depressed; his mind, comprehending in its various relations every shade of unreasonable sadness or gaily, prodigality or cupidity, vacillation or pertinacity, suspicious caution or too confident security; with every color of imagination, from highly intellectual conception to the dream-like vagaries and reveries of hallucination. His sensations are perceptibly diminished or increased. Light and sound, for example, confuse or distract him; like the soft Sybarite, a rose leaf ruffles him. With the smallest increase in the medium temperature of the atmosphere, he becomes hot and uncomfortable, and the slightest breeze shivers and discomposes him; or, as you may sometimes observe in the case of extreme age and idiocy, he becomes equally insensible to excess of light, sound, heat, and cold.

### CAUSES OF DISEASE.

What are the agencies that give rise to

"——— Maladies

Of ghastly spasms, or racking tortures,  
 qualms,  
 Of heart-sick agony, all *feverish* kinds,  
 Convulsions, epilepsies, fierce catarrhs,  
 Intestine stone, and ulcer, colic pangs,  
 Demoniac phrenzy, moping melancholy  
 And moon-struck madness, pining atrophy,  
 Marasmus, and wide-wasting pestilence,  
 Dropses and asthmas, and joint-racking  
 rheums?"

MILTON.

Gentlemen, the *Causes* of all these various diseases—*Various* in name, place, and degree—*One* only in their real nature—may be found either in a *deprivation* or *wrong adaptation* of the identical forces which continue life, in health—the same natural agencies, in a word, by which every motion or event is produced throughout the universe. They comprise, therefore, every thing that connects us directly or indirectly, with the external world; and most, if not all of them, act upon us, in the first place, through the different modifications of nervous perception. The causes of disease, then, never originate in any one organ of the body—except in so far as that organ may be predisposed by an inherent weakness of the attractive power of

the atoms of its parts to receive grave impressions from outward agencies that affect the more stable portions of the same body in a slighter manner.

To return to the *causes* of disease,—are they not infinite? The earth and its emanations—the air and its electrical conditions—the degrees of temperature, dryness, and moisture of both—the nature and extent of our food and drink—the passions by which we are agitated, with all the other changes and chances of our social and individual position; these are the elements to which we must look, not only for the causes of disorders, but for the causes of health itself.

We have already analyzed the Life of Health;—we have seen that it consists in a *periodic* alternation of harmonious movements, some long, some short,—greater and lesser movements, otherwise *fits*; in Shakspeare's language, Life is a "*fitful fever*." If so, what can the morbid modifications of that Life be, but modifications of Fitful or Intermittent Fever? "All diseases," says Hippocrates, "resemble each other in their form, invasion, march, and decline." "The type of all diseases," he adds, "is one and the same." What, then, is that type? If we succeed in proving to you that tooth-ache, asthma, epilepsy, gout, mania, and apoplexy, all come on in *fits*; that all have febrile chills or heats; that *intermissions* or periods of immunity from suffering, more or less complete, are common to each; and that every one of these supposed different diseases may, moreover, be cured by any one of the agents most generally successful in the treatment of Intermittent Fever, popularly termed Ague; to what other conclusion can we possibly come, but that this same Ague is the type which pervades, and the bond which associates together every one of these variously named diseases? If, in the course of these Lectures, we further prove that what are called "inflammations" also come on in *fits*; that the subjects of them have equally their periods of immunity from pain, and that these yield with equal readiness to the same remedial means;—who can be so unreasonable as to doubt or dispute that Ague is the model or likeness—the *type of all disease*!

#### Use of Arsenic in Diseases of the Skin.

By JOHN E. ERICHSEN, Esq.

There is probably no substance in the *Materia Medica* about which a greater discrepancy of opinion has arisen than arsenic. By some its uses have been highly extolled and used too indiscriminately; by others it

has been looked upon only as a last resource, and used when every other remedy has failed.

The arsenious acid, in an uncombined state, is but very seldom employed in this country, although with Bielti, and some other continental physicians, it is a favorite remedy in psoriasis inveterata, and other very obstinate cutaneous affections. Its dose, in the form of the "*Asiatic pill*," varies from the sixteenth up to the fourth of a grain twice a day. The comparatively large quantity of arsenious acid that is required in an uncombined state to produce a beneficial action on the skin, ought, in my opinion, to militate strongly against its employment in this form. The minimum dose of arsenious acid recommended by most writers on the diseases of the skin is one-sixteenth of a grain; now this is equal to the quantity contained in seven and a half minims, almost the maximum dose of the solution of the arsenite of potassa, and certainly too large a quantity of this preparation for us to be justified in commencing with. This difference in effect is probably owing to the greater readiness with which the arsenious acid when presented in solution, must be taken up by any surface, and carried into the general circulation.

Mr. Donovan lays great stress upon the small quantity of arsenic, and of the other elements, that, in his preparation, sometimes effect a cure; but in this I do not think it presents anything peculiar or more remarkable, than is constantly seen in Fowler's solution, and the other preparations of arsenic.

The *modus operandi* of the arsenical preparation, as of most other medicinal agents, is unknown to us. We are only acquainted with their secondary effects, which manifest themselves most unequivocally on the digestive, nervous, and integumentary systems; on all of which they act as excitant or stimulating tonics.

From a careful examination of many cases of cutaneous disease in which this mineral had been employed, I am enabled to state that nothing is gained by carrying it beyond a certain point, as far as the affection of the skin is concerned, and that by so doing, much mischief, perhaps of an irremediable nature, may be inflicted on the patient: that it is not a remedy that can with safety be *pushed*, to use a common phrase, but that all the good that will result from its employment can be accomplished by a careful and guarded administration of it, and by its being intermitted on the first appearance of any symptom of local or general irritation.—*Med. Gaz.* May 12th, 1843.

Sir B. C. Brodie in a Lecture delivered in the Theatre of St. George's Hospital, in the session 1843-44, in speaking of the swelled tongue, in which small tumors and abscesses are sometimes formed, says,—

"The remedy best adapted for these cases is a solution of arsenic. Give the patient five minims three times daily, in a draught, gradually increasing the dose to ten minims. It should be taken in full doses, so that it may begin to produce some of its poisonous effects on the system. When it begins to act as a poison it will show itself in various ways. Sometimes there is a sense of heat, a burning pain in the rectum; sometimes griping, purging, and sickness, and nervous tremblings. A patient who is taking arsenic, especially in pretty large doses, ought to be very carefully watched. At first you may see him every two or three days, and then every day; and as soon as the arsenic begins to operate as a poison, leave it off. When this effect is produced the disease of the tongue generally gets well, but at any rate leave off the arsenic, and the poisoning will not go too far; it will do no harm. If, after a time, you find that the disease is relieved, but not entirely cured, you may try another course of arsenic. Perhaps it may take a considerable time to get the tongue quite well. Sarsaparilla, with the bichloride of mercury, may be given at one time; and at another, arsenic. You cannot give either of these remedies for ever, and indeed the arsenic can only be given for a very limited period; but it is astonishing what bad tongues of this description I have seen get well under these modes of treatment, especially under the use of arsenic.

#### ON PHTHISIS.—BY DR. GRAVES, Dublin.

[In the following passage, Dr. Graves explains his views on the pathology of tubercle:—]

"I look on tubercular development and consumption as the consequences of that particular state of constitution, which occasions what is falsely termed *tubercular inflammation*, a state of constitution in which we have three distinct processes, attended by corresponding morbid changes, each different in itself, but depending on one common cause. Every form of consumption, which has hitherto come under our notice, is referable to one common origin, and this is that debilitated state of constitution which has been termed the *scrofulous habit*. One of the first tendencies of this habit is to the formation of tissues of an inferior degree of animalization, and parasitic productions, among which I class tubercles, whether oc-

curring in the lungs, brain, or liver, whether they exist in a minute or granular form, or in large, soft, and yellow masses, or in the state of tubercular infiltration. I look on tubercles in this light, and not as the consequence of inflammation, nor do I consider that it has been proved that tubercular development is the cause of phthisis.

Dr. Graves contends, that in all cases of phthisis, 'the pectoral symptoms, of whatever nature they may be, are caused by *scrofulous inflammation*,' by which we presume that he means, inflammation as it occurs in individuals of a scrofulous diathesis, and he proceeds to compare the progress of ulcerations of the lungs with that of external scrofulous abscesses. There is, he observes, the same slowness, the same insidious latency, the same gradual solidification and gradual softening; the puriform fluid secreted is similar in character, while there is the analogous occurrence of burrowing ulcers and fistulous openings with close approximation in the form of thin parietes, and difficulty of healing in each; and at the same time constitutional symptoms identical in nature; hectic flushings and sweats, diarrhoea, emaciation, &c., equally accompany phthisical suppuration of the lungs and scrofulous inflammation of the joints or other external parts. With these views, therefore, we are not surprised to find Dr. Graves entertaining the opinion that tubercle, though a most frequent accompaniment of phthisis, is neither the essential cause of that disease nor a necessary product. Scrofulous inflammation is with him the *fons et origo*, the real and efficient cause of phthisis, whether tubercle be generated in the course of the diseased action or no, and thus we have scrofulous pneumonia and scrofulous bronchitis equally productive of phthisis without the presence of one single tubercle or spot of deposition of tubercular matter, either in the pulmonary tissue or on the bronchial membrane. In the latter case, scrofulous bronchitis it is urged by Dr. Graves, that the accompanying fever presents all the material phenomena of phthisis; there is the same emaciation, frequently the same incurability; the same means tend to its aggravation or benefit, and the same scrofulous pus is secreted, although not mixed as in cases of true phthisis with broken-down tubercles.

We may therefore, have tubercles without either the pneumonia or the bronchitis; and we may have scrofulous pneumonia often ending in slow burrowing suppuration, and proving fatal without any tubercles being formed. In like manner, a person may die of scrofulous bronchitis without the occurrence of either tubercles or pneumonia. Of

these three effects of scrofula, it may be remarked, that, owing to their cause and origin being the same, they are most frequently found in combination. The same diathesis which produces one may give rise to the others; hence the frequency of their association; hence it is that they generally occur together.—*Brit. and For. Med. Rev., July, 1843.*

Dr. Graves is one of the most talented men of the age, and has had for a long period an extensive hospital and private practice,—yet it would be difficult to find an ordinary physician whose notions are so erroneous on the pathology of tubercle or of bronchitis. We are told first, that tubercular development is falsely termed *tubercular inflammation*,—which is very true, but notwithstanding he repeats this affirmation, his head is so full of the *acute, sub-acute and chronic inflammations* of the schools, he soon forgets himself and “contends, that in all cases of phthisis, the pectoral symptoms, of whatever nature they may be, are caused by *scrofulous inflammation*.” We are also told, that tubercle is a parasitic production, the consequence of an inferior degree of animalization, and yet we are told tubercles of the lungs have the same character in all respects, as those seen on the external surface of the body, with exalted animalization, accompanied with irregular fever, and terminating in scrofulous abscesses and ulceration, &c., and which every tyro knows to be diseased lymphatic glands.

This notion of the parasitic origin of tubercles, is the old astrological theory which was taught more than 2000 years ago; and notwithstanding its absurdity, the professors of our medical colleges will continue to teach it as long as such trash is of any value in their market.

If there is any thing any where to be found more crude and contradictory than the effusions we have noticed of Professor Graves, it may be found in the crudities with which he confounds phthisis with bronchitis and pneumonia. The regular and vascular organization of tubercles, and the poverty of the secretions which are conveyed to the heart by the lymphatic system in phthisis,

should have long since directed him to the true character of these bodies, without any knowledge of the scientific symptoms which point with an unerring hand to the disease in this system. The Doctor, however, as we have before said, is a man of talents, but knows nothing of these symptoms, or of the difference between diseases of the serous and of the mucous membranes, and his treatment of these affections is consequently the forebodings of death, or a mere repetition of the old astrological absurdities of the schools.



#### COROLLARIES.

1. “During health, the system is animated by a *spiritual, self moved, vital power*, which preserves it in harmonious order.”

2. “It is only by means of the *spiritual* influence of the morbid agent, that our *spiritual vital power*, can be diseased, and in like manner, only by the *spiritual* (dynamic) operation of medicine that health can be restored.”

3. “The homeopathic healing art develops for its purpose the IMMATERIAL (DYNAMIC) VIRTUES OF MEDICINAL SUBSTANCES, and to a degree previously unheard of, by means of a *peculiar and hitherto untried process*. By this process it is that they become penetrating, operative, and remedial, even those that, in a *natural or crude state*, betrayed not the least medicinal power upon the human system.”—

HAHNEMANN.

#### Polemical Powers of Hahnemann.

FROM THE  
BRITISH JOURNAL OF HOMŒOPATHY.

Introduction to the proving of Arsenic.

BY SAMUEL HAHNEMANN.

Overwhelming recollections arrest my mind at the mention of Arsenic.

When He, the All-bountiful, created iron, He left to the free choice of the children of men to fashion it either into the deadly dagger, or the peaceful ploughshare; to slay or to support their race. Ah, how much happier for them did they employ all His gifts for good! So would they fulfil His will and the end of their being. We cannot charge an all-loving Providence with the

crimes that men have committed in having abused the administration of terribly powerful drugs, by giving them in enormous doses, and in improper cases, confiding in some frivolous conceit or miserable authority, without having any proving or grounds of choice.

No sooner does a careful prover of the action of medicines appear, than all are in commotion against him as an enemy of their ease; and they do not shrink from meeting him with the most unblushing calumnies!

The ordinary system of medicine administers, *frequently and in large doses*, the strongest of drugs, such as arsenic, nitrate of silver, corrosive sublimate, wolf's-bane, deadly nightshade, iodine, foxglove, opium, henbane, &c. Stronger substances Homœopathy cannot employ, for none are stronger. When physicians of the prevailing school employ them, they evidently vie with each other who shall prescribe the largest doses, and boast of the monstrous quantities they have administered. For this they receive the approbation and applause of their brethren. Let Homœopathy, however, make use of the same substances, not at random, as in the ordinary practice, but, after careful investigation, in those cases only for which they are exactly suited and in the smallest possible quantities, and it is immediately charged with poisoning! How partial, how unjust, how calumnious is this, in those who pass for honest and upright men!

Does Homœopathy now enter into a fuller explanation? Does it condemn (as from conviction it must) the monstrous doses administered in the prevailing practice, and does it contend that infinitely smaller quantities should be given—that, where the ordinary physician prescribes a tenth, a half, a whole grain, and upwards, a quadrillionth, a sextillionth, a decillionth of a grain is perfectly sufficient? On this, the same prevailing school, which decried the homœopathic healing art as a system of poisoning, laughs outright, pronounces it to be mere child's play, and declares itself thoroughly convinced (convinced without having tried it?) that such a *small quantity* can have no earthly effect, — *is in fact as good as nothing at all*. Thus it is not ashamed to blow hot and cold with the same breath, to accuse exactly the same thing of being inert and ridiculously small, which it had just declaimed against as rank poisoning, all the time praising to the skies its own monstrous and murderous doses of the same substances. Is not this the most miserable and gross inconsistency it is possible to conceive, wilfully perpetrated for the purpose of doing shameful injustice to a system, which cannot be proved to be deficient

in truth, consistency, practical utility, the tenderest caution, and most unwearied circumspection, in the choice and administration of its remedies?

When not very long since a celebrated physician\* spoke of pounds of opium which were consumed monthly in his hospital, where even the nurses were permitted to give as much of it as they thought proper to the patients—mark now, opium, which in the ordinary practice has consigned so many thousands to the grave—yet this man lost none of the esteem in which he was held, because he belonged to the prevailing guild, in which every thing is allowable, be it as hurtful and dangerous as it may. And when a few years ago, in one of the most enlightened cities of Europe,† almost every practitioner, from the dignified doctor down to the barber's apprentice, prescribed arsenic as a fashionable medicine in almost every disease, and that so frequently, and in such immense doses, that the detriment to human health was quite palpable; yet this was most honorable practice, though not one of those who employed it was acquainted with the peculiar mode of action of this metallic oxyde (consequently must have been ignorant of the cases of disease when its employment was indicated,) and they all continued prescribing it in repeated doses, *any one of which, had it been sufficiently diluted and potentialized,‡ was quite sufficient to cure all the diseases in the habitable globe* in which this remedy was indicated. Which, then, of these opposite methods of practice best deserves the flattering appellation of "system of poisoning,"—the ordinary method, which assails the poor patient (who, by the way, often requires quite another medicine) with the tenth of a grain of arsenic, or the homœopathic method, which administers not even a drop of tincture of rhubarb, without having previously instituted a most rigid inquiry to ascertain whether or not rhubarb be the best adapted, the only appropriate remedy—the homœopathic method which has discovered, by indefatigable and oft-repeated trials, that it is very rarely necessary to administer more than a fractional part of a decillionth of a grain of arsenic, and that only in cases for which the most careful proving has shewn the remedy adapted? To which, then, of

\* Marcus, in Bamberg.

† In what a deep state of ignorance must not the medical science of our quarter of the globe be sunk, when these things occurred in such a city as Berlin, which yet, in all other kinds of human knowledge, has scarcely an equal!

‡ POTENTIALIZED—that is the word—the old Fox would not say magnetised. Ed.

these two methods, does the honorable title of "inconsiderate, rash system of poisoning," best apply?

"A tenth of a grain," I hear some remark, "is the very smallest quantity we are in the habit of giving; were we to prescribe less, we would render ourselves ridiculous."

Indeed! So a tenth of a grain produces sometimes dangerous results, but the observances of your clique prohibit you from giving less—a great deal less! Is this not a gross insult to common sense? Are the observances of your fraternity introduced among a set of senseless slaves, or among men who are endowed with liberty of thought and understanding? If the latter be the case, what should hinder you from giving a smaller quantity where a large quantity proves injurious? Is it obstinacy? scholastic dogmatism? or what other prison of the mind?

Novelty is, indeed, a capital crime in the orthodox school, which, settled down upon her lees, enslaves the reason to the tyranny of antiquated custom.

But why should a physician who, from his profession, ought to be learned, thinking,—independent,—a controller of nature—be bound down by such a pitiful rule; and above all, what should prevent him from rendering a dangerous dose mild by diminution?

What should prevent him, if experience teach him that one thousandth of a grain is still too strong, from giving one hundredth-thousandth, or a millionth of a grain? And were he to find that this quantity in many instances was productive of evil consequences, *since every thing in medicine is learned by investigation and experience* (seeing that it is but an experimental science,) what should hinder him from diminishing the millionth to a billionth? And if this were in many cases too powerful, why should he not still further diminish it to a quadrillionth of a grain, or if necessary, still less!

Methinks I hear vulgar stolidity croak from out the quagmire of its thousand-year-old prejudices: "Ha! ha! ha! a quadrillionth! Why, that's nothing at all!

How so? The smallest possible portion of a substance, is it not an integral part of the whole? Were it to be divided and re-divided even to the limits of infinity, would not there still remain *something*—something substantial—a part of the whole, let it be ever so minute? What man in his senses would deny it?

And if this (a quadrillionth, quintillionth, octillionth, decillionth) be in reality an integral part of the divided substance, which no man in his senses can doubt, why should

this minute portion, as it is certainly *something*, be *inactive*, while the whole acted with such violence? But *what* and *how much* this minute portion can effect, profoundly speculating reason, or lack thereof, can never tell: experience alone must determine, against whose facts there is no appeal. Experience alone can decide whether this small portion be too weak to have any effect on diseases, too weak to relieve and restore to health the morbid condition in which it is indicated. No dogmatical assertion, issuing from the closet of the theorist, can determine this point; experience alone, the only competent arbiter in such a case, can do this.

Experience has already decided the matter, and is seen to do so daily by every unprejudiced person.

#### Numbering---its Importance to the Physician.

The virtues of *simple arithmetic*—which, when occupied in the deduction of medical facts, is, by general consent, called *numbering*—have no operation more important than that of calculating the efficacy of *remedies*, for *numbering* is the only method by which their qualities can be satisfactorily proved, though almost wholly neglected by us, very many medicines which are in daily use being indebted for their character simply to hearsay, and not to that of effectual test. Accordingly, the most diverse opinions prevail, even among intelligent practitioners, with regard to the pretensions of numerous presumed therapeutic agents. One, for example, says that he has the greatest confidence in the alterative virtues of sarsaparilla; another, with equal opportunities of observation, declares his belief that its qualities are precisely equivalent to those of chopped hay. Some experimenters will affirm that iodide of potassium, given in doses of more than eight or ten grains, will act as an irritant, producing diarrhoea, vomiting, and other disagreeable effects; while certain inquirers, on the other hand, assert that six drachms of that substance may be given daily, in divided doses, for many weeks, and even half an ounce of it at a single dose, without inconvenience to the patient.

It is quite clear that—the constitution and condition of the patients being analogous—one or other of these statements is egregiously erroneous, although both profess to be founded on personal observation. It is needless to multiply instances. There are, in daily use, a great number of alleged medicinal substances, with reference to which it is disputed whether they have any operation at all, or admitting that they have some, what that operation is, and under what cir-



cumstances it occurs. But to ascertain whether a given substance be active or inert, in relation to the animal economy, and—if it have an appreciable action,—to determine what that action is, are points of inquiry within the compass of every individual who is endowed with common sense, and willing to incur the trouble of the investigation. Hence the fact that if any uncertainty exist on such questions, it is discreditable to medical science, their solution being mere matters of arithmetic. But ciphering seems as irksome to doctors as to schoolboys, the greater part of us preferring to exercise our faith or our fancy to using our tablets. The expression "*ceteris paribus*" is common enough in medical language, but that distribution of objects which is necessary to render the phrase applicable, is lamentably rare in medical inquiries. In no other department of human knowledge are to be found such discrepancies of opinion as to what ought not to be matter of opinion at all, but matter of fact; nor is it surprising that sound-headed men of other professions should often turn from medicine with incredulity and contempt, as from a science that is without principles, and an art without efficacy.

The numerical method may be applied to therapeutic operations with greater facility than to most other branches of medical inquiry, because we have here the advantage of knowing the nature and proportion of at least one of the agents that are concerned in the actions under investigation, namely, the medicine itself; whereas in many questions in vital statistics we have to calculate effects arising from causes whose nature and intensity—nay, perhaps, their very existence—are all wholly unknown. When a medicine is brought forward laying claim to the power of producing a certain action in the living system, or of curing a given disease specifically, no matter by what process, nothing can be plainer than the *method* of ascertaining whether the allegation be well founded. Simply take care that genuine samples and similar doses of the medicine are employed, that all the individuals to whom it is exhibited are, as nearly as possible, circumstanced alike, and that the number of patients is sufficient, and then the conclusion that is deduced by the accurate use of numbers may be considered to be as certain as any that can be obtained in a science that is not purely mathematical. Medicine cannot attain the exactness of astronomy or optics; but there seems to be no reason why it should not acquire equal certainty with chemistry, and other branches of experimental science.

If the efficacy of every new remedy had been thus tested as it arose, how often would the profession have been spared the humiliation of reposing unbounded confidence in agents which were really either inert or pernicious. Iceland liverwort would not then simply have settled down into a very respectable article of diet, after having promised to scare consumption from the face of the earth, nor would mercury have poisoned those myriads of persons who have fallen victims to an indiscriminating belief in its specific powers.

It is impossible, day after day, to observe the mass of isolated facts that are thrown before the profession relating to medicine, without lamenting the neglect to which we have drawn attention—both on this and many other occasions—and continuing to press the necessity of a remedy for the evil, until the proper remedy is adopted.

These observations of the editor of the London Lancet are not only of the utmost importance to the physician and his patients, but, like his observations and suggestions given in the last number of this work (p.18.) on the probably extensive utility of the use in chronic diseases of "a very moderate galvanic influence, sustained for a length of time," should be printed in letters of gold, and suspended in a conspicuous place in the office of every physician.

The diagnosis of diseases must, however, be first perfected before the profession can advance much in the choice of remedies, and may not we, who have practised physic nearly 40 years, and these arithmetical numbers more than a quarter of a century, now venture to suggest to the editor of the Lancet, the importance of copying into his journal, from the last number of this work, and spreading far and wide, the *mathematical* symptoms of tubercular disease of the organs and limbs, disclosed by the practice of the arithmetical system which he now recommends to the attention of the profession? No! such a suggestion would be perfectly useless, for it would be necessary for these symptoms to undergo a metamorphosis, and appear in a new dress under the garb of discoveries of some English physician, before we could have the least hope of seeing them published in that or any other Medical

Journal of that kingdom, or in the semi-English journals of the medical schools of this country. A universal or general knowledge of these symptoms, with the remedies naturally suggested by them, would save myriads of our race every year from a premature grave, who are now annually poisoned or quacked to death every year with the common remedies and treatment of the schools. But an incubus has hung its deadly weight upon every effort to improve the practice of medicine more than two thousand years, and the victims of every age and condition must submit to their fate.

#### Connection of Respiration with Sensibility.

NEW EXPLANATION OF AN OLD RIDDLE.  
To the Editor of *The Lancet*.

SIR,—It is always pleasing to throw light on the result of an experiment which is out of the usual course of explicable phenomena. One of such, I believe, is the following, for I never met with any explanation of it. Its discovery has generally been ascribed to an American naval officer, but whatever its origin, it has the same interest to the physiologist.

When each of four persons standing at the corners of a long table, places two fingers of one hand under the shoulders and hips of a person lying on the table, if at a given signal they all five draw their breath (inspire) quickly, the four can raise the fifth person, who will appear to them to be much lighter, or, as it has been described, "as light as a feather." They must all inspire at the same time, and without irregularity, or laughing, &c., on which account it may have to be tried twice or thrice before the remarkable result is obtained.

How can we explain it? A medical friend suggested to me that he thought the act of inspiration changed the position of the poles of a person, and thus altered the weights and to support his view stated that iron weights, after acquiring magnetic polarity from continuing long in one position, are lighter when turned over on their face. But this explanation, ingenious as it certainly is, supposes a change of weight in the person operated upon, a thing, which of course, cannot be. Indeed, there must be an increase in the weight equal to that of the air so inspired. I will proceed, therefore, to show what I think is the real cause of the person raised appearing to be so light.

1. Pressing my hand hard on the seat of a weighing machine, I kept up that pressure

as equally as I could, and another person observing the index, the result was, that when I inspired the instrument indicated a greater pressure in the proportion nearly of eight to seven, so that at each inspiration the index moved forward considerably.

2. I placed a bucket full of water on the floor, and carried a wire round its handle, and thence around my finger, making a loop at the middle of the second phalanx of the index of the right hand. I then found that the pressure of the wire, when I attempted to raise the bucket by it, caused (of course) considerable pain, but that if I inspired at the same time the pain was diminished, and I could raise the weight with less difficulty.

Now, here are three things to be considered; the amount of weight raised, the sensation experienced in raising this and other weights (and by which I presume we form a judgment of the weights of bodies generally, or of resistances) and the pain caused by great pressure on the part from which the weight is hung. My first experiment proves the influence of inspiration in obscuring the judgment of weight, inasmuch as the pressure appeared to be always the same; yet, during inspiration, the index showed a change. In the second it may easily be seen how the act of inspiring blunts sensibility to pain.

The explanation that I would attempt to give, therefore, of the lightness observed in the American experiment is, that the act of simultaneous inspiration which tends to stiffen the body of the person lying down, and render it better adapted for raising, also impairs the judgment of those who raise him, and blunts that unpleasant sensation in the fingers, &c., which might prevent them from raising that weight in the ordinary way. But the influence of inspiration on sensation is not confined to these efforts, or operations, only. The scream of affright is an inspiration, and the scream itself is a sound uttered during that act, and not a vocal sound produced, in the usual manner, by expiration. And I think there can be no doubt that this sudden drawing of the breath, as in the experiments cited above, is a means of dulling sensibility against the fatal shock which a fright might otherwise occasion. The sudden application of cold to the surface of the body in the shower bath, is attended with a sudden gasp, a modified scream, a rapid inspiration, and its effect, I have reason to believe, is to deaden sensibility.

If we consider the function of respiration in connection with sensibility, perhaps of every kind, we shall find it naturally divided into three periods,—inspiration, expiration, and an interval, the interval being, more pro-

perly, the time for sensibility,—inspiration taking up a certain time, expiration a time somewhat shorter, and the interval varying in duration, according to the wants of the system. All these periods are liable to alter, and we may see this in many states of the body. In the hurry, and bustle, and straining, of what is well called "action," no interval is allowed in the breathing, no one attends to his sensations, and the result of such increased respiration and muscular exertion is, quickened pulse, augmented heat of body, &c. But in an opposite condition of our system, when the mind, content on a subject that absorbs every thought and feeling, demands a long interval, as in amatory cases, the termination of that interval is marked, mediately, by a sigh, a form of expiration following a fully drawn inspiration. Hoping that these observations, hastily made, will meet, in your valuable Journal, the eye of some reader who has paid attention to the subject, I remain, Sir, your obedient servant,

SALTER LIVESAY, M. D., R. N.  
Belvedere-road, Lambeth, Dec. 1843.  
*London Lancet.*

**The cold water dash, and reflex action.**

*Hæmorrhage* from the lungs, nose, and uterus, is frequently arrested in an instant by repeated dashes of cold water. Syncope, infantile fainting fits—*Coma*, from narcotic poisons—*Asphyxia*—*Apoplexy*—and *Puerperal* convulsions, are arrested and quickly subdued in the same manner. These extraordinary effects of the sudden alternation of cold upon a warm surface is purely mechanical, and is the consequence of the sudden and powerful contraction of the over-expanded blood vessels. A subdued expansion of these vessels necessarily follows this and the succeeding contractions, according to the laws of the magnetic forces which produce motion, and these are precisely the effects that are required in these cases of hæmorrhage and suspended animation. With such means and with such a powerful remedy always at hand, many a fond mother has by mere intuition, saved her darling child.

When in any of these cases the body has, from any cause, become too cold to obtain these results, heat should be first applied to the surface, and then the cold dash, and we should remember that whatever we do in such cases should be done quickly.

In cases of inaction of the bladder in consequence of its great expansion, from excessive accumulations of urine, the cold dash upon the feet, legs and thighs, makes the bladder contract with great force, when the urine instantly flows in a large stream.

**Magnetic Poles, and Heat and Cold.**

The greatest heat known to us is produced by the action of the magnetic poles upon each other. Sir H. Davy decomposed the alkalies and many other substances that had resisted every other means of reduction, by bringing them in contact with the opposite poles of a powerful magnetic battery.

The greatest cold on the earth is known to be in the immediate vicinity of the magnetic poles in the arctic and antarctic circles, and it follows then, that when *active* and powerful magnetic poles are brought near to each other, they produce the greatest heat known to us, and that at their greatest distance from each other, they produce the greatest cold, or that the cold increases as their distance from each other. The distance of the magnetic poles from each other, in a direct line through the centre of the earth is 120 deg. or about 7,900 miles, and the distance from each pole to the centre of the earth about 3,950 miles, and as the magnetism of the earth with its magnetic poles is in motion, and consequently in an active state, as in the case of Davy's battery, the heat must increase as the distance from these poles to the centre of the earth, where it must be at its maximum. Now the heat in the earth increases, from a few feet below the surface, at the rate of about one degree in every 45 feet, as is well ascertained by numerous experiments in mines in different parts of the earth, as well as by boring into it, in many places, a distance of from a few hundred feet to the hot water line.

The deepest coal mine in England is near New Castle, where the temperature at the bottom, 1200 feet below the surface, is constantly 77 deg., and at 900 feet 70 deg., while at the surface it is about 48 deg.,

being about 1 deg. for every 45 feet. In the Mexican mines, at about the same distance from the surface, the temperature is constantly 74 degrees.

An increase of heat from the surface towards the centre of the earth, at the rate of 1 deg for every 60 feet, would make water boil at a distance of 9900 feet, and this is probably the source and mean depth of hot springs. The same rate of increase of heat would produce an intense light red heat at the distance of 180 miles, and melt almost every known substance, and at a distance of about 200 miles would convert them all into the gaseous state, when these gases, in a constant state of expansion, would be forced to the surface, as they are, through the lava, or valves of the craters of the volcanoes, by the action of the heat of the internal surface. The earth is therefore a hollow sphere, the crust or shell of which cannot be more than about 200 miles thick.\*

The intense light red heat of the internal surface of the shell of the earth must expand the gases inclosed in it so much as to make them perfectly transparent at the distance of many hundred miles from it, through which the light from this concave surface must shine with great splendor, and present to an observer, a thousand miles in the interior of the earth, a scene of surpassing grandeur.

The solid crust of the earth covered by the sea is thinner than other parts of it, the water extending over a great part of it far below the boiling water line; and hence the cause of the situation of the volcanoes in the islands and near the sea.

There are about 200 active volcanoes, of which 90 are in the islands surrounded by the sea, and 110 on the continents near it.

A volcano in the Indian sea, in 1815, shook the earth at the distance of 1000 miles, filled the air with ashes 300 miles, and roared at that distance like thunder.

\* The heat at the distance of two hundred miles from the magnetic poles towards the centre of the earth, or in the direction of their magnetic axis, is, therefore, so great as to reduce every kind of solid matter to the gaseous state.

The heat of the gases which issue from the craters of volcanoes is so intense as to melt every thing that comes in contact with them, in their course to the surface of the earth; and hence the cause of the lava in the craters, which sometimes flows over their mouths, and descends in rivers of fire to the valleys below.

These are some of the evidences of the most intense heat in the centre of the earth; while the arm frozen and fixed in its descent with the steel in hand to strike the flint to light a fire, is one of the evidences of the most intense cold on its surface—presenting in one view the heat expanding from the centre, and the cold spreading and condensing from opposite points, and thus forming from its elements a crust upon the surface.\*

The condensing power of these poles, at first comparatively feeble, has been increased immensely as the number of the strata subsequently formed upon the earth at different and distant periods of time, and the density of these strata, or the crust of the earth, has consequently increased in the same proportion.

As the repulsive force which maintains the earth and planets at their respective distances from the sun decreases in direct proportion from it, they must be maintained in an order in direct proportion to their density, and as their density is increasing with the number of their strata, they are consequently approaching the sun.

The number of strata in the earth and in the different planets is in direct proportion to the number of revolutions performed in their orbits. The number of strata in the earth being taken as 12, their numbers are nearly Vulcan, 24;† Mercury, 20, Venus, 16,

\* The ancients it appears from the following quotation had a knowledge of these extraordinary facts, and taught it in their Temples.

† The spot whence issued the prophetic vapor (from the mouth of the cave in the Temple of Apollo, at Delphi,) which inspired the priestess, was said to be the central point of the earth, this having been proved by Jupiter himself, who dispatched two eagles from opposite quarters of the heavens, which there encountered each other" (Strabo. 419.—Pausan 10, 16.—Plut, de orac. Dep. p. 409. Anthon.

† This planet now in the sun's atmosphere, has been seen through temporary openings in it, five times, by different astronomers.

Earth, 12, Mars, 8, Asteroids, 6, Jupiter, 4, Saturn, 2, Uranus,\* 1. The time in which a stratum is formed on each of these bodies is in direct proportion to their distance from the sun, and they are formed about 3 times faster on Mercury than they are on the earth at the present period.

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Case of *Hamatemesis*,

TREATED BY JOHN EPPS, M.D., LONDON.

Mrs. Waite, aged 23, married only a fortnight. I was requested, on Saturday, July 15, 1843, by the mother of this patient to visit her daughter, whom she represented as in a most dangerous state, and rapidly becoming worse.

I learned that on the previous Monday the patient, to outward appearance, was very well, but in the afternoon of that day was seized with giddiness and faintness, fell, and was found lying on the floor. This was followed by the vomiting of a large quantity of blood, which continued daily, more or less, decreasing a little till Friday, when (she having had some powerful purgative medicine administered by her medical attendant,) it increased, and on the Saturday, the day I was consulted, still increased. Such was the state, indeed, that the surgeon in attendance said if another vomiting took place, the result must be fatal.

When I arrived, which was about a quarter past one, p. m., I found the patient lying on the bed with white cheeks, white lips, white blanched fingers, with a swollen transparency about them, exhausted, eyes half closed, pulse rapid, and weak, excessive anxiety of countenance, the tongue blanched, but with a tint indicative of approaching typhus, the teeth encrusted with a sordes, cold sweats often breaking out, and she herself excessively thirsty. Besides these symptoms, there was the peculiar restlessness, so striking in these cases, causing her constantly, so far as her weakness would allow her, to change her position. Her mother stated further that the patient experiences continual pain round the waist, this becoming violent before she vomits, the pain being after the vomiting for a short time relieved. Her appetite was gone; her bowels had been very violently acted upon by the medicines administered to her before I saw her; the motions were black and knotty; her water passes regularly; her last monthly period was natural. I satisfied myself that she had had

no blow, no extra exertion. I ascertained, also that she had had pain round the waist for eight or nine weeks before she was married, and also a pain at the heart, the latter continuing after her marriage.

I gave the patient at once three globules of aconite, in a wine glass of water, and ordered the following:—

R. *Arsenic*, four globules;

*Water*, four ounces. The fourth part to be taken immediately\* and the dose to be repeated every fourth hour.

I left with the patient three globules of *veratrum*, to be given in case she fainted away.

Sunday morning, July 16. The patient vomited some blood soon after I left her yesterday. She took the arsenicum mixture, slept in the beginning of the night, but after waking, became restless, and has so continued ever since. She has not passed any water since I saw her yesterday. Her paleness is, of the two rather worse, and her appearance (to her mother) was worse than it was yesterday: her bowels have not acted. She has not complained of the pain round the waist and upper part of the bowels. She fainted yesterday, and the *veratrum* globules were administered. She feels, to use her own words, "heart-sick," retches very much, but brings up nothing; she wishes to die. For the continual retching I prescribed the following mixture:—

R. *Ipecacuanha*, four globules;

*Water*, four ounces. A spoonful for each dose. The dose she was ordered to take after each violent retching.

On Sunday night, at 10 p.m., her husband came in great anxiety, wishing me to visit his wife immediately, as they all expected she was dying. On arrival I found that though the previously existing symptoms existed, still they were not augmented to the degree that by this time they must have been if she were really worse; I therefore gave hope. Gave three spoonfuls of her *ipeacuanha* mixture, and left, in case the exhaustion should increase, three globules of China (*cinchona*) to take; otherwise to continue the *ipeacuanha* mixture.

Monday, July 17. She was restless all through the night, till the morning. At four in the morning her mother administered the three globules of China. She then fell asleep, and slept better since that hour than she has since Friday. She took a cup of cocoa and some barley water, and both remained on the stomach. She has not vomited since she took the arsenicum on Saturday. She complained last night of pain in her head, and wandered much; her eyes not closed when asleep. She is now hot and

\* The first strata upon this planet is not yet completed, as appears if recent calculations founded on certain geological and astro-magnetic data.

thirsty; her forehead also is hot; the retchings have diminished; her bowels have not acted; she is restless when awake. I ordered her two mixtures:—

R. *Aconite*, four globules;

*Water*, four ounces, Ft. mist., No. 1.

R. *Nux vomica*, four globules;

*Water*, four ounces, Ft. mist., No. 2.

I directed that she should take a fourth part of No. 1 mixture at once: wait four hours, then take a fourth part of No. 2; wait six hours, and then repeat as before.

18. Slept still better last night; was not awake more than an hour from twelve to six; her eyes more closed in sleep; she seems still inclined to vomit, but to-day it is rather heaving; water passes freely; bowels not opened; she complains of a pain in her stomach and of a fulness. Her hands burned last night, and this evening she is a little feverish. To-day she is decidedly better; her lips are less blanched. She is, however, more sleepy to-day. I left three globules of opium, which were ordered to be taken if the bowels remained confined, and the restlessness increased, and the eyes half closed, and the tongue should become brown, and the sleep comatose. If all these symptoms do not appear, then to continue the aconite and nux vomica mixtures.

20. Slept well for four hours last night, and slept with her eyes closed: has had very little retching; tongue not so black; thirst less. She has not as yet eaten anything, but expressed a wish for some stewed eels. Her bowels still inactive, though she has felt a desire this morning to relieve them, but without effect; water clear; still pain and a sense of fulness about the stomach, and she cannot bear pressure at the pit of her stomach; she has complained, also, of a severe pain in her back; her temper is peevish; her restlessness, when awake, is much lessened; her lips begin to assume a shade of redness; hands less hot. Has taken some beef-tea. She did not take the opium globules. Prescribed an aconite and a pulsatilla mixture, four globules in each, and ordered a bread poultice, on which twenty drops of the tincture of pulsatilla, of the first dilution, were dropped, to be applied to the pit of the stomach, and directed, that, should the bowels not act the next day, she might have an injection of warm water.

22. Her improvement is great; all her family and friends are astonished; she sleeps well; lips are more natural; tongue less black: ate a boiled sole yesterday; bowels still inactive, though she has had two injections. She has a little pain in the head, and more pains and rumblings in her bowels; the

pain in the stomach is gone. I ordered four globules of cocculus (one globule every eight hours, in a wineglass of water), for the inaction of the bowels, the rumblings, and the pain.

23. Bowels inactive still; complains of her head; slept well last night, and awoke quite sensible; her color is returning. She complains of pain in her stomach and bowels, and there is some soreness on pressure; and she was directed to continue the cocculus till three p. m., when, if her pains were not better, she was ordered to take aconite, one globule, and four hours after one globule of nux vomica.

24. Head better; she is stronger, eats heartily; took some mutton yesterday; bowels still inactive; about four p. m., felt a wish to relieve the bowels, but with no effect; she has severe pain in her back, and some tenderness about the bowels: water free and clear; slept well last night, but had during sleep one of her eyes open; she has still a little day-restlessness. Ordered one globule of opium in a wineglass of water every eight hours, for the inaction of the bowels and the sleeping with the one eye open.

25. Slept well last night and with the eye closed. After taking three doses of the opium, her bowels were freely open; the stools black and offensive; lips are regaining rapidly their natural color; the fingers have still a marbly hue. Ordered a globule of opium once a day.

31. The patient is able to sit up and to walk about the room without assistance; she eats heartily, but sometimes brings up her food; the bowels have been confined since the 28th; water clear. The monthly period has not appeared; she has pain in the back of the head and great soreness there—of these she continually complains. I ordered pulsatilla, one globule, in two spoonfuls of water—one spoonful twice a day.

Aug. 8. She paid me a visit; she had been at "public worship" on the Sunday. The back of the head is painful when she lies down, and the pain has kept her awake the two last nights. Her food agrees; appetite good; food remains quiet; bowels tolerably regular. The soreness of the back of the head she ascribes to the fall at the commencement of her illness. I ordered *arnica*, and my patient became well.

This case presents several interesting features.

The first is the inactivity of the bowels. The bowels did not act for ten days, and yet notwithstanding this inaction, the patient became steadily better. I am quite satisfied

that this inaction of the bowels was an essential to the cure; and, further, that had this patient's bowels been forced open by purgative medicine, hæmorrhage would have recurred, and, death must have been the sequel.

A second feature of interest is the evidence afforded in the effect produced by the opium on the bowels, of the power of opium in removing *inaction* of the bowels in certain conditions.

I may add here, that I have cured the most obstinate constipations by opium, in infinitesimal doses; but let it not be supposed, in proffering this statement, that I assert that opium is *the* cure for constipation generally. Opium will cure the constipation which is attended with symptoms to which it is homœopathic, *i. e.*, to which the opium has the power of producing in a healthy person, similar symptoms. Those, therefore, who think to cure constipation by the use of opium without first ascertaining whether the concomitant symptoms are similar to those produced by the operation of opium, will be themselves deceived, and will injure their patients.

*Great Russell street, Jan, 10, 1844.*

See a case by Dr. Epps, and note in explanation, in our last number, p. 30.

#### Auscultation.

The editor of the London Lancet, in an article of the 25th Nov. 1843, laments the decline of the use of the Stethoscope, and imputes it to an exaggeration of its real merits by the dependence that has been placed upon minute and fanciful sounds, or uncertain symptoms, and the neglect of the aid of percussion.

These are probably some of the causes of the decline of the use of this instrument, but there is another cause which has operated more powerfully in this country to prevent its use at all by many physicians, and to cause the decline of its use by others; and that is the habit of *guessing* the precise seat, character, and state of diseases of the chest and elsewhere, which saves almost entirely the time and labor of investigation.

As reasoning and their obligations to their confiding patients have failed to change the habits of these drones, we would suggest to them the practice of the magnetic symptoms which operate like a great labor-saving machine, and by which diseases of the chest are distinguished in an instant of time, and

with a precision that defies imitation by the Stethoscope and percussion combined. Mere Tyro's in the practice of these symptoms have often put the professors of auscultation and percussion to the route, by ocular and overwhelming demonstrations with the dissecting knife.

#### M. Boudet, on the Natural or Spontaneous Cure of Phthisis.

"Tuberculous degeneration of the lungs and bronchial ganglia is infinitely more common, and is oftener susceptible of a favorable termination, than most medical men are willing to admit. In very young children, indeed, tubercles in the lung are certainly of rare occurrence. Of 835 dissections of the bodies of infants, during the first year of life, pulmonary tubercles were found in 18 only—or once in every 64 cases. The frequency, however, of the disease increases very rapidly with the age; for, during the second year, the ratio was found to be as that of 1 to 12: and this progresses, as years advance.

"Having examined in succession, and without selection, the state of the lungs in 197 persons, (of from 2 to 70 years of age,) who died from various diseases or even from casual accidents, I obtained the following results. From two to fifteen years, I found tubercles in three-fourths of the cases. At a somewhat more advanced age, the proportion of tuberculous to non-tuberculous individuals seems to reach its maximum; for of 135 persons, whose ages varied from 15 to 36 years, in no fewer than 116 were tubercles found, either in the lungs themselves or in the bronchial glands; viz. a proportion of six in every seven cases. If such be the case, we may truly say that the presence of tubercles in the respiratory organs is the rule, and their absence is the exception.

"This singular result—a result which, at first sight, seems almost quite incredible—is however readily explicable by the gratifying circumstance of the extreme facility with which these morbid products cease to be incompatible with health, in consequence of various changes that they are liable to undergo in their intimate composition.

"The spontaneous cure of tubercles in the lungs is effected in several different ways. In some cases the tuberculous deposit becomes isolated from the surrounding pulmonary tissue, by a firm fibrous envelop being formed around it. Again, the density of the tubercles themselves may become increased in one of three ways: either by their becoming so desiccated as to form quite a friable paste; or by their assuming a firm tena-

cious consistence that is greasy to the touch; or, lastly, by their degenerating into an inorganic calcareous matter.

"Tubercles may also disappear, in consequence of the progressive extension of the black pulmonic deposit, that we so often see around them. Occasionally, too, they become wholly or partially absorbed, leaving nothing in their place but their sac or envelop. Lastly, their contents may be eliminated from the body."

These various modes of natural cure may be reduced to five, viz.—1. *Sequestration*, by the development of a fibrous sac around the tuberculous deposit;—2. *Induration*;—3. *Transformation* into black pulmonary matter;—4. *Absorption*;—and 5. *Elimination*.

The author makes the following remarks on the latter two modes; and first of absorption.

"Tuberculous matter may be absorbed. I have frequently had occasion to observe tubercles which had become modified in their consistence, and which exhibited very unusual appearances. Instead of being globular, they were of an oval or elliptic shape, or they had become rough and angular on their sides. May we not suppose that such changes were owing to an unequal absorption of different parts of these deposits?"

"Occasionally, too, I have found, in the centre of a thin membranous cyst, a minute tubercle, perhaps not larger than the quarter of the size of a millet seed, and which yet exhibited all the physical characters of this morbid product. Now we rarely or never meet with tubercles, when first deposited in the pulmonary parenchyma, so very small as those which we have now described. There is strong reason, therefore, for supposing that a partial absorption has taken place. What greatly confirms the probability of this idea is, that I have occasionally found, in the neighborhood of these dwarfed tubercles, numerous minute cysts, which were entirely empty; the tuberculous matter, which had once filled them, having disappeared. From these facts I infer that tuberculous deposits may disappear from the tissue of the lungs, by becoming absorbed.

"With respect to the mode by elimination, the only remark that I have to make is, that I have never known it to be effected except in one way, viz. that of expectoration from the bronchi. In this manner, sometimes, pieces of very considerable size have been rejected by coughing.

"The transformation of tuberculous matter may take place at all the stages of its evolution; in the state of softening, as well as of crudity; and under the form of grey gra-

nulations, and yellow tubercles, whether these be separate or aggregated together.

"Even tuberculous excavations of the lungs not unfrequently undergo a curative process. Of 197 cases taken at hazard, in 10 I have found the cicatrices of caverns in the lungs, without the existence of any recent tubercles; and in other eight cases, the process of cicatrization was going on, while recently-formed tubercles existed at the same time. When circumstances are favorable, the process of their healing is usually by the organization of an accidental mucous membrane, lining their cavity; but sometimes by the formation of a fibrous or fibro-cartilaginous envelop. Their cavities may continue to be open, and to communicate, or not, with the adjoining branch. Sometimes they become quite obliterated by the cohesion of their opposite surfaces.

"Usually, the parenchyma of the lung for some little extent around the cicatrised vomica is more or less indurated and impermeable to air: very often it is infiltrated with a black-colored matter.

"Not only have I frequently ascertained by dissection the frequent transformation of tuberculous deposits, but I have also been able to follow out, in the living subject, the conformation of these data; and I now feel confident that phthisis is much more frequently cured than most physicians are willing to admit."

M. Fournet alludes to his having met with, in the course of one year, no fewer than 14 cases of confirmed phthisis that were cured; besides 10 other cases, in which dissection revealed the traces of caverns, that had become perfectly healed.

He goes on to remark, that "these 14 cases of phthisis cured in the living subject, have proved to me—

"1. That certain persons, who have exhibited the most decided symptoms of the disease in its most advanced stage, may yet be restored to excellent health.

"2. That, if the general state is satisfactory in these individuals, and does not occasionally bear the evidence in some manner of the accidents of their past life, the local condition is very different, and always reveals the presence of alterations, more or less extensive.

"3. That even hereditary phthisis, in its most advanced stage, is susceptible of cure; although such an occurrence is certainly much more rare than in cases of the accidental disease.

"4. That phthisical patients, who have been treated by very various kinds of remedies, or who have been left entirely to the resources of the natural powers of their



economy, seem to have recovered in about the same proportion; and, therefore, that nature generally 'fait tous les frais' of the cure of the disease."

He concludes his remarks with the following sentence: "The capital fact which seems to spring from these inquiries is, that tuberculous disease is not, like Cancer, essentially incurable; on the contrary, that it is often curable, and that its extreme and most disheartening fatality is referrible rather to the circumstance of its being seated in one of the vital organs of the system, and to its tendency to frequent relapses, than to its primary and essential nature.—*Revue Medicale*.

M. Boudet confirms in the most extraordinary manner the views of consumption we have long maintained, and long since published in this country, and we have selected and now republish the article for the particular benefit of a certain class of physicians, who when they have been pointed to cases in which this disease has been cured by the magnetic remedies, have uniformly answered "it was not a case of consumption, for that disease can't be cured." We may now, also for their benefit, republish a schedule of the cases of tubercular disease treated with those remedies in 1835, and published in 1836, in which it will be seen 42 out of 46 cases of consumption were cured. We would not, however, be understood as intimating a belief that they could have made such a proportional number of cures with those remedies, without first learning how to distinguish the disease before the sexton is called.

Cases of tubercular disease affecting different parts of the body, and treated with the magnetic remedies from Jan. 1, to Dec. 31, 1835.

|                                                                                                        |    |
|--------------------------------------------------------------------------------------------------------|----|
| Cases affecting the neck, . . . . .                                                                    | 18 |
| Neck and eyes, . . . . .                                                                               | 2  |
| Neck, nose, and spine, . . . . .                                                                       | 1  |
| Neck, tongue, tonsils, and right leg, . . . . .                                                        | 1  |
| Neck, jaw, tonsils, ear, cerebellum, breast, heart, stomach, uterus, one arm, and both legs, . . . . . | 1  |
| Neck and lung, . . . . .                                                                               | 2  |
| Neck and stomach, . . . . .                                                                            | 1  |
| Neck and mesentery, . . . . .                                                                          | 3  |
| Tongue, tonsils, and uvula . . . . .                                                                   | 1  |
| Tongue tonsils, and right leg, . . . . .                                                               | 1  |
| Nose and face, . . . . .                                                                               | 2  |
| Lungs, (first stage,) . . . . .                                                                        | 21 |

|                                                                              |    |
|------------------------------------------------------------------------------|----|
| Lungs, last stage, with tubercles in a mature state, . . . . .               | 1  |
| Lungs, with excavations, . . . . .                                           | 5  |
| Lungs and both legs, and one ankle, with excavation of both lungs, . . . . . | 1  |
| Heart, . . . . .                                                             | 3  |
| Heart and liver, . . . . .                                                   | 4  |
| Stomach, . . . . .                                                           | 19 |
| Liver, . . . . .                                                             | 5  |
| Stomach and lungs, . . . . .                                                 | 18 |
| Kidney, (left,) . . . . .                                                    | 1  |
| Liver and kidney, (right,) . . . . .                                         | 1  |
| Liver and stomach, . . . . .                                                 | 4  |
| Liver with abscess, . . . . .                                                | 3  |
| Mesentery, . . . . .                                                         | 1  |
| Uterus and legs, . . . . .                                                   | 3  |
| Uterus and lungs, . . . . .                                                  | 2  |
| Uterus and stomach, . . . . .                                                | 6  |
| Joints and limbs, . . . . .                                                  | 31 |
| Unknown, . . . . .                                                           | 1  |

Whole number of cases in 1835, 163  
Of these cases the number cured is, 154  
Cases not cured, in consequence of not using the remedies a sufficient length of time, 3

Of the cases which have died, the first was that of Master N., of Columbus, aged 16 or 17 years' whom I never saw, and of whose case I know nothing, except that it was about ten years since it commenced.

The second case was that of Mrs. B., of M., in the last part of the last stage of tubercula of the mesentery, with a frightful marasmus.

The third case was that of Mrs. K., of M., with cancer of the uterus in a state of ulceration, complicated with abscess of the liver, which was discharging matter through the right side in four places.

The fourth case was that of Mr. W., of M. Michigan, with tuberculated right leg, left hand, heart, and scalp over the right frontal, and right parietal bones. The leg and also the scalp ulcerated in two places. He died of compression of the brain, in consequence of the injudicious use of nitrate of silver, which had been frequently applied by the direction of his physicians, to the upper part of the parietal bone, and penetrated through it to the brain, as shown by dissection.

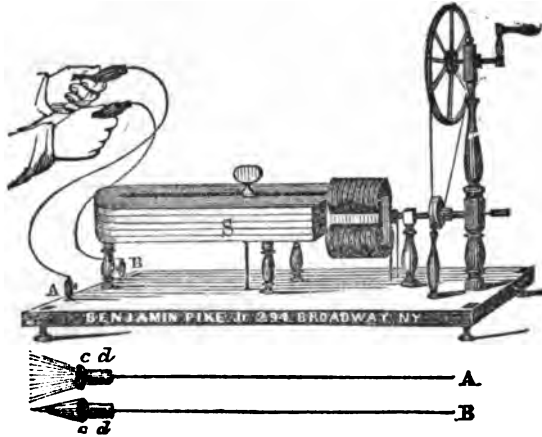
The fifth case was that of Mrs. S., of Cincinnati, with tuberculated left lung in a mature state; and sixth, the case of Mrs. C., of Cincinnati, with hypertrophy of the heart, and excavation of both lungs.

The yearly number of cases in which these magnetic remedies have been used, and also the yearly number of cases they have cured since 1835, have increased more than a hundred fold, as ascertained by a simple arithmeti-

cal series—under all the disadvantages in loss of time, and of having been before in many cases nearly quacked to death with the common treatment of the school's.

They should now, with the demonstrations

of the scientific character of these remedies derived from the results of the magnetic action of the rotary machine, increase in a much greater ratio.



#### Rotary Magnetic Machine.

The readers of the Dissector will recollect that, in our last number, we gave a description of the extraordinary effects of the Rotary Magnetic Machine, obtained by Von. J. E. Wetzler, of Krunkheiten, in Germany. We have repeated some of his experiments with this machine with the same or similar results, and we have besides obtained with it the most astounding effects in a variety of other cases.

This machine has been known as one of great power both in Europe and this country, during the last two or three years, but nothing of consequence has been published in regard to its application in the cure of diseases, excepting the experiments of Von. Wetzler.

When the wheel is turned, the armature of soft iron, wound with copper wire, strikes the poles of the magnet, S, fig. 5; which elicits sparks of fire, while brass cylinders, connected with the armature and poles of the magnet, by copper wires, are held in the hands. The forces from this machine, it will be seen, are diffused and connected with

the skin, from and over large surfaces, instead of points of copper wire, as formerly. Von. Wetzler, it seems, first applied these cylinders to the face, head and other parts of the body to cure local diseases.

We soon found the cylinders very awkward means of connecting these forces with different parts of the body, and especially in directing them into the different organs through the posterior spinal nerves, and we consequently substituted large brass buttons, &c., connected with copper wires, A B—the wires being drawn through corks, d d, (non-conductors) with which the buttons are placed and held on the different parts of the body. The button, c A, is about an inch and a half in diameter, and is connected with the hollow conductor, B, of the north pole of the magnet, by means of a screw; while the button of the other wire, c B, of one inch in diameter, is connected with the south pole, S, at A.

The forces that are conducted from the north pole along the wire, A, through the button, c, repel and expand, and are much stronger than those that are conducted from

the south pole along the wire B, through the button, c, which attract and contract, and this fact was known to Von. Wetzler, who estimated the difference at from 30 to 40 per cent.

We have another rotary magnetic machine from the same maker, much smaller, and which answers all the purposes of this, in which a small magnet is turned over a small armature, by a small magnetic battery. The buttons we use in magnetising are attached to it in the same manner as in the other machine, and its power is increased to a very great extent by placing pieces of iron wire of the length and size of knitting needles into the cylinder of coils of copper wire connected with the poles of the magnet and armature.

Having described these machines, and the instrument, by which the forces obtained from them are connected with different parts of the body, we shall now proceed to describe the effects of the action of these forces on the organs and other parts of the body in a variety of cases.

*Sick-Headache.*—In these cases we have applied the large button connected with the machine to the poles of the brain through the organ of causality on one side, and the small button to the organ of Amativeness on the opposite side, alternately; so that the forces might pass along the line of the axes of the large poles of the brain as seen in fig. p. 58. The power applied was always very light and 8 persons, including ladies and gentlemen, were cured in from 1 to 3 minutes.

*Chorea, or St. Vitus' Dance.*—The case of a young lady aged 13 years, with complete loss of power over the left hand and arm, and very little over the left foot and leg. She had been out of health, with pain in the head and chest, but the disease was not fully developed until two weeks before she called upon us. The magnetic symptoms pointed to the disease in the cerebellum. The large button was then placed on the right side of the organ of Amativeness and the other on the hand, and then on the foot, and sometimes on the organs of causality and individuality. She improved daily under this process. We commenced magnetizing her Jan. 15, 1844, and magnetiz-

ed her generally once every other day, and on the 9th of Feb. the use of her limbs was entirely restored.

*Tooth-ache.*—(Jumping.)—Two cases, and each entirely cured in an instant of time.

*Tic Douloureux.*—Three cases. The first was cured the first sitting. The second after three, and the third on the second.

*Tooth-ache with swelled face,* 6 cases, 5 of which were cured at the first, and 1 on the second application of the buttons, to the face.

*White Swellings of Mucous Surfaces—Encysted Tumors of the Wrist and Hand.*

*Three Cases.*

A hopeless case of this affection in a gentleman, aged 37 years, was presented to us, in which the joints of both wrists and hands were implicated. The use of the right hand and arm had been entirely lost about seven months, and the left was swelling and fast approaching the same state. There were two very small encysted tumors on the right wrist, which was much swelled, and four about the size of musket balls on the left. There was one also on a swelled joint of each hand.

The buttons were placed upon these swellings under the full power of the instrument, which they resisted with the greatest tenacity for ten days, when they began to succumb and shrink from it. They have now, March 10th, been under the action of the machine from five to ten minutes nearly every day during the last 60 days, and they are now very nearly reduced, and the strength and action of the hands and arms very nearly restored.

The second case is that of a female servant, with swelling of the left wrist and hand, and two large encysted tumors, with entire loss of power in the hand and wrist. One of these tumors had been opened by a surgeon, and its gelatinous contents discharged without benefiting the patient. The buttons were applied as in the first case; on the fifth day the swelling and tumors began to shrink under them, and on the sixth day she was able to open and shut her hand

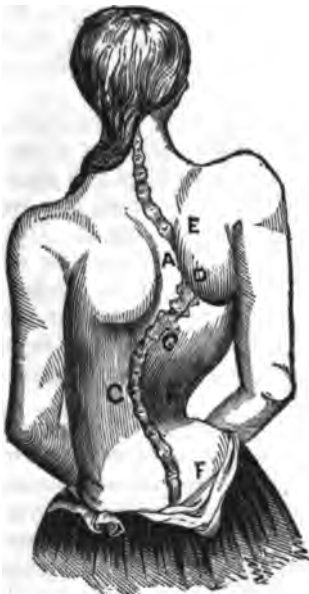
with considerable force, and the disease will soon be reduced.

The third case is that of a lady with swelled wrist, and one encysted tumor, which, like the other cases of this class, is yielding slowly to the power of the instrument.

*Lateral Curvatures of the Spine.*—2 cases. The muscles of the back are alternately tuberculated and atrophied in these cases, and in many of them puffy or elastic white swellings formed over the tuberculated muscles, while the atrophied muscles become paralysed and cease to act. Slight deviations of the spine are the consequences of the first change in the natural state of these muscles, and great curvatures of the last, as seen in fig. 6.

This figure represents, in no exaggerated form, the case of a young lady of this city, aged 17 years, who on returning home from school, about two years since, was seen to have a slight deviation in the spine, which

Fig. 6.



gradually increased to the great curvatures seen in the figure, which also represents, very well, hundreds of other cases in this city, that are most lamentable monuments of the pres-

ent state of the knowledge and skill of the medical profession.

In this case a large puffy and elastic white swelling occupied the back part of the scapula, DE, over the tuberculated muscles under it, and extended to the upper part of the right shoulder; while the muscles on the inside of the arch of the spine at A, were paralysed. Again the muscles on the outside of the arch at C, were tuberculated and as tense as the head of a drum; while those on the inside at B, were perfectly paralysed, soft and flabby. The muscles were also tuberculated and tense at F, and atrophied on the opposite side of the spine. There was also a great projection of the point of the scapula at D, and the spine itself was tuberculated from thence to G.

We commenced magnetizing this young lady, by applying the different buttons on the paralysed muscles at A, and B, alternately, at intervals of a few seconds, with the greatest power of the machine. They were also applied at E, and B, and at E and C, which straightened the spine so much as to bring the whole width of it out from under the shoulder blade, and the sitting was concluded in 10 minutes.

Very little action was apparently produced in the paralysed muscles, but it was amusing to see them dance at the next and succeeding sittings to the tune of the instrument. The large puffy swelling DE, was seen to shrink under its power, while magnetizing her the fourth time, and we and the ladies in attendance were surprised to see it suddenly vanish entirely, leaving behind little else but the skin and bones of the scapula, when the sitting was instantly concluded.

The action of the paralysed muscles was now so much increased, as to make it necessary to lessen the power of the instrument, and after the tenth sitting, in the course of fourteen days from the time we commenced magnetizing her, the muscles at B, had become full, broad, and tense; while those on the opposite side had become much softer and less tense. The muscles at A had also become tense, and those on the opposite side relaxed. The space between the shoulder blades, which did not at first exceed two

inches, amounted now to six inches, and the spine having very nearly resumed its natural position, and her form very nearly perfect, she was dismissed, with directions to apply the magnetic plaster five inches wide along the spinal column, and to take the magnetised gold pill.

*White Swellings of the Serous Surfaces—Tubercular Disease, or common Scrofulous Swellings of the Joints.*

We have been daily applying those buttons to these swellings during the last two months, with a moderate power of the machine, and in a great variety of cases, including those of the shoulder, elbow, wrist, hip joint, knee, ankle, foot, and cervical, dorsal, and lumbar vertebræ. A great majority of these cases were, at the time we commenced magnetising them, using the magnetic gold pills and magnetic plaster, and were in the various stages of the process of cure—some of the cases being still in the first, others in the second stage, and some very nearly well. It would be as tedious as it would be useless to describe successively the apparent effect in each case, as they necessarily varied, more or less in the different stages of that process, and it will be sufficient to say the effect has been apparently beneficial in nearly all these cases, and has in no instance been apparently injurious. The same may be said of the cases which had not been under the use of these remedies, and the case of white swelling of the scapula of the young lady with curvatures of the spine, is an example of the best effects obtained in some of these cases, which did not, however, from the nature of the disease, preclude the necessity of the use of other remedies.

*Bronchocèle—(Goitre).*—Two cases. 1st. that of a young lady, from the mountains of New Jersey. The disease commenced five years since, was very large, and we had been foiled in an attempt to cure it, and now applied the buttons to it without mercy, under the full power of the machine, which made it tremble like a leaf, without exhibiting any disposition to shrink from the action of the instrument, and the sitting was

concluded in ten minutes. The next day the tumor was again placed under the full power of the machine, which soon began to shrink under it, and in ten minutes was reduced about one-third, when the sitting was concluded. On the third day it was again submitted to the full power of the instrument, and in ten minutes entirely disappeared, and the sitting was concluded; but on removing the buttons the swelling appeared again. It was, however, much reduced. On applying the buttons to it again on the next day, it disappeared in an instant, when the patient screamed under the frightful power of the instrument, which now shook her whole frame. The power was instantly reduced by an assistant one-half—the buttons being still held in their position, and in ten minutes the sitting was again concluded.

On removing the buttons, this unwelcome intruder on female beauty, like Monsieur Tonson, “came again,” but was now reduced fully one-half. The reduction has continued under the daily action of a moderate power, and the swelling now (March 12th,) after having been magnetised ten times, is not more than one quarter of its original dimensions.

The second case is that of a young lady of this city. The swelling was comparatively small, and she was unable to bear more than one-fourth part of the power of the instrument at the first sitting. It entirely disappeared in an instant at the commencement of the second sitting, and on removing the buttons, it was apparently permanently reduced more than one-half. (March 12th).

*Paralysis—(Palsy).*—Thirteen cases, including those of one side of the face, of the ear, eye, one arm, leg, one side of the body, (hemiplegia,) and of both lower limbs, or paraplegia.

In some of these cases the paralysis was diminished, or removed temporarily, and in others permanently, by the action of the machine. Some of them were the consequence of tubercular disease of the serous surfaces of the cerebellum and medulla oblongata, as disclosed by the magnetic symptoms; while other cases were those of hypertrophy of the

mucous surfaces of those organs, as disclosed by the presence of the disease, and the absence of those symptoms. The diagnoses in the different cases was confirmed, 1st, by the existing connection between the paralysed muscles and these organs; and, secondly, by the great difference shown in the *sensibility* of those different surfaces under the action of the machine.

These observations will enable physicians who are familiar with these symptoms to distinguish the different cases requiring very different powers of the machine, and also the importance of aiding its action on these organs with the proper remedies for the reduction of these diseases, or aiding the steady, although comparatively feeble action of the proper remedies for these cases, by the necessarily temporary action of the machine, as the cause of the paralysis in these cases must be removed, as our experiments have shown, before the paralysed limbs can be fully and permanently restored.

These suggestions are deemed of so much importance as to induce us to illustrate them in a concise history of one of these cases—that of C. J. H., a young man, aged 24, who for four or five years past had been suffering from a gradual diminution of the power of voluntary motion, mostly in the lower extremities, and amounting at least to almost perfect paralysis, being unable to walk across a room without the aid of a cane, and then only able to shuffle along without raising the feet or bending the knees. These symptoms were accompanied with costiveness, loss of appetite, of sleep, of flesh, and at last, with pain in the head, when his mind began to give way to the general wreck of his naturally good constitution.

The magnetic symptoms pointed to the seat of the disease in the cerebellum, and we commenced magnetising him on the 3d of January, and the first sitting, which was concluded in ten minutes, resulted in a favorable modification of all the symptoms. He was brought to us in a carriage, but determined to put his increased power of locomotion to the test, and first walked about half a

mile on his way to his lodgings. At the second sitting on the 6th of January, the pain in his head gave way. After the third sitting on the 6th, he walked about three miles, and after the 6th, (11th Jan.) he made the natural motions in walking. He was magnetised daily, with a steady improvement in his symptoms, until the 20th Jan., when he took a severe cold, and was consequently confined to the house until the 12th February, when we commenced magnetising again. His bowels have now (March 15th,) become perfectly regular, appetite excellent, sleep sound, mental powers greatly improved, and flesh and power of locomotion nearly natural, indicating a vigorous action in all the functions of life.

Now this naturally talented and amiable young man commenced the use of the magnetic remedies before mentioned by the direction of a physician in one of the southern States, and who after a few weeks advised him to come to this city, and we advised him to continue the remedies in conjunction with the action of the machine. He did so, and such is the result of a perfectly hopeless case, the consequence of supposed harmless irregularities, excited by an enormous cerebellum.

*Ear.*—(Deafness.)—We have two cases of this affection, from tubercular disease, whose hearing is improving under the combined action of the machine, and the remedies mentioned.

*Eye.*—We have obtained the most flattering effects in some cases of disease of the eye, by the action of the machine alone—indiscriminately, without regard to the classification of the nosologists.

*Erysipelas.*—Two cases. The erythema, or red blush of the skin, in this disease, is precisely like that produced by the buttons under the action of the machine, and we were pleased with an opportunity to test the effect of its forces in a severe case affecting the face, which became as pale as death, on moving one of the buttons over it—the other being at the same time in contact with the ear. This magical effect, after the lapse of eight days, appears to be permanent.

The homœopathsists lay great stress upon the result of this experiment, as confirming in the most extraordinary manner their favorite doctrine of *similia similibus curantur*, and insist upon it that the a'opathists must match it, or give up their opposition to homœopathy.\*

The second case was also a severe one, affecting the lower limbs, in which, like the first, the common remedies of the schools, and a great variety of nostrums had failed. The disease, however, gave way in the most extraordinary manner under the action of the instrument, reducing the swelling and removing entirely the intolerable itching.

Aware of the consequences resulting from attempts to impart to the people, and, consequently, to pretenders to science, a knowledge for which the former are not, and the latter never can be prepared, we should not at present venture to describe the effects obtained from the machine in another case, if those we have already described, as well as many others, had not been witnessed by a great number of respectable persons, but as such is the fact, we may proceed, regardless alike of the good or evil effects of the action of the machine under the guidance of those who know nothing of the magnetic symptoms of disease, acute or chronic, or of the magnetic organization of the human system on which the instrument acts.

*Tubercular Disease of the Neck.*—(King's Evil).—Four cases. They were all under the influence of the magnetic remedies before mentioned, or magnetised rings, to which that of the machine has been added, and are all progressing favorably.

*Strabismus.*—(Squinting).—One case. This was a bad case of a young lady, affecting both eyes during the last seven years, which turned out so much as to make it very difficult to read. We applied the buttons to them, under a moderate power of the machine, and concluded the sitting in two minutes, with a plain diminution of the affection. The reduction continued daily,

under the action of the instrument, and on the fifth sitting it was completed. The action of the eye was then perfectly natural, and the cure appears to be permanent.

*Entropium.*—(Eye-lashes and eye-lid inverted upon the eye-ball).—One case. That of a female. The common operation and remedies had failed in this case. The disease could not, however, resist the action of the machine, but succumbed to it—the eye-lid turning out, and the sitting was concluded in ten minutes. The eye-lid and lashes did not venture to occupy their former position. We are now magnetising both eyes to remove the opacity of the corneas and granulations of the eye-lids, which are disappearing rapidly under the action of the instrument.

*Aphonia.*—(Loss of voice).—One case. We have used the machine three times in this case with decided benefit.

*Tubercular Disease of the Throat.*—Eight cases. The swelling and redness of the throat could be plainly seen to be lessening daily under the action of the machine in these cases. The worst cases of enlarged tonsils do not withstand the action of the instrument, but shrink under it, becoming pale and corrugated.

ACUTE DISEASES.—*Inflammation of the Liver.*—Two cases. The action of the instrument reduced the inflammation in these cases with great rapidity. The pain, however, is so much increased, as to make it necessary to observe the greatest caution in magnetising inflamed surfaces.

*Tubercular Disease of the Organs.*—We have conducted the forces from the machine through all the organs in a great number, and a great variety of cases, including the brain and spinal cord. In these cases one of the buttons was placed over the spinal cord in the hollow of the neck on the organ of amativeness, the suboccipital, or one of the posterior spinal nerves, and the other button on different parts of the body depending on the organ and different parts of it, through which we wished to conduct the forces, and this we have always been able to do with the greatest facility and precision. As regards the effects obtained in these cases, beyond

\* One of these gentlemen, however, suggests that they may possibly be able to do so, by the aid of such a genius as Dr. Post, so celebrated in the manufacture of homœopathy soap.

that of removing or palliating a painful or urgent symptom, permanently or temporarily. We can say but little that is perfectly satisfactory, because the process of cure is necessarily slow, where, at least in many of them, large portions of the organs have to be taken down, carried off, and rebuilt before the patient can recover, and the time since we commenced magnetizing these organs, now only about three months, is not generally long enough to effect these objects.

Besides a great majority of these cases were under the influence of the magnetic remedies, and many others were placed under their influence with the impression that the effect of the machine alone must necessarily be temporary in such cases, which appears to be confirmed by the apparently temporary effect of the instrument upon most if not all of those who were not under such influence.

As regards the effect of the machine in many of the cases in which the patients were at first, or after having been magnetized a few times, were placed under the influence of those remedies it was generally little more than that of removing the urgent symptoms of the periods of excitement in the course of the disease. There were however some extraordinary and most interesting exceptions to these general results, and among these are the apparent effects of the machine in some of the cases of consumption in which we have used it, which leave little doubt of its great influence in this disease, and as little that it will hereafter be entirely under the control of the physician who learns as he may to distinguish it in its incipient stage, or when the tubercles are in their milliary state.

The experiments of Drs. Lerche and Cru-sell, of St. Petersburg, suggested to us the probability of such a result from the action of the machine, as they formed tubercles with one pole of a battery and dissipated them with the other, in *their experiments upon the eye*\*

\* The results of those experiments form one of the best texts for the most withering comment on the common system of practice, as will be seen from the fact that physicians of every name and grade, as well as quacks of all sorts, are constantly prescribing positive and negative remedies indiscriminately, in different, or positive and negative diseases, without the least knowledge of their having any such distinctive character, and consequently none of the cause of the discordant and unscientific results of the action of their remedies.

The action of the machine will also be found of the greatest importance in female complaints. The uterus, and the broad ligaments which sustain it in its position in the healthy state, contract with great force in prolapsus uteri under the action of the instrument, and gives the most entire and apparently permanent relief.

In tubercular disease of the heart (hypertrophy) the effect of the instrument is also very extraordinary—the action of the heart becomes slow and regular, whereas in magnetizing other organs the action of the heart and arteries is not altered.

There are certain rules which we have observed in magnetizing to prevent injury from the action of the machine.

1. The large button for the sake of distinction, and for convenience in conducting the negative force over large surfaces, was always connected with the machine in the place and manner before described.

2. In magnetizing the brain or cerebrum we have placed the large button on the organ of causality on one side, and the small button on the organ of amateness on the other.

3. The large button was placed on the cerebellum on one side in disease of this organ, and the small button on the ear or hand of the other, excepting cases of disease of the vermicular process, when the large button was placed on the hollow of the neck, and the small one on the organ of individuality.

4. In magnetizing the face, both buttons have sometimes been applied to it, but generally the large one only, while the other was applied to the ear.

5. We have placed the large button over the eye-lids and the small one over the organ of amateness in magnetizing the eye, except in the case of strabismus, when the small button was placed in the corner of the eye next the nose, and the other in the opposite corner.

6. In magnetizing the ears, the large button has been placed upon the tongue and the small one on the ear, except in cases where the disease has been traced to the origin of the auditory nerve, when the large button has



been placed on the cerebellum on one side, and the ear on the other.

7. The buttons have been held on both sides of the throat a minute in magnetizing it, and then reversed alternately, and in magnetizing bronchoceles and other swellings we have pursued the same course.

8. In palsied limbs the large button has been placed on the cerebellum, or over the cervical vertebrae as in rheumatism, and the other on the palm of the hand or on the leg or foot.

9. In magnetizing the organs of the body as the lungs, heart, stomach, &c., the large button has been placed on the spinal nerves connected with these organs, and the other over the lower parts of the organs.\*

10. In magnetizing the brain or cerebrum we have observed the greatest caution in using only the weakest power of the machine, and this is a rule which should never be departed from; and in magnetizing the other organs it will be the safest course to commence the operation with a weak power, and then gradually increase it as the patient can bear it, or as circumstances may require. It may appear superfluous to say another word in regard to the caution that should be practised in the use of this instrument. It may, however, be useful to observe that in consequence of the greater force from the large button, the focus of the forces is not equi-distant between the buttons, but at about two-thirds the distance from the large one, and this fact may aid magnetizers in avoiding as much as possible in operating upon the brain, the withering effects of the little button. If any injury is felt, the action of the instrument should be reversed—a fact that will be understood by mesmerizers who will, we have no doubt make the best and safest magnetizers.

We may now with our experience in the use of these machines, advise physicians to use the small rotary machine we have described, as it is the safest, cheapest and most perfect instrument, and which cannot fail to advance with great rapidity the progress of the present revolution in the practice of physic and surgery.

\* When pain is produced by the action of the instrument, the position of the button should be reversed.

#### Animal Magnetism.

Surgical operations in the magnetic state are becoming common occurrences. Bones are set, tumors and limbs are removed, and teeth are drawn in this state in a very comfortable manner, without pain or knowledge of the patients. The attention of clairvoyants is also beginning to be directed to the motions of the light-fingered gentry, as will be seen in the following article, from the March Number of the Magnet.

#### Extraordinary Instance of Clairvoyance.

DEAR SIR:—Believing that the following account, although connected with circumstances of a melancholy and painful character, may not be uninteresting to your readers, I have concluded to submit it to you, for publication in the Magnet. I feel great reluctance in undertaking the sketch, on account of the deeply mortifying circumstances under which the developments were made; and, because, it must cast severe reflections upon a young man who is now no more. I feel compelled to use initials, instead of names at full length, so as not to give unnecessary pain to surviving friends, though it be to subvert the interests of a sublime and interesting science, which is my only apology for the narrative.

Some time during the month of January last, a Mrs. S., of the village of A. A., in the State of Michigan, missed from her parlor table, a beautiful little gold watch. It was taken one evening, while no member of the family was in the parlor; and no one having been heard to go into the room, the whole affair was enveloped in mystery. Suspicion rested upon no one in particular, in the mind of Mrs. S. or her husband. Careful search and enquiry were made for several weeks, but all to no purpose. The singular disappearance of the watch, remained an unexplained secret, locked up in the bosom of the unhappy young man who had ventured to commit the deed. A few months passed away, and the matter was nearly forgotten.

In the spring, (in the month of April, I believe,) Mr. D. B., the distinguished scholar in the science of Animal Magnetism, visited A. A., for the purpose of lecturing and exhibiting facts and experiments in proof of the pretensions of Mesmerism. He had with him, a young man, whose name I do not now recollect, but who was a stranger in that place. This man was an excellent *clairvoyant*; and while in clairvoyance, possessed one peculiar faculty, which I do not recollect to have ever read of before. He invariably took that no-

tice of objects, that enabled him to remember them with perfect distinctness, when awake.

One day, while in clairvoyance, Mr. S., the husband of the lady who lost the watch, was placed in communication with him. He enquired of the clairvoyant, (whose name for convenience I will call A.) in relation to the disappearance of the watch. For a long time, Mr. A. refused to answer the interrogatories put to him, touching this delicate subject; but at length, consented to undertake a full disclosure. His answers were sufficiently definite and descriptive, to fasten suspicion upon C. C., a young man who resided in the place, and who had been in the employ of Mr. S., and who had long been a familiar visitor at his house. He stated, *definitely*, that the watch was now [then] in the hands of a young man in the village of Amsterdam, in the State of N. Y.

The credulous, of course, believed that C. C. was the guilty man, especially as he was known to have visited Amsterdam late in the winter. This disclosure was made in the presence of but few witnesses or spectators. The next day, Mr. A., the clairvoyant, came to Mr. S., apparently under great excitement, and pointed through the window of Mr. S.'s office, to a young man in the street, and declared *him* to be the young man whom he saw in clairvoyance the day before, and who took the watch! The young man was C. C., who was a perfect stranger to A. Even the credulity of Mr. S. was now disturbed. He could not, he *would* not, believe the clairvoyant. C. C. had always maintained an unsullied reputation; and Mr. S. had been long and intimately acquainted with him: he was a young man much beloved and respected.

This young man, C. C., early in the month of August last, was taken violently sick, with a fever. After it had raged for a few days with such obstinacy as to preclude the possibility of recovery, he was told by his faithful physician, that his case was hopeless,—that he must die! It was an unwelcome message; but he must now be honest, for the scenes of the Judgment were at hand!

Two days before his eyes were closed in death, he sent for the Rev. Mr. C. an Episcopal clergyman, with whom he had long been familiarly acquainted. To him he made a free, full, and humble confession of the whole transaction. He disclosed the secret known to none but his God! It was precisely as the clairvoyant had stated it. He took the watch east with him, and sold it to a brother in the village of Amsterdam, as had been stated. He exonerated every body else from any participation or privy in the affair; and confessed that upon his head alone

rested the guilt! Such is a true history of this matter, which may be relied upon as perfectly authentic.

Yours, &c.

PHILOMATHIA.

Michigan, Jan. 16th, 1844.

#### Animal Electricity.

As some remarks were made in our last number on this subject, we revert to it now merely to state a fact, to which a large number of our most intelligent citizens can testify.

During Mr. Quimby's exhibition in this town on Wednesday evening, 14th inst., his intelligent Clairvoyant was in communication with F. Clark, Esq., a respectable merchant of this place. The Clairvoyant described to the audience a barque owned by the Messrs. Clarks & Co., called the *Cañilda*, then on her passage from Cuba to New York, minutely, from "*due to earing*," as seamen say. He then informed the company how far said barque was from her destined port, and gave the name of vessel and port. The distance, we think, was about 70 miles.

On the next evening, he visited (in his somnambulism) the same vessel, and said she had arrived off the Hook, where she then was.

On the Tuesday following this exhibition the merchants received a letter informing them of the arrival of this barque (see our Marine Report) at the precise time stated by the Clairvoyant, who, it will be recollected, is Lucius Bickford, a young man 19 years of age.

This was but one of several exhibitions of his visiting absent vessels, of which he could have had no information, and describing even the master and people on board.

We profess no knowledge of this wonderful science, but deem it a duty we owe to the public, to publish every fact that may aid the progress of human knowledge.

Now to our minds, there is no more mystery in all this than there is in repeating a lesson committed. How is this done? Why, we say, it is the impression made on the mind, of the very letters and words committed; and when the book is removed and the bodily eye cannot see those letters and words, the "*mind's eye*" sees them, and by this agency alone the subject repeats them, and can even describe the very form of the letters. But it is a fact, that pressure on the brain will instantly stop all this, even in the middle of a word; and this has been demonstrated to many witnesses. What does this prove? Why, that the *nervous system* of man, is the medium of all such intellectual communications; and if so, we say, it is the

*invisible nervous fluid*, which is as much **ELECTRICITY** as that of the atmosphere which produces such wonderful and *mysterious* effects; but which is, and even will be invisible and hidden, and one of the mysteries reserved for a world of spirits. Now when the electric fluid or spirit of the atmosphere shatters a tree or house, we all believe it was done by that agency, passing from a cloud to the object below. Why, then, reject the testimony of our own senses, by disbelieving that a similar fluid passes from one person to another, enabling him to see in the "*mind's eye*," what he cannot behold with his natural eye? If we reject this mode of reasoning, we might on the same grounds reject truths of a most sacred and immutable character.—*Wiscasset (Me.) Republican*, Feb. 22, 1844.

**MR. SUNDERLAND.**—This gentleman concluded his course of lectures on Magnetism, on Saturday evening last, to a good audience. The evening's entertainment was a rich one, inasmuch as the experiments were interesting and satisfactory. Quite a number of individuals fell victims to the sympathetic power of Mr. S., at extreme points of the hall, who, after an elapse of some twenty or thirty minutes, were drawn to the platform by the attraction of the operator.

Mr. Sunderland's mode of operating is entirely different from any thing we have heretofore seen—it is original with him, and singular in the extreme. He brings the power to bear while he is lecturing, and as he seems to rivet the attention by his remarks, your curiosity will be drawn off by the somnambule sleep of some dozen or twenty persons in various parts of the hall. The effect produced in this way is amusing, to say the least; and when we find individuals in subjugation to this power, whose characters are unimpeachable, how can we doubt the *spell*—the *charm*, or whatever signification you may please to give it?

As we before stated, some of the experiments were very fine. There were eleven patients upon the stage, and what affected one affected the whole. The sympathy was great, and run apparently in a vein through the circle of this little community.

Mr. S. caused one of the young men to see a ghost—without a word being said—and as you could see the countenance change, from a serene look to a frightful and ghastly stare, there would be but little room left in the mind for skeptical evasions. Mr. S. then caused them to see snakes, at which, in the twinkling of an eye, they all burst out into a frenzied shriek, and evinced all those fearful emotions which they would if the scene had been real.

What appeared to be the most pleasing part, was that of a *deaf* woman, who was under this influence—and when, to appearance, they were in the height of ecstatic pleasure, she with the rest, clapped her hands, while in unison they exclaimed—"Oh! how happy we are in this place (the place to which they were in imagination,) we should like to stay here for ever!"

We will here say, that Mr. Sunderland had seven new subjects on the above-mentioned evening—persons he had never before seen, and who had never before been "magnetized."

Mr. S. has left a good and lasting impression, and general satisfaction prevails with regard to his lectures.—*Salem Advertiser and Argus*, Feb. 28, 1844.

#### Mesmeric Prevision.

The London Spectator publishes the following singular narrative, with the remark that although skeptical on the subject of mesmerism, it does not hesitate to print it without comment, coming as it does from a "gentleman of careful habits of observation and scrupulous veracity."

Have you courage to give insertion to the following case? It is so singular that I can hardly expect any one to receive it without considerable hesitation; and yet, as I am able to pledge myself to the strict accuracy of its details, and to the respectability of station and high moral worth of the parties to whom it refers, I feel desirous that it should be widely known.

On Monday, the 25th December, I magnetized Mrs. H—, a married lady, twenty-eight years of age. She had been magnetized at intervals during the preceding year, altogether about six times. Upon each occasion she had manifested some degree of lucidity; and in the only instance when the experiment was tried, she had answered readily to the action of my hand upon the various phrenological organs. On the present occasion, I magnetized her solely for the improvement of her health, as she was suffering from weakness and a pain in the breast, the result of a confinement eight weeks back. In other respects her health was good.

In less than two minutes from the commencement of the magnetizing process, she passed into a state of somnambulism. I then addressed her: "How do you feel?" She made no answer. I repeated the question two or three times, without success; but in a few moments she exclaimed, with an expression of great anguish, "Oh, pretty well, but I shall soon be dreadfully ill."

"When shall you be ill? now, while you

are being magnetized?" "No, in two days time."

"At what hour?" "Three in the afternoon."

"Can nothing be done to avert it?" "Nothing."

"What will it result from? an accident, or natural causes?" "Natural causes."

"Can you tell me any thing that can be done? Will magnetism afford you service?"

"Yes, it cannot avert the attack, but it may do much good. It will be a spasmodic attack, and after a little while it will extend to the heart. The heart will not be originally affected; but the violence of the suffering will cause it to be affected sympathetically, and there will then be danger. Magnetism may remove this."

"And will it not remove the other suffering?" "No." Then, after a pause, she added—"It cannot remove them entirely; but I think it may mitigate them."

"At what time after the attack should I commence the magnetic passes?" "In about half an hour."

"How long will the attack last?" "From an hour to an hour and a quarter. It will be dreadfully severe; but it will not prove fatal. I shall have more of them. I have much suffering to undergo."

"When will the next attack take place?" "I cannot say."

"What description of passes should I make on Wednesday, in order to relieve the heart?"

"Commence just *under the heart*, and make long passes to the feet."

"During what time am I to continue them?"

"About five minutes. You must also make passes *across my back*, if possible."

"How long will it be before you cease to suffer from these attacks?" "About eight months."

"Will magnetism benefit you during that time?" "Materially."

She still manifested much apprehension and anguish. "Come," I said, "You must not be sad. I am sure that you can bear pain with patience; and as it will all end well you must not give way to despondency."

"Ah!" she exclaimed, "I think of my children and my husband—I know what he will feel."

I now ceased speaking to her for a minute or two; afterwards I said, "You must tell me if you desire to say any thing more, or if you would rather sleep?" "I think you had better awaken me."

"I demagnetized her accordingly. She awoke instantly, and (as on all former occasions) totally unconscious of having uttered a single word. She said, however, that she was not so much refreshed as usual, and that

her head felt as if she had been engaged in the most intense thought. To relieve this, I magnetized her again for a few minutes; and when she was again awakened, she stated herself perfectly restored. I then took my leave; previously agreeing with Mr. H—that no intimation should be given to his wife of what had passed.

On the following day, I saw Mr. H—; when he stated, that during the preceding evening his wife had enjoyed excellent spirits, and that she still continued in a satisfactory state. On the Wednesday morning, he told me that he had left her in apparently good health, excepting that she seemed in a state of depression which almost caused him to apprehend that her prediction would be verified. She was herself, however, free from any anticipation of evil.

In the afternoon, I proceeded to her house, intending to reach it about half-past three, which according to her prediction would be half an hour after the commencement of the attack, the time at which she had stated that magnetism should be resorted to. Having, however, little expectation that my services would be required, (since I was inclined to regard her forebodings merely as the result of a momentary sadness,) I did not pay any particular attention to punctuality, and it was twenty-two minutes to four when I arrived.

I found her extended upon a sofa, in the severest agony. Her pain drew from her repeated cries, and I learned that she had been seized with a violent spasmodic affection.

I immediately commenced making the passes below the heart, which she had directed during her somnambulism on the preceding Monday.

"Does that give you relief?"—"Oh yes; it greatly relieves the heart."

I then raised her to a sitting posture, and commenced the passes across her back.

"Oh! that gives still more relief—it takes it entirely away from the left side; but the general pain remains the same."

She sank, apparently still suffering most severely from attacks of pain in the epigastric region, which seemed to threaten suffocation. She began, however, after I had made a few passes, to experience some short intervals of ease. During one of them I asked, "At what time were you attacked?"—"Half an hour or three-quarters of an hour before you came; nearer three-quarters of an hour."

"Was it sudden?"—"Quite. I was in the passage, and was obliged to call one of the servants to help me to this room. It seemed to suspend animation. In about twenty minutes, or more, it attacked my heart; the blood seemed to fill my head, and

I was much alarmed. It continued till you came; my sufferings were dreadful; but now the pains seem longer to affect the heart."

She still continued to experience paroxysms, which I was only able partially to relieve. At intervals she exclaimed, "Oh, how fortunate you happened to call! I feel as if you had saved me."

She complained of fulness of the head, and directed me to make two or three passes over her forehead; which gave her instant relief. At length at about six or seven minutes past four, the pains seemed rapidly to subside. She fell into a calm sleep, her countenance assuming an expression of perfect composure; and from this, at about twenty minutes past four, she awakened in good spirits, and, though greatly exhausted, perfectly free from pain.

She continued to dwell upon the "fortunate" circumstance of my having called: and I left her in the full belief that the visit had been an accidental one.

Since the above occasion, she has been magnetized several times; and she now predicts with rigid accuracy the state of her health for several consecutive days. On the 7th of this month, she announced a slight attack to occur at eleven o'clock on the morning of the 11th, which would not extend to the heart, and another severe attack at three P. M. on the 15th, in which that organ would again be compromised. On both occasions the prediction was fulfilled even in its minutest particulars.

I may mention, in conclusion, that until the attack above described, she had never experienced any indisposition in which the heart was supposed to be in the slightest degree affected.

Deluze gives many cases of prevision in the somnient state, and they are of common occurrence in this country.

#### Treatment of Fever.

By CHARLES COWAN, M.D., E. & P.

Physician to the Royal Berkshire Hospital, &c.

Dr. Cowan has not said much respecting his own practice, as the type of fevers in his own neighborhood of Reading has seldom been found severe; but he has taken pains to collect the experience of others, which is as follows:—

We shall now briefly advert to the experience of others in the treatment of fevers, selecting that which may not have sufficiently attracted the student's attention. A surgeon in extensive practice has found the following powder very advantageous in 140 cases of simple fever, continuing its use until the gums were slightly affected:—

R. Nitrate of potash, four grains; tartrate of potash, a quarter of a grain; mercury with chalk, five grains. Mix. Repeated every four hours

And in all fevers of a low type he was convinced of the benefit of the saline treatment. His formula was—

R. Chloride of soda, three drachms; carbonate of soda, two drachms; hydrochloric acid, half a drachm; camphor mixture, six ounces. Mix. Half an ounce every hour.

He founded his experience upon notes of 120 cases.

In reference to the use of mercury, Dr. Macartney says, "In no single instance have I known mercury fail in arresting the progress of fever, provided it be not combined with visceral affections, or characterised from the beginning with great prostration of strength."

Mr. R. Stevens (Lancet, 25th June, 1842,) asserts the value of mercury in all contagious diseases, and he has met with more than ordinary success since employing it in the treatment of fever.

Dr. Elliotson, and many other writers, speak favorably of the mild use of mercury in this disease; and when the type was inflammatory, it might, perhaps, be always judiciously prescribed.

#### Case of Poisoning by Colchicum.

By A. T. THOMPSON, M.D.,

Physician to University College Hospital, &c.

The subject of the following case, John Goodrich, was ordered in a public institution six drachms of tincture of colchicum in a half pint mixture of Epsom salts, of which he took one ounce every six hours. It was ascertained that a larger quantity (six oz.) of the colchicum had been put into the bottle than was prescribed. Vomiting soon commenced after the first dose, and after the third the nose began to bleed profusely, accompanied with violent purging. Notwithstanding these violent symptoms, the medicine was continued. His medical attendant found him sitting up in bed, with his back reclined against the wall, his arms hanging listlessly beside him, his head bent forward upon his breast, and his shirt drenched with blood from his nostrils. His mouth was open, his eyes were staring, full, and turgid; the vessels of the adnata congested, and the pupils dilated; pulse 170, full, bounding, and incompressible, and respiration short and hurried. Thirty ounces of blood were taken from the arm, and a mixture containing potash, carb. and liq. opii sed. was prescribed, followed by port wine and cinchona bark. This treatment seemed to rally the patient,

but he ultimately relapsed and died. But we have condensed this case chiefly to hang a practical remark upon it, made by Dr. Thompson, which is as follows:—

On reviewing the treatment of this important case, I have little to remark, except that it is probable, had my assistance been sooner demanded, I should have opened the temporal artery, instead of bleeding from the arm. I am of opinion, that in the early stage of poisoning by an *acrid*, or a *narcotico acrid* poison, the poison is circulating in the blood, and that much benefit would result from rapidly abstracting a large portion of it from the vicinity of that organ, upon which much of its energy is exerted. By such a practice, also, the sympathetic irritation would have been greatly lessened, and time would have been thus afforded for providing against the collapse, which, in all these cases, is the result to be dreaded.—*London and Edin. Mon. Jour. of Medical Science*, June, 1843, p. 340.

**Chronic Hydrocephalus treated with Ipecacuanha, in Form of Liniment.**

In Dr. Hannay's Dispensary cases is the following one of chronic hydrocephalus, which is said to be congenital:—

The infant was in its eighth month, and the head had acquired a size much beyond natural. It presented an unnatural expression, looked languid and inactive; squinting, vomiting, and costive bowels. It had been several times attacked with convulsions, after which it lay comatose for several hours. The fontanels were large and full. I directed diuretics (nit. pot. and pulv. ipecac.) as I have a notion that to increase the urinary is, on many accounts, very advantageous in this disease. But it is to the effect of a liniment composed of powdered ipecacuanha root, from which decided benefit was derived in this case, that I request space for a short memoir of my trials of this remedy, first suggested to me by my accomplished colleague, Dr. Easton, Professor of Materia Medica in Anderson's University. To that gentleman I sent the following results of my experience of this new counter-irritant, and beg to offer it as the therapeutic parts of my gleanings. The formula I adopt is as follows:—

R. Ipecac. Pulv.; Olei Oleæ Europ, aa, 3j.; Adipis Suill. 3ss.; M. opt. fiat linimentum fricando admodum.

The part we wish to irritate is to be rubbed freely with this liniment for fifteen or twenty minutes three or four times daily, and enveloped in flannels. This produces, in about thirty-six hours, or sometimes sooner, very numerous small papule and vesicles, seated

on a deep red base of irregular extent. They become flattened in a short period, and assume the pustular character. Many of them run together; are confluent. The part feels hot to the hand of another, and a tingling sensation, never amounting to pain, is experienced by the patient. The eruption endures very vividly for a few (three) days, during which the pustules become covered with a scab-like scale, and fall off, leaving no mark. They never ulcerate, as do the pustules from the tartrate of antimony. I regard the ipecacuanha as a very valuable addition to our counter-irritants. It is not over severe, as the tartrate is occasionally found to prove. Yet, with all its moderation, it is very efficient, and extremely manageable. In feeble, young, and very irritable persons, it will, I feel assured, prove a very suitable counter-irritant. I specially beg attention to the use of it in the head diseases of a chronic kind in infants and young children. Many of these cases follow the suppression of eruptions and scabbed diseases of the scalp. Now, the ipecacuanha liniment produces a scabbed state of the scalp, as nearly resembling the affections in question as can be imagined, and maintaining a counter-irritation on the surface which I have proved, I think, to be a very valuable agent of this nature.—*Ed. Med. and Surg. J.*, Oct. 1843, p. 321.

**Inspissated Bile.**

We have several times alluded to the exhibition of inspissated ox-gall, as a remedy for constipation, &c. We find that the inspissated bile of the swine has been used in America since 1828, for this and other purposes. In a communication on fever by Dr. Mettauer, we have the following:—

Another modification of the ipecacuanha pill employed by us, was the combination of two or three grains of the inspissated bile of the swine, with one grain of ipecac. and two of the carbonate of potass; this compound was most valuable in this stage; and it seemed to act with decided effect, as a supporting and securing remedy, upon the mucous membrane of the stomach and intestines, and as a diaphoretic at the same time. It was especially valuable in those cases attended with a denuded and raw tongue; this organ always becoming more healthy after its administration.—*Amer. Jour. of Med. Science*, July, 1843, p. 52.

**Treatment of Croup with Sulphate of Copper.**  
By Dr. Schwabe.

This invaluable medicine in croup, first recommended by Serlo, has been used in

more than fifty cases by the writer. He generally begins the treatment by applying from four to twelve leeches to the larynx, and then orders 1 1-2, 2, 3, and occasionally even 4 grains of sulphate of copper, mixed with a few grains of sugar, to be taken every half hour or every hour, according to the urgency of the symptoms. Each dose is followed by vomiting, which, scanty after the first dose, is always copious after the second, and is continued so long as thick mucus or membranous concretions are apparent in the matters ejected. The patient then takes half a grain of the sulphate every hour, until several dark green motions have been discharged, to effect which from eight to twelve doses suffice.—*Casper's Wochenschrift*, No. 9, 1843.—*Lond. and Edin. Mon. Jour. of Med. Science*, Sept. 1843, p. 834.

*Treatment of Volvulus.*

Mr. Pilcher has recorded a case of volvulus occurring in a child, in which all the remedies commonly employed for the removal of the disease had been unavailingly employed, when he was induced by the recollection of a former case, to order thin gruel to be injected by the rectum until the lower intestines had become completely distended, regurgitation being prevented by pressure around the anus. The effect was almost immediate, the obstruction giving way, and the patient completely recovering.—*Prov. Med. Jour.* May 6, 1843, p. 122.

*Value of Antimony in Mania.*

Dr. Sutherland states that the employment of antimony in the treatment of mania is of the highest value. A fourth of a grain of the potassio-tartrate may be given every fourth hour, or at the commencement of the paroxysms of furor. It is powerful as a means of controlling the action of the heart and arteries. In many cases in which it has been given, it has acted like a charm in instantly subduing the excitement and violence of the patient; and in some cases an alteration in the symptoms for the better has been traced from the commencement of its administration.—*Prov. Med. Jour.*, July 22, 1843, p. 342.

*Dartres of the Perineum.*

Dr. Barosch, of Lemberg, was consulted by a young man, about twenty-eight years of age, for a dartrous eruption affecting the perineum and scrotum, with which he had been afflicted from his sixteenth year, and the irritation from which was such as to cause him to be continually applying his hands there, so that he was obliged to avoid

society. He had consulted the most famous physicians in Hungary, but the only thing that seemed at all to relieve him was the cold water hip-bath. When he consulted Dr. Barosch, he was exhausted by suffering, insomnia, loss of appetite, and despair; the skin was dry; the entire perineum, scrotum, and internal surface of the thigh, were covered with deep brown, hard crusts, surrounded by bleeding fissures, caused by the nails of the patient. Below these crusts, the skin was hard and thickened. The fall of crusts alternated with an acrid discharge. Kœchlin's liquor having failed, Dr. Barosch prescribed the external application of iodine as follows:—Fifteen grains of iodine and two scruples of hydriodate of potass, dissolved in five ounces of distilled water, and one ounce of spirits of wine; make a lotion. The topical application of this solution continued for several hours, caused at first a burning sensation, which was, however, very tolerable, and was soon followed by a relief such as the patient had not experienced for two years. The use of this lotion was continued for three weeks, the patient taking baths frequently during that period, at the end of which time the cure was complete.—*Oesterr. Medicin. Wochen.—Provincial Med. Journal*, April 29, 1843, p. 99.

*Compression in Chronic Hydrocephalus.*

M. Hirsch has published another example of the efficacy of compression in cases of chronic hydrocephalus. A child, eleven months old, labored under this affliction; the head was large, fontanelles open, and all the sutures widely separated. The lower extremities were paralysed. On the 11th of May, a mixture, containing infusion of bark, digitalis, and sweet spirits of nitre, was administered, and mercurial frictions were made on the head. The paralysis gradually disappeared under the influence of this treatment. On the 28th the head was enveloped with strips of sticking plaster, which compressed it on all sides; the plaster was renewed on the 28th of June and 4th of September, and in February it was found that the fontanelles and sutures were completely ossified. The child had begun to walk and speak.—*Casper's Wochen.—Provincial Med. Journal*, April 29, 1843, p. 101.

*Pilula Ferri Comp.*

Several methods of preparing this pill have been recommended to preserve the carbonate of iron undecomposed, and to insure the uniform consistence of the mass. This can be made according to the directions of the Pharmacopœia by an attention to the following particulars:—

Dissolve the sulphate of iron, finely powdered, in treacle, with a moderate heat, and add the carbonate of soda, stirring constantly until the effervescence has entirely ceased, and the mixture has become cool; then add the myrrh gradually, and incorporate the mass. As a little evaporation takes place at the commencement of the process, a small excess of treacle is requisite to supply the deficiency. This mass retains its color and consistence remarkably well.—*Pharm. Jour.* July 1, 1843, p. 36.

#### *Treatment of Diabetes.*

An interesting case of this affection is published by Mr. Hodges, of Downpatrick, in which the nitrogenizing plan of treatment so ably recommended by Dr. Barlow, of Guy's Hospital, was attended with excellent results. The treatment was commenced by giving five grains of the sesquicarbonate of ammonia every three hours, with coffee and bacon to breakfast, animal food and cruciferous vegetables for dinner. The skin was stimulated by friction, and the patient well clothed with warm flannel. In four days the urine was diminished in quantity from twenty-four to fourteen pints daily. The ammonia was then increased to five grains every two hours, and very soon the quantity of urine voided was only eight pints daily; in thirteen days more only five pints; and in twenty-one days the drink taken in the twenty-four hours was two pints, and the urine four pints.—*Medical Gazette*, July 7, 1843, p. 525.

#### *Incontinence of Urine successfully treated by Nitrate of Potash.*

Dr. Young, of Chester, Delaware County, has found that this medicine, given in ten-grain doses every three hours, has had a very excellent effect in checking this troublesome affection. In several cases where tinct. lyttae and other means had failed, this medicine was given with complete success. He supposes that its good results may be owing to its increasing the irritating properties of the urine, thus making it more stimulating to the bladder or its sphincter. If so, he also thinks that other preparations of potash, soda, &c., may be used when the nitrate fails.—*American Jour. of Med. Science*, April 1843, p. 371.

#### *Elder Bark in Chronic Dropsies.*

The decoction and extract of this vegetable substance are reported to be remarkably efficacious by hydragogues, producing so speedy an effect on the urinary and fecal secretions as to make it needless to use more than two or three applications. The proportions for

the decoction consist of a couple of handfuls of the bark to a quart of water; dose, a wine glassful a day. The extract is administered in France in the form of pills, of one and a half grains each, of which from six to ten are taken in the twenty-four hours.—*Journ. de Med. et de Chir. Pratique*.—*Lancet*, June 1843, p. 340.

#### *Apoplexy cured by Galvanism.*

Theodore Mandurik, a Dalmatian, twenty-four years of age, of sanguine temperament and a robust constitution, and who had usually enjoyed good health, killed one of his countrymen in a quarrel, for which offence he was incarcerated in the prison at Scardona. Three days afterwards he was attacked by a violent fit of epilepsy, followed by entire loss of voice, to restore which external local and general bleedings, and antiphlogistic measures of all kinds were employed without effect. In a few months he was removed to the central prison of Zara, where he was examined by the medical staff. The tongue was somewhat enlarged, and preternaturally reddened, though dry, and the blood-vessels around its base were much distended. The sense of taste was uninjured, but the movements of the tongue and of the larynx were performed with difficulty.—Leeches were now applied to the sides of the tongue; tartarised antimony, in both large and small doses, and drastic purgatives, were employed, and a tartar emetic plaster was placed over the larynx; but all these means failed to restore a healthy action in the parts adjacent, and Mandurik was still compelled to keep his mouth partially open to maintain respiration, a function only performed by short and difficult inspirations. At length, about sixteen months after the attack, the voltaic pile was thought of, and a battery of fifty pair of plates was employed. The positive pole was placed over the cervical vertebrae, and the negative upon the parts affected. On the first day two hundred shocks were given, and on the second three hundred, but no perceptible effect followed. Two days were suffered to elapse, and a battery of 70 pair of plates was then used, with which about three hundred shocks were given. The patient was found acutely sensitive to the action of electricity, and a lapse of five days was permitted to intervene before its fourth application, which consisted of four hundred shocks with the latter-named battery. Whether these had been administered too precipitately, or whether his system had become more excitable by galvanism, the patient, after this last application, became much agitated, and subsequently fainted for a short time. Next day he suffered intense head-



ache, his face was flushed, eyes lustrous, pulse full and strong, from which state he was relieved by copious bleeding. But he now, for the first time, gave utterance to hoarse sounds. After six more days the battery of fifty pairs was again employed, and three hundred shocks were given. The same treatment was repeated every two or three days, and then, at similar intervals, four hundred shocks were given with the seventy-pair battery. The voice, meanwhile, and the motive powers of the tongue and larynx, gradually returned to their normal condition, and after the twelfth application the patient had completely recovered. The deduction drawn by the surgeon who has reported the case is, that no nervous affection whatever should be regarded as incurable till electricity in some form has been tried and found to fail.—*Lancet*, May 27, 1843, p. 291.

*Reduction of Femoral Hernia on Dr. O'Beirne's Plan.*

We have repeatedly referred to this plan of reducing a strangulated hernia, but as every fresh fact in corroboration of it is satisfactory, we subjoin the following case by Mr. Collambell, of Lambeth. It was that of a woman, *æt* 51, ruptured 24 years ago. All the symptoms of strangulation being present, the taxis being used for a considerable time, and various other measures resorted to without avail, Dr. O'Beirne's plan was tried as follows:—

I introduced, says Mr. Collambell, the elastic tube of the stomach-pump into the rectum, and passed it the distance of twelve inches. I then attached the syringe, and slowly injected two quarts of warm water. When half of that quantity had been thrown up a gurgling was distinctly heard in the tumor, and it gradually became less tense. Having injected all the water, I removed the syringe, and allowed it to run off by the tube; I then reapplied the syringe and continued exhaling the air, when, after a few minutes, I had the gratification to find the hernia gradually subsiding, and, by keeping up gentle pressure, the contents were returned into the abdomen. My patient immediately pronounced herself relieved; her countenance became cheerful, and the sickness abated; she was ordered a brisk aperient of magn. sulph. and aq. menth. pip. and a dose of calomel and opium. The bowels acted freely on the following morning, and she is now as well as usual.—*Lancet*, April 29, 1843, p. 155.

*Strabismus.*

M. Jules Guérin has published a second Memoir on Strabismus, devoted to a rational

and experimental inquiry into the distinction between the optical and the mechanical forms of the disorder; a former memoir, published in the same journal the 3d April, 1841, having treated principally of the mechanical or primitively muscular form.

Optical strabismus, the principal subject of the present paper, the author defines as a consecutive of secondarily muscular deviation of the eye, consequent on a disjunction of the axis of vision and the axis of the eye. This disjunction may be produced in three ways; 1st, from an obstacle to the passage of visual axis along the course of the ocular axis; 2ndly, by a change of relation in the refracting media without alteration of their transparency; or, 3rdly, by an insensibility of the retina at the proper point for the reception of luminous rays. The first is characterised by the squint existing only while the patient is looking at an object. In these cases the two visual axes, though no longer concurring with the ocular axes, converge towards one point. A squint, then, existing only during active or intentional vision, cannot depend on permanent muscular contraction. A young person aged 19, who had a moveable clot of blood in the posterior chamber, was observed to squint from the attempt to place a transparent portion of the medium opposite to the object looked at, and thereby to avoid the inconvenience produced by the presence of the clot in different parts of the chamber. As soon as she ceased to look at an object, she ceased to squint. A disturbance in the relation of the refracting media, the author thinks is the only way of accounting for some cases of strabismus which are produced suddenly after a blow, or a jarring fall on the seat or on the feet. The first effect of displacement is double vision; and the squint, at first temporary, lasting only during attentive vision, is gradually made permanent by the repeated endeavor to escape from this fatiguing symptom.

The third form, viz., from partial paralysis of the retina, is more difficult of actual demonstration, though its presence may be inferred by induction rigorous enough for practical purposes. Amauric patients, when endeavoring to distinguish a light, are seen to turn the eye in different directions where they know the light does not exist; they present the various surfaces, as it were, feeling for it. Those in whom the paralysis is but partial, contract a habit of subjecting to the influence of the rays that part that is most sensible. The author believes that in no case of secondary optical strabismus will the texture of a muscle be found fibrous, and that in no case of primary mechanical muscular strabismus will such a fibrous state of the muscle be

wanting. Where myotomy has been performed in cases of optical secondary strabismus, he believes that one of three things must have happened—either the case has not been watched long enough to ascertain the result, or a positive failure has followed, or the primary cause, whatever it may have been, has really been removed by the operation. The author adds a summary of the distinctive characters of the two kinds too concise to be materially abridged, but too long for our pages.

*Medical Gazette, May 12, 1843, p. 254.*

*Electro-puncture in the treatment of Deafness, depending on a Paralysis of the Acoustic Nerve.—By M. Jobert.*

The paralysis of the acoustic nerve may be produced by exposure to a current of air, to too great a shock of the head, to waves of sound too violent, to affections of the teeth or of the gums. Electro-puncture has been already employed in these cases, but it had fallen into disrepute. The author believes that he uses it in a manner more direct and more rational; here is his proceeding:—Stard's sound, he says, is introduced through the nasal fossa into the eustachian tube, and in this sound a long thin acupuncture needle is inserted, so as to fix itself in a point of the parietes of the eustachian tube, while the other end projects from the end of the sound; another acupuncture needle is implanted in the membrane of the tympanum. This being done, one of the conducting wires of a galvanic battery, of which the trough is filled with water and muriatic acid, is passed through the eye of one of the needles, and the end of the other conducting wire is made to touch the opposite needle. I have used, in the beginning, eight pairs of the battery, then I got to ten, to twelve pairs; finally I have been as high as eighteen, and at present I have patients who have undergone several sittings, and on whom I have acted with the entire pile, the touch of which contains forty metallic pairs. At the moment that the two poles are put in contact, there is a very painful shock in the ear and in the head, with convulsive motions; but this shock and this pain cease immediately. In a single patient the impression was felt during eight days, but it never extended beyond a slight pain, which ceased of itself. It must be added, that the patients who were submitted to electricity in this manner, were, during some moments, as if stunned, and preserved some time after the experiment a bewildered look. The sitting was usually confined to a single shock when the patients were irritable; I have given two and even three shocks in people whose sensibility was obtuse, and who have been already submitted to electro-puncture. In

general I allow eight days to pass between each trial. The author then relates four cases of well marked deafness, and in which the cure was complete; in the first after a single shock, in the second after two shocks, and in the third after two sittings, each composed of three galvanic shocks.—*L'Examineur Medicate.—Medical Gazette, June 2, 1843, p. 356.*

*Oil of Turpentine in Night Blindness.—By Charles Kidd, M. R. C. S., Medical Attendant of the Doonass Dispensary.*

In two cases of this description, in which the patients were seized with a total blindness every evening, the moment the sun set, although in other respects perfectly well, Mr. Kidd tried the whole routine of medicines without effect. The iris alone showed symptoms of disease; the rest of the eye was healthy. The iris was very interrupted and sluggish in its movements, and evidently very insusceptible of its usual stimulus, the pupil contracting very little even on the approach of the strong glare of the sun.

Being aware of the action of turpentine on this part of the eye. Mr. Kidd ordered the following mixture with excellent effect:—

R. Ol. terrebinth; ol. ricini, aa. ʒj.; mist. camphoræ, ʒiv.; liquor. potassæ, ʒi.; trā. opii. gtts. x. Ft. mistura.

Half an ounce to be taken every night and morning. The patients were cured in a few days.—*Dublin Medical Press, May 10, 1843, p. 292.*

It is often difficult to continue the use of turpentine on account of its disagreeable nature. Bouchardat recommends the following formula:—

Take of gum accacia, ten grammes; mix it with ten grammes of water; add of white honey, fifty grammes; oil of turpentine, fifty grammes; carbonate of magnesia, q. s. Make a soft electuary.

The dose is from 2 to 10 grammes (36 to 180 grains) a-day in unleavened bread. In some cases a little laudanum may be added.

*Medical Gazette, Sept. 22, 1843, p. 912.*

*How to make Leeches Bite.*

The leech which it is intended to apply, is thrown into a saucer containing fresh beer, and is to be left there till it begins to be quite lively. When it has moved about in the vessel for a few moments, it is to be quickly taken out and applied. This method will rarely disappoint the expectation, and even dull leeches, and those which have been used not long before, will do their duty. It will be seen with astonishment how quickly they bite.—*Medical Gazette, June 23, 1843, p. 480.*

*Researches into the Nervous Influence supplied by the Par Vagus.*

M. STILLING, whose researches on the nerves was noticed in the last volume of THE LANCET, has been led to the following conclusions respecting the functions of the par vagum and some of its branches.

The par vagum is both motor and sensitive. The superior laryngeal nerve is solely sensitive, having no effect to produce motion in the glottis. The recurrent nerve is motor, and sensitive also, though in a less degree than the superior laryngeal. The glottis and the whole larynx derive all their sensation from the first named branch. The trachea derives its sensation from the recurrent branch, and the lungs from the branches of the par vagum, which they receive. The glottis depends for motion on the recurrent branch, and not at all on the nervus accessorius. Irritation of the roots of the vagus nerve within the skull causes the same result as irritation of the recurrent branch. The quality of the voice is dependent on the condition of the superior laryngeal nerve, and the degree of harmony between this and the recurrent branch.

With regard to the motions of the pharynx: in ordinary respiration the pharynx is closed; it is only in abnormal circumstances that it contains air. In most animals the pharynx manifests a contractile action or vibration of its muscular fibres during expiration; this action is not perceived in inspiration. The section of the par vagum determines a contraction of the pharynx, as does irritation of the recurrent and superior laryngeal nerve.—*Schmidt's Jahrbuch* 36; *Haeser's Archiv*, 1842.

*Medical use of Saffron.*

In several cases of obstinate chlorosis that had not yielded to preparations of iron, in one case of puerperal fever in which digitalis and bleeding had failed, and in two cases of chronic artero-phlebitis, Dr. Morgante, of Verona, reports that he has employed saffron with the greatest success, commencing with doses in the form of pills, amounting to sixteen grains in the twenty-four hours, increasing the doses until the quantity is doubled. As to the manner in which this medicine acts—it is reported to be particularly effective in cases of increased action of the capillary vessels, and analogous in its effect to the more active preparations of iron.—*Memoriale della Medicina Contemporanea*.

*Facial Neuralgia.*

An ointment composed of veratria, one part, to eighty parts of lard, has been found

very useful as an external application in cases of facial neuralgia. But the preparation is much more efficacious if made with rancid instead of fresh lard, which is probably owing to a salification and greater solubility effected in the veratria by the agency of the free acid in the fat.—*Revue Scientifique*.

*Lancet*, May 27, 1843, p. 304.

*Black Drop reduced to the strength of the Tincture of Opium.*

Take of hard opium, powdered, ʒij; citric acid, powdered, ʒiiss; boiling water, ʒxv; rectified spirit, ʒxxv. Pour the boiling water on the opium and citric acid; macerate for twenty-four hours; add the rectified spirit; again macerate for fourteen days, and strain.

*Lancet*, May 20, 1843, p. 304.

*Treatment of Dropsy.*

The main object in the treatment of ascites is, of course, to excite the organs, by the aid of which nature herself expels the serious secretions of the abdominal cavity; and accordingly such diuretic and drastic agents should be employed as are most likely to act at the same time on the absorbent system, the urinary organs, and the intestinal tube. In combination, also, with medicinal agents, a diet should be adopted at once solid and tonic, composed principally of broiled or roasted meats, toasted bread, &c., with small quantities of red or white wine; but on no account should the patient have recourse to toast and water, broths, gruel, or such like drinks; in fact, the principle should be to drink as little as possible, and instead of liquids to use jellies, oranges, and fruit generally, by way of demulcents. M. Delreyne, who advises the above regimen, recommends the following diuretic wine as suited to weaker subjects:

R. Nitrate of potash, three drachms, and juniper berries, fifteen drachms, to be steeped for twenty-four hours in a bottle of wine water; dose, a glass daily.

This stimulant is especially useful in incipient dropsy, and cases of oedematous swellings of the extremities.—*L'Experience*.—*Lancet*, May 20, 1843, p. 253.

*Coupler-Irritants in Bronchitis.*

Dr. Graves, in his work on clinical medicine, makes some excellent remarks on coupler-irritant remedies, which are to be applied not merely over the chest, but to the nape and along the sides of the neck, over the epigastrium, and in the course of the cervico-spinal and pneumogastric nerves generally. He thinks that—

The spirit of turpentine exercises something more than a mere counter-irritant action, and proposes the following formula for imitation.

Strong acetic acid, 3ss; spirit of turpentine, 3iij; rose water, 3iss; essential oil of lemon, a few drops; yolk of egg, sufficient to suspend the turpentine.—*British and Foreign Medical Review*, July 1843, p. 246.

#### Cæsarean Section.

A woman, aged thirty-one, who had borne five children naturally, was attacked with violent arthritis, during her sixth pregnancy. The pelvis became so deformed that the finger could scarcely be introduced between the tuberosities of the ischum and the ascending rami, on either side; the pubes also formed a very prominent angle, the sacrum projected much forwards, and the os uteri could not be reached. On the 27th of July, 1840, labour having commenced, and the contraction of the pelvis diameter being well ascertained, the Cæsarean section was determined on, and was performed in the linea alba by Dr. Arnoldi. The results were most fortunate; the mother nursed the child herself, and the wound healed by the beginning of September. *Proc. Med. Jour.*, Oct. 21, 1843, p. 60.

#### Cure of Venereal Warts.

Francis states that two remedies which he had tried for the extirpation of venereal warts, have always perfectly eradicated them, namely powdered savine and a solution of lunar caustic; the first to be applied to the warts every night, taking care previously to wet them, in order that the powder may adhere to them. The quantity ought not to be more than will lie on the top of a good-sized horse-bean. Applied every night for a week or ten days, this remedy will, it is said, cure them effectually. Should this, however, not be considered powerful enough, the savine may be sprinkled every night, and on the following morning a solution of nitrate of silver (four grains to the ounce) may be applied. These two remedies Mr. Francis always employs, and has never found them useless.—*Med. Chir. Rev.*, July, 1843, p. 281.

#### Rupture of the Uterus—Recovery.—By M. Vaulpre, M.D.

The patient in this case was in her 19th year, and confined for the first time. Delivery was attempted by the long forceps, but in vain; the head of the infant had to be opened, and delivery was accomplished by means of the hook. In passing the hand into the uterus, a longitudinal rent was discovered, corresponding to the right fossa, and from

six to seven centimetres in length. The hand, when passed into the gap in the uterus, came in contact with the mass of the small intestines. A month afterwards the uterus contracted, and the tear in its substance could no longer be perceived. The patient was alarmingly ill. She vomited, had hiccup, violent pain in the abdomen, &c. Nevertheless she did not die; on the contrary, after several days passed in a state between life and death, she began to improve, and finally recovered.—*Lond. and Edin. Mon. Jour. of Med. Science*, July 1843, p. 651.

Disease in the brain, spinal cord, heart, lungs, stomach, intestines, liver, kidneys, or other vital organs, is characterised more by disturbances of function in those organs than by pain.—*Dr. Bellingham*.

A short time since an ox was killed at Waltham and on proceeding to cut it up, a live snake, perfect, with the exception of the scales, was found in the caul of the animal. It measured two feet six inches in length.—*English paper*.

Leeches have been found in the liver, and snakes in the stomach of human beings in this country.

REVELATIONS BY MESMERISM.—The Pennsylvanian, of Philadelphia, translates a strange narrative from a Dutch paper. A little girl, five years of age, was drowned near Dresden, while amusing herself with some playmates, who were afterwards unable to point out the place of the catastrophe. The parents applied to Amelia Klunger, a celebrated somnambulist, and she immediately told them where they could find the body, which they did, in the very spot she named, and they returned her their thanks in the newspapers. The affair has created a sensation in Dresden.

NAPHTHA—its curative effects in tubercular consumption—a humbug.

Errata, in our last number p. 13, &c., for decollionth, read decillionth.

Errata, in this number p. 61, for Nagne-tism, read Magnetism; p. 87, for replex read reflex.

# THE DISSECTOR.

Vol. I.]

NEW-YORK, JULY, 1844.

[No III.]

## FALLACIES OF THE FACULTY.

Ague—Spasmodic and Paralytic Disease—Disorders of Sensation.

### LECTURE II.

In our former Lecture, gentlemen, you will remember that, after a brief allusion to a few of the many errors which, from time to time, have prevailed in the schools, we took a more simple, though, at the same time, a much more bold and sweeping view of the subject of *Medicine* than would appear to have hitherto come within the grasp of teachers and professors. The nature of Health and Sleep, of Death and Disease, we in some measure explained;—and we proposed, as matter for future argumentation, that *INTERMITTENT FEVER OR AGUE* is the likeness or type of all the maladies to which man is liable,—referring, at the same time, to certain natural analogies in the world around us; and hazarding the statement, (which until we prove, we by no means wish you to take for granted) that the chrono-thermal or ague medicines are the most generally influential in the treatment of every kind of disease. Let it not, however, be supposed that in our high estimate of this particular class of remedies, we reject, in practice, any earthly agent which God has given us; for there is no substance in nature which may not be turned to good account by the wise and judicious physician. Besides the chrono-thermal remedies, which we chiefly use as remedies of *prevention*, we possess a multitude of powers which have all more or less influence upon the human body, both in health and disease: and though few or no substances can act upon any part of the frame without implicating every other part, yet do we find that certain medicines have relations of affinity to particular organs of the body greater than to others—some affecting one organ, some another. Of this class, Vomits and Purgatives, as (their names import,) Mercury, Creosote, Cantharides, and the various Gums

and Balsams, are the principal: Iodine, Lead, the Earths and Acids are also examples.—But while, in the more simple cases of disease, the chrono-thermal medicines, singly, will answer every purpose,—particular cases of disorder will be more efficiently treated with alternations and combinations of both classes, than by the exhibition of either simply. Of the action of remedies of every kind, we shall speak more particularly when we come to treat of individual substances.—For the present, we shall content ourselves with repeating what we stated in our former lecture, in connexion with this subject, that the action of *REMEDY* and *CAUSE*, in every case, comes at last to the common principle of their capacity *Electrically* or *Galvanically* to affect temperature or motion—change in one never taking place without change in the other. It will be a subject of gratification to pursue *DISEASE* through all its modifications and varieties, step by step, and to show you the source and the extent of our influence over it,—for which purpose we shall call our different witnesses before you in the shape of Cases,—taking these, as often as possible, from the experience of others, and when this fails us, from the results of our own practice; leaving to you, of course, to compare and cross-examine these last at your leisure, with such facts and cases of a similar description, as may come before you during your attendance at the various hospitals with which you are respectively connected. Of this we feel assured, that whether or not you individually pronounce a verdict in our favour upon all counts, you will at least collectively admit that we have compelled you to alter your sentiments most materially upon many measures which you previously supposed to be as unquestionable in practice as they were orthodox in precept. But if, according to Lord Bacon, “disciples do owe unto masters only a *temporary* belief, and a *suspension* of their own judgment until they be fully instructed, and not an absolute resignation or perpetual captivity,” you will not be

sorry to escape from the thralldom of men who, when asked for bread, gave you a substance which, in the darkness of your ignorance, you could not by any possibility tell was a stone! No longer mocked by mystic gibberish, you will now take your places as judges of the very doctrines you formerly, as pupils, implicitly and without examination believed; and according to the evidence which I shall bring before you, you will pronounce between your teachers and me—whether the infinity of distinctions and differences, upon which they so pride themselves, be founded in nature and reason,—or whether, in the words of the same great philosopher “all things do by *scale* ascend to *UNITY*, so then, always that knowledge is worthiest which is charged with least multiplicity.”

Gentlemen, there was a time when the greater number of people imagined that the only thing worth acquiring in this life, was a knowledge of the dead languages. A new era has since sprung up, and mankind have begun to appreciate the advantages to be obtained from an acquaintance with the chemical and physical sciences. They now prefer the study of the natural bodies around them, to pedantic discussions about Greek articles and Latin verbs. It is only in the cloisters of Oxford and Cambridge, that men sneer at “utilitarianism,” or in that antiquated off-shoot of these monkish institutions—the *College of Physicians*. Railroads, steam-boats, galvanism, and gas, have all come to light within the last half century. A revolution in thought and action has been the result; petty objects have given way to comprehensive views, and petty interests have been destroyed by the general improvement that has already been accomplished. Is Medicine the only branch of human knowledge destined to stand still, while all around it is in motion? Is the march of intellect to sweep on and on, and leave behind it this, so-called science, untouched and unimproved in its progress? When the monarchs who have successively wielded the medical sceptre—who each in their day were looked upon as demigods in physic, have in turn declared that all that they knew of it was that “they nothing knew,” shall blame be attached to him who would attempt to rescue his profession from this worse than darkness visible? If, by their own confession, the Knights and Bailies were ignorant of the first principles of correct practice, surely it were but charitable to suppose that men so intelligent and sagacious on most other matters may, in this instance at least, have pursued a deceptive mode of investigation? Like the racer on the wrong road, how could they in that case get to the end of their jour-

ney? Pursuing their professional studies chiefly in the dead house, these physicians forgot that medicine has no power over a corpse. Gentlemen, the reflections which I shall have the honor to submit for your consideration, were the result of observations made on the ever-shifting motions of the living. Who will tell me that this kind of study is only proper for medical persons? Who shall say that this description of knowledge may not be made interesting to the world at large? Greek, Latin, High Dutch, and Hebrew,—are these repetitions of the same *signs* more important than an enlarged knowledge of the *sense*—more instructive to those who pursue them as a study, than a consideration of the revolutions and constantly changing relations of the matter of their own bodies? Without a proper knowledge of the laws of your own organization, how can you possibly put in practice the Greek maxim, “Know yourselves?”

Having premised this much, I now come to consider in detail the phenomena of

#### INTERMITTENT FEVER OR AGUE;

for ague being the type of every other modification of disease, it is necessary you should be well acquainted with its principal symptoms. I have already told you there can be no disease, no morbid *motion* without change of *temperature*. The subject of ague, then, among other sensations and changes, successively experiences a CHILL and HEAT, followed by a profuse PERSPIRATION. These three stages, commonly called the Cold, Hot, and Sweating stages, constitute the PAROXYSM or FIT. The patient, during each stage, is consequently in a different condition of body from either of the others; his sensations, moreover, differ during each of them. To the state of Perspiration, which terminates the fit, an INTERMISSION, or interval of comparative health, succeeds; and this interval of immunity from suffering usually lasts one, two, or more days, (giving rise to the terms *tertian*, *quartan*, and other *agues*, according to the interval of duration), before the recurrence of another similar fit;—such fit generally making its invasion with a wonderful degree of exactness at the same hour of the clock as the former, and lasting about the same time,—when it is again followed by a similar periodic intermission of the symptoms as before. In all the stages of the fit, every function of the body is disturbed—some more, some less. During the cold stage, the face becomes pale, the features shrink, and the muscles are tremulous or even spasmodic: the patient, in other words, shivers, has cramp, and his strength

is prostrate. The breathing and circulation are variously altered,—his urine, if he passes any, is generally pale and plentiful, and his other secretions are similarly changed in quantity and quality. The senses and mental powers are for the most part depressed, or even curiously vitiated, though sometimes they are preternaturally exalted. A gentleman, who was recently my patient, informed me, that during the cold stage his intellectual powers were more than usually clear, and his sensations throughout highly pleasurable; he felt as if under the pleasurable feeling produced in some people by opium; but this kind of feeling is more frequently an accompaniment of the hot stage. The patient has nausea and loss of appetite, sometimes sickness; less frequently looseness of bowels,—or he has hunger amounting to voracity,—and sometimes thirst. A reaction now comes on. The patient gradually becomes warmer and warmer—the face changes from pale to red—his cheek is now flushed—his eyes are suffused, and he suffers from headache, more or less agonising. This is the *Hot stage*.

The thirst, whether it existed before or not, is now a most prominent symptom; the appetite is thoroughly lost; the patient having, in most instances, a repugnancy to the very name of food. If you inspect the tongue, you will find it comparatively dry and loaded, and of a brown colour; and though the skin feel to your hand like a burning coal, so to speak, the patient himself may complain of such excessive coldness, as to induce the attendants to cover him with numerous blankets;—more generally, however, he has a sensation of heat equally severe. Every muscle of his body in this stage is more or less painful and enfeebled; though in some instances, he may appear to have a greater command over them than in health; and if delirium supervene, which it may do, his strength will appear almost superhuman. During the excitement of this stage, individuals have been known to become musical, poetical, oratorical, and have exercised other talents which they never were known to manifest in health. The heart now beats violently, and the pulse is full and bounding; the urine, instead of being pale, as in the preceding stage, is scanty and high coloured. The secretions generally are sluggish, and in some instances they are altogether suppressed. A long *sweat* succeeds, during which the greater number of the suppressed secretions gradually reappear.—As with a feeling of languor, lassitude and a disposition to yawn and stretch the various members of the body, the fit is usually preceded; so with the same symptoms does it

usually end. Then comes the state of comparative health, which may either again pass into the Fever-fit, or continue for an indefinite period, so as eventually to become Health.

As every individual has, from birth, some part of his body less strongly constructed than the other parts, it would be wonderful indeed, if, during this tempest of body, termed an *Ague-fit*, that weak point were not very often discovered, but discovered more or less, in every instance it usually is. Is the Brain the least strongly constructed point? Then, according to the part of the organ most implicated, and the degree of implication, will you have Epilepsy, Apoplexy, Insanity, Imbecility of Mind, or Palsy, superadded. Is the original weakness of conformation seated in the lungs? Look, then, for spitting of blood, asthma, or consumption.—In the heart? how it palpitates or remits in its beats!—it may even stand still *for ever*; and more than once in my life have I known it to do this during the ague-fit. But the joints may be the weak points of the patient's body?—then, as a matter of course, the joints swell and become more or less hot and painful. And if just at this epoch, some wiseacre of the profession chance to drop in,—with the usual scholastic sagacity, he discovers the disease is not Fever, but *Rheumatism*. The lancet, of course, is immediately bared—the leech and the blister are ordered;—from this moment, the entire treatment is directed, not to the beginning, but to the end—not to the Fever, but to its termination! The state of the joints is the sole subject of thought and action; the Brain—that Pandora's box of the whole—that organ upon which every motion of the body, wrong or right, depends—never once enters into the wonderfully wise man's head;—he never once dreams of influencing this key to all the corporeal actions, in any manner whatever. And what is the result of this treatment? Daily promises, and daily disappointments—hope deferred and the heart made sick—the health, the happiness, and the home of the patient too often made desolate forever.

Thus far, Gentlemen, I have detailed to you the beginning, the progress, and some of the more important terminations of what is usually called a perfect ague-fit. I must now tell you that all agues are not equally perfect; the stages of the fit in particular cases may vary in duration—the bolder features or symptoms be all more or less subdued—the intermission, or immunity from suffering, instead of extending to a day or days, may be only an hour or two in duration. The disease is now no longer Ague; Physicians change its name to *Remittent Fever*. Remit-

tent fever may be either the primary disease, or the Fever may, in the commencement, be a veritable ague,—recurring and re-recurring, in the first instance, at perfectly periodic intervals of a day or more; yet slide by degrees into a fever of the Remittent form. And this Remittent Fever again, whether it be the original or secondary disease, from its periods of access and interval becoming still less obviously marked, may assume the shape and shade of disease incorrectly termed *Continued Fever*; which last, from long duration and other circumstances, may terminate in that most terrible state of mental and corporeal prostration, by the schools denominated *Typhus Fever*,—from a Greek word signifying stupor or unconsciousness, that being one of the most common symptoms.

What, then, are all these Fevers, but varieties or shades of each other? During the course of all or any of these so-called different fevers, every organic affection, every possible local change you can name or imagine, may, with more or less quickness, be developed,—giving occasion, of course, to the attending practitioner to baptise the disease anew; and this he may either do, according to the locality of such organic change, or according to the locality in which the symptoms may induce him to suspect its existence. Should a new doctor chance at this particular time to be asked to see the patient, what a fine opportunity for a very pretty quarrel! And the practitioner who attended from the beginning, though he may have practised the right, shall very likely be dismissed, while the other for advising the wrong may as certainly be retained, and be esteemed, at the same time, as an angel, or an oracle at least. You are doubtless curious to know the *wherefore* of this. But there is nothing so very curious in the matter after all. For if you only reflect how few people in this world can get further than the surface of things,—how few can see beyond present signs and present symptoms, you will not be astonished that the new doctor who shall place his finger on the organ for the time most implicated, and wrongly set that down not as the *end* but as the *beginning*—not as the consequence or effect, but as the origin and cause of the totality of disturbance, will be preferred to him whose experience of the whole case led him rightly to look upon the local disease as the gradual development of repeated febrile attacks. But the new practitioner will seldom be content with merely seizing upon the local termination as the cause or beginning of the mischief, and proceed to treat it accordingly; for he will very often drop a hint, at the same time, that but for neglect of this the case might have ended

far more favorably. Suppose, for example, *Pulmonary Consumption* to be the after result of the original fever. “What a pity,” the learned man will say, “I was not called in at first, for *then* I should have at once attacked the *seat* of the disease—the chest.” Then, Gentlemen, when no consumptive symptom existed,—then, when the *weak point* of the patient, for all you, I, or any other doctor knew, or could know, might have been the liver, stomach, or any thing else! And by that pretty speech of his, nine times out of ten, such new doctor will succeed in securing the esteem of the persons who employ him. Now this is a hard case for the honest and more able practitioner; but so the world wags!

Until the publication of my *Work*, the *Fallacy of the Art of Physic as taught in the Schools*, and long after, it was the almost universal belief of medical professors that Ague could only be caused by emanations from the fens; the complaint being very common in fenny countries; and I am not sure that this belief is not even now one of the numerous fallacies still taught in our schools and universities. But, Gentlemen, there is no agent in nature which may not cause ague, from a blow to a passion. Lord Byron's mother, according to Mr. Moore, died of a “fit of ague brought on by rage or vexation, caused by reading her upholsterer's bill.” The close analogy subsisting between ague and the passions has not escaped the observation of the poets, Shakspeare, as I shall afterwards show you, often alludes to it; and Coleridge in his usual playful manner, gives us to understand,

There's no philosopher but sees,  
That Rage and Fear are one disease,  
Though this may *burn* and that may *freeze*,  
They're both alike the Ague.

You see, then, there can be no corporeal agitation, no constitutional revolution, without a change of temperature of some kind.—Butler in his *Hudibras*, tells us,

Love's but an ague fit reversed,  
The hot fit takes the patient first.

Seriously, you will do well to ponder on the relations which the effects of the various passions bear to ague. Throughout them all you may observe the same tremor and thermal changes; and in many cases the disease which they may cause becomes equally periodic and recurrent. A young lady was to have been married on a particular day; but on the very morning of that day the bridegroom was accidentally killed. The grief of the lady ended in insanity. The *fit* in this



case, came on every day at the same time ; but during the remainder of the twenty-four hours, she had, in scholastic phrase, a "lucid interval." She was then perfectly sane.—Gentlemen, may I ask what are the lucid intervals of mania but intermissions? Prolong them to an indefinite period and you produce sanity! Prolong the intermission of any disease to an indefinite period, and you have *Health*. Your own common sense will tell you that.

What are the constitutional effects of a fall or a severe blow? Do we not perceive the same tremor in the first instance—the same pallor and loss of strength so remarkable in the cold fit of ague? Have we not the same hot or febrile fit succeeding? "The fevers," says Abernethy, "produced by local disease [local injury,] are the very identical fevers which physicians meet with when there is no external injury." How can they be otherwise, since it is only by the matter of the body changing its motive relations and consequent thermal conditions in an identical manner in both cases, that we obtain the group of symptoms included by physicians under the abstract word "*FEVER*."

The agents which cure fever from a blow, are the same agents which cure fever from a passion, a poison or a viewless and unknown cause. When a man is hot, and his skin dry all over, no matter what the cause be, you may bring his condition to the state of health by throwing cold water over him. You may do the same by an emetic. Oh! an emetic has a wonderful power in the case of fever; and the old physicians treated all fevers in the first instance by emetics.—They did not trouble themselves much about the cause. The state of the patient was what they cared most about. When he was cold, they warmed him, sometimes with one thing, sometimes with another. When hot they cooled him—not in the Sangrado fashion of these days, by draining him of his life's blood; but by the employment of an emetic, or by sponging him over with cold water! By bleeding a man in the hot stage of fever, you may cool him certainly; but unless you cool him to death, you cannot thereby keep the fit from returning. When it does return, you may bleed him again, it is true; but how often may you do this safely? So far as my experience of medical matters goes, few people in these times are permitted to die of disease. The orthodox fashion is to die of the doctor! Gentlemen, we daily hear of the terms *constant* and *continued* fever, but there never was, nor can there be a fever without a remission, without a period of comparative immunity from suffering, more or less marked. Every writer

of name from Cullen downwards admits this, but what does it signify whether they admit it or not? use your own eyes, and you will find it to be the truth. You have only then to prolong that period of immunity to an indefinite time, and you have health. By bark, opium, and the various chrono-thermal medicines, you may in most cases succeed. But instead of trying to prevent recurrence, practitioners now-a-days only temporize during the fit; and this is the most profitable practice; for a long sickness makes many fees! The honest physician will do his best to keep the fit from returning. Now if blood-letting were certain to do that, how could we possibly hear of people being bled more than once for fever? Do we not hear of repeated application of the lancet, and of the patient dying notwithstanding? When I come to speak of Inflammation, you shall find how little that instrument is to be relied on in fever, or rather you shall find that its employment at all, is one of the greatest and most terribly fatal of medical mistakes! How then is it, that this practice has so long maintained its ground? By the same influence that for thirty centuries determined the Indian widow to perish on the funeral pile of her husband—the influence of authority and custom simply. In physic, gentlemen, as in other things, men are "bred to think as well as speak by rote, they furnish their minds as they furnish their houses, or clothe their bodies, with the fancies of other men, and according to the age and country. They pick up their ideas and notions in common conversations or in their schools. The first are always superficial, and both are commonly false"—[Bolingbroke.] The first step that I myself made in rational medicine, was to unlearn all I had been taught; and that at the beginning was difficult. How I ever came to believe one half the rubbish propounded by medical teachers, I cannot now understand; for the whole doctrines of the schools are a tissue of the most glaring and self-evident absurdities. At a future period of this course I shall prove my assertion, but before you can detect error, you must first know truth, and this it shall be my endeavor to point out to you. To return then to Fever. From the facts and observations already stated, you at once perceive that during the whole of the paroxysmal stages of an ague the entire economy is more or less altered and revolutionized. It matters very little upon what part of the body the exciting cause or causes of this corporeal disturbance shall first fall—whether directly upon the brain in the shape of a *Passion*, a poison, or a blow on the head—or more remotely, as in the case of a sudden chill, or the mechanical injury of a joint or

other external part—to the consequent derangement of the Brain and Nervous System, we still refer the whole paroxysmal symptoms. Why, after these symptoms have once completely passed away, and the economy has been comparatively restored to its usual healthy motive condition, periodical repetitions of the diseased motions should yet recur, is a thing not more inexplicable than that the various habits of Health should in certain instances with our knowledge, and in certain other instances without it, all have a tendency periodically to repeat themselves: Upon this subject I will touch more at large at an after period of the course. Meantime as the symptoms of an uncomplicated *Ague* fit stand out boldly in relief—and as in every other form of disease, however named or by whatever caused, these symptoms or shades of symptom may readily be traced; you at once see the reason why I have taken *Ague* as the *type* of the whole. But while with this explanation I assume every disease to be in the first instance an *ague*—do not suppose for a moment that I employ the term in any confined sense. Call the symptoms *ague*, fever, or what you please, CONSTITUTIONAL DISTURBANCE is the prelude to every disease—the precursor of every kind of local mischief—though in numerous cases if not in all—more especially after repeated paroxysmal recurrence, SUPERADDED PHENOMENA appear, and these last may be either FUNCTIONAL or ORGANIC—and in some instances they are of a kind so grave and important, as to throw the constitutional symptoms for a time altogether into shade. Some part of the system, in a word, may be so much more prominently implicated than another, as to become the chief feature of the case—functionally if the motions be only *atomically* altered—organically, if the part in question be threatened with a change in its structure tending in any way to its destruction or decay. Of the first you have an example in the *spasm* or *palsy* of a muscle, or the suspension or too great flow of a secretion. Of the second I can give you no better instances than that disorganizing disease of the knee joint termed “white-swelling,” and that too common termination of chest disease in this country—*Phthisis* as it is termed by medical men—*Consumption* or *decline* by the vulgar.

The propriety of adopting any remedial measure has in every case more or less relation to time and temperature. But the beneficial influence of the Peruvian BARK, and its preparation *Quinine*, would appear, more than any other agent, to depend upon the period in which we administer it. The proper period for its exhibition is during the remission. With the exception of opium, it is

more strictly a *preventive* than any other known agent. So generally, indeed, has it been found to answer this purpose in the treatment of *Ague*, that many teachers of medicine have vaunted it as a *Specific* for this distemper; but as we stated to you in our former lecture, there is no such thing as a specific in nature for any disease whatever. Had there been a specific for *ague*, do you think the court doctors would have permitted Oliver Cromwell to die of it? Whatever be the agency by which this or any other disease has been cured, you shall find in the course of these lectures, ample evidence that its influence relates in every case to change of temperature. Major-General Sir R.—A—while serving in Portugal, became the subject of severe *ague*, which resisted a host of remedies prescribed for him by numerous medical friends—Bark among the number. One day when riding out he was seized with a paroxysm. The inmate of a little shop where he dismounted till the fit should be over, suggested to him to try the barber-surgeon of his neighbourhood. Willing to be cured by any body or by any thing, Sir R. at once agreed. The ambidexter man of medicine came, ordered him a large plaster to his back, and the *ague* was forthwith cured! Gentlemen, to what, but to the improvement of the *temperature* of the spine must we attribute the success of that plaster? The general good effect of *Quinine* in keeping off the *ague-fit*, when it proceeds from viewless causes, is sufficiently well known to every member of the profession; but it is not so generally understood that the same agent may be equally serviceable in cases produced by local injury. Of this, however, I will give you a proof. A gentleman shortly after having had a *bougie* passed, was seized with *ague* of the most perfect kind; two days after, at the same hour, he had a return, and every alternate day it recurred, till he had experienced about twelve paroxysms; then for the first time he took *quinine*, and he had no repetition. He never had *ague* before that occasion, nor ever afterwards, unless when compelled to use the *bougie*.

I do not know that I could better commence my proof of the intermittent nature of Disease generally, than by entering into a short consideration of what are termed

#### SPASMODIC COMPLAINTS.

Such complaints being unattended with any structural change, are termed by the profession FUNCTIONAL; a word, as we have seen, expressive of their simplicity. What is the meaning of the term *Spasm*? It means an irregular or unnatural contraction of some

muscle of the body, and in the case of the voluntary muscles, you cannot by any effort of the will control or counteract it. By rubbing and warming the part, you may sometimes succeed, and there are a great many medicines by which, when taken internally, the same effect may be produced; but what will answer in one case may not answer in another. The disease is sometimes termed *Convulsion*, and *Cramp* also, more especially if the spasm be painful. The difference of locality in which spasm takes place in different persons has afforded professors an excellent opportunity of mystifying the whole subject. When it happens in the membranous lining of the lachrymal duct, you shall see the tears accumulating at the inner angle of the eye, the passage to the nose being closed up by the contracting spasm. This disease is called *Epiphora*, and sometimes, though not quite correctly, *Fistula*, *Lachrymalis*. *Sneeze*, *Hiccough*, and *Yawn*, are also effects of spasmodic action. Occurring in the muscular apparatus of the windpipe, or its divisions, spasm is familiar to you all in the word *Asthma*; and 'it is also termed *Dyspnea*, from the difficult breathing which it certainly occasions. When this spasmodic action affects the muscles about the jaws and throat, and the patient at the same time has convulsions of the face and limbs, there is usually loss of consciousness, with a sudden loss of power in all his members, which causes him to fall. This is the *Epilepsy* or "falling sickness." The subject of the disease termed *Jaundice*, in ninety-nine cases out of a hundred, owes the yellow colour of his skin to spasm—spasm of the gall-ducts—though any other obstruction of these passages—a gall-stone for example, may give rise to the same effect. Taking place in the illium or small intestine, spasm is termed the *Iliac Passions*; in the colon or great intestine, *Colic*; in the urethra, *Spasmodic Stricture*. The *Lockjaw* affords yet another example of spasm. That all these various diseases are merely effects of the same action in different parts is proved by each and all of them having been known to assume the most perfectly *periodic type* in individual cases, and by all being more or less amenable to the same class of remedies most generally influential in keeping off the ague-fit.

Like every other Force in nature, Remedial Powers act by *attraction* or *repulsion*, and for a reason to be afterwards given, every remedy can act both ways in different individuals. They are all capable of producing inverse motion,—in one case *curing* or *alleviating*, in another *causing* or *aggravating* disease. Opium, for example, will set one man to sleep, and keep another wakeful. Arsenic has

cured the tremor and heat of ague, and set up both in a previously healthy person. Opium, Bark, Copper have done the same. Moreover, all four have produced diseases with fits and remissions.

A girl took a large dose of arsenic (sixty-four grains) for the purpose of suicide; her design was discovered in sufficient time to prevent her death; but a periodic epilepsy ushered in by chills and heats was the result. A man of the 30th foot, after a course of hard drinking, became epileptic; his disease came on every second day at the same hour. Quinine, silver, and calomel, were tried without success. I then gave him arsenic, after which he never had another fit. In these two cases then, arsenic produced inverse motions, causing epilepsy in the first, and curing it in the second. When I come to treat particularly of the Passions, I shall show you that the same passion which has caused an ague or an epilepsy may cure either. In truth, I scarcely know a disease which the passions *Rage* and *Fear* have not cured and caused, according to their *attractive* or *repulsive* mode of action in particular cases.

I have said that *ASTHMA* is an intermittent disease. "The fits of convulsive Asthma," according to Darwin, "return at *periods*, and so far resemble the access of an *intermittent fever*." Had this physician's knowledge of the symptoms of Asthma been sufficiently complete, he would have added that in almost every instance the subject of it shakes or shivers, and in all complains of a chilly feeling followed by heat of skin. Then doubtless he would have found that between ague and asthma there is something more than a resemblance—that Asthma, in fact, is an ague, with the further development of spasm of some of the muscles of the windpipe.—But call the disease what you like, I have generally cured it with one or other of the chrono-thermal remedies; and with two or more in combination I can most truly say I have seldom been compelled to complain of ill-success in its treatment. In one case, however,—that of a gentleman who had the disease every second night,—I had the greatest difficulty in effecting a cure, for it was not till I had nearly exhausted all my best resources that I succeeded to my heart's content by applying a warm plaster all along his spine. Here you again see, in the most direct manner, the advantage of attention to temperature; the spine, in this case, was always chilly, but became warm and comfortable under the use of the plaister. Many medical writers have detected the analogy which subsists betwixt *Spasm* and *Tremor*, without being at all able to explain in what it consists. Analyze tremor, or as it is more commonly cal-

led, "shivering" "shaking," or "trembling." and you will find it to be merely a rapid succession of incomplete spasms. In *St. Vitus' dance*, or as it is sometimes termed, "the leaping Agye," which is also a periodic disease, you may see every variety of spasmodic and tremulous action a muscle can take. It is a disease which I am very often consulted for in children, and in most cases I speedily succeed with minute doses of one or more of the chrono-thermal remedies; one remedy of course answering better in one case, another in another.

With the same agents, prescribed upon the same principle, I have been equally fortunate in the treatment of Urethral Stricture—a disease for which the bougie, in general practice, is far too indiscriminately employed. You all know the beneficial influence of *warm baths* in this affection, and some of you have heard of the advantages to be obtained from the internal use of *Iron*. But the influence of *Quinine* over stricture is not so generally known. It is unnecessary for me to give any instances of my own in evidence of this, Sir Benjamin Brodie having published at length the case of a gentleman affected with spasmodic stricture of the tertian type—that is to say, which came on every alternate night about the same hour, and which yielded, in his hands, to quinine. The marked *periodicity* of this case doubtless pointed out the proper treatment; but in cases where this is less striking, you have only to ask the patient if there are times when he passes his water better than at others; and if he answers in the affirmative, you may be sure the stricture depends less on a permanent thickening of the mucous membrane of the urethra, than upon a remittent spasmodic action of its muscular apparatus. Such a patient on coming out of a warm room into a *cold* one, will find himself, all in a moment unable to pass a drop of water. See then the effect of *thermal change*—of change of *temperature*—in producing spasm,—and hence too the benefit to be derived from the warm bath in the treatment of spasm generally. In the great majority of stricture-cases, the surgeon may save himself the trouble, and his patient the torture, of passing the bougie at all, by treating the disease chrono-thermally;—that is, if he prefers the interest of the public to his own; but this mode of preventing the return of disease is obviously less lucrative than that which enables him to give a temporary relief at the expense of long attendance.

We now come to that form of disease termed

#### PALSY OR PARALYSIS.

An affection in which there is a still greater loss of muscular power than in any of those

we have hitherto considered. From the suddenness with which the patient is in most instances affected or "struck," this disease is known to every body under the name of "Paralytic Stroke," or more familiarly still, "a Stroke." It consist either in a partial or complete inability to use the affected muscles—for there are degrees of Palsy as of every other disease—inability to control their actions in any manner whatever by the will. Now it is a common error of the schools to teach that such disorder is *always* dependent on some *PRESSURE* on the Brain or Spine.—But, gentlemen, Paralytic disease has often been produced by a *purge*, and oftener still by *loss of Blood*;\* and many weakly persons on suddenly rising from their chair, have all at once lost the use of a leg or arm. Most cases of Paralytic diseases if properly sifted, will be found to be only the *termination* of previous constitutional disturbance; previous threatenings of such loss of power having been more or less frequently felt by the subjects of every case. Moreover, in a number of cases, palsy is an *intermittent* disease throughout its whole course, being preceded by chills and heats, and going off with a return of the *proper* temperature of the body. How can you reconcile the idea of permanent pressure with such phenomena?

I now hold in my hand the *Dublin Journal*, in which I find a case of paralysis of some of the muscles necessary for the proper performance of the functions of speech—*Aphonia*, as it is called by professional men. This case will show you that Palsy, like every other form of disorder, may exhibit the most perfect periodic intermissions. It is taken from a foreign journal. [*Hecker's*] "A peasant girl was attacked in the following manner:—Speechlessness came on every day at four o'clock, P. M. accompanied by a feeling of weight about the tongue, which remained a quarter of an hour. The patient, while it lasted, could not utter any sound, but occasionally made an indistinct hissing noise.—Consciousness did not seem impaired during the fit. She ascribed her inability to speak to a feeling of weight in the tongue. The paroxysm went off with a large evacuation of watery urine, accompanied with *perspiration* and sleep. Ten such attacks had occurred, when Dr. Richter of Wiesbaden was called to see her; he ordered her considerable doses of sulphate of Quinine with immediate good effect from the first day. The attack returned, but in a mitigated form, and on the second day

\* The recent case of Sir Wm. Geary must be still fresh in everybody's mind. That Gentleman met with a sudden loss of blood from an accidental wound of the carotid artery. Palsy of the left side ensued.

no trace of it was visible except a certain degree of debility and fatigue felt at the usual hour of its coming on."

I am sorry the corporeal temperature is not stated by the reporter of this case, but the periodic manner in which it came on and went off, together with the mode of its cure, sufficiently illustrate its nature. Not long ago, I was consulted in a similar case, which was moreover complicated with palsy of one side. Sarah Warner, aged 25, married, had suffered periodically from loss of speech, and also from an inability to move the leg and arm of one side. Various remedies had been ineffectually prescribed by her medical attendants, who all looked upon her disease as *APOPLECTIC*—in other words they supposed it to be caused by *pressure* on the Brain. One of them, indeed, proposed to bleed her, but she would not consent. When she applied to me I ordered her a combination of Quinine and Iron, after which, she never had another fit.

I shall now give you the details of a case of palsy which I treated successfully after it had been long considered hopeless:—

Mrs. Sargent, aged 40, a married woman, and the mother of several children, had kept her bed for eight years, on account of paralysis of the lower extremities; during which period she had been under the treatment of eight or nine different physicians and surgeons of the Cheltenham Dispensary, Dr. Cannon and Mr. C. T. Cooke among others. Such at least was the woman's own statement, confirmed to me by many people of respectability, who had visited her from the commencement of her illness. When I first saw her, she could not move either leg; her voice was an almost inaudible whisper; she was liable to frequent retchings and she complained of spasms with much pain of the loins and limbs. Her last dispensary medicine, mercury, which she believed had been given her by mistake, had produced salivation, but with decided aggravation of her symptoms. In this case I prescribed a combination of remedies, the principal of which were hydrocyanic acid and tincture of cantharides. Under this treatment her voice returned in about a week: her recovery from every symptom was complete in six weeks, and she had no return in three years after she was under my care.

Charles Overbury, aged 10, had been in a curious state for some months previous to my first visit. I found him lying upon a couch, every muscle of his face in such complete repose, that his countenance seemed quite idiotic; his arms and legs were perfectly powerless, and if you held him up, his limbs doubled under him like those of a drunken person. Upon which ever side you placed his head, he was unable to remove it to the

other. It was with difficulty he swallowed his food, but the heart and respiratory muscles performed their respective offices with tolerable correctness. The patient labored under complete loss of speech the entire night, and nearly the whole day. About the same time daily—noon—he could utter the monosyllables *yes* and *no*, but this power remained with him for half an hour only. The remedies to which I resorted in this case were minute doses of calomel, quinine, and hydrocyanic acid,—all of which improved him, but the last proved the most effectual. In less than three weeks he was running about, well in every respect, and the change in his countenance, from apparent idiocy to intelligence, was as perfect a transformation as it is possible to imagine. You marked, I hope, the periodic, though imperfect, remissions which this case exhibited.

The case of the celebrated Madame Malibran may still be fresh in some of your minds. It was completely the converse of this boy's disease, for at particular times every muscle of that actress became stiff and rigid throughout the entire body. When taken together, these cases show the analogy which subsists between paralytic and spasmodic affections; indeed, in many cases, both affections co-exist at the same time in different muscles of the same person,—sometimes they are complicated with imbecility of mind or insanity.

A young girl was lately carried into my room by two of my servants. Her mother brought her to me, at the request of the Rev. Edward Murray, brother of the Bishop of Rochester. Not only had this girl lost the use of one side, but her reason was gone; in fact, her appearance was quite idiotic, and she was utterly helpless in every way. She had, moreover, an *Epileptic fit* every night when she was put to bed. In this case, I prescribed a combination of copper, silver, strychnia, and quinine. What a medley! I hear some of you say; but don't be too quick, for mark the result. About six weeks afterwards, a young person walked into my room with a letter "from the Rev. Edward Murray." It was the same girl, looking quite intelligent, and speaking and walking as well as she had ever done in her life.—Her epileptic fits had become faint, few, and far between, and she was then the monitor of her class! Now this girl, Mr. Murray informed me, had been ill *four* years, and had been dismissed the Middlesex Hospital "incurable."

I was suddenly called to see Mrs. T— of Clarges-Street, whom I found with complete loss of the use of one side, and partial palsy of the muscles on the same side of the face. She had been nervous and ill for some

time, and the night before, she had been suffering from domestic affliction. The next morning, while entering her own door, she fell as if she had been shot. When I saw her, her face was pallid, and her feet were cold. The people about her were urgent that she should be bled, but I ordered her warm brandy and water instead. A gentleman who was formerly her medical attendant, was sent for, and agreed with me that she should not be bled. Under the use of quinine and strychnia, continued for about six weeks, with country air, she recovered the use of her side so far as to be able to walk without a stick; the use of her arm has also since returned. Had this lady been bled or leech-ed, she would now in all probability be in her coffin.

I will now give you a case or two exemplifying the cure of palsy of a single limb.

Case 1.—Mary Boddy, 18 years old, from the age of *eleven*, had weakness of the back and loins, and she gradually lost the use of the right leg. In this state she remained for *three years*; sixteen months of this period she was an in-patient of the Gloucester Infirmary, in which establishment her mother held the situation of nurse. But cupping, bleeding, leeching, blistering, were all ineffectual. The patient complained of having suffered from shivering fits, followed by heats, and sometimes perspirations. The same mode of treatment as in Mrs. Sargent's case, with the addition of a galbanum plaster to the loins in which she complained of coldness, was adopted, and followed with like success. She had scarcely been a fortnight under my care, before she completely recovered the use of her paralytic limb, and she has had no relapse during the last four or five years.

Case 2.—Esther Turner, aged 30, when in the service of Mr. Ward, the master of a respectable Boarding School, at Painswick, fell down stairs, and from that moment, lost the use of her left leg. After a period of *eleven years*, during which she had been ineffectually under treatment in various hospitals and infirmaries, she came on crutches to my house. She explained that she was subject to severe shivering, with occasional convulsions. Her leg, she said, had more feeling on certain days than others. After trying her for some time with a combination of hydrocyanic acid and tincture of cantharides, without any improvement, I prescribed a pill, containing a combination of quinine, silver, and colchicum, night and morning. She progressed from that day; and in about six weeks I had the satisfaction to see her in possession of the complete use of her limb; nay, she returned to her service at Mr. Ward's, which she only left to get married.

Case 3.—Miss M——, aged 25, had lost the use of both limbs for *seven years*; all that time she had been confined to her bed, and though she had the advice and attendance of the late Sir Charles Bell, who was a friend of her family, she never once could stand up during the whole of that period. She was brought up to town from Yorkshire, a distance of 260 miles, on a sofa-bed, to be placed under my care. I immediately put her on a course of chrono-thermal treatment, and we had not long to wait for improvement, for in five days this young lady could walk round the table with the partial support of her hands. At the end of two months, without any assistance whatever, without even the support of the bannisters, she could run up and down stairs nearly as well as myself.

Should this case be considered to require better confirmation than my word, I am permitted *privately* to give Miss M——'s name and address to any party who may take an interest in the case, the particulars of which she will readily communicate. Miss M—— is the daughter of an accomplished English clergyman, and is niece of one of the judges of the supreme court of Scotland, who being in town all the time she was under my care, saw her the day after she arrived, and had the satisfaction to witness the whole progress of her cure.

If a knowledge of anatomy could confer a knowledge of Physic, why did Sir C. Bell fail in this case? No man knew anatomy better; few knew the *nervous system* so well. But to know the anatomy of the *dead* is one thing, and to know how to influence the motions of the *living* is another. Sir C. Bell was a profound anatomist, and an admirable operative Surgeon; he excelled in Mechanics, but not in Medicine.

I could here give you numerous other cases, all more or less explanatory of the manner in which palsy of almost every muscle of the body may be developed and cured. For the present, I shall content myself with recording my experience of a disease, which until I explained its nature in 1836, was never supposed to depend on Palsy, namely the *Curved or Cooked Spine*.<sup>\*</sup> By most authors, this disorder had been supposed to be under all circumstances, an affection of the bones. Some vaguely referred it to be peculiarity of nervous action; while others hy-

<sup>\*</sup> When I first published my views of the nature of Curved Spine, their correctness was called in question. When Stromeyer and others, without noticing my labours, afterwards adopted them as their own, they were admitted by the whole profession to be true.—What a reward to the real cultivators of science.—first to have their discoveries denied, then pilfered! The reader will find as he proceeds that this is not the only instance of plagiarism I have to complain of.

pothetically traced it to looseness of the ligaments. When the late Mr. Abernethy said it was owing to a "*rancour* in the muscles," he only used an unmeaning phrase to conceal his ignorance of the entire matter; for what meaning can there in reality be in the word "*rancour*," when applied to a subject like this? *Rancour* is an old English word for malignity or ill temper; but how can that apply to a state of muscular *repose*,—to a palsy! Nevertheless, to Mr. Abernethy's surgical care, almost every case of spinal curvature, among the higher ranks, was at one time entrusted. What the disease really is, I shall now proceed to demonstrate.

The mast of a ship is kept erect by the *stays* and *shrouds*—if you divide or loosen these on one side, the mast falls more or less in an opposite direction. The human spine is kept upright by a similar apparatus—the *muscles*. If any of these muscles from bad health become weakened or paralyzed on any side, the spine, from the want of its usual supporting power, must necessarily, at that particular place, drop to the other side. But being composed of many small jointed bones,—the *vertebra*—the Spinal column cannot, like the mast, preserve its upright form, but when unsupported, must double more or less down in the shape of a curve or obtuse angle; and the degree and situation of this curvature will depend upon the number and particular locality of the muscles so weakened or paralyzed. This disease or "deformity," (for Mr. Abernethy would not allow it to be anything else,) under all its uncomplicated variations of external and lateral curvature, is the result of muscular weakness or palsy; which palsy, for the most part, is a feature or termination of long remittent febrile disorder. It is often a more or less rapid development of the usual diseases of children,—Scarlet fever, Chicken-pox, Measles, and so forth; all of which, as I shall afterwards show you, are purely remittent fevers; but whether complicated with vertebral disease or not, curved spine is no more to be influenced by issues, setons, moxas, &c, except in so far as these horrible measures almost invariably confirm it by further deteriorating the general health of the patient.

In the commencement of most cases of this kind, the patient is taller one day than another,—a proof that it depends upon the state of health of the hour; and never do I remember to have had such a patient who did not confess to chills and heats or *vice versa*. I will give you two cases in which these phenomena were observed.

Case 1.—A young lady, aged 16 had a lateral curvature of the *vertebræ* of the upper part of the back, (that is a curvature to one

side) causing the inferior angle of the shoulder blade to protrude. I prescribed calomel and quinine, in small doses, and directed her to have her spine rubbed night and morning with soap liniment. In less than a month the patient had gained three inches in height, and in two months more, she was erect.

Case 2.—A lady, 45 years of age, the mother of children, had her spine so much curved at the lower part of the loins, that, to use the phrase, her "hip grew out." This case came on suddenly. I ordered a warm plaster to be applied to the spine, and prescribed hydrocyanic acid and quinine. In three weeks she stood upright. Four years afterwards she had a return, when the same means were again successfully put in practice. These two cases, gentlemen, were cases of simple, uncomplicated palsy of the muscles of the back. There are yet other ways in which curved spine may take place, though these still depend on a *loss of Health* of the general system. The mere weight of the body will in some cases produce *waste*, or, professionally to speak, *interstitial absorption* of particular *vertebra*, or of their parts. A curve of course must follow; but curvature of the spine is not unfrequently the effect of a *consumptive* disease of the substance of the *vertebræ*—a process by which one or more of these small bones fall into a state of ulcerative decay. Still, even in these cases there is at the same time a greater or less loss of power in particular muscles—for the same general bad health that weakens the bones must weaken them also.

I will give you two cases illustrative of this last complication.

Case 1.—Mrs Craddock, aged 25, had, for upwards of eighteen months, great weakness in the upper third of the back, where a swelling made its appearance, gradually increasing in size. According to the statement of this woman, she had been an in-patient of the Gloucester Infirmary for seven months; during which time she had been treated by issues and other local measures, but with no good effect. When I first saw her, she could not walk without assistance. Upon examination, I found a considerable *excurvature*, involving the third, fourth, and fifth *vertebræ* of the back,—which *vertebræ* were also painful and enlarged, and the skin which covered them was red and shining. The patient was extremely debilitated, shed tears upon the most trifling occasion, and was subject to *tremblings* and spasms. She was generally chilly, and suffered much from coldness of feet. She also complained of *flushes*. Some days she thought the "swelling" in her back was not so great as upon others; and upon these particular days, she also remarked

her spirits were not so low. I directed the issues to be discontinued, and ordered a combination of hydrocyanic acid and tincture of cantharides, to be taken three times a-day. These medicines she had scarcely continued a fortnight, when the improvement in her general appearance was most decided; the protuberant part of her spine had in that period considerably diminished—her health daily became better, and, in less than a month, her cure was accomplished. A permanent curve, slight when compared with her former state, still remains.

Case 2. A young gentleman, 9 years of age, had external curvature of the upper vertebrae of the back; one or more of which were in a diseased and even ulcerated state, as was obvious, from the discharge which proceeded from an opening connected with the spine. His mother observed that he stood more erect some days than others. When I was first consulted, he had an issue on each side of the spine; but these, as in the former case, having been productive of no good, I ordered to be discontinued. Keeping in view the remittent and constitutional nature of the disease, I prescribed small doses of calomel and quinine. The very next day the discharge was much diminished and a cure was obtained in about six weeks. The ulcer in that time completely healed up, but a permanent angular curve of course, remained—trifling, however, when compared with the state in which I first found him. I might give you many other such cases, but my object is to illustrate a principle, not to confuse you with too much detail. These two cases, gentlemen, are sufficient to show you the nature and best mode of treating, what you may call, if you please, *Vertebral Consumption*;—though I am not so sure the schools will agree with you in the designation. The one case was in its incipient state, the other fully developed.

It occasionally happens that the matter proceeding from a diseased vertebra, instead of making its way out by the back, proceeds down the loins internally, till it reaches the groin, where it forms a tumour; this tumour is called by the profession *lumbar*, or *psoras abscess*. With the exception of opening the tumour to allow the collection of purulent or other matter to escape, this disease, like the cases just detailed, should be treated almost entirely by constitutional measures—by such measures as tend to the improvement of the health generally. It has been for some time the fashion to confine all patients with spinal disease to a horizontal posture; and a rich harvest makers of all kinds of beds and machines have derived from the practice. In the greater number of cases this treatment is

erroneous from beginning to end. Constant confinement to one posture is sufficient of itself to keep the patient nervous and ill; while his own feelings and wishes are, for the most part, the best guide as to whether he should rise, walk, sit, or lie down. In this he has no theory—the doctor too often has nothing else.\*

Equally effectual have I found the chronothermal principle of treatment in that particular palsy of one or more muscles of the eyeball, which gives rise to *Squint*, or *Strabismus*, as the Faculty phrase it. Parents who have children thus affected will tell you that the little patient some days scarcely squint at all. You see then that this affection, at the commencement at least, is in most instances an *intermittent* disease. Can the intermission here, like that of the ague, be prolonged to an indefinite period by bark, opium, &c.? Oh, I could give you half-a-hundred instances where I have prolonged it to a cure by these remedies. In a case lately under my care, the squint came on regularly every alternate day at the same hour, and lasted an hour. The subject of it, a boy of eleven, after taking a few minute doses of quinine, never squinted more. In another case, as nearly as possible the same, I ran through almost all the chrono-thermal medicines ineffectually; but succeeded at last with musk. I was lately consulted in the case of a young gentleman affected with squint, who had also a tendency to curved spine. A few doses of calomel and quinine cured him of both. The subject of all these cases had corporeal chills and heats,—showing clearly that the local affections were merely developments of remittent fever. Were medical men only to attend a little more to constitutional signs, they would not, I am sure, leech, blister, and cup away at localities, as they are in general too fond of doing. If properly treated at the commencement, squint is very generally curable by internal remedies; but when, from long neglect or ill-treatment, it has become permanent, the position and appearance of the eye may be made all but natural by a surgical division of the opposite muscle. If the squint be *partial* only, a surgical operation will make the patient squint worse than ever—and even in the case of complete squint, should the paralytic

\* Among the numerous causes of spinal disease named in books, much stress is laid on the improper use of *Stays*, and other articles of female dress—but what is Heaven's name is the use of reasoning with the English people on such a subject—a people who imitate every body, fear every body, and in all things attempt to rival every body—not so much as regards truth and excellence, but as regards the stark, staring abandonment of both! The doctors at least have reason to thank them. We laugh at the Chinese for diminishing the size of the female foot, which is not a vital part. The cheat is, if you take its contents into account: but see how we diminish it by stays! &c.



muscle upon which it depends recover its power after the operation, a new squint would follow of course.

There is yet another paralytic affection of the eye which I must explain to you. I allude to what is called *Amiaurosis* or Nervous Blindness. In this case, a non-medical person could not tell the patient was blind at all, the eye being to all appearance as perfect as the healthy organ. Now, this affection, in the beginning, unless when caused by a sudden blow or shock, is almost always a remittent disease. Some patients are blind all day, and others all night only. Such cases, by the profession, are termed *hemeralopia* and *nyctalopia*, or day and night blindness. These, then are examples of intermittent amiaurosis; and they have been cured and caused, like the ague, by almost every thing you can name. You will find them frequent in long voyages,—not produced in that case by exhalations from the fens or marshes, as many of the profession still believe all intermittent diseases to be,—but by depraved and defective food, with exposure to wet, cold, and hard work, perhaps, besides. In the *Lancet*, [8th Dec. 1827,] you will find the case of a girl, twelve years of age who had *intermittent* blindness of both eyes, palsy of the limbs, phrenzy, and epilepsy, from all of which she recovered under the use of ammoniated Copper—a chrono-thermal remedy.—This case fully establishes the relations which these various symptoms all maintain to each other; and their remittent character, together with the mode of cure, explains the still greater affinity they bear to ague.

The remedies which I have found most efficient in *permanent* nervous blindness have been the chrono-thermal, or ague medicines, occasionally combined with mercury, or creosote. I will give you a case which I treated successfully by an internal remedy.—Charles Emms, aged 25, stated to me that he had been completely blind of both eyes for upwards of nine years, four of which he passed in the Bristol Asylum, where, after having been under the care of the medical officer of that establishment, he was taught basket making, as the only means of earning his subsistence. He had been previously an in-patient in the Worcester Infirmary, under Mr. Pierrepont, but left it without any benefit. Some days he perceived flashes of light, but could not even then discern the shape or shade of external objects. Before he became completely blind, he saw better and worse upon particular days. When he first consulted me, his general appearance was very unhealthy, his face pale and emaciated, his tongue clouded, appetite defective and capricious, and he described himself as

being very nervous, subject to heats and chills, palpitations and tremblings; his spirits were depressed. My first-prescription, quinine, disagreed; my second, silver, was equally unsuccessful; with my third, *hydrocyanic acid*, he gradually regained his vision—being, after an attendance of four months, sufficiently restored to be able to read large print with facility. Such has been his state for upwards of two years. I need not say his general health has materially improved—his appetite, according to him, having become too good for his circumstances. In confirmation of the value of hydrocyanic acid in nervous blindness, I may mention that many years after I first published this case, Dr. Turnbull detailed as a great *discovery* some cures which he made in similar cases by applying the vapour of this acid to the Eye.

If patients who are subject to DEAFNESS, be asked whether they hear better upon some days than others, the great majority will reply in the affirmative;—so that deafness is also for the most part a remittent disease.—That it is a feature or development of general constitutional disorder is equally certain, from the chills and heats to which the great body of patients affected with it, acknowledge they are subject. Deafness from organic change of the ear is infinitely less frequent than that which arises from nervous or functional disorder. Hence the improvement to be obtained in the great majority of diseases of this organ, by simply attending to the patient's general health. By keeping in view the chrono-thermal principle, I have been enabled to improve the hearing in hundreds of cases. One old gentleman, upwards of 70 years of age, after having been all but quite deaf for years, lately consulted me for his case; he recovered completely by a short course of hydrocyanic acid. The like good effects may also be obtained by chrono-thermal treatment in ringing of the ears, &c. Indeed, very few people get much out of health without suffering more or less from noise in the ears; sometimes so great as to cause partial deafness.

Cases of loss of the sense of Touch, and also those of partial or general numbness, will, in the greater number of instances, be found to exhibit remissions in their course.—So also will almost every instance of that exalted degree of sensibility known by the various names of *Tic douloureux*, *Sciatica*, &c., according to the locality of the various nerves supposed to be its seat. Look at the history of these diseases. What have your surgical tricks done for their relief,—your moxas, your blisters, your division of nerves! The only measures to which these diseases have yielded, have been the chrono-thermal

remedies, bark, arsenic, iron, prussic acid &c., the remedies, in a word, of acknowledged efficacy in ague. I shall here present you with a case from the *London Medical and Surgical Journal*, illustrative of the nature of *Tic* when involving the nerves of the face. The pain first supervened after a fright; it returned every day at two o'clock, commencing at the origin of the suborbital nerve, extending along its course, and lasted from half an hour to an hour. Two grains of sulphate of quinine given every two hours for three days produced in so short a period a complete cure. The same prompt and favourable effects were observed in another case of frontal tic that appeared without any known cause.—Now this *frontal tic* is commonly known by the name of *brow-ague*. Why then mystify us with *neuropathy*, *neuralgia*, and a host of other jaw-breaking terms, that, so far from enlightening the student upon the subject of medicine, do nothing but lead him into darkness and confusion. All these are mere varieties of Ague; the place of pain making the only difference.

Loss of the sense of *TASTE* is an occasional effect of constitutional disturbance, and so is *Depraved Appetite*. An example of what is called *Bulimia* or *excessive appetite*, occurs in the lectures of Mr. Abernethy: "There was a woman in this hospital, who was eternally eating; they gave her food enough, you would have thought, to have disgusted anybody, but she crammed it all down; she never ceased but when her jaws were fatigued.—She found out that when she put her feet into cold water, she ceased to be hungry." What could be this woman's inducement to put her feet in cold water, in the first instance? What but their high temperature—the Fever under which she labored? A gentleman, who was fond of play, told me, that when he lost much money he was always sure to become *ravenously hungry*; but that when he won, this did not happen. The temperature of his body, as well as the condition of his brain, must have been different at these different times.

To the state of corporeal temperature, we must also refer the various degrees of *THIRST*, from which so many invalids suffer. This like *HUNGER*, when extreme, is a depraved sensation. If we have intermittent fever, so also must we have intermittent hunger and thirst among the number of morbid phenomena. Colonel Shaw, in his *personal memoirs and correspondence* has this remark; "I had learned, from my walking experience, that to *thirsty* men, drinking water only gives a momentary relief; but if the *legs* be wetted, the relief, though not at first apparent, positively destroys the pain of thirst."

We have, hitherto Gentlemen, confined ourselves, as much as possible, to simple or "functional" diseases,—those forms of disorder in which there does not appear any tendency to local disorganization or decay. In our next Lecture, we shall enter into a consideration of those disorders which manifest more or less *change of structure* in their course. Such diseases are termed "organic," by medical writers, and to a certain extent they are more complicated than those we have just left. To a certain extent, too, they admit modification of treatment. In most cases of this kind, though not in all, it is my custom to prescribe one or more powers, having a general chrono-thermal influence, with one or more having a special local bearing.—I have necessarily, on occasion, combined remedies which may partially decompose each other. In continuing still to do so I am justified by *successful results*, the only test of medical truth—the ultimate end and aim of all medical treatment. A charge of unchemical knowledge has been occasionally urged against me for this, by chemists and drug compounders. But what says Mr. Locke?—"Were it my business to understand physics, would not the surer way be to consult nature itself in the history of diseases and their cures, than to espouse the principles of the dogmatists, methodists, or chemists?" This charge, then, I am willing to share, with numerous medical men, whom the world has already recognised as eminent in their art. By such, the answer has been often given, that the human stomach is not a chemist's alembic, but a living organ, capable of modifying the action of every substance submitted to it. And here I may mention, that the late Sir Astley Cooper, when I sent him my work, entitled "*The Unity of Disease*," with that candour and gentleman-like feeling by which he was not less distinguished, than by his high eminence as a surgeon, wrote to me as follows:

"Dear Sir, I thank you most sincerely for your valuable work. I have not the least objection to being *unchemical*, if I can be *useful*; and I agree with you, that the living stomach is not a Wedgewood mortar.

Yours truly,

ASTLEY COOPER."

"Dr. DICKSON, Clarges-street, Piccadilly."

*Intermittent Fever, following local injury, cured by Quinine.*—Mr. Stafford narrates the case of a gentleman, who dislocated the tarsal bones. Reduction was effected, but the injury was followed by excessive pain, which after a time, became intermittent, coming on every evening about eight, lasting five or six hours, and then gradually abating. It was cured by quinine.—*London Lancet*.

## A LECTURE

## On the Magnetism of the Human Body.

(Continued from page 67.)

It was attempted to be shown by Matteucci, that the nerves were electric, but no effect on the galvanometer has been detected, even when the current of a galvanic battery is passed through them—hence, even if there were electric currents in the nerves, they would not be detected by the galvanometer, unless the direct influence of the denuded nerves could be experienced. I do not think this has been attempted, and I propose, when at leisure, to examine into it. Within a few days, I have received in the London Lancet, the notice of a report by M. Shuster, to the French Academy of Sciences, to prove that electricity is not serviceable in medicine, unless it be applied through acupuncture needles. Administered in this way, he asserts it may be employed with success in many diseases, chronic rheumatism, paralysis, amaurosis, &c. He says it acts by directly stimulating the sensibility, contractility and absorbent function.

It is a well known fact also, that needles used in acupuncture, become magnetic—this aids his idea, of forming a direct communication with the nerves.

In cases of serous effusions, the eminent Le Roy D'Etiolles has also been successful with the above mode of application.

My experiments showing magnetic influence on the needle only during motion of the muscles, derive additional support from the fact of their being no action developed by electric currents passed through the nerves when quiescent, and the latter experiment renders it probable that human electricity is modified by vital power, or perhaps the influence of the mind, until muscular action, under the control of the latter, is commenced.

It would occupy too much time to quote the multitude of curious experiments which go to show a similarity in effects of the nervous power with electricity, galvanism and magnetism. I would not, in the present state of our knowledge, give a fixed opinion as to their identity—effects attributable to all these fluids, supposing them distinct, and all possessed by the body, have been exhibited. Farther experience may show us that whether one fluid in different states, or several, some vital principle or mind, modifies their action in the body. We know that our motive power is under the control of our *will*, and that sensation involves consciousness, and without consciousness, there is no *will*. If the nervous power is weak, the will can only make it act feebly, and without a strong will, great effects of nervous power

are not shown. The will controls the nervous system of animal life, while it does not influence that of organic life. This is worth noticing in relation to mesmeric or magnetic influence, where the operator controls the will of the subject, and what his will controls, but does not affect the organic functions. Insanity or mental disorder deprives us of the power of will, and thus of the control of animal life, but organic actions are not necessarily impeded. When the mind is sane, muscular motion is mostly under the control of will, if the organs are sound. Bichat has clearly shown a difference between the *nervous* system of animal life which ministers to the mind, and is under the *will*, and carries on the functions indispensable to the continuance of life, and the nervous system of organic life which is not subservient to the will, and does not transmit sensations, except when the sensibility of a part is highly exalted by irritation, and then we perceive its action. The natural stimulus of these separate nerves is in like manner developed. That we derive sensation and perception from the external world, through nervous communication, no one doubts, because if you divide or compress the nerve, the sensations are not communicated to the brain—an influence developed on the nerves and communicated to the brain, give us perception. If the power of sensation was in the nerves (which are only vehicles of it) the brain would not be of so much importance—it has no sensibility when irritated—the nerves receive impressions and then convey them to the brain, the organ of *mind*, which power notices and appreciates them.

Experiments to indicate that the motive and sensorial power of the body is galvanic or electro-magnetic, are very numerous. Among the most singular are those of Weinhold, related in the Journal des Progres, vol. x, 1828.

"He beheaded a cat, and after pulsation and muscular action had completely ceased, he removed the spinal marrow, and filled the vertebral canal with an amalgam of mercury, zinc and silver. Immediately the throbbing of the arteries re-commenced, and the muscular actions were renewed, which it was impossible to distinguish from those which are produced by the influence of the spinal marrow; the animal made many leaps. When the irritability appeared exhausted, Weinhold, by means of a metallic arc, placed the heart and voluntary muscles gradually in contact with the artificial medullary substance, and he revived again general but feeble contractions."

"He filled with the same amalgam, the

cranial and vertebral canal of another cat which did not give any sign of life; the animal became, during about twenty minutes, in such a state of vital tension, that it raised its head, opened its eyes, looked steadily, attempted to walk, and endeavored to rise after falling down frequently. During all this time the circulation and pulsation were very active, and continued for a quarter of an hour after the chest and abdomen were opened. The secretion of gastric juice was evidently more abundant than ordinary, and the animal heat was perfectly re-established."

"He filled also the cranium only of a dog with the same amalgam, he examined then the principal functions of the senses, and observed that the pupil still contracted, that the animal manifested still a desire to avoid the light when a lighted candle was placed near it, and that it listened when a person struck with a key on the table."

In support of this very singular experiment, we have a paragraph from Muller's late work.

"In the eye, a feeble galvanic current excites the special sensation of the optic nerve, namely, the sensation of light. In the auditory nerves, electricity produces the sensation of sound."

Volta states that when the poles of a battery of forty pairs of plates were applied to his ears, he felt a shock in his head, and a few moments afterwards, perceived a hissing and pulsatory sound like that of a viscid substance boiling, which continued as long as the circle was closed."

It is a generally received opinion, that *nervous power* produces sensation and motion—what this is, we have not settled. Sir Charles Bell has demonstrated, however, that the posterior roots of the spinal nerves, are the origin of nerves of sensation, while the anterior roots are for those of motion.—Majendie has shown that "the spinal marrow is composed of two distinct cords in juxta position, the one endowed with exquisite *sensibility*, whilst the other almost completely unconnected with this property, seems to be reserved for *motion*." Upon this, a theory has been based, that an ascending current of electricity by one cord causes *sensation*, and a descending current by the other causes *motion*—or perhaps there is a negative and positive portion of the cord, the one constituting the agent of sensation, and the other that of motion.

The experiments of Muller have proved that "the application of galvanism to the anterior roots of the spinal nerves, after their connection with the cord is divided, excites violent muscular twitchings; the same stim-

ulous applied to the posterior roots is attended with no such effects." These galvanic experiments support the facts determined by C. Bell.

The late discoveries of electro-magnetism strongly incline to the opinion that motion and sensation are produced in the body by it.

The convulsive and violent muscular action produced on the bodies of criminals immediately after death by galvanic action, clearly makes it appear that it can cause motion in animal bodies, and acts on nerves and thus through the organs of motion. Liebig says, "By means of *nerves*, all parts of the body, all the limbs, receive the moving force which is indispensable to their functions—to the production of mechanical effects.—Where nerves are not found motion does not occur. The will certainly has an influence over motive power, while the organ to be moved has its nerves sound—*how* it acts we know not. The will directed to our vocal apparatus causes any sound which we can utter to be given forth—*how* it is effected, and why the sound is acute or grave, we can only explain as the result of will.

If Electricity, Galvanism and Magnetism be separate powers, their peculiar combination or supply in different proportions by the pile or chemical action which produces them, may account for varied susceptibility, and idiosyncrasy, according to the predominance of one or other.

There are objections to their identity which I have not time to enumerate; the permanence of the needle pointing in the same direction, unless mechanically obstructed; magnetism is not impeded by glass, and electricity is—you can insulate the latter and not the former—touching with the hand removes nothing from the magnet, and deprives an electrified body of its electricity instantly, &c. With 200 feet of copper wire, and 200 feet more interposed in the turns of the spiral, and 120 pairs of plates 4 inches square, the current made *magnetized* needles, but did not affect the galvanometer. Faraday.

That magnetism produces motion in inanimate matter, is shown by the polarity of the needle, which if placed E. and W., and left to itself, turns to the N. and S. Call this attraction or what you will, oscillation and motion result. The magnet will hold up by its inherent power a weight heavier than itself. Connect with it a galvanic armature and it will lift forty times its own weight. The human strength is capable of raising four or five times the weight of the body. I know an individual weighing less than 300 lbs. who has lifted from the ground 1300 lbs.

The following case illustrative of electro-

magnetic action on the human system, is reported in the London Lancet.

At the Middlesex Hospital a man was admitted about six hours after having taken an ounce of laudanum. At this time he was apparently lifeless, the surface of the body was cold, countenance pale and livid, lips purple, pupils contracted to a mere point, respiration was scarcely perceptible, pulse hardly to be felt. The laudanum was removed by the stomach pump, but in spite of every exertion the pulse became more unfrequent, and was at times imperceptible; when recourse was had to electro-magnetism, which was applied by means of a small battery with coil and contact breaker. One wire was applied to the neck, and the other to the region of the heart, or epigastrium, and by these a succession of very powerful shocks was given. The good effects were very apparent. The muscles of respiration were set in motion, and the diaphragm contracted powerfully; the chest was more fully expanded, respiration was more powerfully carried on, and a corresponding improvement was observed in the countenance. The pulse improved and became more powerful, becoming steady when the current was interrupted for a few minutes. The application was continued for several hours, and was finally successful and the patient restored.

In the last (April) number of the American Medical Journal, is a similar case reported with the same results. It occurred in March, 1842, at Valparaiso. A gentleman was poisoned by a powder which was given to him at Cubebs; after the most violent symptoms, and continued unavailing efforts to relieve him, "he now appeared to be sinking. The surface was cold and covered with a clammy sweat. The face was palid, with a purplish tinge, the jaw and eyelids were fallen. The pulse was hardly perceptible at the wrist, if at times it was at all to be felt. Stimulants were continued. There were no signs of reaction, and the features wore the aspect of death. Worn out with fruitless efforts, the medical attendants desisted from further exertion. Dr. Page thought of the electro-magnetic battery, and proposed its application, as they felt justified by the desponding circumstances to make the experiment." He says,

"It was immediately tried, and with the happiest results. With an assistant rapidly rotating the wheel, I applied the balls at first to each side of the neck, and ran them down behind the clavicles. The arms and body now moved convulsively, but the patient lay as unconscious as before. I now passed one ball over the region of the heart, and the other to a corresponding point on the right

side. In an instant his eyes opened widely, and with a ghastly expression of countenance, his head and body were thrown convulsively toward me, and he groaned. He now sank back in his reclining posture and was again asleep. The balls were reapplied in the same situation, with similar results, a third and fourth time, and he cried, 'no more.' Reaction was now positively established. The heart had received a strong impulse. The pulse was becoming rapidly developed, and the whole surface warm."—Reaction continued satisfactorily, and there was no farther occasion for the battery.

"When he recovered his consciousness, he says all had been blank, until he felt as if a gun had been fired off within him, which thrilled through and shook him to the very extremities." This was the application and effects of the electro-magnetic battery.

This case is reported by Dr. T. S. Page, and was witnessed by Dr. Houston, of the Royal Navy, and Dr. Barrabino, of the United States Navy, attached to the schooner Shark. A few weeks previously, a French gentleman, who took the same medicine from the same shop, lost his life. Upon an analysis of an equal quantity of the powder, 30 per cent. of opium, (75 grains) were found in it, which accounts for its melancholy effects.

The results of the experiments in these two cases, fully warrant us in the belief that *post hoc propter hoc* may fairly be presumed here, and that electro-magnetic action supplied the place of nervous power in the human body. In vol. 4, p. 482, of Sturgeon's Annals of Electricity, are some interesting experiments with galvanism on dogs. Three puppies were drowned, and left in cold water fifteen minutes. All vitality had apparently ceased—no motion being perceptible. They were taken out? one was submitted to successive shocks from a voltaic battery, and *restored to life*—the other two were left as they were—they remained so. Three others were drowned in warm water, and left immersed forty minutes—two of them were restored in the same manner. In the "Discourse on the Study of Natural Philosophy," the philosophical Herschel says:

"The principle once established, that there exists in the animal economy a power of determining the development of the electrical excitement, (speaking of the torpedo,) capable of being transmitted along the nerves, and it being ascertained, by numerous and decisive experiments, that the transmission of voltaic electricity along the nerves of even a dead animal, is sufficient to produce the most violent muscular action, it becomes an easy step to refer the origin of muscular motion in

the living frame to a similar cause; and to look to the brain, a wonderfully constituted organ, for which no mode of action possessing the least plausibility had ever been devised, as the source of the required electrical power. If the brain be an electric pile constantly in action, it may be conceived to discharge itself at regular intervals, when the tension of the electricity developed reaches a certain point, along the nerves which communicate with the heart, and thus to excite the pulsations of that organ. This idea is forcibly suggested by a view of that elegant apparatus, the dry pile of Deluc, in which the successive accumulations of electricity are carried off by a suspended ball, which is kept by the discharges in a state of regular pulsation for any length of time." This same idea of the cause of the pulsation of the heart appears to have occurred to Dr. Arnot. The stronger pulsations of the brain during high excitement, favour this hypothesis.

Many more experiments might be offered in support of the identity of the nervous power with electric, galvanic and magnetic influence, both as to the production of motion and sensation.

I have not noticed the evolution of *light* during decomposition or chemical change, of which some curious cases are recorded, arising in the human body.

"Sir Henry Marsh observed in a patient, dying of consumption, about ten days before her death, a very extraordinary light which seemed darting about the face and illuminating all around her head, flashing very much like an Aurora Borealis. She had been that day seized with suffocation, and was extremely nervous. At night this luminous appearance suddenly commenced. The maid said she had seen it before, and it had dazzled her eyes, but that she was afraid to speak of it, as she would be called superstitious. It continued for an hour and disappeared. Three nights after he saw it again. The evening before she died, he saw it again, but fainter, and it lasted about twenty minutes. The state of the body was that of extreme exhaustion. Her breath had a peculiar smell, which led him to suppose some decomposition was going on. Sir H. Marsh has collected, in all, four cases similar to the above. He considers it as resulting from decomposition, as seen in dissecting rooms—from chemical action, in peculiar conditions, evolving light through electrical phenomena." We know the decomposition of animal matter, especially fish, produces phosphorescence, or electric light.

The influence of light on animal development is strikingly pointed out by the experi-

ments of Dr. M. Edwards. He has shown that if tadpoles be nourished with proper food, and are restored to the constantly renewed contact of water, (so that their branchial respiration be maintained,) but are entirely deprived of light, their growth continues, but their metamorphosis into breathing animals is arrested, and they remain in the form of large tadpoles!

Here is a fact which we are forced to believe, which we cannot explain.

When the queen bee in a hive dies, or is removed, do we understand how the bees have the power of converting into queens the neuter eggs? and yet do we not believe this? Do we not see a different animal in the general form of the body, the proportionate length of the wings, the shape of the tongue, jaw and sting, and in many other respects, than would otherwise have been produced—yet can we explain how this is effected?

I might relate cases of spontaneous combustion, under circumstances strongly inducing a belief in the agency of electricity in its production.

The direct influence of the magnet on the human body, has been a subject of frequent experience among medical men. I have, myself, witnessed cases where positive effects were felt. A lady of cultivated intellect and much intelligence had neuralgia of the arm for several months, with intense suffering—the N. pole of a magnet applied to it, relieved her pain temporarily, while the south pole increased it violently. This same effect I have seen in cases of rheumatic joints.—These influences are not perceived by all, but only by those of highly sensitive nervous systems. All who are susceptible of mesmeric induction, feel the effects of the magnet when applied to the head; in some it produces giddiness, headache, and even convulsions.

The editor of "The Magnet" mentions that he held a magnetized steel ring over the head of one of his subjects, while awake; "in a few minutes she drooped into a state resembling sleep." On removing the ring, he found it impossible to wake her up, or to control her at all. "The entire system seemed to be paralyzed, the breathing was much increased, and difficult, and she continued in spasms about twenty minutes, when she was relieved, and came out "in a shudder," like the lad described in the article below.

The following letter "from an intelligent minister of the gospel, well and extensively known," published in "The Magnet," presents singular facts.

"Rev. and Dear Sir:—Agreeably to your

request, I herewith transmit the facts respecting the influence of the *magnet*, in producing the magnetic sleep in the case of my little son. I first magnetized him about the 20th of February, 1842. His age is 15. For some days he was put to sleep each day, for about half or three-quarters of an hour. After that, each alternate day, for about three or four weeks.

"About ten days since, he was playing with a small horse-shoe magnet, capable of sustaining about 12 or 14 ounces. In a short time, I perceived that he was asleep, and exhibited the usual symptoms of the magnetic state. I attempted to arouse him, and he immediately opened his eyes, but said 'I am in the magnetic state, I can see every thing just as when I am magnetized.' I attempted by the usual passes to remove it, but found I could not. He said, 'it is the magnet that has produced this state, and you cannot take it off.' I then took the magnet in my hand, and tried the effect of making the several passes with that; but it only increased the difficulty. I then proposed to send the magnet away to a distant place, but he objected with great earnestness, and even with tears. I then persuaded him to go with me into another room, 20 or 30 feet distant from the magnet; and after staying there a short time, he consented to have the magnet removed.

"I again tried, by the usual passes, to remove the influence from him, but could not. He remarked that nothing I could do would remove it, but that it would pass off, of itself, in about an hour, and that he should 'come out of it with a shudder.' During all this time *his eyes were open*. He could hear and converse with me and with persons who were very near him, after they had been near him for a few minutes, but with no others.

"He was playful, and apparently happy. In about an hour, he started suddenly, and with a violent spasmodic shudder, and appeared to be restored to his natural state. Of nothing that had passed, had he any recollection, and the only difference that I could discover between this and the state in which he had usually been when magnetized, was that in *this*, *his eyes were open*; he had none of the usual attachment for me, all seemed transferred to the magnet, and I had no power to remove it. The magnet had been removed to a distant chamber. But he expressed a strong desire to go to it. I then took the magnet away, *unknown to him*, and passing out of doors, carried by a *circuitous route*, and placed it in a pile of lumber, distant about 70 or 80 feet. It was past 9 o'clock at night, and very dark, and he had

no means of knowing, by the ordinary senses, that it had been removed. He said, however, that it had been removed, and went on to tell me which way he would take to find it, and said he would not go directly to it, but would find it by a circuitous route—that he would go out round the house, in about the same course that I had taken in conveying the magnet there! But he said the magnet was wrapped up in a paper, and put in a pile of lumber, which was the fact.

"I then went and removed it to a still greater distance, where I left it till the next morning. He said he had a *strong impression on his mind*, that it had been removed to a more distant place, as I have described it, and that from that time he lost all interest in it. This was more than an hour from the time that he came out of the magnetic state with a shudder, as above described. Since then, he has manifested no desire for the magnet, but when it was afterwards brought near him, even within several feet, he said, after a few minutes, that he felt the same influence coming over him, and immediately caused it to be removed.

"I might add, that the application of living magnetism in his case, was in a course of medical treatment for a spinal disease, and was generally applied under the direction of experienced physicians, and apparently with very happy results.

Respectfully yours,

Philadelphia, April 17, 1842.

When Casper Hauser, who had been isolated from the ordinary influences of the external world for eighteen years, had the N. pole of a small magnet held towards him, he described a *drawing* sensation produced outwards from the epigastrium, and as if a *current of air went from him*. The S. pole affected him less, and he said it *blew upon him*.\*

Professors Daumer and Herman made several experiments of the kind, and calculated to deceive him, and even though the magnet was held at a considerable distance from him, his feelings always told him very correctly. These experiments always occasioned perspiration, and a feeling of indisposition. He could detect metals placed under oil cloths, paper, &c., by the sensations they occasioned. He described these as a *drawing*, accompanied with a chill, which ascended according to the metal, more or less, up the arm—the veins of the hand exposed being visibly swollen.

\* Millingen.

The influences felt by him from the magnet are precisely such as it produces in the cases of my experiments—and the paralysis of the arm of a susceptible individual, by making him grasp a rod of soft iron or copper, is effected with the same feelings on the arm, described by Hauser from his touching a metal.

The sensitiveness of this boy to the impression of metals is well explained, when we reflect that the eye, when kept from light, increases in its susceptibility to its influence; and its sudden application to this organ, will destroy its vision, while slowly accustomed to its influence it is its essential stimulus.

A gentleman of high respectability informed me lately, that he knew from personal experience, that the body is magnetic. He was a surveyor, and had observed frequently, that in dry weather, at midday, his needle would vary whenever he approached it.\*

The conducting power of the body varies with different individuals, some shewing electrical influences, and others none—Now in terrestrial magnetism, Mrs. Somerville says, "The effects of induction depend upon the facility with which the equilibrium of the neutral state of the body can be overcome; a facility which is proportioned to the conducting power of the body; consequently, the attractive power exerted by an electrified substance upon another substance previously neutral, will be much more energetic, if the latter be a conductor, than if it be a non-conductor."

This may also be applied to organized bodies, as well as inorganic.

Dry animal matter, as bone, or horn, or leather, are non-conductors of electricity—moistened, they become conductors. It is not improbable, that at a future time we may refer the phenomena of fever to the free electricity of the body accumulated on the surface, when the perspiratory function is impeded—carried off as it usually is, by the restoration of the latter. The calorification of the body is still unsettled, and is open for examination.

The sources of magnetism would give us an interesting subject for investigation, for we know that the sun's rays are magnetic. Milton beautifully describes the constellations, as governed by the magnetism of the sun.

\* Since this lecture was written, I have succeeded in magnetizing needles, by the same effort of the arm and hand over them. The fact of rendering needles magnetic by the passes continued for a long time over them, is mentioned in the "Magnet." I succeeded in a short time by my process—which I have repeated five times successfully. Whether this can be effected only in certain electrical conditions of the body, is to be learned.

"as they move  
Their starry dance, in numbers that compute  
Days, months and years, towards his all-hearing lamp  
Turn swift their various motions, or are turn'd  
By his magnetic beam that gently warms  
The universe, and to each inward part  
With gentle penetration, though unseen,  
Shoots inviolable virtue ev'n to the deep."

Liebig attributes to "the unequal degree of conducting power in the nerves, those conditions which are termed paralysis, syncope and spasm." This eminent chemist also says, "As an immediate effect of the manifestation of mechanical force, we see that a part of the muscular substance loses its vital powers, its characters of life; that this portion separates from the living part, and loses its capacity of growth and its power of resistance. We find that this change of properties is accompanied by the entrance of a foreign body (oxygen) into the composition of the muscular fibre, (just as the acid loses its chemical characters by combining with zinc,) and all experience proves that this conversion of living muscular fibre into compounds, destitute of vitality, is accelerated or retarded according to the amount of force employed to produce motion. This is corroborative of the identity of nervous power with electro-magnetic influence." He goes on to say, "the moving force certainly proceeds from living parts." "It is obvious that the ultimate cause, the vital force, &c., has served for the production of mechanical force; that it has been expended in the shape of motion."

That the nervous power is derived from a source within the body is certain, as it varies with its healthful or disordered action—it becomes exhausted by muscular action, and excited by stimulants, which act on our material structure; it is lost by continued wakefulness—and intense pain debilitates it excessively. Steady application of the mind also fatigues the brain and weakens nervous power, and rest alone restores it. While the brain and nerves are sound, our nervous power of motion, (and to some extent that of sensation) is under the control of the will, the existence of which involves consciousness in our ordinary state. In *somnambulism*, in which consciousness is absent, some modification of reason, allied to what we call instinct, seems to control them. This is for the inquiries of the metaphysician as well as the physiologist, and deserves our study.—It is well known that in *somnambulism*, the intellectual functions are not only active, but frequently more developed than when the individuals are awake, and in their actions and locomotion they are more cautious.

Whether the nervous power extends without our bodies, and how far, we are yet to learn. The phenomena of Mesmerism would



seem to indicate that it does, and produces effects on other living organization. Dr. Holland observes:

"We cannot assert this to be impossible; and one or two high authorities have affirmed its probability."

The emanations from animal bodies, by which dogs scent them in the chase, and which the Hindoos, living on vegetables, perceive in Europeans, feeding on animal substances, show perceptible influences extending around us.

The curious phenomena of what is called *sympathy*, are physical results yet to be explained. We know that mind acts upon matter, but the *quò modo* is as yet inexplicable to us. Can we explain that mysterious influence by which a nervous disease affects the minds, and finds its way to a diseased structure, as an electric shock is communicated from body to body by contact? Can we explain how, when this occurs, a loss of will is the result, similar to the fascination of a serpent over its prey? Yet, do we deny the well authenticated facts, relating to the convulsionnaires of France—the *jerks* of our own country, and the 4000 cases of St. Vitus's dance in England?

Can these be the results of imagination alone? Is the imitation of the wise and good, prompting us to simulate and rival them merely, "such stuff as dreams are made of?"

If nervous power originated from mental action, it would be less variable—but we see the mind as strong and active when the body is weak—and the strength of the latter depends on nervous power. Coleridge, who thought as much as most men, says, "illness never in the smallest degree affects my intellectual powers. I can *think* with all my ordinary vigor in the midst of pain; but I am beset with the most wretched and unmanly reluctance and shrinking from *action*. I could not, upon such occasions, take the pen in hand to write down my thoughts for all the wide world." It is not mind, for we conceive that to be indestructible, eternal, therefore, not liable to disease and decay; the bodily organs through which it develops its influence on matter, may be disordered and communicate its powers imperfectly, hence we become familiar with what is called *mental* disease, which is strictly paradoxical. A man drinks liquor, his brain becomes oppressed with blood—as this increases mental confusion comes on, and then a loss of mind takes place—if the blood be thrown out and apoplexy result, it is permanently gone. Intense mental action produces fulness in the vessels of the brain, which frequently is followed by similar effects. The melancholy

example of this lately exhibited in the condition of the poet Southey, will readily present itself to the mind.

If the electricity of the body varies, (which experiments prove,) this will enable us to understand how sensitive nervous persons experience so readily atmospheric changes, electric influences. In the animal economy, solids are constantly passing to fluids, and fluids into solids and gases, and changes into electrical conditions, and as to temperature, are always going on. When the bodily health varies, and the nutritive function is impeded, as well as other vital actions, we must expect this to be the case.

Pfaff and Ahrens have shown, that in health the electricity of the body is positive, yet sometimes it is negative, and much oftener so with women. In the 5th volume of Tilloch's Magazine, there is an article on animal electricity, with original experiments, by a Mr. Hemmer, of the Electoral Academy at Manheim. From 2,422 experiments, he came to the following conclusion:—That electricity is common to all men; that it is sometimes negative, oftener positive, and sometimes wanting; that it is produced without friction with the clothes, and is evolved from the naked body; that its quality is altered by certain circumstances, and changed from the one to the other kind by sudden violent motion—from positive to negative by cold, or lessened in amount by it; that continued mental exertion increased the positive electricity, &c. This latter fact is very important, if verified. When Casper Hauser held a cat by the tail, he was seized by a shivering as if he held a metal, and felt as if he had received a blow. If mesmerism depends upon magnetism or electricity, the power of the magnetizer may be derived from his capacity to communicate his nervous power of motion and sensation to his subject—if so, he should control both his motions and sensations; *this he does*, while his influence over him lasts.

\* Sensitive persons are most easily affected by mesmeric induction—weak and sensitive persons experience electrical and atmospheric changes more readily—they also part with nervous power more quickly than strong and healthy persons. The touch of metals produces painful sensations in some persons, and paralyses the muscles of others.

The variation of the electrical state of the bodily organs, may enable us to appreciate varied susceptibility to disease in different persons—and may also account for susceptibility, as to magnetic induction. The predominance or deficiency of the magnetic or electric conditions, may, perhaps, assist us, with more advanced knowledge, in investi-

gating temperaments, sympathy, special fancies and antipathies.

Dr. Elliotson, of the Royal Medical Society of London, says, "I am not aware that one *temperament* is more susceptible of *mesmeric* influence than another. The same person may be susceptible at one time, and not at another. I have had a patient insusceptible for four weeks, and then become highly susceptible."

I have, myself, had a case of an intelligent lady, in delicate health, whom I tried seven different times without effect, for an hour at each sitting—on the eighth, she was fully influenced in fifteen minutes, and continued in the magnetic state until I waked her.

I cannot here avoid a quotation from an eminent author, Dr. Holland, who says of the *origin* of nervous power, "Physiological science, on the matter in question, seems at this moment to be on the verge of some great discovery; resembling in this respect, the actual state of other physical sciences—those of light, heat, electricity, chemical forces, and perchance of gravitation—which the course of modern inquiry is ever tending to reduce to certain common laws. It is a question of deep interest already referred to, whether the relation here, is not closer than that of mere analogy; and whether future research may not associate some of the functions of the nervous system, with the more general elements of force and action in the physical world. Vital laws, and what we term physical laws, stand precisely in the same relation to our knowledge. They are continually approximating as this knowledge advances; and may not possibly in the end be submitted, even in human comprehension, to some common principle embracing the whole series of phenomena, however remote and dissimilar they now appear. All science tends to prove the unity of creation, through the evidence it affords of mutual and universal relation of parts."

Dr. Carpenter expresses a similar idea.

"That the rapid progress of generalization in physical sciences renders it probable that ere long, a similar formula shall comprehend all the phenomena of the inorganic world; and it is not, perhaps, too much to hope for a corresponding simplification in the laws of the organized creation."

Did time allow me to consider sympathy, cases might be presented to you, as interesting and extraordinary as the apparent miracles of *animal magnetism*.

Having trespassed long on your attention, I will hasten to a few deductions from the experiments on the needle which I have mentioned; while I add that the "FACTS OF

NATURE, NOT THE THEORIES OF MAN, ARE THE ONLY INFALLIBLE TESTS OF THE VERITY OF ALLEGED DISCOVERIES."

1. The human body is magnetic, and possesses polarity. May I be allowed here to allude to the beautiful analogy, which the innate principle of our being, pointing to the Great First Cause, has to the mysterious tendency of the needle to the pole? Our benevolent and wise Creator may have intended the same power, with which he regulates the terrestrial movements of our planet, to be the instrument of communication between matter and mind, and mind and his Divine influence.

When we see an influence imparted by one man's mind to that of another, communicating thought and impulse, is it mere imagination to suppose that this view may be consistent with the mechanism of our moral government? Can we not better appreciate the Divine influence over our own minds, when we have personal experience of the influence of our own finite power over that of others? Surely we can.

"Man, the servant and interpreter of nature, understands, and reduces to practice, just so much as he has actually experienced of nature's laws; more he can neither know nor achieve."

2. Individuals of stronger magnetic power, can charge weaker with their magnetism, which gives them a control over the will and actions of the latter, while the charge or communication lasts. Persons of equal magnetic power, do not produce any perceptible influence on each other.

Perhaps future experiments may indicate that the polarity of individuals varies, and susceptibility to induction may depend on one reversing the polarity of another.

3. The *will* controls and puts in motion the magnetic force, perhaps analogously to the supposed influence of the sun giving motion to vibrations producing light.

4. As iron is charged, and parts with its magnetism if the inducing power is removed, so human bodies become more so by the influence of others, and lose the additional force when the cause is removed. This accords with experience.

5. As magnets once charged, when they lose their magnetism, are more easily charged again; so the susceptibility to induction increases with individuals.\* Once affected they become more easily influenced at each subsequent experiment.

6. As the capacity of iron or steel for magnetism varies, when soft or hardened, so

\*This fact in relation to magnets is stated by many, but is not settled.

does peculiarity of temperament, constitution and circumstances, modify the influences of human magnetism.

The laws of human magnetism are yet to be learned, but we are now fairly started in their investigation.

In the 19th century, it is remarkable that man's pride should exceed his ignorance, and that the study of natural causes of physical phenomena, reported by credible witnesses, should be deemed beneath the notice of scientific men. Or, as Sir William Temple remarks:

"When man has looked about him as far as he can, he concludes there is no more to be seen; when he is at the end of his line, he thinks he is at the bottom of the ocean; when he has shot his best, he is sure none ever did or ever can shoot better or beyond it;—his own reason he holds to be the measure of truth, and his own knowledge, of what is possible in nature."

In this age of philosophy, the discoveries of science are daily becoming productive of facts, which ought to humble the pride of arrogant man, and teach him with how much more reverence he should

"Look through nature up to nature's God."

May I be allowed to hope that the time will arrive, when—

"A decent respect for the opinions of mankind" will protect students of science from the discouraging and illiberal course pursued towards them, by those whose position in communities, gives them the opportunity of a ridicule, which too often destroys their ability to add to the common stock of human knowledge.

It is ungenerous, it is unjust, it is unwise, to heap unmerited censure and charges of insanity, or collusion with imposture, upon those, whose interest is in the common advancement of science, and whose enthusiasm is necessary in the mechanism of scientific enquiry, to supply the place of self interest, which is the great impelling power in the ordinary pursuits of life.

To such as are engaged in the study of truth, I would say, in conclusion, in the language of one whose intellect has had a powerful influence on the world,

"Crafty men condemn studies, simple men admire, and wise men use them"—and to those who oppose them, "read not to contradict and confute, nor to believe and take for granted, but to weigh and consider."

Magnetic Organization of the Organs of the Human Body, as traced by the Rotary Magnetic Machine.

Continued from our last Number.



A.A.—Poles in the organs of causality.  
a.a.—Poles in the organs of amativeness.—  
Arbor vitæ. b—Cervical glands. c.c.—Lungæ.  
d.d.—Mammæ or breasts, and heart. e—Stomach.  
f—Spleen. g—Liver. h.h.—Kidneys. i.i.—Ovaria. j—Uterus. m—Cystis.  
n—Arbor vitæ. a.n—Axis between these poles.

The importance of a knowledge of the magnetic organization of the human system, is greatly increased by the introduction of the Rotary Magnetic Machine into practice, as it is on that organization which the instrument acts. In magnetising the organs, it is necessary, in most cases, to place one of the buttons on the posterior spinal nerves connected with them, while the other is moved over the organs. In some cases, however, one button should be placed directly over one pole of an organ, while the other is over the spinal nerve connected with it. There are other cases, in which one button

should be placed over the pole of one organ, and the other over the pole of another organ; and again, there are cases in which one button should be placed over one pole, of one organ, and the other over an organ of the brain. There are also many cases, in which the buttons must be placed over different phrenological organs, and hence the necessity of a knowledge of their relative situations. The engraving in the first number of this journal, page 49, giving a view of these organs, and the preceding diagram, intended to give the outlines of the magnetic organization of the principal organs of the body, will be of great service to magnetisers, who have little or no knowledge on these subjects.

We have traced these poles through the spinal nerves, under a very moderate power of the instrument, and also direct magnetic axes, between poles of the same, and of different and distant organs, as seen in the above figure, which accounts for the direct sympathies that are known to exist between distant organs, in the most satisfactory manner. The direct magnetic connection between the stomach and spleen, and the spleen and left kidney, accounts also, in the most satisfactory manner, for the introduction of some fluid into the kidneys, through a medium, other than that of the general circulation.

There are other large poles in the abdomen, besides those represented in the above figure—there are two in the solar plexuses, and two in the mesentary surrounded with satellites. There are also two poles in each joint, including those of the spinal column, with axes connecting antagonist muscles, a knowledge of which, and of these muscles, is indispensable to a scientific and successful application of the buttons, in magnetising for lateral, anterior, and posterior, curvatures of the spine, acute and chronic rheumatism, paralysis, &c.

#### Motions of the Magnetic Forces, and of the Earth and Planets.

To men of that cast of mind which impels them to search out truths for themselves, and can practice the patience necessary in working out demonstrations, Sir Isaac New-

ton's theory of gravitation has ever been far from satisfactory. At the same time, to endeavour to controvert a theory, which has been received as settled, by all, or nearly all, the devotees to science for a century and a half, is a labor sufficient to deter the boldest. To raise a question as to the truth of what men have, from their youth upwards, been accustomed to believe, strikes the world as something that even the charitable pronounce preposterous, and others will regard as rank heresy. The innovator may reason, though never so logically, yet if he succeeds in exciting wonder only, he may esteem himself happy—nay, if he do not call down the spirit of persecution he may regard himself fortunate. Human nature is so constituted—self-love is so pervading—that men do not like to be found in error. Envy makes the individual, who happens to have struck on the right path in advance of his fellows, her favorite mark. In short, although we admit that the age in which we live is more liberal than any that has preceded it, since the christian era, we must also acknowledge, and every day's experience strengthens the testimony on which the conviction is founded, that truth is the most unwelcome visitor that can knock for admittance at the doors of the hearts of men. Furthermore, it is much less laborious to adopt a venerable, and venerated error, than to make those toilsome researches which are necessary to establish a new truth. The very labor of thinking is itself painful, so much so, in fact, that very few men take the trouble to think *ab initio* for themselves. There is something so very respectable in the cloak of error, that no matter how threadbare it may have become, it is most frequently adopted as the most fashionable garb, and worn with a kind of triumphant, *petit maitre*, jauntiness. To its assumers it never seems ungraceful, and it is but seldom that the popular voice pronounces it out of character.

Notwithstanding, however, that we, of all men, need be most deeply impressed with the correctness of all this—it is the result of some forty year's experience—we lay before our readers the following dialogue. We

adopt this style of composition from believing that it is most simple, and least capable of being misunderstood; it also, in our view, admits of greater certainty of expression, an object which it is desirous to gain, inasmuch as we would avoid ambiguity.

A. Do you know that motion is produced by the action of two forces, one of which repels and expands, and the other attracts and contracts?

B. No, I don't know any such thing.

A. You don't, therefore, teach any such thing in your college?

B. No, indeed! There is only one force that produces motion; namely, that of gravity or attraction.

A. How were the earth and planets first placed at certain distances from the sun, and how are they maintained at those distances without a repulsive force?

B. When God made the earth and planets, he gave each of them an impulsion in a right line, in which they would have always moved, but for the force of gravity in the sun, which constantly draws, or attracts them out of that line into curved lines or orbits.

A. Each of these bodies had then a repulsive force to start with, by the aid of a miracle in each case, and, as the attractive force from the sun has been in action an immense period of time, these impulsions must have been tremendous, or those bodies would have long since gone into the sun, and the author of this theory has established his claims to provident discretion in imputing these impulsions to an all-powerful source.

B. The theory to which you allude supposes a primitive projectile force in a right line, and the force of attraction, and that from a combination of these forces, results the curvilinear motion of the planetary bodies. It is true, these bodies would have long since fallen into the sun, if the projectile force were not increased by the increase of the force of attraction, in certain portions of their orbits.

A. So the force of attraction is so accommodating as to manufacture a projectile or repulsive force, whenever and wherever it may be necessary to suit the theory, and prevent these bodies from falling into the sun.

According to the theory, therefore, they were first put in motion by a succession of miracles, and are still prevented from falling into the sun by a perpetuation of those miracles.

B. The projectile force, according to the theory, is increased in the falling of a body through half of the radius of a circle, to an amount which would be equal to what it would have acquired by gravity alone; and in this way overcome the force of attraction, and thus prevent the planets falling into the sun, "while in the other part of the orbit the solar attraction is exercised in an opposite direction."

A. I know that such is the theory, but it is remarkable, that since it tells about the planets acquiring projectile force in *falling* in one part of the orbit, it says nothing about its losing projectile force in *rising* in the other. But here it seems the solar attraction is exercised in an *opposite* direction. And such are the absurdities, and resources of this miraculous theory, so characteristic of the age in which it was formed, and so congenial to a mind redolent of superstition and witchcraft.

B. I know that men of science have never been satisfied with Newton's Theory, but they agree in the necessity of teaching it, notwithstanding its complexity, in the absence of any other that is not subject to the same objection; for we can determine the place of a planet at any time, and account for the variations in the motions of the planets, however minute, with the most perfect exactness.

A. I know that such are the pretensions of the advocates of this theory, and that these pretensions increase *pari passu* with their absurdity. There is, however, an exception, in a distinguished mathematician, who acknowledges that "the planet is not in the place represented by the figures, but then it is not far from it." That is, not more than 10, 20, 30 or 40 thousand miles from it, (and we know that it is frequently at these distances,) and this is an example of their perfect exactness.

You call the precession of the equinoxes, or retrograde motion of the earth in its orbit, "the effect of the solar attraction, that acts

\* See Ena. Metropolitana.

with more intensity upon the increased quantity of matter at the equator, which it tends to draw into the plane of the ecliptic, but which maintains its inclination by the effects of its motion of rotation ;" or, in other words, the earth staggers back from this cause, and barely maintains its inclination by the momentum of its motion of rotation ; and this is a fair sample of the manner in which you account for the variations in the motions of the earth and planets. Now, the intensity of the attractive force from the sun, instead of being so very great at the equator, as is here assumed, is 66 1-2 times greater at the *poles* than it is at the *equator*, and this difference is increasing, and will go on increasing, until it amounts to 90 ; for the intensity of the action of the forces of the sun upon those of the earth, is in direct proportion to the intensity of the forces of the earth, and this intensity is minimum at the equator, and increases inversely as the squares of the distances to the magnetic poles in the arctic and antarctic circles, where it is maximum, as is shown by magnetic observations on the earth, and as is demonstrated by the magnetized ring. Besides the heat upon the earth, which lessens the force of attraction, is maximum at the equator, and minimum at the poles, and yet you talk of the greater intensity of the solar attraction on the equator, in the presence of facts which are fatal to such an assumption.

B. I am aware that the facts are as you state them—that the planets are not perhaps, *exactly* in the places represented by the figures ; and the manner of accounting for the precession of the equinoxes may be erroneous. But you do not, I hope, seriously intend to deny the truth of the theory of *universal gravitation*, or attraction.

A. Yes, I do ; for a theory of *universal repulsion* would be just as true as that of *universal attraction*. The absurdities involved in each, it could be easily shown, would be exactly equal.

B. Well, I am astonished !

A. So am I, that any man of common sense, should have ever believed so absurd a theory.

B. Newton's theory of universal gravita-

tion was opposed more than thirty years, by men of the best talents in Europe, and the opposition was at last given up, and the theory acknowledged to be true ; and do you, at this late period, believe you can show it to be a false theory ? Does not the apple as well as other bodies, fall to the earth by the influence of the force of gravity alone ?

A. I do, and can, not only show the theory to be false, but also, that that *apple*, as well as other bodies, have a repulsive force constantly acting upon them, from the atmosphere alone, of 15 pounds to the square inch, which is abundantly sufficient to make them fall with great velocity, without the aid of the attractive force.

B. But these bodies *fall* in a vacuum.

A. Yes, and so does that *feather* as fast, and mark the difference in time.

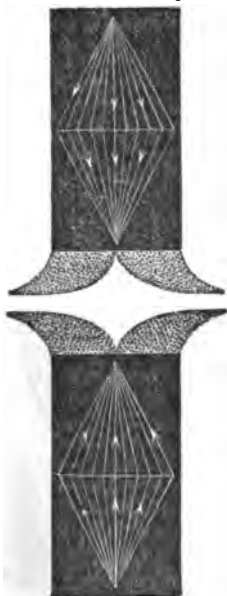
B. Well, we will see if you can show the theory to be false ; and now, to prevent any misunderstanding in regard to it, I will state the theory as it is, viz. " That all particles of matter mutually attract each other, in the direct ratio of their masses, and reciprocally, as the squares of their distances."

A. That I acknowledge is the assumption on which the theory is founded, and you I presume will acknowledge, that the forces which produce motion in the particles of matter are magnetic ?

B. Yes, I acknowledge the attractive force is magnetic, and if there is any other force in the particles of matter, I suppose it must be magnetic also, but I don't want to hear anything about motion being produced by heat and cold—about the expansive force of heat and the contractive force of cold—we understand all about that. There have been a great many theories introduced by visionary men, but they have all been found untenable when compared with the theory of *universal gravitation*. You must show that the assumption on which the theory is founded, as you please to call it, is false, before you can disturb the theory.

A. Very well, there can now be no mistake in regard to your position or mine ; and now here are some square magnets, and I will dip the positive end of each into iron

filings, and you will now see that on placing these ends near to each other, the forces in these ends of the magnets repel and expand.



B. Well, that is a fact, there is an impulsion, or projectile force which expands.

A. I will now dip the opposite, or negative



sive end of one of these magnets in iron

filings, and place it near the positive end of the other.

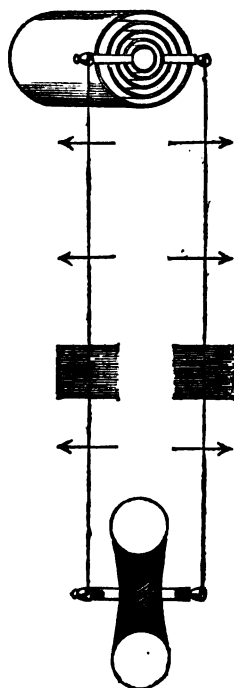
And here, you now see the forces attract and contract.

B. That is true. How beautiful and how perfect the illustration !

A. Sir, did you ever see a magnetized disc ?

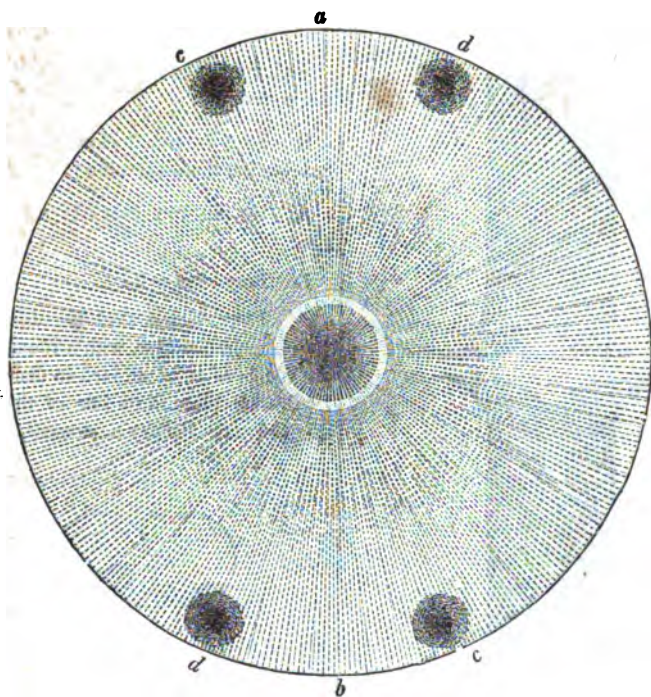
B. Pray what is it ?

A. I have here a steel disc of saw plate, 15 inches in diameter, with a round hole in the middle of it, of an inch in diameter, and I will now place it on one of the poles of this Galvanic Battery a moment, and then



first adjust and then remove the connecting copper wires, and raise it from the pole. I will now lay it on the table—place a sheet of white paper over it, and strew the paper with iron filings, as you see.





B. That is astonishing ! what makes the iron filings work into lines ?

A. They are magnetized by the disc with two poles, and the forces form the pole in the space in the centre of it ; repel one end of each iron filing and attract the other, and consequently compel them to lie in a line with the forces which radiate from the centre.

B. What makes that halo, or light circle, around the pole in the centre of the disc ?

A. It is produced by the violent action of the forces upon the matter which surrounds it.

B. Is not that possibly the way in which the sun lights up its atmosphere.

A. To answer that question in the affirmative, it is only necessary to admit a power in the forces from the sun, proportioned to what we obtain with the magnetic battery ; for by bringing the poles in contact with each other, in *our* atmosphere, they produce the most intense light and heat, and the direction of the attractive force from the surface, and

of the repulsive force from the centre of the sun, bring them (as can be shown) in contact in his atmosphere.

B. I see four circular spots in the circumference of this disc, where some of the iron filings stand up on end, and others are turned half round. What does that mean ?

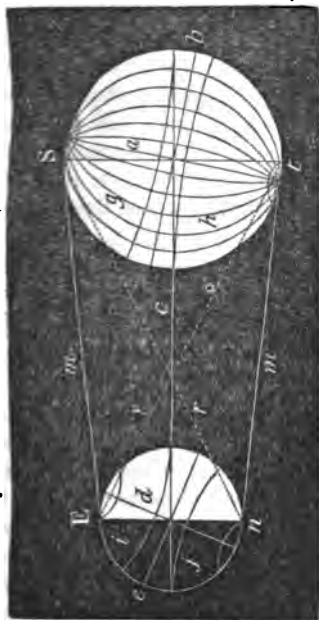
A. They are the offsprings of the large pole in the centre. It has made four poles and pushed them into the circumference of the disc, and it is the action of the forces from the small poles that makes some of the iron filings stand on their ends, and others turn around them.

B. Well, the sun, it has been said, may have formed the earth and planets by its action upon matter in space, and you have here, it appears, a miniature solar system, produced by the action of these forces, and showing at least, a possibility of their production in that manner.

A. There are other and more important facts in confirmation of that supposition in the correspondence of these two innate



forces, with the two great divisions of matter ; for there are two great divisions of matter, one of which, as alkalies, repel and expand, while the other, as acids, attract and contract. Again, it is well known that the earth is equally divided in the same order, or that the southern hemisphere is in a positive, while the northern hemisphere is in a negative state; and moreover, that they consequently attract each other, at the same time that the southern hemisphere repels positive, and the northern negative matter. The sun and planets being constituted, and organized in the same manner as the earth, their respective hemispheres, of the same denomination, must repel, while the hemispheres of opposite denominations, must attract each other, when *within* repelling and attracting distances, as seen in this figure.



S, the sun ; a, the axis of rotation ; b, equator ; St, magnetic axis ; c, plane of the ecliptic ; E, earth ; d, axis of rotation ; e, equator ; En, magnetic axis ; m m, continuous lines representing the direction of the attractive forces ; r r, dotted lines representing the direction of the repulsive forces ; g, the positive, and h, the negative hemisphere of the sun ; i, the negative, and j, the positive

hemisphere of the earth. It is now only necessary to apply the simple and universally acknowledged laws of the magnetic forces, to show that the sun S, must compel the earth E, to revolve on its axis ; for the positive hemisphere of the sun g, would attract the negative hemisphere of the earth i, at the same time the negative hemisphere of the sun h, was attracting the positive hemisphere of the earth j ; while the hemispheres of opposite denominations, g j and h i, would repel each other in the direction of the dotted lines r r.

The earth being a round body, and having two forces thus acting upon it in opposite directions, would necessarily revolve on its axis with a velocity proportioned to the intensity of the forces, in the same manner as a ball revolves on its axis, when we pull it with one hand on one side, and push it on the opposite side with the other.\*

The earth like the ball, it will be seen, must revolve as it does, in the direction of the attracting or pulling forces.

When the earth would be thus revolving on its axis, it would be compelled to revolve round the sun at the same time and in the same direction, for the simple reason that it would be constantly attracted on the west and repelled on the east side, and would perform a revolution in its orbit in a time proportioned to the intensity of the forces and its distance from the sun.

The true cause of the motion of the earth on its axis and in its orbit, is thus shown by the action of the magnetic forces, and in a manner so plain as to make it easily understood by persons of the most common education and capacity, notwithstanding the great difficulties in which the subject has been heretofore involved.

Newton, like the philosophers of the present day, knew nothing of the motion of the magnetic poles, but imputed the cause of the motion of the earth on its axis and in its orbit, to the immediate agency of the Supreme Being, as may be seen in his ninth proposition, in which he says, "That as no me-

\* The forces act simultaneously on the opposite sides of bodies as is demonstrated on the magnetized ring.

chanical cause can be assigned for the projectile force, none for the gravitating force, and none for the rotation of planets on their axes; so all those phenomena must be referred to the immediate agency of the Supreme Being."

Sir Richard Philips has promulgated a gaseous system of astronomy, founded on the assumption of the equal densities of the sun, earth and planets, and their momenta among one another in an elastic medium, which is equally subject to the necessity of the same marvellous interposition besides that of enchantment or witchcraft.

Newton supposed that when God made the earth he gave it a push, and that from that impulse it would have always moved in a straight line, but for the gravitating or attracting force of the sun, which compelled the earth to change its course; but as it was in constant danger of falling into the sun by the long continued action of this force, notwithstanding the first prodigious impulse, he in his eagerness to prevent it, founded a theory of a projectile or repulsive force, for keeping the earth at a respectful distance from it, on the ridiculous assumption of a fall of the moon sixteen feet in a minute, which he applied to the earth, and in this way demonstrated most minutely in his own mind, as well as in that of most of his readers, the stability of the earth in its orbit.

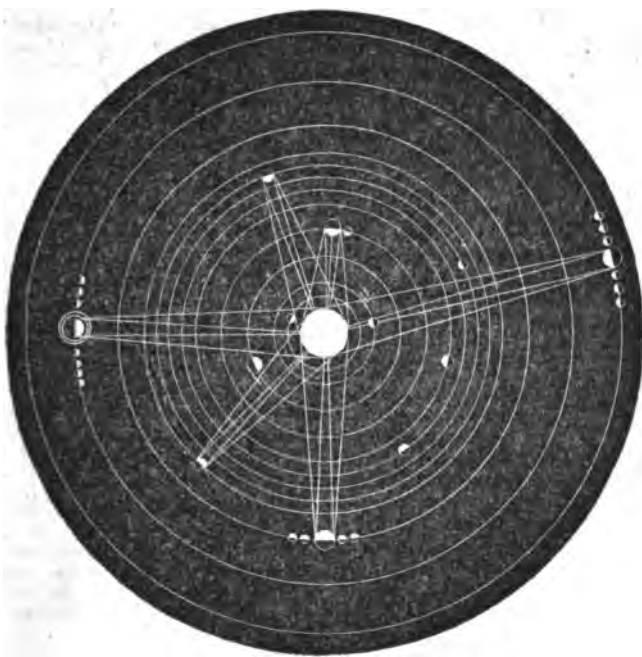
Sir Richard Philips has, however, had the presumption to deny the accuracy of Newton's calculations, in regard to the distance the moon falls in a minute which according to his theory is 128,814 feet instead of 16; and he applies it to the earth, and in this way obtains a tremendous projectile force, and accounts for the stability of the earth in its orbit, by the assistance of this new moon story, with the same minuteness that Newton did, with 16 feet fall of the moon in a minute, and with all the gravity and solemn emphasis due to such a subject, notwithstanding the glaring absurdity of the attempt to obtain an increase of the projectile out of the gravitating force, whenever and wherever it might be necessary to suit his theory.

B. I see that the facts you have adduced are perfectly fatal to the theory that all particles of matter mutually attract each other in the direct ratio of their masses; for as you say it might be as truly said that all bodies mutually repel each other in the same ratio of their masses. There is, however, another fact connected with the Newtonian theory that may help us out of this difficulty, and as I presume you do not intend or wish to demolish the whole fabric on which this system is founded, I will mention it. It is this, "A double projectile force, balances a quadruple attractive one."

A. Yes, at short distances from the bodies from which the forces emanate, but as the projectile force decreases in direct proportion, and the attraction only as the cubes of the distances, they are consequently balanced at a certain distance, and also at uncertain distances, according to the density of bodies with which they come in contact, as in the case of the earth and planets. That appendage to the theory of universal gravitation cannot therefore save it from the fate of every other not founded on the laws of these forces.

B. I can now see that the projectile force, which as in the case of the iron filings, expands, must necessarily lose power in some proportion, and I should be pleased to see an example, if you can conveniently give one, which shows it to be direct.

A. I Can readily do so, and will illustrate it in this drawing of the solar system, in which the repulsive force is represented in lines drawn from the centre of the sun to the surface of the planets, and the attractive force by lines drawn from the surface of the sun to the planets. Now there is always a magnetic axis or principal magnetic meridian between poles of opposite denominations, whether they are of the same body, or poles of different bodies, when they are within attracting and repelling distances, and the line drawn here from the *centre of the sun, to the centre of the earth*, represents the principal meridian between them, and corresponds with the principal meridian or *line of no variation* of the earth.



The sun moves on its axis from west to east, and consequently moves the earth and planets on their axis, and in their orbits, by the action of his attractive force in the same direction, while the repulsive force maintains them at their respective distances from him, and at the same time moves their lines of no variation from east to west, or in a direction opposite to that in which the earth and planets are moved by the attractive force; for this economy is a necessary consequence of the action of these forces in opposite directions. Now the distance which the line of no variation of the earth is moved by the repulsive force, in one year, or in the time the earth performs one revolution in its orbit is  $32',26''$ , as is ascertained by numerous observations, and this corresponds very nearly with the mean diameter of the sun ( $32',03''$ ) as found by observations at its greatest and least distances from the earth; and as the visual angles of bodies decrease in direct proportion to distance, it necessarily follows

that the repulsive force from the sun decreases in the same proportion.\*

B. Barlow, I recollect, calculated the annual rate of motion of the magnetic poles, and of course the line of no variation at  $25'$  and the line of revolution at about 860.

A. I know he did, but his calculations were founded on assumptions which were erroneous.

The time of revolution is 666 years, and this number has a very important relation to our system; for the magnetic poles and line of no variation of the sun, earth and planets, perform a revolution around these bodies in 666 of their years; and it is easy to determine by this and their distance from the sun, their annual rate of motion, but it is getting late, and we must defer any further conversation upon this interesting subject to a future period.

\*  $32',26''$  is the true mean diameter of the Sun, as seen from the earth—it does not vary from it one second, and astronomers will please correct their observations.

## The "Water-Cure" Analysed.

From the London Lancet.

As we stated in our last number, on examining the various elements of which the hydropathic treatment is composed, we find that they may be reduced to the following.—The temporary application of cold to the skin after copious perspiration has been produced without artificial heat, total abstinence from all stimulating fluids; simple diet; early hours for rising; and regular bodily exercise.

With the exception of the first, the one, it is true, on which the greatest stress is laid, all these means of treatment can only be considered as hygienic agents; and if we analyse carefully the sweating and bathing processes, we find that they are merely the application to disease generally of agencies, the use of which has been, from the earliest times, familiar, not only to the profession, but to the public at large. To appreciate correctly the influence of the hydropathic medication we must recall to mind the physiological action of cold water on the human frame. Immersion in cold water produces a sudden shock on the nervous system, and is immediately followed by contraction of the cutaneous capillaries and retrocession of the blood from the external to the internal regions, the nervous system, however, soon rallies, and the heart impelling the blood with renewed vigour, it is returned to the periphery of the body, distending the capillary vessels which it had previously abandoned, and giving rise to an universal glow or sensation of warmth. The intensity of this *re-action*, as it is called, depends on various causes, one of the most important of which is the state of the skin previous to immersion. If its circulation is active and vigorous, and if, consequently, the surface of the body is warm, the *re-action* is certain, prompt, and vigorous. If, on the contrary, the circulation of the skin is sluggish, deficient in energy, the reaction is incomplete, or may be absent entirely. In this case the person who has been immersed, on getting out of the water, shivers, feels an universal sensation of cold, pain in the chest, cephalalgia, and may not experience reaction for some minutes, or even hours.

The above principle, that the intensity of reaction after the application of cold depends chiefly on the previous vigour of the cutaneous circulation, has scarcely been sufficiently appreciated by hygienists. It is this principle which explains the inoccuity of the cold-bath as used by hydropathists in some diseases.—By wrapping their patients up in a blanket, or in a wet sheet first and then in a blanket, as soon as they awake in the morning, when they are warm, and the circulation of the skin is active, perspiration is easily produced; and it is whilst they are in this state, whilst the cutaneous circulation is the most vigorous, that they are plunged into cold water.—As might physiologically be expected, the re-

action is generally prompt and energetic, and thus the tonifying effects of the cold-bath are often obtained with patients who would not have had sufficient warmth of skin or vital energy to react against the cold-bath, as usually employed.

But this mode of administering the cold-bath and the physiological data on which it is justifiable, are not new to the profession. With the exception that before PRIZEMANITZ the sweating stage was produced by artificial heat, which, in our opinion modifies but little its physiological action, it has been known and put in practice from the remotest antiquity up to the present day. The Romans of old were in the habit of sweating in the *sudatorium*, and of then throwing themselves into cold water. The Russians and Finlanders of the present day remain for many minutes exposed to vapour heated to 150° Fahr. and then throw themselves into water just above the freezing-point, or roll themselves in the snow. Even in our own country, where such practices are not in use, it is generally understood that a person may throw himself into cold water when warm or perspiring from exercise without the slightest danger. Indeed, if ladies catch colds, pneumonias, &c., by coming out of ball-rooms, and heated localities, a circumstance which is much less frequent than is generally supposed, it is not because they come out of a very warm locality into a cold one, for the warmer the skin is the more able is the economy to resist the action of the cold, but because small portions only of the cutaneous surface, the neck and shoulders, for instance, are exposed for a considerable length of time to the action of the cold air. How seldom do we hear of men, whose clothing is such as to place the entire economy under the same hygienic condition, experiencing any inflammatory attack from such a cause. In northern climates, where the houses are heated in their totality, attacks of bronchitis, laryngitis, &c., are, we believe, much less common among the higher classes than in our own country, although the cold out of doors is much more severe. The reason is that the skin being thoroughly warmed when they leave their dwellings the system is much better able to resist the action of the cold, to react against it.

If the view we have taken of the action of cold water on the skin is correct, and it is the one entertained by all the first physiologists and hygienists of the day, the sweating and bathing processes of the hydropathists are reduced to little more than a novel mode of applying the cold-bath and of ensuring its efficiency in delicate constitutions. It is merely the exaggeration of the cold sponging in the morning, or rising warm from bed, which medical men so often recommend to their patients.

As to the abundant perspiration, respecting which so much is said, and which is stated to be so extremely efficacious, it is, in reality, of very little importance whether it be produced

by rolling a person up in blankets, and thus arresting the natural evolution of heat from the skin until that organ relieves itself by abundant perspiration, or whether it be produced by the direct application of moisture and heat combined in the shape of heated vapour. The effect, as regards the elimination of a certain proportion of the animal fluids through the medium of the skin, is the same.—And yet these are the novelties brought forward by the hydropathists,—novelties, the nature and action of which every medical man has learned as part of his professional education.

The means of treatment which constitute hydropathy, considered as a portion of our therapeutical arsenal, are powerful medical and hygienic agents, but can only be adopted as a panacea for all diseases by the ignorant public, or by such medical men as wish to raise their own fortunes on the credulity of others, or are destitute of that valuable faculty which we alluded to in a former number—*common sense*. By attention to diet, by moderation in the use of stimulants (or in some cases, by abstaining from them entirely,) by exercise, by early rising, by cold ablutions, we preserve health; and in a long series of dyspeptic and nervous disorders, occasioned by town life, in which the stomach is often overloaded with food, stimuli are taken in excess, exercise is neglected, late hours are kept, and the mind is continually on the stretch, attention to these points is equally successful in restoring lost health. Cures are, indeed, every day effected by all medical men who practice extensively our profession, through the action of the above means, and that without their demanding of their patients the sacrifice of their residence or occupations, and, without anything more than a placebo in the shape of medicine being administered. Is it then extraordinary, that when we add to their agency freedom from the harass of business, the novelty of a picturesque highland residence and a military-like regularity in the execution of the plan laid down, that many thus affected should rapidly recover at Graefenberg, Marienberg, Malvern, or other similar places.

We must not also forget that the hydropathists have many advantages in the application of their hygienic rules over regular practitioners. They make their patients get up at five, abstain from stimuli, take long walks, &c., whilst members of the faculty in general can only advise those who place themselves under their care to follow such a course, for they have not the halo which public opinion gives to novelty and more especially to all panacea-mongers.—PRIESSNITZ, the peasant, is said to rule over lords and ladies, at Graefenberg with a rod of iron. His very nod is obeyed by his patients; whom he never deigns to acquaint with the motive of his prescriptions. What would a West end fine lady say of her physician, if he insisted on her getting up at five o'clock, taking a cold-bath, and then walking round Hyde Park a couple of times before breakfast?

He would be called a fool and dismissed.—But the same lady will submit to this, or anything else, if it comes from a MORISON or PRIESSNITZ, or even from one of their more humble followers.

No doubt, in cases such as those we have just mentioned, the cold-bath, which Dr. Forbes justly calls the most powerful tonic of the Pharmacopœia, is a valuable adjuvant, but we much doubt whether its efficacy is much increased by the immoderate sweating that precedes it. It appears that in a great number of cases, after a certain time, numerous boils and abscesses appear on the skin, and in the subcutaneous cellular tissue. These are appealed to as indicating that the pecant humours of the blood have made their way to the surface of the economy; but every rational medical man must give a very different interpretation to the manifestation of such phenomena. They can in reality, only be considered as the result of repeated and long-continued irritation of the skin, and must do harm by their reaction on the system generally.

There is another class of diseases in which the hydropathic treatment is calculated to be beneficial, viz, in rheumatic and gouty engorgements of the fibrous tissues of the joints. In these cases, it is more especially the sweating and bathing that act on the engorged tissues, gradually promoting a healthier action of the absorbents, and favouring the resorption of the effused lymph. In gouty constitutions, the hygienic treatment resorted to is also precisely the one calculated to modify the constitutional diathesis. If we could always persuade a patient who consults us for the first fit of the gout, to drink water for the rest of his life, to take exercise, and to diminish by half the amount of animal food he is in the habit of taking, there would be but little chance of a relapse of the attack. But although we think hydropathy harmless, or even beneficial, when directed against the sequelæ of gout and rheumatism, we are very far indeed from admitting this to be the case during an acute attack of gout or rheumatic fever. The experience of ages tells us that in such cases there is a general inflammatory diathesis which explodes in the local inflammation and that if re-percussion of that local inflammation takes place, there is danger of the inflammatory action settling on some vital organ, and terminating the life of the patient. It is generally acknowledged to be of such extreme importance to prevent this translation of the disease from the extremities, that no physician in his senses would ever dream of preventing, by cold local applications, the manifestation of an incipient attack of gout, and would even be very careful how he applied cold to a person subject to gout in the interval of the attacks.—This remark applies more especially to persons advanced in life, as they with difficulty resist even common inflammatory attacks of the more important viscera. There can be no doubt that Sir F. BURNETT's death is to be attributed to the neglect of this pathological

principle. In nearly all acute diseases we should be inclined to consider hydropathy a most dangerous practice.

The practice followed by most of the professed hydropathists, as compared with their pretensions, stamps them as impostors. They profess to be able to treat and to cure all diseases by means of "the water cure," and at the same time it is notorious that they select their cases, principally choosing the forms of disease we have enumerated as likely to be benefited by the plan of treatment which they follow. It is a general remark among those who have written on the subject that the persons who sit down to the "table d'hôte" of the hydropathic establishments on the continent, are, generally speaking, as healthy and cheerful a set of people as you could wish to meet with. Dr. ERSENBERG, the hydropathist who was refused a license to practice by the French Academy, states in one part of his work,—"I expected to find at Graefenberg a reunion of the most varied and severe maladies, and on every side I only saw robust bodies, and fresh countenances. It was only several months afterwards that I perceived some who presented external traces of a deep-seated vital affection." PRIESSNITZ exercises great discrimination in the choice of his patients, refusing those who appear to present traces of deep-seated disease. We believe his example is followed by his English disciples; indeed, there cannot be a greater proof of the fact than the printed assertion made by one of them, that out of five hundred patients he has not lost one.

Hydropathy which is now in the zenith of its fame, will have the fate of all other medical impostures. In the course of a few years it will be abandoned by the public for some other novelty, and this will continue to be the case until the Legislature steps in to shield the public and the profession from the inroads of quackery.

We think we cannot better close our remarks on hydropathy than by quoting the conclusion to which the French Academy came on the government referring to it as to the propriety of allowing a hydropathic establishment to be formed in Paris.

1. That hydrotherapy is a dangerous therapeutic method which does not rest on facts.
2. That its theory is chimerical.
3. That it is in disaccord with our chemical and pathological doctrines.
4. That the Academy cannot in any way approve of it.
5. That the use of cold water has been long in the domain of medicine, and submitted to known rules.

*Digitalis in Epilepsy*—Dr. Scott, of Liverpool, describes some cases of ethenic epilepsy which seem to have been successfully treated by tincture of digitalis administered during the premonitory stage, in full doses, and

continued until it produce some effect. This remedy deserves attention, as calculated to subdue the increased vascular action which in many cases precedes the epileptic convulsion. Dr. Scott, judiciously remarks, "In the ethenic species of epilepsy the premonitory symptoms which have come under my observation, have usually been those of nervous and vascular excitement, gradually increasing until the cerebro-spinal congestion has been sufficient to produce the paroxysm; and it seemed reasonable to suppose that if the excitement could be allayed, the paroxysm might be arrested, and by continued prevention the disease might be eventually removed, provided it was not dependent upon organic causes. This has been effected in so many instances, by the instrumentality of digitalis, without detriment to the powers of the constitution, that I cannot but think that it presents a valuable resource, and is deserving of a more extended trial in similar cases."

*Incontinence of Urine and Enuresis Cured by Electricity.*—Incontinence of urine frequently comes on after severe rheumatic and gouty affections. In many cases these affections have been referred to affections of the spinal marrow; but M. Froriep denies this, as any affection of the lower portion of the cord, which would cause paralysis of the bladder, would at the same time produce some paralytic symptoms in the voluntary muscles of the lower extremities. He refers it, therefore, to a local affection of the bladder itself, to an affection of the nerves, or the muscular fibre, or of both. Taking this view of the question, he resolved to try the effect of the application of the local application of electricity. A metallic stilet, terminating in a button-point, is introduced into the bladder, with the aid of a gum catheter, which envelopes the whole but the button-point. The handle of the stilet is then connected with one of the wires of the electro-galvanic battery, while the extremity of the other wire is pressed against the pubes. The electric current is passed through the bladder for a quarter of an hour each day. The bladder in general retains the urine better the very first day after the application; but the application requires to be renewed at intervals, till the bladder recovers its full power. Several cases are related of this affection, in people from thirty to forty years of age, in whom the affection was completely removed by the electricity. M. Froriep has found this agent equally powerful in removing the weakness on which the enuresis of children depends. In some cases, he found one ap-

plication of the electricity remove the disease; in others, it required to be repeated at intervals. He found that, in weekly children, a few doses of iron confirmed the cure.—*Idem*.

#### Human Magnetism.

##### *Amputation performed during the Magnetic Sleep.*

The *Wolverhampton Chronicle* contains the following extraordinary statement; for the accuracy of which it vouches:—John Marrion, aged forty-five, residing in Canlane, Sedgley, received an extensive injury of the middle finger in January last, and became a patient of Messrs. Thompson and Dunn. It has since been treated by those gentlemen in the usual manner, but the nature of the injury rendered amputation necessary. With a view to test mesmeric sleep, Marrion consented to the proposal to place himself under the treatment of Dr. Owens, and on Sunday week, for the first time, he was magnetized. The patient was afterwards daily magnetized, and the case created intense interest in the public mind, more particularly among medical men, who attended in numbers every day to mark Dr. Owen's progress. On Saturday the operation was performed, and Mr. Dunn's room was thronged with medical and other gentlemen, to witness the event. The patient, on being brought into the room, appeared rather flushed, but Dr. Owens addressed him in a lively and friendly manner, and he took his seat evidently quite composed. In two minutes and a half deep sleep was produced, but the doctor kept his position some time longer. Dr. Mannix then felt the patient's pulse, which beat one hundred per minute. Some questions were put to him while in this state by Dr. Owens, and language being excited, he said he felt very comfortable. "Proceed with the operation," said the doctor; and in one minute Mr. Dunn had performed it very neatly. The cutting the flap and the dividing of the bone by the nippers was watched with breathless scrutiny by all present, but not a muscle quivered nor did a sigh escape, nor did any single thing occur to betray the slightest sensation. During the dressing of the arm the hand was suspended over the table in a cataleptic state, without any further support. Two minutes after the operation Dr. Mannix felt the man's pulse—it was still 100. Dr. Owens then excited laughter, and the patient laughed happily, evidently quite unconscious of the relief he had undergone. Some time elapsed

during which he continued sleeping, and on being questioned in that state he was not at all aware of what had been done. Being awake (which was done instantaneously by Dr. Owens touching the organ of firmness, which seemed to act almost miraculously,) and finding his arm in a sling, he ejaculated—"Thank the Lord for that." In reply to questions, he said he had not felt it. Every gentleman signed the minutes, which were noted by Mr. Gatis, during the operation, when a liberal subscription was raised for the man, and Dr. Owens was warmly congratulated.

There is no reason to doubt the truth of this statement, as it is gravely put forth. It deserves the timeliest and most careful consideration of the many surgeons and scientific men, who doubt the efficacy of magnetism in this application. If the most fearful operations of surgery can be performed without any pain, almost without inconvenience to the patient, many a pang will be saved to humanity. An agent that has such wonderful power over the human frame as this has, should at once attract the careful and unprejudiced study of the natural philosopher and practical physician.—*Ed. Magnet*, June, 1844.

*Period of Incubation in Syphilis.*—Ricord says, when indurated chancre exists, a true syphilitic diathesis is established, and accidental circumstances alone are necessary to bring about its manifestation. The interval, which separates indurated chancre from secondary symptoms, may truly be considered as an incubation, during which a ferment mixed with the blood (syphilis larvæ, Baglivi), and circulating with it, modifies its composition in such a manner, as to render it, in some measure, unfit for proper nutrition on the one hand, and on the other—under the influence of circumstances which have no action on the healthy individual—to give rise to a series of symptoms which have received the collective name of secondary syphilis. This interval of incubation is shorter in the child and female than in the male adult. It lasts from three to four weeks to as many months in general, the average being six weeks. A sudden change in the external temperature, the excitement caused by alcoholic stimulants, or even local causes, or warm or cold baths, the action of a short pipe on the lips, neglect of cleanliness, diet of an exciting nature, the exercise of riding—such are the most frequent determining causes of the first outbreak of secondary symptoms.

*The Effects of Mercury on Cattle.*—"A cow had been very much infested with large black lice, to destroy which the unguentum hydragryi had been freely used. She was salivated, being well supported, however, with decoction of linseed; in a few days the effects of the mercury began to subside; but the result was, that the hair of her ears sloughed off close to the head, and likewise the points of both the ossa calcis, and to such an extent that one of the tarsal joints was left open, which caused no little trouble to stop the escape of synovia. Her tail, likewise, became almost denuded of hair; nevertheless, she ultimately rallied, and milked well in the following summer."—*Veterinarian*.

*Tapping the Chest* is usually performed in front between the sixth and seventh ribs, where the serratus magnus and obliquus externus muscles digitate. On this subject Mr. Colles remarks, "The place to operate on in empyema is in my opinion, referable to the inferior angle of the scapula. Place your patient on the side opposite to where the matter is; place his arm of the affected side on a line with the body, the elbow being just over the highest part of the crest of the ilium; you then have the scapula fixed; then measure four fingers' breadth downwards from the angle of the scapula, and four fingers' breadth transversely from the spinous process of the vertebræ (to get clear of the thick mass of muscles near the spine) until it meets the perpendicular line, where they decussate, there you should puncture. You are first to make an incision three or four inches long in the transverse direction through the skin, next through the latissimus dorsi, and next through the intercostal muscles, and then you get upon the pleura. Now some advise you to tear through the pleura; but in many of these cases the membrane is thickened by disease, so as to be several inches thick, and you might be tearing until you were tired before you could get through. I once operated for empyema until the whole knife was in the wound."—*Dublin Medical Press*.

*Prophylactic virtues of Belladonna against Scarlatina.*—"A curious fact is mentioned, under the head of the solanaceous narcotics, in support of the supposed efficacy of belladonna as a preventive of scarlatina. A child was brought home from school ill with this fever, and M. de Lens caused all the family to take belladonna as a preventive, except one the grandmother and she was the only person who received the infection. The form

and dose in which it is given, for this purpose, are as follows:—Fifteen centigrammes of the extract are dissolved in thirty grammes of distilled water, and of this two or three drops are given night and morning to infants one year old or under, three or four drops to children of two years, and so on progressively, so that the dose for an adult is fifteen drops. It appears that the reputation of this prophylactic course of treatment is pretty firmly established in France, and so much so in Germany that it has been frequently recommended by authority during violent epidemics. We doubt whether it is much in favour with English practitioners; but yet as M. Bouchardat justly observes, it is attended with little trouble, and no possible harm, so that it would be well worth while to take the chance of its being useful. It may do good too, as a *medicine morale*." *Provincial Journal*.

#### Paralysis.

Mrs. Pollock 500 Greenwich-Street, had a paralytic shock about 6 months since, which palsied entirely the left half of her body and limbs, the common remedies were applied without benefit. On the 23d of May last, Mr. D. B. Crist commenced mesmerising her daily, and on the 4th sitting she raised her hand to her head, and after the 7th sitting she was able to walk without assistance, and on the 8th of June inst. she was apparently entirely well, when the sittings were concluded.

*Tests for Arsenic.* In the *Provincial Journal* (which by the way now issues from its rural retirement, pale, sickly, and attenuated) we find a paper by Dr. Sherman on the tests for arsenic. He particularly alludes to those of Marsh and Reinsch, and their modification recommended in *The Lancet* by Mr. Ellis. The only objection to those tests is the difficulty of procuring zinc free from arsenical contamination. The author is then led to remark that "there is another test which deserves more attention than it has yet met with, viz. the decomposition of distilled water by galvanism, to which the suspected solution is added, with pure sulphuric acid,

"It may be as well to bring to the recollection of our readers that a gramme is 15,444 grains by weight; a centigramme, the 100th part of a gramme.



collecting the hydrogen from the negative pole or zincode of Smee's battery, igniting it and examining the stain left in a glass tube open at both ends. If there is the smallest particle of arsenic, the hydrogen will combine with it, and you then have a stain of *metallic arsenic*, with *rhomboidal crystals*; which you may *oxidise, collect, and dissolve in water*; go through the fluid tests, reduce the sulphuret in a tube, and sublime it into *arsenious acid* again. This is the most delicate test known, and is *perfectly free from the charge of using any substance in which arsenic can exist*." It should be remembered that sulphuric acid is not always free from arsenic. The only satisfactory means of ascertaining the purity of the materials made use of is to put the apparatus in action previously to the addition of the suspected substance. If found then to be pure, the experiment can, of course, be relied on.

#### *The Influence of Factory Labour on Growth.*

Dr. White, in a communication to the Medical Gazette, makes the following remarks, which will not at the present moment be lost on some of our readers:—"It is by no means an unfrequent occurrence in this neighbourhood (Preston) to find newborn infants weigh twelve, thirteen, and fourteen pounds; and the average weight seems to be from ten to eleven pounds.

Notwithstanding the more than ordinary weight of infants at the time of birth, it is worthy of remark that the generality of adults never reach above the middle size, and by far the greatest number are much below it. It is very probable that this may arise from the early age at which children are sent to work in the factories; and that, although the parent plant be impaired from want of proper culture, it preserves within itself the power of propagating a race which, by due and timely training, might become one of the finest in the kingdom."

#### *Treatment of the Erectile Tumours of the Eyelids.*

By M. CARRON DU VILLARDS.

A little girl, fourteen years of age, had presented, since her birth, on the upper eyelid, an erectile tumour, about the size of a grain of coffee. The tumour was of a livid red colour, increased daily, and was excessively tense when the child cried. M. Carron du Villards inoculated the tumour and its circumference with vaccine virus, traversing it with a thread impregnated with the vaccine matter. On the fifth day, the symptoms of inoculation mani-

fested themselves. Five pustules appeared around the tumour, which itself became inflamed. On the tenth day it was covered by a black crust, which came off on the twentieth, leaving a healthy, rosy surface underneath. All traces of the erectile tumour had disappeared.

A child nine years of age, had borne, since its infancy, an erectile tumour in the external angle of the eye. The tumour had never increased in size until the child was attacked with scarlatina. Its increase from that time was so rapid as to alarm the parents, who applied to M. Carron du Villards. Three entomological pins were fixed in the tumour, and their extremities having been bound together with a little silver wire, were exposed to the flame of a wax candle. The tumour became swollen, cracked, and then sank. On withdrawing the pins they brought away a portion of its parenchyma. Eight days afterwards the child was cured.

A pretty young woman, of Versailles, had an erectile tumour, of the size of a pea, on the superior eyelid. After an attack of scarlatina, it became endowed with increased vitality, and appeared ready to burst every time she coughed. In six weeks it acquired the size of an olive. M. Carron du Villards having been then consulted by her family, determined to operate by the coagulating method. The tumour was injected by means of Anel's syringe, with a styptic solution. It became black, and then faded. On the fourth day, it was surrounded by an inflammatory circle, and covered by small phlyctenæ. The fifth day a portion of it separated, and the rest dried up. On the eighth day the entire crust fell off, leaving underneath a rosy, new skin, similar to that of a cicatrised blister, without loss of substance or deformity.—*Annales d'Oculistique.*

#### *Case of Large Ovarian Tumour Removed by Operation.*

By FREDERICK BIRD, M. D., &c.

[Read before the MEDICAL SOCIETY OF LONDON.  
March 4, 1844.]

The subject of the case was a lady, on whom he had lately operated for the extirpation of a large ovarian tumour. The operation, although attended by unusual difficulties, had been completely successful. He had been induced to bring the case before the notice of the society, partly on account of the peculiar features it presented, and partly because it afforded a marked illustration of the imperfect state of the means of diagnosis of certain forms of ovarian disease. The subject of the case was thirty-five years of

age, married, but without children, and, with the exception of dysmenorrhœa, had enjoyed previous good health. During the last two years the abdomen had been increasing in size, the enlargement having taken place equally on either side, and had been, until within the last six months, quite unaccompanied by disturbance of the general health. Pregnancy was for some time supposed to exist, and, under that impression, no recourse was had, until lately, to remedial measures. The abdomen had, within the preceding four or five months, enlarged much more rapidly than before, frequent vomiting and protracted diarrhœa then occurred, and general emaciation succeeded. Two months ago, Dr. Frederick Bird saw the patient, in consultation with Mr. Hale Thompson and other gentlemen, at which period the abdomen had a circumference of forty inches; fluctuation appeared very distinct in every direction; the thoracic cavity was much encroached upon by the large size of the tumour, she was greatly emaciated, and it was evident that the constitutional powers were fast sinking beneath the disease. Dr. Locock, Dr. Hamilton Roe, Dr. Hodgkin, Mr. B Phillips, and others, subsequently saw the patient, and the operation for extirpation was finally determined upon.

The same preliminary treatment adopted in his former operations have been employed. Dr. F. Bird commenced by making a small incision in the linea alba, and a little below the umbilicus, and on exposing the peritoneum, the cyst was found to be adherent; the adhesions were then examined, and Dr. Locock concurring in the operation that they would admit of separation without any great difficulty, the incision was enlarged to about five inches, so as to readily admit of the passage of the hand, which was next cautiously introduced between the surface of the tumour and the parietes of the abdomen; the adhesions were found to exist in every direction anteriorly, but, excepting in some few parts, gave way readily to the presence of the fingers; all the adhesions having been thus detached, and it having been previously found that the contents of the cyst were not fluid, an incision was made into it, and its bulk considerably reduced by the withdrawal of several pounds of the firm gelatinous mass by which it was filled, and as soon as the tumour began to protrude from the wound, it was firmly grasped by the forceps, the incision carried upwards to about three inches, and the remaining part of the morbid growth removed from the cavity of the abdomen; the wound was then closed, and secured by sutures, the vessels of the pedicle having been previously tied and divided, and the ligatures fixed at the lower end of the incision. But little

hæmorrhage occurred and the operation was borne remarkably well by the patient, her pulse, at its conclusion, exceeding but by two beats the frequency observed during several days prior to its performance.

No pain, or other local symptom, was felt after the operation; reaction soon appeared, and as quickly subsided; the patient passed a good night, and at the end of a few days had quitted her bed; the wound rapidly healed, and all the ligatures were removed before the end of the fourth week after the operation. The patient's convalescence had not been retarded by any subsequent symptoms, and she is now in complete health.

The tumour weighed thirty-five pounds. It consisted of the right ovary, enlarged by the development of one large primary and several secondary cysts. The parent cyst was filled by a firm gelatinous secretion, varying in color and in density, the difference in color being apparently due to the amount of blood sent to its several parts, the deepest color being observed at the lowest portion of the mass. In some parts was opaque and striated. There were several vessels of large size traversing the interior of the tumour. The pedicle contained three arteries, of which one was large; the contents of the secondary cysts did not essentially differ from that contained in the primary one. The external surface of the tumour was irregularly covered by false membrane, which, in some parts, was of considerable density and firmness.

In making some remarks upon the preceding case, Dr. F. Bird said, the attendant circumstances of the operation, in the present instance, had confirmed him in his opinion of the advantages to be gained by the employment of an incision of mediate size; the separation of the adhesions had, in this case, been found neither a tedious or difficult proceeding, for the tense condition of the abdominal walls not having being destroyed by the large abdominal section, the hand was no sooner introduced laterally between the parietes of the abdomen and the contained tumour, than the adhesions were put upon the stretch, and, in that state, readily gave way before the presence of the fingers. Had the abdominal walls been more extensively divided, the detachment of the adhesions would have been a more difficult, and probably a more dangerous proceeding. Although the tumour was of large size, and did not contain any fluid, yet it was removed without having recourse to the very large incision.—The history of the case had afforded no reason for believing that inflammation had occurred at any former period, and the adhesions were neither detected nor suspected. It was difficult to determine the period for which

the peritoneal adhesions had existed; but the thickened, and in some parts well organised form of the false membrane, scattered over the surface of the tumour, seemed to indicate that they were not of very recent date. It was worthy of remark that, since the operation, the menstrual function had been twice performed, and on neither occasion had the patient experienced any of the severe pain from which she formerly suffered.

*On the true Character of Idiopathic Erysipelas.*

By JAMES ARTHUR WILSON, M. D.,  
Physician to St. George's Hospital.

There is a short severe fever, at all times sporadic in this country, and occasionally prevailing with epidemic frequency,—a fever which, though uniform in any given number of cases, as that of measles, small pox, or scarlatina, is not yet associated by nosologists or practitioners with its proper class of acute eruptive disorders, but is known only by a name common to it, with various other affections of the skin, some of which are not febrile, and are comparatively of trivial importance. The idiopathic erysipelas of the head and face is a disorder essentially constitutional, specially determined to certain structures—pervading every one—engaged from the first in limiting its own action—and fulfilling within a given period of time, in its operation on the skin, as generally in the system, every condition of the regular eruptive fever.

In one of the last instances of idiopathic erysipelas that fell under my care, the patient, aged 53, formerly an officer in the British army, was admitted with every symptom of the disease into St. George's Hospital on December 20, 1843. He was taken ill, ten days before, while on his way to London, having been previously exposed to wet and cold, and suffering much from anxiety of mind. When I first saw him, on December 21st, he was under the full influence of the fever, exhausted, prostrate, and nearly blind. His face, universally swollen, was rough on the left side, with extensive desquamation, and disfigured about the lower part by thin black crusts of lymph and cuticle. On the right cheek vesication was still in active progress. The pulse was full and frequent, the tongue much coated. On December 23rd the inflammation had extended to the right ear, where it ceased to spread. Two days afterwards, the symptoms, both local and general, had entirely subsided. The attack, in this case, began on December 11th, with a sense of general illness, and pain over the left side of the face. It was not until two days after-

wards, on December 13th, that the local inflammation declared itself by heat, swelling, and redness, in the upper part of the left cheek. This is a fair sample of the fever in its usual form and average degree of intensity.

One of the first cases that compelled my attention to the regularity of period in idiopathic erysipelas was that of a young gentleman, whom I attended under a severe attack of this fever, in July, 1829. The local inflammation, which was exceedingly severe, occupied both sides of the face, the forehead, and anterior scalp. There was high fever, with delirium, at times loud and maniacal; the breathing was much disturbed; the tongue remarkably black and dry. When I first saw him he had been three days ill. In five days more all the urgent symptoms had subsided.

In another case, which occurred at the close of the autumn of 1830, and which afforded me an opportunity of studying the disease by personal experience of its effects, the first symptoms observed were general weakness and uneasiness, with a sense of coldness, especially in the legs, and of shrinking in the bulk of the limb. They felt "like cold thin sticks." To this evidence of general illness succeeded, on the same evening, December 2, a cough of the most harassing kind, which entirely prevented sleep, was not relieved by expectoration, and was accompanied by severe shooting pain in the right groin. On the following day there was swelling, with heat and redness in the lobe of the right ear and under the angle of the jaw, which, in the course of a week, had extended over the entire face, and hairy scalp of both sides of the head. The febrile symptoms already mentioned were not alleviated on the appearance of the eruption, but continued to increase, with slight intermission, until December 8, on which day (the seventh from the invasion of the fever,) and during the two following days, the disorder seemed to have reached its maximum of intensity. The tongue was at this time thickly loaded; there was an abhorrence of food, with nausea and occasional vomiting; the bowels were constipated, and the motions obtained by medicine were of a black pitchy appearance. There was exceeding hurry, with perplexity of mind and occasional delirium. The vesications were large and numerous, discharging an acrid matter. During their formation a very copious viscid exudation took place from the inflamed scalp, by which the hair was matted into thick folds,—the inflammation extended from the face backwards, through the nostrils, to the upper pharynx, so that these surfaces remained for

## True Character of Idiopathic Erysipelas.

ing time sore and disposed to bleed. A-  
ight days of fever the symptoms, both lo-  
and general, gradually subsided, leaving  
at effect of waste by emaciation of the  
e frame, with extreme muscular debility.  
he kidneys continued to act very largely  
ng the early period of convalescence; the  
tute was greater than it had ever been  
re or since; but it was long before the  
tion of sleep was recovered. The hair  
rated entirely from the head, and several  
ll abscesses subsequently formed, one be-  
h the lower eyelid, two under the chin,  
another behind the ear. They were  
ed in due time by the lancet, and healed  
ly.

vo of my medical friends, whom I attend-  
then ill with erysipelas of the head and  
, in the years 1832 and 1833, might be in-  
ced in further evidence of the regularity  
r which the symptoms of this fever pro-  
and are determined. If they kept notes,  
did, of their own cases, during convales-  
e, they will find that their sufferings from  
r and inflammation were terminated in  
than ten days.

(r. J. G., of Clarges street, complained to  
in the afternoon of April 11, 1832, of  
s, heat, violent headach, sickness, and a  
ng of general distress. The tongue was  
white, but not furred. On the follow-  
lay black scybalæ had been voided from  
owels, succeeded by bilious motions; and  
headache was relieved. There was, how-  
, a sense of great oppression, with con-  
nausea, and he had vomited much green  
yellow fluid, which was intensely sour to  
aste, and instantly reddened blue litmus-  
r. On the following day erysipelas de-  
d itself by swelling and redness of the  
and cheek, which in twenty-four hours  
, had extended to the forehead and hairy  
of the same side, and, subsequently,  
s the nose, chin, and forehead, to the  
side of the face. The local inflamma-  
had reached its greatest degree of inten-  
on April 17th, being the fifth day from  
commencement of the eruption and the  
th from that of the first symptoms of the  
t. On April 18th the face was paler and  
tumid; on the 20th there was general  
amination of the cuticle; and on April  
all symptoms of the disorder had sub-

the case of Mr. J. P., of Eaton-square,  
two days of much constitutional distur-  
e by chills, heats, and other symptoms  
ver, the dusky redness and swelling of  
pelas were first observed behind the right  
n August 7, 1843. The inflammation  
equently extended over the entire face,  
head, and hairy scalp; the vesications

were extensive, and there was much fever.  
On August 15, (the ninth day from the inva-  
sion of the local symptoms,) the swelling of  
the face was fast subsiding, the natural com-  
plexion had begun to return, the skin was  
moist, the pulse natural, and convalescence in  
all respects fairly established. In this case  
the erysipelas fever had supervened on the re-  
moval of an encysted tumour from the back  
of the neck. From intimate acquaintance  
with the patient, and with a full knowledge of  
the causes in previous operation on his gene-  
ral health, I had every reason to believe that,  
had he not been attacked by erysipelas, he  
would have been laid up before the close of  
the autumn with some other form of fever.  
Thus it would appear, that a severe consti-  
tutional disorder was specially determined  
in his character by the accident of a local in-  
jury.

From these selected instances of idiopathic  
erysipelas, as from the large majority of a  
much more numerous record, extending at in-  
tervals over a period of sixteen years, the dis-  
order may be described as a severe depressing  
fever, lasting from eight to twelve days, and  
determined, by a special effect of inflamma-  
tion, to that peculiar organic structure, the in-  
tegruments of the head and face. Like other  
fevers, it often supervenes on local injuries,  
or on any of the various causes that induce a  
bad state of the general health. It attaches  
specially to certain temperaments, and to par-  
ticular states of constitution; affecting the  
limited range of persons liable to it, under cir-  
cumstances which, in others, would induce  
the more common varieties of fever. It pre-  
vails most in particular districts, and at cer-  
tain seasons of the year. The late Dr. Warren,  
in the course of his long metropolitan practice,  
observed that it was most frequent during the  
months of spring and autumn, and when the  
wind blew from the south-west. Idiopathic  
erysipelas is not so frequent as is generally  
supposed. On looking over my hospital case-  
books, from 1839 to the present time, I have  
been surprised at not finding more instances  
of this disease. From the information af-  
forded to us in the admirable medical reports  
lately issued from the War-office, it does not  
appear to be a frequent complaint among the  
troops of the British army. Its effects upon  
structure are so frightfully obtrusive, that  
they exact an undue share of attention from  
the clinical observer, and are thus remember-  
ed, to the exclusion of cases less prominent in  
their interest.

A further analogy might be assumed be-  
tween the erysipelas and common eruptive  
fever, from the contagious properties which,  
it is supposed, are inherent to both. With  
this much-disputed question I do not at pre-

sent propose to interfere. That during certain states of atmosphere, and of other local influences, erysipelas may, and does, attack many individuals simultaneously, is beyond doubt. That, in some instances, it has been "caught" by one person from another, there is much reason to believe. The eminent physician to whose opinions respecting the disease I have already alluded, did not consider erysipelas as contagious. The president of the College of Physicians, fourteen years back, held an opposite opinion.

When erysipelas of the head and face proves fatal, which seldom happens unless in sequel of some other disease, it is generally found, on examination after death, that the lungs, the serous and the mucous membranes, are the structures in which there is most evidence of organic injury. Like the other eruptive fevers of this country, erysipelas in bad cases, always becomes typhoid towards its close. Its pathology, by dissection, is that of scarlet fever, which, in its several stages, it very much resembles.

On the examination post mortem of a middle aged man, who died with this disease in St. George's Hospital, on June 1, 1837, there was universal thickening of the peritoneum, with an effusion of sero-purulent fluid into its cavity. Recent effects of its same kind were likewise observed in both sides of the chest. The heart was much enlarged by dilatation and thickening of its left ventricle; the aorta was atheromatous, the liver unusually hard, and the kidneys small, mottled, and granular. Thus, according to the routine practice of the day, in this case of mixed acute and chronic disease, bleeding, blistering and other antiphlogistic measures would have been indicated by the symptoms of pleurisy and peritonitis, while bark and wine would have been in demand as specifics for the erysipelas. Can stronger argument be adduced for the revision of much that is dogmatical in our modern practical medicine?

Here, then, is the true character of the disease, with a practical inference for its treatment. Thus, regarding its symptoms, whether local or general, as a train of actions tending of necessity to their own relief, we should, in most cases, be content to watch over their safe development, and to wait patiently for the result; which, in this fever, soon arrives. Idiopathic erysipelas, within ten days from its invasion, seldom fails to cure itself. Like the other eruptive fevers, it occasionally presents itself in a complicated and irregular form, and must then, of course, be treated by means that are special to the case. I have known the erysipelas fever supervene on laryngitis and pharyngitis, on jaundice, on phrenitis, hemiplegia, and

various local inflammations of the vital or other organs; on the scarlet, rheumatic, and epidemic typhoid fevers.

In a case which I attended in February 1837, the patient, an athletic farmer, past the middle age, was bled five times from the arm before he got well, and the blood taken was in every instance buffy. The inflammation of the skin began in the face, and subsequently extended over the entire surface of the body, not excepting the palms of the hands or the soles of the feet, from which, at the close of the disease, there was desquamation.

In the early days of ordinary erysipelas fever the physician's rule of treatment should be neither specific nor exclusive. The patient is nauseated by the lightest food, his tongue is foul, and his bowels loaded. You would purge him in other fevers; do the same in this. Just exception is taken against the use of purgative medicines, from their supposed weakening effect, in this disease, by those who make no distinction between it and the partial erysipelatous inflammations of the skin. Aperients may, however, be administered with much advantage at the commencement of the fever, and, indeed, during its continuance, with a proper limitation as to their quality and frequency.

Like other epidemic fevers, erysipelas is often first developed from influences that disturb the digestive functions. The tongue is remarkably foul in many cases of this disease, and the motions of a peculiarly dark appearance and pitchy consistence. There is every reason to believe that its attacks might occasionally be prevented by the timely administration of brisk aperient medicines. In the first onset of this severe fever, when digestion is arrested, when secretion and general nutrition are suspended; in those days and nights of the hurried pulse, the hot skin, and perplexed head,—of incessant cough it may be, and constant sickness; at this time to cram the patient with bark is to obey a rule by the abuse of its principle.—Salines, rennet-whey, and fresh water are all that the patient needs during the early symptoms of this inflammatory fever.

In our application, by treatment, of these principles to the local effects of the disease, while we are careful to protect from lasting injury the structures in which its action is most declared, we should continually remember, that in the progress of the eruption is the advancement of the cure. It is under an imposed task of swelling, vesication, and excretion, that the skin, which bears the strain of this fever, is enabled to relieve the other vital organs, and in the end to maintain its own integrity. How rash and mischievous the

interference that would seek to mislead the actions thus determined to the surface, by the introduction of belladonna to the system already charged with morbid poison in the blood; that would prescribe, in all cases of the disease, an exact limit to its eruptive action, by pencilling the inflamed face and scalp with designs in lunar caustic! The mask, which in erysipelas the patient is compelled to wear, should never be adapted by his physician.

There is seldom occasion for external applications of any kind. Even were it possible, by such means, at once to arrest the local inflammation, we should be wrong to employ them. It is essential, for the safe development of this fever to its close, that in the skin, as elsewhere, certain special actions should be suffered for a time. The excessive pungent heat of the inflammation, in its early stage, may be relieved by frequent lotions with the Liquor of acetate of ammonia, diluted with equal parts of tepid water. The continual application of cold is repellent and unsafe. When the vesication has commenced, or is in progress, tepid washes of soft water, or of thin, smooth gruel are the best. The watery solution of acetate of ammonia may be again used at this time, diluted with hot, well-strained poppy decoction.

It is better not to sprinkle flour upon the excoriated surfaces. While absorbing the acrid discharge, it concretes into a stiff, uncomfortable scab which a little gentle sponging would entirely obviate. To bathe the head and face, according to ordinary practice, incessantly with spirit-lotion is to surround the patient, helpless, fevered, and comatose, with an atmosphere of intoxicating vapour, which at every inspiration, he is compelled to drink. From this most objectionable process of cooling by evaporation there is often a great aggravation of the delirium at all times incidental to the fever.

Idiopathic erysipelas of the head and face is actually treated on this principle of respect for its symptoms by many who have not as yet been taught to consider it as a regular eruptive fever. Its wide constitutional character being thus practically known, there is the more reason to regret that it has not been distinguished by a name less productive of error and false analogies in the management of disease. Under this one designation of "erysipelas," the severe fever in question is confused not only with partial erratic inflammations of the skin, supervening on local injuries, but with frets, rashes, pimples, and scaly eruptions, in all their variety of eczema, urticaria, lichen, or psoriasis. When a patient declares that he has "the erysipelas," no

precise idea is given to his medical attendant of the nature of the illness, or of its particular effects on the skin. The extreme and acknowledged vagueness of this term when used by persons not of the profession, prevents error by obliging closer inquiry; but it is very necessary that medical men, in their discussions on erysipelas, should know what they are talking about. The bark, wine, and porter, which, in certain diffuse inflammation of the skin, so rapidly alter its nature and limit its extent, would be utterly condemned in the early stages of idiopathic erysipelas by all physicians conversant with the disease as it really exists. Yet by too many,—especially, he it observed, by the doctors in surgery,—let the case be once named erysipelas, and Peruvian bark is a specific for its cure. In the conventional allotment of disease, idiopathic erysipelas, being a fever, belongs of right to the physician. From the limited views that prevail respecting its constitutional character, and from the undue importance attached, in ordinary practice, to the symptoms which it presents in the skin, it is, in many instances treated exclusively by the surgeon, who would hesitate to undertake the undivided responsibility of small-pox, measles, scarlatina or rheumatic fever. This last named fever, regular in its course, and determined, like the others very much to the skin, suggests a good distinctive name for the idiopathic erysipelas of the head and face. For many years past I have proposed to those studying with me in the physicians' wards of St. George's Hospital that we should consent to know the disorder in question under the designation of Erysipelas Fever. We thus merely add to the name by which the disease is already known, a term that vindicates the importance of its constitutional character over the partial and comparatively trifling affections of the skin with which it is now confounded.

This law of regularity in the succession of symptoms, that finds within a given time its completion in their cure, receives a much wider application than is generally assigned to it in the limitations of rational medicine. In many cases of chorea, and in some few of jaundice, that have fallen under my observation, I have seen reason to consider the spasms of the one disease, and the yellow suffusion of the other, merely as symptoms of disturbed general health, working by train and in sequel for a good and wholesome result. The practical application of this principle in the treatment of disease is a continual rebuke to the vanity that would in all cases attribute the interruption or alteration of symptoms to the efficacy of the last prescription.

There is no better test of the physician's professional character than is afforded by his practice in erysipelas. From the rapidity with which its symptoms are developed (generally to a good end) most of the treatment in this fever is superfluous, yet much affects to be specific. And thus the boaster triumphs in a cure where the true physician is content with acknowledging a result. The only explanation of this great regulating agency, under which, as by a clock within us, the effects of fever are determined in a given time, is, from what we notice in the blood, in the stir of its elementary particles, and in the constancy and uniformity of its moving forces.

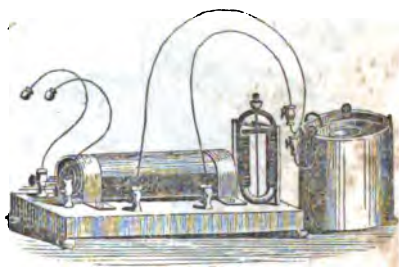
Idiopathic erysipelas, being a fever, is, of necessity a disorder of the entire blood; and here is the explanation of its wide range of symptoms and pathological effects. If the general material of the body be prejudiced in its elementary arrangement, or in any of its essential functional properties, the business of all structure, and of all parts of every structure, must suffer; and this it may be, to the extent of entire interruption or death. Thus, by a spoiling or a wasting of the general blood in the erysipelas, as in other fevers, assimilation, secretion, and muscular action, are sometimes hastened to their end. With those accustomed to this, the true view of the disease, the partial alterations resulting from its agency in structure are regarded but as so many expressions of a disturbing influence general through the system, as effects and symptoms far removed from the beginning of the fever, giving rise, in their turn, to other symptoms; but seldom of sufficient urgency to be received as the immediate cause of death. It appears by the direct observations of M. Andral, that the blood of a person labouring under an attack of erysipelas contains much more than its healthy proportion of fibrin. M. Andral attaches much importance to this excess of the coagulable principle, and seeks to establish from it an essential pathological difference between fever and local inflammation, which few practical physicians would be disposed to admit.

However questionable the claims of modern physic to much of the superiority which it asserts over that of times past, it is certain that in our practical intercourse with small-pox, measles, and scarlatina, we do not derogate from the wisdom of our later ancestors. Of the few principles which physicians now a days care to profess, the best are made available for the treatment of the febrile actions which are determined by eruption to the skin. There is among us, generally, a comprehensive and well-considered view of such action in all its varieties, a nice knowledge of it in

detail, a respect for the symptoms by which it is made evident to the senses—a belief in the benevolence of its purpose—and a reliance on the steadiness of its operation towards a speedy and wholesome end. Thus it is good service done to physic, when an unclassified eruptive fever is placed where it of right belongs.

Idiopathic erysipelas has, I am told, been recently classed with the eruptive fevers by M. Rayer, of Paris; but in the various medical reports lately published in this country, it is distinctly separated from fevers of every kind, and is designated in their tabular arrangements as a disease *sui generis*.

THE ROTARY MAGNETIC MACHINE.



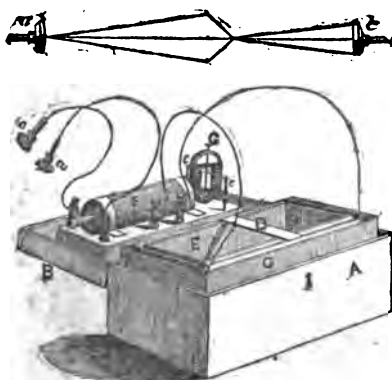
In the April number of this Journal, we gave an engraving of a Rotary Magnetic Machine. The instrument then exhibited is worked by hand. Above we present a drawing of a similar machine, but which differs so far as to be put in operation by magnetic power. The length of that now displayed, including the battery, is 16 inches. Its width 4—height 5 inches, and the weight of the whole, the case and buttons, for magnetising, about eight pounds. It is very durable, and is put in motion by a solution of sulphate of copper, the expense of which is very trifling.

The price of the instrument accompanied by the necessary buttons, (6 in number) and case, is \$14 50 cents, cash in hand.

The size and weight of the Machine, together with its liability to get out of order, and the complaints frequently made of diffi-

culty in running it, has given us great inquietude, and we consequently determined to obviate these objections if possible, and have at last succeeded in our object, by employing a Jeweller extensively known in the Union, as having no superior in this city, to make the machine under our direction. It has a new and convenient arrangement as represented in the following engraving, and to distinguish it from other machines we have named it the

#### SAVAGE ROTARY MAGNETIC MACHINE.



The instrument is fitted into a neat Mahogany case (with lock and key) 8 inches long, 4 wide, and 3 deep.

A, case; B, the cover; C, sheet copper vessel; E, sheet copper, the lower edge of which is soldered on the bottom of the copper vessel C; D, copper piece connected with the zinc between the copper surfaces, containing a solution of sulphate of copper; F, cylinder of copper wire; G, magnet and armature; e, e, conductors to the armature; c, negative, and a, positive button for magnetising.

The cylinder, magnet, and armature, with the block of wood on which they rest are very light, and are set on the cover of the case in magnetising; after which it may be placed in the open space in the centre of the case, and the buttons and conducting wires laid over it,

and the cover turned over the whole and locked.

The armature is jeweled, and in running is estimated to make more than 10,000 revolutions in a minute. The instrument runs much better, and apparently as well as it is possible to make one run; its power is fully equal to any we have seen, and has besides great advantages in size, weight, and neatness, and will be found very convenient for physicians and private families, and to possess other advantages than those we have noticed.

Mr. Savage is making a machine much smaller and lighter on the same plan, a pocket instrument, which has a power that will be sufficient for ordinary purposes.—He also makes a larger machine, precisely like these, in a neat mahogany case 10 inches long, 5 wide, and 3 deep, more especially for office use which is jewelled and runs in the same manner as that first described.

The price of the Savage instrument first described is \$15, including 6 buttons of a form we have found necessary and most convenient, with full directions for running the machine, and directions for magnetising, in a great variety of cases, illustrated with engravings, &c.

The price of the pocket instrument in a neat mahogany case 6½ inches long, 3 wide and 2 deep, is \$15, including 2 buttons.

The price of the machine last described for office use is \$18, including 8 buttons and directions for running, and using it as above. These instruments are very light neat and portable, will run without difficulty, and will last a life time. They will be found indispensable to every physician, and also in many private families, as well as for ships and other vessels.

The figure drawn above the engraving is intended to represent the direction of the forces as they proceed from the buttons in magnetising. a, the negative button repels and expands, while the positive button attracts and contracts. Besides one of these forces exerts an alkaline, and the other an



acid influence upon the fluids and solids of the body.

We cannot however enter further into this subject at present, and it is not necessary to do so, if the magnetizer observes the directions we have given for magnetizing.

The effects of these instruments are of a character so extraordinary, in both acute and chronic diseases, as to leave no doubt it will produce an entire revolution in the practice of both physic and surgery. It will become indispensable to every physician, and also in many private families, and they are both availing themselves of its benefits as fast as it can be manufactured.

We have been magnetising with these machines for the last six months, and they have thus far realized our anticipations as described in our last number. Since that publication we have tested it in a great variety and number of cases, with results that have been highly satisfactory.\*

Among these cases there have been 35 of lateral curvature of the spine; 11 of distortion of the spine; 5 of distortion and lumbar abscess, and disease of the hip joint; 51 of tubercular consumption; 13 of chronic bronchitis; 5 of chronic bronchitis, complicated in its last stage with tubercular disease of the lungs; 11 of tic-doloureux; 2 of tubercular disease of the antrum and nose, 5 amaurosis; 8 opacity of the cornea; 2 tumours of the eyelids; 28 sick head ache from tubercular disease of the brain; 1 tubercular disease of the organ of approbation, *connected* with tubercula (white swelling,) of the right side and back part of the first cervical vertebra, involving the upper attachment of the sterno-cleido-mastoid muscle, and producing an impediment in the motion of the right leg; 2 cases of tubercular disease of the organ of firmness *connected* with tubercular disease of the same muscle; 6 tubercu-

la of the cerebellum, connected with tubercula of the uterus, and uterus and stomach; 8 tubercular disease of the ear; 2 paralysis of auditory nerves; 1 hypertrophy of the mucous surfaces of the organs and limbs; 1 acute rheumatism; 18 chronic rheumatism; 7 paralysis; 26 tubercular disease of the throat; 13 secondary syphilis; 5 amenorrhoea; 5 corea—St. Vitus' dance, or tubercular disease of the cerebellum; 2 catalepsy.

A great majority of these cases were complicated with tubercular disease of other organs, as the heart, stomach, liver, kidneys, &c. All the cases of consumption were thus complicated, excepting two, in which the disease had commenced in the stomach, liver, arteries, throat, or brain, before it attacked the lungs. This, we may here remark, we have long observed to be the uniform course of the disease in 9 cases out of 10, showing the importance of attacking it in its transit to that organ.

In the notice of the effects of the Rotary Magnetic Machine, in the April number of the Dissector, we suggested the probability of its great importance in the incipient stage of tubercular consumption, from the results obtained in the few cases, in which we had then used it. Further trials, in more than 50 cases, have not only confirmed that opinion but have shewn it to be very useful in the last stage, especially in promptly reducing the pleuro-peripneumony that often attends tubercular disease of the lungs. In many cases it lessens the cough and expectoration, by reducing the mucous disease of the bronchial tubes that traverse the tuberculations.

In magnetising the lungs, the button conveying the weakest, or positive force, is placed over the posterior spinal nerves connected with them, in the intervertebral spaces, between the 7th or last cervical, and first dorsal vertebra, while the other, or negative button, conveying the strongest force, is moved slowly over the entire surface of the chest, with the instrument graduated to a moderate power. This practice is adopted in

\* We have had with the assistance of Students, three machines running, almost constantly from morning till night.

consumption or pneumonia, for the purpose of first exploring the lungs to find the place most diseased, as the action of the instrument will be much more sensibly felt when the button passes over it, and it will require more magnetising than other parts of the lungs.

In exploring the chest, and in magnetising, whether for disease of the lungs, heart, or pleura, the positive button should be placed over the left intervertebral space in magnetising the left side of the chest, and over the same space on the other side in magnetising the right side of the chest. In such cases the process is continued only from 5 to 10 minutes, and once a day is generally sufficient.

*Tubercula of the heart—hypertrophy.* In this case the negative button should be placed below the lower apex of the heart, where it may remain 10 or 15 minutes, under a very moderate power of the instrument.

*Pleurisy, Acute or Chronic.* In these cases the negative button should be placed over the seat of the disease, or place where the pain is felt, under a very moderate power of the instrument.

*Tubercula of the Stomach—Dyspepsia.*—The positive button should be placed over the intervertebral spaces, between the first and second, and second and third dorsal vertebrae, and the other button over the stomach. In magnetising the left side of the stomach, the positive button should be placed over the left side of the spine, and the other about two inches to the left of the medium line.—In magnetising the right side, the button should be placed over the right side of the spine and stomach.

*Tubercula of the liver—acute or chronic diseases of the liver.* The positive button should be placed over the intervertebral spaces of the right side, between the 7th and 8th, and 8th and 9th dorsal vertebrae, while the other is moved slowly around one half of the body, from the pit of the stomach below the short ribs to the spine, and then over the short ribs.

*Tubercula of the spleen—acute or chronic.*

The positive button should be placed on the opposite side of the spine, to that in the case of the liver, and the other button over the left side as in the case of the liver.

*Tubercula of the large intestines.*—The positive button must be placed over the intervertebral space, between the 5th and 6th and 6th and 7th dorsal vertebrae, and the other over the intestines on the right or left side, as indicated by the seat of the disease.

*Tubercula of the small intestines.* The positive button should be placed over the intervertebral space, between the 11th and 12 dorsal vertebrae, and the other over the front part of the abdomen, right or left of the medium line, as indicated by the seat of the disease.

*Mesenteric Diseases.* In these cases the buttons should be placed over the spine and abdomen, as in the instances of the large and small intestines.

*Kidneys.* In tubercular diseases of the kidneys—acute or chronic, the negative button should be placed over the intervertebral space between the 12th dorsal and first lumbar vertebrae, and the other on the opposite side of the abdomen.

*Cystitis.* The positive button should be placed over the same intervertebral spaces as in cases of the kidneys, and the other over and above the pubis.

*Prostate Gland.* In these cases the positive button should be placed over the intervertebral space, between the last lumbar vertebrae and the os-coxigex, and the other over and above the pubis.

*Uterus.* In magnetising this organ; the positive button should be placed over the intervertebral spaces, between the first and second and second and third lumbar vertebrae, and the other over and above the pubis.

*Ovaria.* In tubercular disease of the ovary, the breasts or mammae are not of the same size—that on the same side of the diseased ovary being larger than that on the opposite side, in consequence of atrophy of the latter from direct sympathy with the diseased ovary. The positive button should

therefore be placed over the atrophied breast, and the other over the ovaria of the opposite side.—The same course should be pursued in *chlorosis*, *amorrhoea*, &c.

*Leuorrhœa.* The positive button in these cases should be placed over the intervertebral space, between the last lumbar vertebra and os-coxigix, if tenderness is elicited by pressure there, otherwise it will be found in the lumbar vertebra, over which this button must be placed. In the first case the negative button should be placed over the front part of the perineum, and in the last over the pubis.

*Prolapsus-uteri.* In these cases the button may be placed on each side of the pubis, or one button may be placed over a lumbar vertebra, and the other on the side of the pubis, when the broad dilated ligaments that sustain the uterus will contract with great force.

*In tubercular disease of the stomach and uterus*—the positive button should be placed over the intervertebral space, between the first and second dorsal, and the other over the pubis, in consequence of the direct sympathy between these organs.

*In tubercular disease of the cerebellum and uterus*—the negative button is placed over the organ of amateness, on one side, and the other on the opposite side of the pubis, and we should here observe that females can and should magnetise themselves, in cases of disease of the uterus, and vagina, &c., and should never allow a physician to do so, while they have strength to do it themselves, or can procure the assistance of a female.

*Brain.* Tubercular disease of the brain is distinguished in an instant, by the pain produced by the pressure on the sub-occipital nerves, on the sides of the space between the head and first cervical vertebra, or joint of the neck, in the absence of tubercular disease of the throat. It may also be distinguished by the pain darting into the brain, when the disease is in its active state, or by severe pain in the head, in the absence of an injury. In magnetising this organ, we should always observe the greatest caution, and always commence with the weakest power of the instrument.

*Sick head ache.*—The positive button is placed over the organ of amateness, and the negative over the organ of causality or the opposite side of the head, and moved quickly over that side of the forehead, when the positive button is placed over the opposite organ of amateness, and the negative over the opposite organ of causality, and moved over that side of the forehead as before. The sitting is thus concluded generally in less than one minute.

*In head aches*—other than those that are periodical, and called sick head ache, we place the negative button over various organs as indicated by the pain, or seat of disease, while the positive button is moved around the neck.

*Tic-Dolroaux.*—The positive button is placed over the plexus of nerves, in front of the ear, while the other is passed over the side of the face, and the sitting concluded in a few seconds.

*Strabismus*—Squinting. The positive button is placed over and pressed in to the corner of the eyelid over the paralyzed muscle, and the other over the opposite corner of the eye, and the sitting concluded in one minute.

*Eye.*—Diseases of the eye, acute and chronic.—The negative button is placed over the eyelids in these cases, and the other over the back part of the neck, excepting amourosis, in which case the buttons are reversed.

*Nose.*—Diseases of the nose, acute or chronic. The negative button is placed over the nose in these cases, excepting polypus, in which case the buttons are reversed.

*Antrum.*—In case of disease of the antrum the negative button is placed over the antrum, and the other over the neck.

*Tooth-ache.*—The negative button is placed over the diseased tooth, and the other in front of the ear.

*Throat.*—In diseases of the throat, acute or chronic, the buttons are placed on the opposite sides of the neck, under the ear, and moved slowly towards the chin, or the positive over the sub-occipital nerves, and the other on the side of the throat.

*Muscles.*—Tubercular disease of the muscles—Rhetmatism, acute or chronic. Pain is

produced by pressure on the intervertebral spaces of the cervical vertebrae, which increases with the intensity of the disease; and in magnetising for rheumatism the positive button should be placed over the back part of the neck, at the commencement, and at intervals during this process—no matter whether the disease is in the arm, finger, leg or toe. The buttons should also be placed, and moved slowly over, and around, and between, the joints. The positive button being sometimes on one joint, and the negative on another.—When the disease is affecting the arms, shoulder or neck, one button may be held a few minutes in each hand.

*Paralysis.*—In cases of paralysis, patients should be magnetised in the same manner as in rheumatism.

*Chorea.*—St. Vitus' dance—Tubercular disease of the cerebellum. The negative button should be placed over the organ of amateness, while the other should be placed on the affected limb, or limbs, of the opposite side.

*Epilepsy.*—Tubercular disease of the cerebellum. The negative button should be placed over the cerebellum, and the positive on the neck or ear of the opposite side.

*Catalepsy.*—Tubercular disease of the vermiform process, in the medium line of the cerebellum, (organ of motion.) In these cases the positive button should be placed over the first cervical vertebrae, and the other over the organ of individuality.

*Deafness.*—Tubercular disease of the eustachian tube. In these cases, the positive button should be placed on the tongue and the other on the ear.

*Joints and Limbs.*—Tubercular disease of the joints and limbs—white swellings. In these cases both buttons are moved over and around these swellings, whether in a sound or ulcerated state.

*Spine.*—Tubercular disease of the spine—distortion of the spine—distortion of the spine and lumbar abscess. The buttons are applied around and over the distortions, and abscesses, as in the case of white swellings.

*Spine.*—Lateral curvatures of the spine—(See description of the manner of magneti-

sing, with an engraving, in the April number of this Journal.)

*Aphonia.*—Loss of Voice. Dr. L. D. Fleming, of Newark, N. J., who recovered his voice rapidly under the action of this instrument, thinks it is better to apply one of the buttons—the negative—over the organ of imitation, instead of both on the neck, under the angle of the lower jaw, from the effects produced in his case.

Tubercular disease of the organs is invariably distinguished, in all these cases, by pain more or less severe (in proportion to the intensity of the disease) produced by pressure on the ganglions of the spinal nerves, in the intervertebral spaces along each side of the spine—no matter what name may have been given to the disease by physicians, nosologists, or other medical writers.\* It is a disease of the secreting or lymphatic system in the serous surfaces, in which the posterior spinal nerves terminate, and is propagated from the skin to the limbs, and from the limbs to the organs, and from one organ to another. The seat of the disease in the skin, limbs, and spine, is easily seen, and its precise situation in the organs is in general easily determined, by exploring them under a very moderate power of the instrument.

Patients affected with tubercular disease, will bear only a moderate power of the machine, and among these there is a great difference in susceptibility to its action, as in the cases of mesmeric influence. Generally they will bear very comfortably, one half of the power of the instrument, but there are a few that will go into a fainting fit,† or into the mesmeric state, under its weakest power. The greatest caution should, therefore, be exercised in graduating the instrument, especially at the first sitting. In fact, children and weak-minded people should never be allowed to use it. The time occupied in magnetising varies in the different cases—generally

\* These symptoms are magnetic; for, when we press upon these ganglions in the active state of the disease, the pain will dart into the diseased organ, with a force which increases with the intensity of the disease.

† We have had only two cases of this kind—one, a lady, in magnetising the brain, and the other, a gentleman, in magnetising the chest. They were both very subject to fainting fits from trifling causes.

from five to fifteen minutes, when the magnetic organisation of the system becomes so tense as to give violent shocks to the magnetiser, and sometimes headache to the patient if the process is continued too long.

In nearly all the cases of tubercular disease, other remedies are required to keep up a steady magnetic action. Magnetising restores lost motion in the tuberculated portions of the organs, limbs, and other structures—sometimes permanently, but generally temporarily, making it necessary for such patients to use other remedies at the same time. With these, in conjunction with the action of the instrument, they recover very rapidly—even cases so far advanced as to preclude any hope of their recovery by any other means. Magnetic or magnetized remedies are the only ones that are of any value in tubercular disease of the organs and limbs. We continue to use the magnetised gold pills in these cases with a success in conjunction with the action of the machine that precludes the necessity of any other, and we should here remark, that the daily effects of the action of this instrument affords the most conclusive and overwhelming proof of the correctness of the magnetic treatment we have long pursued in tubercular disease, and gives us a most extraordinary and glorious triumph over our opponents.

#### HYPERTROPHY OF MUCOUS SURFACES.

*Bronchitis*—(Chronic).—The action of the rotary magnetic machine, alone, will cure all the cases in the first stage of this disease of the membrane that lives inside of the air tubes. The disease is distinguished by cough and expectoration, and the absence of the magnetic symptoms of tubercular disease of the lungs.

The *negative* button should be placed first over the intervertebral spaces, between the seventh cervical and first dorsal vertebrae while the other is passed slowly over the whole surface of the chest, including the back part of it, as in the case of tubercula of the lungs, or consumption. The *positive* button is then placed on the tongue, and the other moved quickly over the whole surface of the chest, and the sitting concluded in ten minutes.

In the last stage of the disease the action of the instrument should be aided by the nitrate of silver, which should be ground one hour in a glass mortar, with loaf sugar, in the proportion of 5 grains of the nitrate of silver to 100 of sugar. About a drachm of this powder should then be put into a perfectly dry phial, holding not less than half-a-pint, and then shaken and instantly applied to the mouth, making at the same time a full inspiration in such a manner as to inhale the particles of powder suspended in the air contained in the phial.

*Mucous disease of the throat*.—This disease is distinguished by hawking and expectoration, and the absence of the magnetic symptoms of the tubercular disease of the throat.

The negative and positive buttons are applied alternately over the upper part of the neck, or on each side of the throat in these cases. Every case in the first stage of the disease is cured in this way. In its last stage the throat should be gargled with a weak solution of nitrate of silver, once in two or three days.

In diseases of the mucous surfaces of the organs and limbs, patients will bear fully double the power of the machine, that they will in diseases of the serous surfaces; in fact the greatest power that is borne in diseases of the serous surfaces, whether acute or chronic, will have little or no effect in acute or chronic diseases of the mucous surfaces, and this fact in a doubtful case is sufficient to determine the true character of the disease, whether in the brain or any other part of the body.

#### ACUTE DISEASES—INFLAMMATION OF THE SEROUS SURFACES,—ACUTE TUBERCULA.

The action of the rotary magnetic machine reduce inflammations of the organs and limbs with great rapidity. We have used it in cases of inflammation of the liver, and inflammatory rheumatism, &c. It cured the first in from two to three minutes, and in cases of paralyzed limbs in the last, the progress of the disease from one limb to another has ceased on the first application of the instrument, and the inflammation in the paralyzed

limb or limbs soon reduced by a few more applications of the instrument, without the use of any other means whatever. In a letter from Dr. L. D. Fleming of Newark, N. J. he says, "A few weeks since my wife had a most violent attack of pleurisy of the left side. I applied the buttons of the instrument, from one to two minutes. It produced a sensation of faintness, which subsided in about fifteen minutes—since which time there have been no symptoms of the disease. I could add a great many cases of the extraordinary effects of the machine, but time presses hard upon me, and this must suffice."

Inflammation or acute tubercular disease of the serous surfaces of the organs and limbs, is distinguished by the magnetic symptoms, in the same manner as chronic tubercula of these surfaces, and in magnetising in these cases of disease of the organs the positive button should be placed over the ganglions of the spinal nerves, in the intervertebral spaces, and the negative over the seat of the disease in the organs, in the same manner as described in cases of chronic disease of these surfaces. In pleurisy *pleuritis costalis* or *pleuropneumony*, the positive button should be placed over the intervertebral spaces between the 7th or last cervical and first dorsal vertebrae, as in the case of peripneumony or inflammation of the lungs.

The posterior cervical nerves, or those between the first and last cervical vertebrae of the neck, are connected with and terminate in the serous or external surfaces of the muscles (*the fasciae*) and the internal cervical motor nerves, or nerves of motion with the mucous or inner surfaces of the muscles.\* In magnetising for rheumatism, acute or chronic, the positive button should therefore, be placed over some one of the cervical intervertebral spaces of the affected side while the negative is moved slowly over the affected muscles or limbs. We have frequently first applied both buttons to a limb in these cases without effect, and have

at last been obliged to resort to the manner of magnetising above described, as in the case mentioned of a gentleman with impediment in the motion of his right leg.

*Palsy*—shaking. In these cases the positive button should be applied to the neck as in the case of rheumatism, and the other to the extremities of the affected side.

*Bronchitis*—acute.—The buttons should be applied in these cases in the same manner as in chronic bronchitis.

#### DISEASES OF THE SKIN.

The buttons should be both applied and moved over the diseased surface in diseases of the skin, with a few exceptions, as in the case of the face when the positive button should be placed on the ear, or over the plexus of nerves in front of it, while the other is passed over the diseased surface.

We have used the instrument in only a few cases of disease of the skin, and these mostly cases of erysipelas, lepra, *salt-rheum* and herpes. It reduces the most inveterate cases of erysipelas with great rapidity, and the effects in the others have been such as to warrant a belief, that there are very few diseases of the skin, that can long exist under the action of the machine.

*Fevers*.—From the very favorable effects of the action of the machine in sympathetic, hectic, or irregular fevers, great hopes are entertained of its future success in those that are idiopathic, as intermittent, remittent, nervous, congestive, and yellow fever.

The spine should always be examined in these cases to determine the true character of the disease, whether of the serous or mucous surfaces, and the number of organs implicated in it; and this can always be done with perfect ease and certainty by the presence or absence of the magnetic symptoms. When these are present, the positive button should be placed over the intervertebral spaces, and the negative moved slowly over the diseased organ under a very moderate power of the instrument to find the seat of the disease in the organ, and determine the amount of the power that can be borne with ease to the patient.

\* We long since discovered those connections of the spinal nerves with the different surfaces of the muscles and of the organs, by the magnetic symptoms, and its correctness and importance is now every day demonstrated by the action of the machine.

In the absence of these symptoms, the negative button should be applied to the intervertebral spaces, connected with the stomach and intestines, while the positive is moved slowly, first, over the surface of the stomach, and then over the intestines—observing the rule to have a button over the spinal nerve connected with the organ which we wish to magnetise.

*Effects of Magnetising upon the Magnetiser.*

We have probably received on an average 50 shocks a day in magnetising our patients, during the last six months, either from accidentally touching the unprotected parts of both buttons, or from touching the patient with one finger and a button with the other, and was at first much alarmed at the consequences that might result from it. We have been however not only happily disappointed in our expectations of injury, but have found it a great benefit to us. It has removed it appears every vestige of chronic rheumatism with which we have been much affected during the last 14 years.

We never had so much elasticity in our body and limbs, and never had so much strength, we never walked with so much ease as we now do, and besides, we frequently, even after having gone through a great labor during the day, feel so much elasticity and buoyancy that it is rather difficult to sit or stand still, from a strong inclination to be moving, jumping, or dancing; these sensations are in fact sometimes so strong as to require strong efforts to repress them.

**Magnetic Sleep.**—A much greater number of persons can be put into the magnetic or mesmeric sleep under the combined influence of the rotary magnetic machine and the magnetiser, than by the common method, or that of the magnetiser alone. We have put persons into that state by the influence of the machine alone.

In the combined operation we place the positive button in the left hand of the person to be magnetised, and take the negative button in our left hand, and then take with the other hand the right hand of the same per-

son, under the most moderate power of the instrument.

When persons have passed into the magnetic state in this way, or through the influence of the instrument alone, they represent themselves as being surrounded with an intense light. They also represent the brain as beaming every where with intense light which gradually disappears, and in 10 or 15 minutes is no longer noticed.

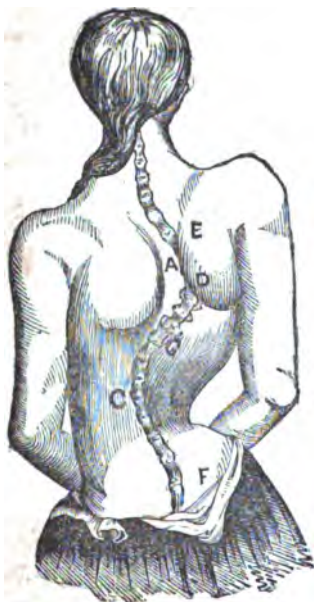
We have not given a concise history of the effects of the machine in each case mentioned, as in the few cases noticed in the last number of this Journal; because such descriptions, with very few exceptions would have been little more than mere repetitions of the triumphant action of the instrument. It may however be of some importance to notice more particularly its effects in lateral curvatures of the spine, as we have only referred to them in the last number. In the 35 cases we have had since that time, there was a great variety in the form of the curves, and a great difference in the time since they commenced as well as of their ages. The time of their existence was from 1 to 16 years, and their ages from 8 to 32 years.

The time required to straighten a spine, or make it resume its natural position depends so much upon the circumstances attending each individual case, as the form of the curve, the time of its existence, and the health of the patient, &c., as to make it necessarily very uncertain.

The first object to be obtained is to lessen the action of the tuberculated muscles on the posterior side of the curves, and increase it in the paralyzed muscles on the other, to enable us to make the spine pass the centre and curve in the opposite direction, *under the action of the buttons.*

When this object is attained and we can make it pass the centre at each sitting, the muscles will soon maintain it in its natural position. In eight cases in which the curvatures had existed from one to two years, they passed the centre the first sitting, while it has required more than two months to effect this object in three cases of long continuance.—

The muscles are always swelled, thickened, or tuberculated on the posterior side of the curve, (as seen in the following engraving;)



and emaciated or atrophied and paralyzed on the other. In magnetising these cases the positive button is placed over the paralyzed muscles at B, while the negative button is passed over the tuberculated muscles in the right shoulder and hip, at intervals from 5 to 15 minutes; in the mean time the *negative* button is placed over the tuberculated muscles at C, while the positive button is moved over and around the left shoulder along the inside of the curve at A, under a power of the instrument that can be easily borne.—Some of these bear only a moderate, while others will bear its full power. We commence with a moderate power at each sitting and then gradually increase it to the full power that can be borne, bringing the spine up as straight as possible at the close of each sitting. In some bad cases assistance is required to raise the atrophied shoulder and keep the paralyzed muscles distended under the action of the buttons, much however will depend on the tact, perseverance and experience of the magnetiser.

In magnetising in these cases, as well as every other, the passes with the buttons should be downwards, or in a direction from the head to the feet, and this is a rule that should not be departed from, and to avoid mistakes in the use of the different buttons, magnetisers should attain a habit of taking the negative button in the right hand, and the positive in the left.

*Classification of Diseases.*—The magnetic symptoms to which we long since directed the attention of physicians, make a natural division of disease, into four classes, viz:—

I. Acute diseases of the serous surfaces of the body, including the skin.

II. Chronic disease of the serous surfaces.

III. Acute disease of the mucous surfaces of the body, including the alimentary canal.

IV. Chronic disease of the mucous surfaces.

The action of the magnetic machine on these different surfaces, confirms the correctness of this classification, which simplifies the practice of physic and surgery in the most extraordinary manner, and elevates the study and practice of medicine from a very uncertain, and consequently ever-changing art, to the character, dignity and rank of a science.

In running the machine, an ounce or a table spoonful of sulphate of copper (blue vitriol) is put into the space in which the zinc is placed, when water is poured on it, until the space is about half full. The vitriol will be dissolved in three minutes, when the zinc is placed in the solution in a position in which it does not touch anything but the cross piece which suspends it in the solution. The wires are then connected with the battery, machine and buttons, in the manner seen in the figure. The arm of the armature is then pushed slightly with the finger, so as to turn it in a direction from east to west, or in the apparent course of the sun, when it moves with great rapidity and the process of magnetising is commenced. As soon as we are through with the operation, the zinc is raised out of the solution and placed on the projections, attached to the different surfaces



of copper, to prevent the further action of the solution upon the zinc. The solution does not act on the copper surface, and may therefore remain in it, or it may be poured into a phial or bottle and used many times, or until it becomes too weak to make the machine run well, when a little more blue vitriol may be added or a new solution made as before.

Depositions accumulate constantly upon the zinc, and sometimes to such an extent as to prevent the solution from acting upon it, when it must be washed off, and again placed in the solution, and the armature started as before.

The silver conductors of the forces to the armature, sometimes press too hard upon it, and at other times not so hard as it should do to make it run very fast or at its greatest speed. A very little attention to these conductors, and to keeping the zinc clean, will enable any person to run the machine in the best manner.

The power of the instrument is regulated by moving the piston in the cylinder. It increases from its minimum to its maximum, with the distance of the piston in the cylinder.

#### Animal and Vegetable Electricity.

Electricity the principal agent of animal life—of the vegetable life and growth—its action a direct stimulus—deficiency of its density or elasticity subversive of animal health, and induces diseases of debility—intense and long continued heat reduces its density or elasticity.

T. GALE, M. D., Troy, N. Y. 1802.

The electrical effluvia is far more subtle than air, is diffused through all space, surrounds the earth, and pervades every part of it; and such is the extreme fineness, velocity and expansiveness of this active principle, that all other matter seems to be only the body, and this the soul of the universe. This element exists in all places and in all bodies; and its action is sufficient not only to be (under the First Cause) the secondary cause of motion, but to produce and support life throughout all nature, as well in animals as vegetables. Now as the heat of every animal is the engine which circulates the blood through the whole body; so the sun, as the heat of the world, circulates or rarifies, condenses, vibrates, stimulates, and by continually changing the state and density of this elementary fire, not only gives motion and gravitation to surrounding worlds, but doth, on principles occult, impart life, vigour and growth to all

animals and vegetables. It is a species of itself, and totally distinct from all other bodies.

This elementary fire not only exists in animal bodies on an equilibrium with those substances with which they are constantly connected, but the common air, especially when cool, imbibes a large proportion of this elastic fire. The lungs inspire this air, the fire mingled with it is dispersed through the pulmonary vessels into the blood: the whole mass of fluids are, in a degree, fermented and enlivened, and the vessels being at the same time more filled and distended, their tone is quickened, and the circulation accelerated; all the animal functions are, in part, put in, and preserved in motion, and the whole system is invigorated by this single agent.

If it is granted, that totally non-conductors become such by their imbibing, in some fixed form, a large quantity of this elementary fire, which it is supposed so far constitutes these bodies, that they are incapable of conveying an electric shock, then it will follow that cold air, which any one may easily know is a non-conductor, imbibes, as was before suggested, an immense quantity of this electrical fluid. The consequence then is, that the lungs serve as an electrical machine to all animals, keeping up a constant insolation, by which the system is invigorated, as was before described; this insolation is subject to continual waste, partly by perspiration, partly by internal heat which subdues its elasticity, and partly by those less electrified bodies with which they are necessarily connected.

These operations may be called natural insolation; but as I am hereafter to describe the effect of the artificial insolation, the peculiar effects of the natural will be rendered more obvious and certain.

#### *Electric fire promotes the vegetable life, &c.*

That this effluvia promotes the vegetable life and growth will not be questioned by those who are made to believe that it produceth that effect on the animal. The most that hath been said of its effects on the animal, will apply to the vegetable, except the action of the lungs, and by their action, a higher life obtains a higher and greater supply as is necessary for its support. But a single experiment will put it beyond all doubt, that what I have ventured to call a natural insolation, doth exist, and produceth the described effects, and this will appear by adding a little of the artificial thereto, which may be done thus: Prepare, at the proper season, a box of earth sufficiently moist, place it on an insulating stool or stand, sow in it lettuce seed: at the same time sow the same kind of

seed in a garden bed; this being done, immediately electrify the box of earth on the stool, and keep it continually insolated, and it will bring the lettuce to perfection in one half the time of the former. This circumstance alone is sufficient, in my opinion, to put the matter beyond all doubt, that this elementary fire is the principal agent in promoting the growth and life of vegetables.

And it will be shewn, in its proper place, that the artificial insolation of the human body is as conspicuous an evidence of the same element being the main cause of life, motion and vigor in the animal creation.

#### *The action a direct stimulus.*

That this elementary fire, electricity, or by whatever name it is distinguished, is a stimulus, is obvious from all that hath been observed of its effects on animal and vegetable life. The fluids of animals and vegetables contain more, in proportion to their bulk, of this elementary fire, than the solids of either; and it is the peculiar propensity of this effluvia, to put in agitation any bodies capable of moving or of being acted upon by this agent. Thus the heart of every animal gives the first motion to the blood; this perpetuated by the dilation and contraction of the arteries, at the same time each particle of the fluids has attached to it a globular atmosphere; this atmosphere buoys up, enlivens and facilitates the flow of blood thro' every part of the system; and being contained chiefly in the fluids, doth, in some degree, fill and distend the vessels, and thus excite their action. It is my opinion that could this element be extracted from an animal or vegetable, there would be an instantaneous decay, which would soon terminate in the death of either.

In supporting the diminished life of the vegetable, a diminished action is allotted to this effluvia; its globular atmospheres always tend to propel, buoy up and diffuse to every the most extreme part of every flower and branch of the spreading tree: And it is on this principle only we can account for, the juices ascending and diffusing themselves throughout the vegetable growth

#### *Deficiency\* of ethereal fire subversive of health.*

Life and health being so much suspended on a full supply of this quickening principle,

\* I must own, that I am staggered in determining whether this deficiency, as I call it, doth consist in the reduction of the elasticity of ethereal fire only, or whether, by some means not yet understood, the elementary fire is absolutely dissipated and diminished in quantity—its elasticity must be reduced to promote the vegetable growth, for the vegetable life subsides, in the winter season. When this element becomes very dense and elastic, their fluids cannot flow in consequence of this resistance to motion. I am most apt to

it follows that any deficiency thereof must tend directly to diminish life and health either in the animal or vegetable creation; as it respects the animal life, the deficiency is in the air, the lungs are not sufficiently vitrified; as it respects the vegetable, the soil is deficient in containing it.

#### *Deficiency of ethereal fire causes diseases of debility.*

A continued deficiency of existing powers, tend to induce diseases of debility, and inasmuch as they arise from deficiency of stimulus, are denominated direct, or diseases of direct debility; as this respects the animal life, the remedy is the artificial insolation, opium, &c. and the more durable stimulus of diets &c. As it respects the vegetable life, the remedy is water, and such manure as contain, a greater quantity of this elementary fire.—It was contended before that there is a vast disproportion in the quantity contained in solids, (metallic substance excepted) compared with that which is contained in fluids; hence there is not only a deficiency of this element in the circumambient air, by reason of heat; but through the inability of the soil to contain this element, there is also a deficiency—dry loam, sand, &c. contain but a scanty portion of this elementary fire.

There is reason to believe that the plaster of Paris is highly impregnated with this fire, for it is a non-conductor, as also lime; but this is said to be imparted by culinary fire, in burning the stone; after the same manner it is imparted into the ashes of wood, which renders them so valuable a manure. Some suppose it is imparted into iron, to render it steel; and is contained in great quantities in a fluid form, as in spirits of distillation.

#### *Intense heat causes a deficiency of this quickening effluvia.*

Notwithstanding what hath been said above by imparting elementary fire by the culinary, which is but a different modification of the same element: yet the instant these bodies, or others similar, undergo this heat, they appear to be divested of that which is peculiar to them in their cool state: glass, in particular, when heat to a certain degree, will receive and convey the electric shock as freely as brass or steel; but as soon as it is cool again, will make the same resistance as

think that the reduction of elasticity is a diminution of the existing quantity of ethereal fire, but perhaps some future experiment may convince me of a mistake.—This element assumes such a variety of appearances, and produces effects as various and as unaccountable as the phenomena of its appearances, that perhaps it will be the business of ages fully to comprehend them all. But one thing I am certain of, and that is, as his elasticity in air subsides, animal life languishes; and that the artificial insolation directly invigorates the system.

before: this resistance is supposed to be made by the vast quantity imparted into the substance of the glass in the furnace; but however that may be, it is certain that whenever it is again rarified by heat, the resistance is lost, the imparted element subsides, and the properties of the glass appear to be essentially changed. However, as to the truth of this element's being imparted in any form, I am not anxious to maintain it; it is not much to my purpose, it is rather the opinion of others: but it is to my present purpose to shew, that the rarification of heat, causes a deficiency of this electric effluvia, which is so necessary to life and health. It being so far evident, that some bodies contain so much of this ethereal element, as their natural aquntiy, in a cool state, that they resist the approach of an additional quantity, made by art, as glass, bees-wax, tallow and some other bodies; yet when these bodies are rarified by heat, they become divested of this natural quantity, or at least of its elasticity, and will as freely receive an additional quantity as iron or water, which quantity is supplied to them by the artificial machinery. If we apply these reasonings to the element of air, which in a cold state is as much a non-conductor as glass, bees-wax, &c. and undoubtedly from the same cause, viz:—its own excessive natural quantity; it will follow, that heat, in proportion to its degree, divests common air of this ethereal element, or of its elasticity; the consequence is, that in proportion as the air is divested of this essential property, the animal life must suffer in respiration; the lungs receive and supply less of this animating and quickening power, and the animal functions grow more and more languid, and impaired; and if continued long, must terminate in diseases of debility.—It would be superfluous for me to observe, that diseases of debility are peculiarly frequent in hot countries and climates; I mean rather to trace the cause to its source; and if it should appear to be a deficient supply of this ethereal fire, I shall lay a foundation for what I shall hereafter recommend in diseases of debility as an excellent remedy, viz:—the artificial insolation, with some light shocks to accompany the insolation.

**The relative merits of Mercury and Iodine in the treatment of Syphilis.**

Dr. HOCKEN, at the close of a lengthened and elaborate essay, arrives at the following conclusion on this subject:—

“That a modified use of mercury is adapted to nearly all the forms, but especially the indurated, of primary syphilis:—that in constitutional syphilis a modified use of mercury is almost a *sine qua non* in the great majori-

ty of secondary symptoms, but is either hurtful or useless in the tertiary;—that iodine is inert in almost all the symptoms of primary syphilis with the exception of some forms of phagedena, attended with great debility and derangement of the health;—that in constitutional syphilis it is less valuable a remedy in the majority of secondary symptoms than mercury, with the exception of some severe cases of pustular eruption, phagedenic throat, rupia, and secondary ulcerations, of bad character,\*all of them marked by a cachectic and debilitated constitution; whilst in tertiary symptoms iodine is far more valuable than mercury, and its effects more decided and certain than in any other set of symptoms:—that mercury and iodine are most advantageously combined in cases presenting both secondary and tertiary symptoms:—that many forms of mercury having local or constitutional actions, are applicable to the various symptoms of syphilis, but that the mildest constitutional effect, capable of overcoming the disease, is always to be preferred:—that the only form of iodine safely applicable to the treatment of syphilis is the iodide of potassium, which should never be carried beyond moderate doses:—hence, however valuable the iodide of potassium may be in some forms of syphilis, it cannot be substituted with advantage for mercury in the great majority.”—*Edinburgh Journal*.

**On the treatment of obstinate cases of Stricture of the Urethra.**

Professor Syme read a paper on the treatment of stricture of the urethra, in cases where the ordinary means prove inefficient. He described the characters of the disease when it possesses an obstinate disposition, and endeavored to show that, in such instances, an attempt to effect dilatation by bougies was no less dangerous than useless. Division of the stricture, either by subcutaneous puncture when it is seated in the pendulous part of the canal, or by free incision upon a grooved director, when it lies behind the scrotum, was recommended; as having proved completely successful in cases that had resisted every form of dilatation.—*Cornack's Journal of Medical Science*.

**Effects of Tartar Emetic on Infants.**

Mr. Noble, whose experience on this point corresponds with that of the late Mr. Goodlad of Manchester, remarks that tartar emetic acts occasionally as a poison, even in small doses, in the cases of young children. He gives some illustrations of his opinion, and points out the necessity of great caution in the administration of this remedy.—*Provincial Journal*.

## Academie de Medicine, Paris.

## M. MALGAIGNE ON DORSAL MYOTOMY.

*Lateral Curvatures of the Spine.*—M. Malgaigne read a memoir on dorsal myotomy, invented a few years ago by M. Guerin.—M. Malgaigne's memoir was divided into two parts. The first contained an analysis of twenty-four of the cases treated by M. Guerin, between 1839 and 1843, the remainder was devoted to a critical examination of the operation and its results.

During the period mentioned, 57 cases were thus treated at the Hopital des Enfants, of whom it is stated that 24 were completely cured, and 28 much improved, 4 remaining without amelioration, and 1 dying. M. Malgaigne asserts that he has been able to obtain information respecting 24 of these patients, either by personal inquiry and examination, or from authentic data. He adds, that twenty of these patients had undergone section of the dorsal muscles from one to nine times. They had remained at the hospital from two to eleven months, the treatment however, having often been continued at their own residence. M. Malgaigne states that he has not seen one complete cure, and that even the instances of amelioration are problematical. From his examination of the patients, he even doubts whether the retracted muscles were really divided, and whether the operation is not one which addresses itself hazardingly to overcome imaginary evils. The greatest difficulty in orthopedy is not to raise the vertebral column, but to give it the solidity which it wants by reinforcing its ligaments and its muscles. The weakness of these two classes of organs is so marked, so constant, in lateral deviations of the spine, that they may be considered as one of their principal causes. Six years ago, having to judge between different orthopedic systems, he condemned all apparatus for extension as only tending to increase the weakness of the ligaments and muscles.—Dorsal myotomy was not then invented, but the principles by which he was then guided apply equally to the new operation. It was a bad plan to divide a muscle in order to strengthen it.

A committee was named by the academy to report on M. Malgaigne's communication, the nomination of which gave rise to a very stormy debate, M. Guerin having refused M. Velpau as one of the committee. The academy, however, persisted in retaining him.

## Academy des Science, Paris.

*Structure and diseases of the Eustachian Tube.*—In a paper on the general and patho-

logical anatomy and on the diseases of the Eustachian tube, M. Bonnafort states that he has found with the microscope numerous mucous follicles on the mucous membrane of the Eustachian tube, but none on that of the cavity of the tympanum. He believes that surdity is more frequently caused by thickening of the mucous surface, and subsequently stricture of the passage, than by mucous obstruction. Consequently, instead of merely injecting air into the Eustachian tube, as most surgeons do, he dilates it as he would the urethra, with small gum elastic bougies, which he introduces into the tube by means of a small silver sound. He has not yet met with a case of stricture which has necessitated cauterisation.

## Copaiva Sugar-plums.

Take of balsam of copaiva, 460 grains; calcined magnesia, 18 grains. Intimately mix these ingredients, and in about twenty-four hours the mass may be divided into seventy-two parts, which are to be rolled out between the fingers. These are to be covered with gum and sugar, prepared in the following manner:—

First. A solution of gum arabic, containing a third of its weight of gum.

Second. White sugar, in powder.

Put the copaiva pills into a tinned basin, of an hemispherical form; pour in a little of the solution of gum, to moisten them; then add some of the powdered sugar, and turn the basin so as to get the pills covered all over; repeat this operation three times and afterwards place the sugar-plums on a horse-hair sieve, in a stove heated to 77° Fahrenheit. The temperature of the basin, during the covering of the pills, should not be above 60° Fahrenheit.—*Pharmaceutical Journal.*

## Original seat of Cancer of the Eyelids.

Most frequently the original seat is in the palpebral conjunctiva, and from thence it attacks the skin, on the other side of the palpebral edge. Sometimes the skin is affected first. The affection may be considered as a glandular schirrhus when it commences in the lachrymal caruncle. The frequency of cancerous ulcerations at the internal angle of the eye is very remarkable. This fact is explained by the use of this angle, which serves as a receptacle for the different secretions of the conjunctiva and of the glands of the lids.—*Northern Journal of Medicine.*

# THE DISSECTOR.

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[No. IV

## FALLACIES OF THE FACULTY.

Hereditary Predisposition—Apoplexy—Hæmorrhages—Heart Disease—Pulmonary Consumption—Glandular Complaints—Consumptive diseases of Joints.

By DR. DICKSON.

Gentlemen :

We have hitherto derived our illustrations of the unity and *intermittent* nature of disease, almost entirely from such forms of disorder, as, by the profession of the present day, are termed *functional*; that is to say, such as are uncomplicated with organic decomposition or any marked tendency thereto. Now, in the commencement, all complaints are simply functional. I do not of course include those organic diseases that have been the immediate effect of mechanical or other direct injury—such as the passing of a small sword through the lungs or liver. I speak of disease in the *medical* acceptance of that term—disease in which one or more constitutional paroxysms occur before organic change becomes developed. Enquire the Sequels of those agues for which the usual routine of medical treatment may have proved unavailing. Do not these comprise every structural change to which nosologists have given a name!—hæmorrhage, or rupture of blood-vessels wherever situated,—diseased lungs by whatever termed; with all the various visceral alterations which have obtained designations more or less expressive of the localities in which they become known to us—the enlarged, softened, or otherwise disorganised heart, liver, spleen and joint; the indurations and other changes which take place in the several glands of the body, whether called scrofulous or consumptive, cancerous or scirrhus. When patients thus afflicted complain of the *ague-fits*, from which they suffer, their medical attendants too often point to the local disease as the cause, when in reality, such local disease has been a mere feature or effect of repeated paroxysms of this kind. Even John Hunt-

et, with all his acuteness, fell into this error, when he said, "We have ague, too, from many diseases of parts, more especially of the liver, as also the spleen, and from induration of the mesenteric glands." It is only of late years that the better informed members of the profession have begun to suspect that these structural alterations, instead of being the causes of the "constitutional disturbance," are the results. But this phrase, in most instances, they use without any very definite idea of its meaning—and when questioned in regard to it, they either confuse the matter with the mixed-up jargon of incompatible theories, or frankly confess that they entertain notions which they feel themselves unable by any form of speech to impart to others. Gentlemen, "constitutional disturbance," when analysed, will be found to be neither more nor less than an *excess* or *diminution* of the healthy temperature and motions of various parts of the body,—amounting, when the disease is *recent* (or "acute") to the bolder features of *INTERMITTENT FEVER*—and in cases of longer standing (or "chronic") coming at last to the more subdued symptoms of that universal disease. Betwixt these two extremes you have every kind of intermediate shade,—sometimes depends upon duration, sometimes upon individual constitution.

Every child of Adam comes into the world with some weak point, and this weak point necessarily gives the subject of it a *predisposition* to disease of one locality or tissue of the frame rather than another; but many persons, from accidental causes, have also their weak points. Of this kind are such parts of the body, as after having been externally injured get so well, that while you continue in health you suffer no inconvenience; but as old age steals upon you, or when your general health gives way, you are reminded by certain feelings of weakness in the parts injured, of the accidents that have formerly happened to you, and that to keep the affected parts in tolerable strength

you must not play tricks with your constitution. Individuals so situated can predict every change of weather; they are living barometers, and can tell you what kind of a day it shall be, before they rise in the morning. They obtain their knowledge of this from the experience of their feelings in their old wounds and fractures. Now, Gentlemen, this is what you ought to be prepared to expect:—the atoms of *repaired* parts must always have a weaker attraction to each other, than the atoms of the other parts of the frame,—and they must, therefore, in the very nature of things, be more liable to be influenced by external agency—by every thing, in a word, that has the power to put matter in *motion*. Whatever, under ordinary circumstances, shall slightly shake or effect the whole body, must, under the same circumstances, be a subject of serious import to its weaker parts; and this argument also applies with equal force to the atoms of those parts of individual bodies, which, by hereditary predisposition, manifest a similar weakness in the attractive power of their atoms to each other. As the child is but an extension of the living principle of the parents, its frame must naturally, to a certain degree, partake of the firmness and faults which characterised its progenitors, whether mental or corporeal—resembling them, not only in external features, but copying them even in their inward configuration. Such similitude we see extending to the minutest parts, whether such parts be fully developed, or defectively, or even *superfluously* constructed. As instances of these last, I may mention, that I have known particular families, where the frequent repetition of six fingers to the hand has taken place in successive generations, and others, where the same members have been as hereditarily reduced beneath the correct human standard. Then in regard to hereditary mental resemblances, you will see children, whose father died before they were born, manifesting the same facility or stubbornness of temper, the same disposition to moroseness or jocularity, which characterised the author of their being. Friends and relatives will sometimes hold up their hands with astonishment at this mental likeness of children to their parents; “he is just his father over again,” is a common and correct remark of the least observant. In the doctrine of *hereditary predisposition*, then, the profession and the public, I believe, are equally united in opinion;—but whether they be so or not, is of very little import while you have eyes to look around you, and can judge for yourselves. I must, however, tell you, that in cases of hereditary predisposition, much will

depend upon circumstances, whether or not such predisposition be actually and visibly developed in the individual members composing a given family. A person, for example, in whose family the heart or lungs is the weak point—by guarding himself against too rapid changes of temperature, and availing himself of a fortunate position in society as to pecuniary and other means, may so control numerous exciting elements of disease, as to pass through life happy, and comparatively healthy:—while his less fortunate brother, worn down by an accumulated weight of domestic and other trouble, shall not only suffer in his general health, but shall as surely have the weak point of his family’s constitution brought out in his individual person. We are all, then, more or less, the “sport of circumstances.”

Among the various diseases, which, from their frequency, we justly recognise as the most prominent and important that affect the inhabitants of these islands, I may mention, Spitting of Blood, Consumption, and Glandular disorders. The rapid transitions of temperature, so characteristic of this climate certainly predispose us to these complaints:—for while in the warmer countries of the East, Dysentery and Abscesses of the Liver carry off the greater number of the various races that compose the population,—the natives of India, who have died on our shores, have generally fallen victims to Glandular and Chest Disease. Even the monkey acknowledges the baneful effects of such rapid thermal transitions on his respiratory organs. More than one half of this class of animals that come to England, die of consumption of the lungs. Diseases of the chest and glands certainly become hereditary; but under that head, you may include a great many others,—epilepsy, apoplexy, palsy, mania,—and perhaps, every purely constitutional complaint, which has obtained a name. Could the breeding of mankind be as closely watched and as easily controlled as the breeding of our domestic animals, incalculable advantages, moral, as well as physical, might be the effect of judiciously crossing particular races with each other. The tendency to the particular passions and diseases, which characterise nations and families, might, in this manner, be as certainly diminished, as the beauty of the face and form might be exalted in its standard:—for both depend greatly upon hereditary configuration, or upon the particular atomic association of certain parts of the body, which you find prevailing in families—other external modifying circumstances being, at the same time, kept in view,—such as climate, temperature; social and political relationship.

&c. But be this as it may, whatever will agitate the whole frame of an individual,—whatever will in any manner touch the stability and strength of his corporeal *Totality*, must to a certainty with much more severity affect the weakest point of his body, whatever that point be. This doctrine I mean shortly to apply to.

### APOPLEXY.

The great System termed the Human Economy is made up of numerous lesser systems, each having a fabric or material peculiar to itself. By anatomists, these various fabrics are termed the Tissues. Thus we have the Osseous or Bony tissue of the skeleton, the Cartilaginous and Ligamentous tissues of the joints; the Glandular tissue—different in different systems of glands, but without which there could be no secretion—no saliva—no bile—no perspiration, and the like;—the Muscular and Tendinous tissues, so necessary to locomotion;—the Nervous tissue—of two kinds,—one to convey impressions from the Brain to all parts of the body, the other to convey impressions back to the Brain. Then there is the Vascular tissue, partly muscular in its nature, comprising the heart and its infinity of blood-vessels;—to say nothing of the Cellular tissue, which, like a web or net, invests and insinuates itself into the whole tissues of the body. The tissue of the lungs and that of the intestinal tube are principally compounded of the others; so, also, are the lining membranes of the various cavities and canals that convey the secretions—*mucous* membranes, as they are termed—for the membranes that line shut cavities, such as the cavities of the chest and abdomen, are distinguished by the term *serous*. The Cutaneous, or Skin-tissue, performs the part of an outward envelope to all. Now, as there is seldom such a thing to be seen as a man or woman, whose body is so perfectly made in its outward form as to stand the scrutiny of a sculptor or painter in all its parts,—so, in the internal configuration of all bodies, will there be parts, as we have already seen, inferior to other parts in strength and so forth. Some tissue, or portion of a tissue, may be at fault. Well, then, suppose the fabric of the *Blood-vessels* of a part to be the least strongly constructed tissue of a given individual, can you doubt that any thing which might injure that individual's health generally, would among other phenomena, develop such original weakness in that part of his Vascular tissue, even where it had not been before suspected? Suppose you were to starve a person slowly, or to bleed him day

by day, would you not in that case be sure to break down his whole health? Would you not also weaken the coats of the blood-vessels generally by what so palpably weakened every tissue of the frame? Now, suppose one or more vessels of the BRAIN to be the least strongly constructed parts of an individual body, would not such starvation or such blood-letting be sure to produce so great a weakness of the coats of these vessels as to give them a tendency to rupture, the consequence of which would be effusion of blood upon the brain,—in other words, *Apoplexy*? I think you must even in theory come to that conclusion. But, Gentlemen, I will give you a fact, or rather a host of facts which you will be glad to take in change for a thousand theories. The inmates of the Penitentiary Prison, by very gross mismanagement, were put upon a diet from which animal food was almost entirely excluded—they were all but starved—"An ox's head weighing eight pounds was made into soup for one hundred people, which allows one ounce and a quarter of meat to each person. After they had been living on this food for some time, they lost their colour, flesh, and strength, and could not do as much work as formerly." The affections which came on during this faded, wasted, weakened state of body, were headache, vertigo, delirium, convulsions, APOPLEXY." Remember, Gentlemen, this is not my statement—no distortion or corruption of words made by me as a party advocate. It is *literatim et verbatim* extracted from the official report of Dr. Latham, the physician who was deputed by Government to inquire into the cause of the great mortality in the Penitentiary. If you place any confidence in its accuracy,—If you believe Dr. Latham to be an honest man, there is only one conclusion you can come to, which is this, that the apothecary practice of starving and bleeding to prevent or cure Apoplexy is the most certain mode of producing this disease in persons pre-disposed to it, and of confirming it in such as have already shown the Apoplectic symptoms. Gentlemen, you seem startled at this, and no wonder—for some of you have doubtless lost relatives by the practice. How then, you have a right to demand, must apoplexy be treated? That apoplexy, like every other disease, is a development of general constitutional disturbance,—that it is a remittent disease, and in many instances curable by the remedies so generally influential in the treatment of intermittent fever, according to the various stages of that complaint. I could prove to you by a multitude of evidence.—But there is a case in the *Medical Gazette*, which bears so strongly on this very point,

that I will give it to you at length. It is from the pen of Dr. Graves of Dublin, and the subject of it was a gentleman living in the neighbourhood of Donybrook. This gentleman, Dr. Graves tells us, "had slept well till four o'clock in the morning, when he was awakened by a general feeling of malaise, shortly after which he complained of *chilliness*, some nausea, and headache.—[Here then was the cold stage.] After these symptoms had continued about an hour, his skin became extremely *hot*, the pain of the head intense, and drowsiness was complained of, which soon ended in perfect coma, with deep snoring and insensibility;—in fact he appeared to be laboring under a violent apoplectic fit. He seemed to derive much advantage from bleeding and other remedies, and to my surprise was perfectly well when I visited him in the evening. The day but one after, at the very same hour, the very same symptoms returned and were removed by the very same remedies. [So at least the doctor thought.] I must confess," he continues, "that I could not explain in a satisfactory manner the perfect freedom from all cerebral and paralytic symptoms after two such violent attacks of APOPLEXY. But when a *third* attack came on, I then saw it was a case of the TERTIANA SOPOROSA of nosologists, [what jargon !] and I prevented the return of the fit by the exhibition of Quinine." The quinine, you see, proved at once an efficient preventive of the returning fits, while repeated blood-letting, whatever might have been its effect in shortening them, had not the slightest influence in that more salutary respect. But when Dr. Graves supposed that his bleedings did actually shorten the duration of the fits, may he not have been deceived by the approaching remission of the disease,—may he not have mistaken this natural phenomenon of all disorder for the effect of his remedies? However that be, I can say this much for myself, that since I gave up the practice of bleeding in apoplexy, I have found that disease in the young as generally curable as any other, and in the old much less fatal than when treated by the lancet. Mr. Smith of Cheshunt lately informed me that he had cured several cases of apoplexy simply by dashing cold water over the patient's head, without drawing a drop of blood. Mr. Walter, a surgeon of Dover, has successfully treated apoplexy by the same practice. "The application of your theory," he writes to me, "has lately saved me from bleeding in two cases of APOPLEXY, both of which did well without it." Now apoplexy as it happens, is the great stumbling-block of the vulgar. How mad Dr. Dickson must be not to bleed in apoplexy!—that is the

language of every blockhead who, knowing nothing of the subject but what he has picked up "in conversation or in his schools," very wisely fancies himself an oracle. But what say the oracles of the schools—what say the men who for years and years have been preaching up blood-letting as an infallible remedy for all diseases! Dr. Clutterbuck, as you all know, throughout a long life, has advocated that kind of practice; what does Dr. Clutterbuck say of its success, in cases of apoplexy? I almost fear you will not believe I quote him rightly—but his name assuredly stands as the author of the article APOPLEXY in the *Cyclopedia of Medicine*, from which I quote—and this is what he says under that head and upon that subject:—"As mere matter of experience there is reason to believe that blood-letting does much less good, and the omission of it less injury, than is generally supposed." Only imagine my feelings when, in the course of my desultory reading, I first stumbled upon this passage. Such a confession from such a quarter! Gentlemen, I laughed most heartily, and made an extract on the instant, keeping to the exact words which I have now given you for your edification.

That you may cure the disposition to

#### RUPTURED BLOOD-VESSEL OR HEMORRHAGE

in other parts of the body, as well as in the brain, by cold affusion, I could give you an infinity of proofs. What is the old woman's practice in bleeding from the nose? To put a cold key down your back, and thus by the suddenness of the shock change in a moment the whole corporeal temperature. The principle is the same in both cases, and the good effects of that measure ought long ago to have suggested to medical practitioners a better practice in apoplexy and other hemorrhages than is at present the fashion with fashionable doctors. COLD WATER, Gentlemen, HAS MANY VIRTUES, BUT A GREAT DEAL DEPENDS ON THE MODE OF APPLICATION.\*—

\* Much is said now-a-days of HYDROPATHY, which whether a novelty or not, ought rather to be called HYDRO-SATH-Y. When the words I have placed in capitals in the text were first printed, Hydropathy, or the Cold-water Cure, was not even known by name in England. Hydropathy on a right principle is only a fragmental part of chrono-thermal medicine. Practised as it is by Franzismatz and his followers, on the old erroneous humoral doctrine, it must occasionally injure those who submit to it. Of this I lately had an instance in the person of a female patient who had partially lost the use of her right arm and leg. The case was of a paralytic kind, and among other means for its relief, the patient had tried a hydropathic establishment, which she declares, not only made her worse, but "all but killed her." Under a chrono-thermal course, I am happy to say, she has very nearly recovered the original power of the affected muscles. This patient was recommended to me by Major Eyles, Cold Hill House, Amersham.



The suddenness of the dash is the chief thing to be attended to in cases of this nature.—So much then for the proper treatment of the patient during the fit of bleeding; but what is to be done to prevent its return? English practitioners almost to a man bleed and purge you. The following case may open their eyes; and as it is not taken from my own experience, but from a German Medical Journal of repute, it may perhaps carry more weight with it on that account. "A strong man, aged 27, suffered on alternate days from very violent bleeding at the nose, which continued from four to six hours, and could neither be stopped nor diminished by the usual styptics, nor by any of the other means commonly employed in similar cases. Taking into account the remarkable *periodicity* of the bleeding, the treatment was changed for a large dose of sulphate of QUININE with sulphuric acid. During the twenty-one days following, the bleeding recurred but twice, and was then readily stopped. The patient subsequently continued quite well."—[*Med. Zeitung*, No. 33, 1836.]

In the case of a young lady afflicted with periodical Vomiting of blood, for which she had been repeatedly bled without the smallest advantage,—or rather to the great injury of her general health,—I effected a rapid cure with a combination of Quinine and Alum. The same disease I have again and again cured by Arsenic, Opium and Prussic Acid. A Captain of the royal navy, whom I lately attended along with Mr. Henry Smith, of Cheshunt, for vomiting of blood, got well by small doses of copper.

You will now, I have no doubt, be prepared to question the propriety of the usual murderous treatment adopted for *Spitting of blood*—Pulmonary Apoplexy, as it has been called. Is not the lancet in almost every such case, the first thing in requisition, and death the almost as invariable result of the measure? What say the older authors, upon this subject? Listen to Heberden, a physician who, for upwards of thirty years, had the highest and most extensive practice in London. "It seems probable," writes this veteran in medicine, "from all the experience I have had of such cases, that where the hæmorrhage proceeds from the breach of some large vein or artery, there the opening of a vein will not stop the efflux of blood, and it will stop *without the help of the lancet*, when it proceeds from a small one. In the former case, bleeding does no good; and in the latter, by an unnecessary waste of the patient's strength, it will do harm. But if the opening of a vein be intended to stop a hæmorrhage, by deprivation or revulsion, may it not be questioned whether this doctrine be so

clearly established, as to remove all fears of hurting a person who has already lost too much blood, by a practice attended by the certain loss of more?" With which reasoning, I hope you are all, by this time prepared to agree. But men who know nothing of the economy of the human system, will sometimes dispute this matter with you, by saying, that their patients make blood so fast that they must periodically bleed them, to keep down the disposition to hæmorrhage. Gentlemen, these practitioners deceive themselves; they are deluded into this false and fatal practice by the returning febrile fit—a fit that will recur and re-recure at more or less regular periods, while there are blood and life in the body; and the more frequent the bleeding practised in the case, the more frequent will this febrile fit come on, and with it, the very hæmorrhage which it is the object of their solicitude to prevent. Does it not stand to reason, that the more you debilitate the whole body, the more certainly must you weaken at the same time the already too weak tissue of the vascular coats, that tissue whose original weakness constitutes the tendency to hæmorrhage! Instead of being the consequence of any constitutional plenitude of the blood itself; spitting of Blood is only a natural effect of real weakness in the coats of the containing vessels of the lungs; so that not only is the theory of making too much blood absolute nonsense, but the measures which medical men have for centuries been putting in force, for the cure of hæmorrhagic disease, have been one and all as fatal in their tendency, as the theory that led to them was in principle false. Look at the pale and exsanguined countenances of the unfortunate individuals, who, whether for spitting of blood, apoplexy, or other hæmorrhages, have been subjected to such cruel discipline, and tell me, if these poor creatures make too much blood!—only place your finger on the artery of the wrist, and you may feel it jerking, and compressible, like that of a female who has suffered from repeated floodings. Even during the febrile paroxysm, you may see by the circumscribed flush of the face, that this patient is actually dying of hectic or inanition. What fatal mistakes have not originated in the notion of making too much blood!—To bleed in the case of a ruptured blood-vessel, then, is positive madness. If you open a vein in the arm of any man, whether healthy or the reverse, and let blood, will the opening of another vein stop the flow of blood from the vein first opened? So far from that, both veins will go on bleeding till the patient either faint or die!—Should not this fact have long ago opened the eyes of the profession to the fallacy of their

practice? Gentlemen, how can you doubt, for a moment, that the coats of the blood-vessels, like every other tissue of the body, *must be* equally implicated in the *general debility* that cannot fail to be produced by whatever abstracts *from*, or prevents the entrance of, the material necessary to the healthy organization of every part of the human frame? To bleed or starve a person having a hereditary predisposition to spitting of blood or apoplexy, is the most certain method to develop these diseases in their worst forms!—Yet this is the daily practice of the most eminent physicians! one among many proofs, that in the medical profession, eminence is less frequently attained by *successful results in practice*, than by the dexterous employment of all those mean arts and petty intrigues with which mediocre but unscrupulous minds too often beat men of genius in the game of life. So far as practice is concerned, the eminent physician generally confines himself to the fashion of the day—the more especially, if that fashion be profitable to the apothecary; for in such case he is sure to become the fortunate *puppet* of those whose bread depends, not so much upon the cures they shall effect, as the quantity of physic they shall manage to sell! What a happy nation of fools must that be, which supposes that any class of mankind will put the interests of the public in competition with their own. Benighted and misguided people! you call upon men to relieve you from your sufferings, while you hold out to them the most powerful of temptations to keep you on your sick-beds! You pay for physic, what you deny to talent—for a *long illness*, what you refuse to a speedy recovery! Do you think medical men angels, that you thus tamper with their integrity? Your very mode of remunerating them forces them to be corrupt—and that too, at a moment when their numbers are so great, that could even one half of them live honestly, the other half starve! Hear Mr. Abernethy on this subject:—"There has been a great increase of medical men, it is true, of late years; but upon my life, *diseases have increased in proportion*,—that is a great comfort!"—To whom is it a comfort?—to the public or the profession?—When you call in the physician recommended by your apothecary, how can you be sure that he is not a confederate? or that, when the *farce* of a "Consultation" is gone through, you are not the dupes of a petty intrigue to pick your pockets? Uncharitable man! some of you may possibly say, how can you thus malign the members of your own profession?—Gentlemen, when so many of *my* profession, and those not always of the lowest class, descend to practices

which degrade medicine into the vilest of trades; when, like the Thugs of India, numbers of them silently and secretly enter into systematic collusions and conspiracies for the purpose of inveigling and plundering under friendship's garb, the unfortunate victims who, too confidently repose on their honour and integrity; when the editors of the Medical Journals even are forced to notice the letters they receive in their exposure,—is it not time that the too credulous public should be put upon their guard? If any medical practitioner of your acquaintance has the hardihood to deny the existence of this terrible state of collusion now so prevalent, both in town and country, look upon that man with suspicion,—or rather set him quietly down at once in your own mind, as one of the most deeply implicated of the corruptionists. "A monarch," says Dr. Forth, "who should free his state from this pestilent set of physicians and apothecaries, and entirely interdict the practice of medicine, would deserve to be placed by the side of the most illustrious characters who have ever conferred extensive benefits on mankind. *There is scarcely a more dishonest trade imaginable than the Art of Medicine in its present state.*"—[*Rhapsodien über Medicin.*]

But to return to the subject of Ruptured Blood-vessel. You will find that in every case, except where it has been produced by mechanical or other local agency, this disease is the effect or development of general intermittent fever; the symptoms of which fever vary in their degree of severity with every case,—in one being bold and well marked, in another, so softened and subdued, as almost to escape the patient's own observation;—curable, too, like the simplest ague, by the cold dash or an emetic given during the hot fit;—and to be prevented from recurring by chrono-thermal treatment during the interval of remission. One case will yield to opium or arsenic, another to copper, quinine, or prussic acid, and some will trouble you to cure them at all—for what will agree with one constitution, may, as we have too often seen, disagree with another. I could give dozens of cases of every kind of constitutional hæmorrhage cured in this manner; but the details of one would be the details of all. Yes, Gentlemen, I repeat, by the early use of emetics, the proper application of heat and cold in the different morbid conditions of the body constituting the *febrile fit*, and by the judicious exhibition of the chrono-thermal medicines during its remission, I have successfully treated every kind of hæmor-

\* See the *London Medical and Surgical Journal* and *Lancet*, *passim*,—particularly the former,—for a full exposure of those nefarious practices:

rhagic disease. The same system of treatment has enabled me effectually to cure many cases of Enlarged Veins—Varicose Veins, as they are termed—and the mention of this recalls to my recollection the case of an aged female who had a painful *varicose ulcer*—that is, a sore with blood-vessels opening into it—for which I prescribed the internal use of arsenic, with almost immediate relief to her pain, and the subsequent cure of her ulcer. From the happy result of that and other similar cases, the surgical mechanic may learn that there are other and better modes of treating “varicose veins,” than by bandages and laced stockings. Well, then, I have said all I mean to say upon the subject of Hemorrhage, and I have anticipated something of what naturally belongs to the treatment of Diseases of the CHEST. Of these I must now speak at some length.

It has ever been the policy of teachers and professors to affect to penetrate farther into a millstone than their pupils; and, seeing that for the most part such professors know as little of their particular subject as those they pretend to enlighten upon it, so far as their own reputation is concerned, they are doubtless right! The great millstone of the present day, is the CHEST,—and Laennec’s bauble, the divining rod by which our modern sages pretend to have obtained their knowledge of it. If you believe them, a hollow piece of stick they have nicknamed “the *Stethoscope*” is the greatest invention of these times! By means of it you may discover every motion and change of motion that ever took place in the organs within the cavity of the chest, and some that never could take place in them at all.

What an invaluable instrument must it be—that stethoscope! The enchanter’s wand was nothing to it! Aaron’s rod perhaps came the nearest to it! But, seriously speaking, just observe how gravely your hospital tyros hood-wink and hocus each other with the phrases “hypertrophy” here, and “Atrophy” there; “Caverns” in this place, and “congestions” in that—to say nothing of “rhoncus” and “rale,” “egophony” and “sybilus”—and heaven knows what other sounds and signs besides—sounds and signs which, in the greater number of cases, have as much of truth and reality as the roar of the sea with which the child deludes his fancy when holding a shell to his ear!

Let me first speak to you of

#### DISEASES OF THE HEART.

Do not the subject of every kind of Heart-affection tell you they are one day better, another worse? How shall we speak of diseases of this organ?—of palpitation and tem-

porary cessation or remission of its action?—disorders constantly misunderstood, and as constantly maltreated. Complain but of flutter or uneasiness in any part of the Chest, the stethoscope—the oracular stethoscope—is instantly produced. Astonished—in many instances terrified—the patient draws his breath convulsively—his heart beats rapidly—and the indications obtained by means of this instrument, at such a moment of doubt, anxiety, and fear, are registered and recognised as infallible. “Have we not had too much talk of Heart-Disease since the stethoscope has come so generally into vogue?” was a question asked some years ago by the late Dr. Uwins. Dr. James Johnson shall answer it; and for reasons which I shall by and bye make you acquainted with, I prefer his evidence here to that of any other physician. In one of the numbers of *The Lancet*, Dr. James Johnson is stated to have said at a Medical Society:—“It was a common error in young practitioners to consider the heart as organically diseased when its functions only were much interfered with, and this error has become more general, he was sorry to say, since the *STETHOSCOPE* has come into use.” Dr. Johnson confines his observation to young practitioners—himself not coming under that head,—but I have seen men as old as he make the same mistake, and those, too, enjoying a great reputation for stethoscopic sagacity.

Patient after patient—medical as well as non-medical,—have come to me with the *fatal scroll* of the stethoscopist—there hearts palpitating, their limbs trembling, as they gazed in my face, expecting to read there nothing short of a confirmation of their death-warrants;—yet of those patients, many are now living and well, and laugh, as I hope to make you laugh, at both the instrument and its responses. How little must that man know of his duty as a physician, who would deprive a fellow-creature in distress of the balm of hope—how little can he appreciate the influence of the depressing passions on the bodily sufferings of the sick! Yet with these eyes have I seen, in the hands of the patient, the written announcements of his doom, an announcement which afterwards turned out to be utterly unprophectic and false. How unwarrantable in any case to intrust the patient with such a document.

Let the practitioner withdraw his eye, for a time, from a mere symptom; let him observe how other muscles of his patient palpitate at times, like the heart, and act, like that, convulsively—finding these symptoms to be remittent in every case; and complicated with others, all equally remittent, would he still persist in his small bleedings, his repeat-

ed leeches, his purges,—*measures of themselves* sufficient for the production of any and every degree of organic change he already fancies he has detected! Would he not rather reflect with horror on his past treatment, and endeavour, by another and a better practice, to enable his patient to escape the sudden death to which, in his imagination, he had devoted him? How many a physician, by such a prognostic, has obtained unmerited credit for foresight and sagacity, while he only taught the patient's friends to be prepared for an event, *he himself was materially contributing to hasten!* Truly, in this case at least, prophecies do tend to verify themselves!

Gentlemen, I have seen two stethoscopists examine a patient with supposed Heart-disease, and come to the most opposite conclusions,—one declaring the organ to be enlarged, the other assuming with equal confidence, that it was the reverse! The utter absurdity of attempting to distinguish, during life, one form of Heart-affection from another by any particular sign or symptom, is sufficiently proved by this one fact, that a mere functional variation of its motions will produce every symptom of a real change in the structure of the organ itself. But even could such distinction be effected to the nicety of a hair, the knowledge of it would not be worth a rush for any *practical purpose*—inasmuch as the remedies for every kind of chest-disease come at last to the same agency, whether that agency be directly applied to the surface of the body in the shape of cold or heat; or be externally or internally administered in the form of medicines that electrically influence the corporeal motions through the medium of the brain and nerves. By the chrono-thermal system of practice, I have successfully treated every kind of Heart-disease which ever came, or could come, under the notice of the physician—setting aside, of course, original malformation of the organ. I will give you some cases in illustration:—

A gentleman, aged 30, had been ill for a long time, particularly complaining of his heart, the action of which organ was generally below the healthy standard, and it also palpitated occasionally. So great was his mental depression, that the smallest trifle produced tears. The temperature of his body

generally was below that of health, and he suffered much from coldness of feet—remissions he of course had, being better at particular times. As he did not improve in the country, he thought he would try a London doctor, so he came to town, and consulted the late Dr. Hope, a gentleman, who though he wrote a thick tome, entitled "*Diseases of the Heart*," was, I am sorry to say, altogether wrong in his treatment of them! The stethoscope in this case was as usual applied to the chest, and its annunciation was apical. Hope here told no "flattering tale," for not only was the heart pronounced to be enlarged, but a fatal result was prophetically expressed. The treatment prescribed was not ill calculated to verify the prediction—*carcarilla* and ammonia,—with aperients!! and a *bleeding* every month, or six weeks!! The patient's health, as you may readily suppose, got worse and worse daily,—he became much emaciated in his person, and completely prostrate in mind. To sum up all, he had a tendency to fainting fits; in which state, by the advice of Dr. Selwyn of Ledbury, he came to me. You already guess the practice I adopted—chrono-thermal, of course. Yes, gentlemen, I ordered him first a combination of prussic acid and creosote, which I afterwards followed up by arsenic and quinine. I also prescribed a generous diet, with wine. Well, what was the effect of this?—Why, notwithstanding the depletion to which he had been subjected, he improved daily, and in about six weeks had become so well as to be able to resume his profession—the law, which profession, at the hour I speak, he follows with ardour, and without a complaint of any kind. Indeed, a letter which I recently received from Dr. Selwyn, gave me the news of his marriage. Yet this patient, according to the stethoscope, should have been dead and buried long ago!

Gentlemen, in confirmation of the value of Arsenic in disease of the heart, the details of a case from Darwin, who wrote, he it remembered, in the last century, may not be deemed unimportant:—"A gentleman, 55 years of age, had for about ten years been subject to an intermittent pulse, and to frequent palpitations of his heart. Lately the palpitations seemed to observe irregular periods, but the intermission of every third or fourth pulsation was almost perpetual. On giving him four drops of a saturated solution of *Arsenic* about every four hours, not only the palpitation did not return but the intermission ceased entirely, and did not return so long as he took the medicine."

The cases I shall now give you are three of many such which have occurred in my own practice:—

The Doctor is here we are sorry to say, as profound as ignorant as the profession generally, of the magnetic symptoms, by which tubercular disease of the Heart, as in every other organ, is distinguished with facility and perfect certainty, in every case, and in any stage of the disease; and as this disease is singular, or of its own kind, and therefore entirely different from functional derangement from excitement of the brain or any other cause, it is certainly a matter of some importance to be able to distinguish it.

The cases the Doctor has given in illustration are those of functional derangement, and accounts for his success in treating "diseases of the heart." Editor.

Case 1.—A young lady was afflicted with palpitation of the heart, occasional cough, and so great a difficulty of breathing as to be unable to sleep, except when supported with pillows. She had frequent shivering fits; her abdomen and legs were much swelled, and her symptoms altogether so distressing, as to leave her friends with scarcely a ray of hope. Nevertheless, by the employment of silver, quinine, and prussic acid, she did eventually recover, to the surprise of all who know her. Remissions were well marked in this case.

Case 2.—A young gentleman, aged 16, had violent palpitation of the heart, headache, craving appetite, and some thirst, with great depression of spirits. He was much emaciated, and had a tendency to eruption of the skin. His hands and feet, which were generally cold by day, became during the night so hot, as frequently to keep him from sleeping. By a course of cold-plunge baths, alternated with the shower bath, and by the use at the same time of quinine and iron in combination, the young gentleman was completely restored to health—every one of the above symptoms having disappeared in a few weeks. He is now serving with his regiment in India, having reached the rank of lieutenant.

Case 3.—Major M. P.—'s heart palpitated so violently at times, that you could see the motions in a distant part of the room. This was the case when I was asked to see him. I ordered him prussic acid and musk, which stopped the palpitation in about two minutes after he took it. In the middle of the night he had a threatening of the complaint, but it was at once arrested by the same medicines. A continuation of them for about six weeks cured him completely.

Before dismissing affections of the heart, I must tell you that all of them, or almost all depend upon weakness of the Brain—as you may convince yourself by putting this question to your patient—How do you feel when anything disturbs your mind? The answer will almost invariably be, "Oh it brings on the palpitation at once," or the pain as the case may be. Gentlemen, strengthen the brain, and in few instances will you have any trouble about the heart. The brain is the great controller of every function—it is the true key to all good treatment.

We now come to consider

#### PULMONARY CONSUMPTION, OR DECLINE.

When you see a person harassed with cough, and losing his flesh, and if, at the same time, he complains of shortness of

breath and pain of the chest, and begins to expectorate a muco-purulent-looking matter, you may certainly set his disease down as *Consumptive*; for not only is his general health in that case manifestly wrong, but his lungs are more or less implicated,—and what does it signify in which of their tissues? what does it signify whether it be their mucous membrane, their glands, or their interstitial substance. If his general health from the time he becomes your patient, improve, he will naturally live as long as it continues to do so,—if not, and if it as progressively continues to get worse, he must die! Any further discussion of the matter, *quoad hoc*, resolves itself into the interminable question of *Tweedle-dum* and *Tweedle-dee*!

"Can Consumption be cured?" asked Mr. Abernethy, adding in his own sarcastic manner "Odd bless me! that's a question which a man who had lived in a dissecting-room would laugh at. How many people do you examine who have lungs tubercular which are otherwise sound. What is Consumption?—It is *tubercle* of the lungs—then if those tubercles were healed, and the lungs otherwise sound, the patient *must get better*; but if the inquirer shift his ground and say, "It was the case I meant of tubercles over the whole lungs," why then, he shifts his ground to no purpose, for there is no case of any disease which, when it has proceeded to a certain extent, can be cured."

The next question is what are Tubercles? I take this to be the true answer,—and I wish you to consider it well, for it is, or I should rather say it *was*, until I took the liberty of enlightening the profession, totally at variance with their notions; some of them even now believing tubercles to be parasitical animals! Gentlemen, for the requisite lubrication of the mucous membrane of the cells and other air-passages of the lungs, there must be a certain amount of secretion. To supply this secretion, I need not tell you there *must* be a glandular apparatus; and accordingly a number of minute and almost imperceptible *Glands* in reality intersperse the entire tissue of the lungs—the pulmonary tissue, as it is called—but abound more particularly in the *upper portion* of it—that identical portion in which pathologists imagine they have detected the *commencement* of Consumption. But what they call the *commencement* is nothing more than an *effort* or development of general constitutional disorder. If it be the beginning, it is the beginning of the end—the end of previous repeated febrile paroxysms of greater or less intensity. During such constitutional disorders, and particularly during the course of severe fevers—such as a long remittent fever, the

fevers termed small pox, measles, and the like, these minute *pulmonary glands* become diseased, there being a previous *predisposition* of course; in other words, these glands being the original weak points of individuals having the consumptive tendency. Tubercles then are diseased pulmonary glands.—How many people have traced the Consumption of their children to the smallpox or measles—but would any man in his senses say the consumption was the cause of these fevers? Here it must have been the effect, and so also it may be the effect of any other kind of fever, and in no case can it be the cause of such fever—though, as in the giving way of any other part of the body, the local disease may in the course of time aggravate and keep up the febrile state. The affected gland is in this instance at first almost microscopically minute, but as the disease advances, it swells and becomes of a reddish gray colour, or it may at once take on a suppurative action—it may become an *abscess* varying from the size of a pea or less to that of a walnut or more, or it may go on enlarging to any extent without suppurating or becoming an abscess at all—the function of the affected lung in this case being, nevertheless, as completely disturbed as if it did take on the suppurative state; but in most cases of consumptive disease both kinds of disorganization go on at the same time, one gland or cluster of glands suppurating, and sooner or later bursting and discharging their contents into the air-passages, rendering the lungs at the same time more or less cavernous and hollow—another gland or cluster of glands swelling and coalescing so as to fill up and solidify the air-cells of the part they occupy. These at least are among the principal changes to be found in the lungs of persons who die of consumption, and they are all, as I have already said, more or less gradually produced in the course of repeated paroxysms of general remittent disorder. The matter expectorated by the patient consists of the contents of the tuberculous abscess, and more or less mucous, sometimes mixed with blood; while the cough is at one moment produced by a lodgment of matter in the air-passages, at another it is an effect of the cold air coming in contact with the ulcerated surface of the diseased lungs,—though almost every patient has it *periodically* spasmodic. To understand this subject in all its bearings, you have only to observe the more palpable changes which take place in the glands of the Neck of certain patients. These glands in the healthy living subject, can neither be seen nor felt; but apply any general influence that shall excite Fever in an individual predisposed to glandular disorder,—such as star-

vation, exposure to cold, or the abuse of mercury, and what do you find? Why, these very glands gradually enlarge and form tumours, which tumours, as in the case of tubercles of the lungs, are sometimes of a solid kind, and when examined after death have the same reddish grey appearance, but more frequently like them terminate in abscesses, the contents of which, so far as mere likeness is concerned, are the identical contents of pulmonary tubercles, or *comice*, as these tubercles are sometimes called. In the one case, the patient is said to have the “Evid” or “Scrofula,” in the other Phthisis or Consumption;—the difference of place, and the degree of importance of this in the animal economy, making the only difference between them.—In still farther proof of the correctness of this explanation, I may mention that Louis and others have detected *tuberculous matter* in various other *Glandular* parts of the body of patients who have died consumptive. If it be objected that they have also detected it in the bones, I answer, bones like every other part, have a glandular apparatus.\*

We now come to the question of Cure, and from what we have already said, you must be aware, that however curable Pulmonary Consumption may be in the commencement, in the later stages—that is, where a very considerable portion of the lungs is destroyed—it cannot possibly be cured, though even in this case, the disease, by proper management, may sometimes be arrested.—But here, instead of confusing you with fine spun differences and distinctions, the delight of the schoolmen, I shall try to explain my meaning to you by *similitudes*; for similitudes, in the words of Fuller, are indeed “the windows that give the best light.”—Many of you doubtless have had a certain portion of a tooth slowly consumed by disease, which disease, [tooth-consumption?] by some change in your manner of living, or otherwise, has all of a sudden stopped, and the remaining sound portion of that identical tooth has continued to be useful to you for years!—Such arrest of the consumption of a tooth, I have often myself obtained by quinine internally administered; and Dr Irving of Cheltenham, some time ago, detailed to me two cases in which he succeeded with that remedy. Well, then, with medicines of this class, and sometimes even without any medicine at all, the same thing may take place in

\*We have published during the last ten years, more than 20 000 copies of different medical works, in which we have given precisely the same views of the origin of tubercles; not only in the lungs, but in every other part of the body; and the Doctor is consequently mistaken in supposing himself to be the first person who had attempted to “enlighten” the profession on this subject.—*Editor.*

the lungs; and I have known persons reach a good old age, who had portions of their lungs destroyed, but who, by proper medicine, and attention to the temperature of their chambers, preserved the sound parts from going into further decay. Such persons, at greater or less intervals of time, may even be free from the graver symptoms of consumption, and only commence to expectorate during some change of weather, when they have slight febrile attacks, but these will leave them again on the return of warm weather.

## LECTURES

### ON ORGANIC CHEMISTRY;

*Delivered during the Winter Session, 1844.*  
IN THE UNIVERSITY OF GIESSEN,

BY  
JOSEPH LIEBIG, M. D., PH. D. F. R. S., M. R. I. A.,  
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#### INTRODUCTION—No. IX.

*Decay. Its Nature. A Slow Combustion. Relation of Decay to Fermentation and Putrefaction. Its use in the Arts. Bleaching. Manufacture of Vinegar by the quick process. Suggestions for improvements in the Fermentation of Beer and Wine.*

THE immediate and most energetic cause of all the alterations and transformations which organic atoms undergo, is, as I have already stated in the preceding introductory remarks, the chemical action of oxygen. Fermentation and putrefaction manifest themselves only in consequence of the commencement of a process of decay; their completion is the restoration of a state of equilibrium. Whilst the oxygen is in the act of combining with any one of the elements of an organic substance the original state of equilibrium of attraction in all its elements is destroyed, the substance decomposes, resolving itself,—all the molecular attractions being again equalised,—into a series of new products, which undergo no further change in their properties unless further causes of disturbance or alteration are brought to operate upon them.

Although the chemical action which the elements of organic atoms exercise upon each other in fermentation and putrefaction balances itself, inasmuch as a state of rest is induced between the attractions of the new formed products, yet this equilibrium does not exist with respect to their attraction for oxygen. The chemical action of oxygen

upon organic substances ceases only when the capacity of the elements to combine with oxygen is exhausted. That action consists in nothing more than the affinity, or tendency of the oxygen to combine with those elements. A perfect equalisation of this tendency, therefore, can only ensue when the elements, by combining with oxygen, have formed such products as are totally incapable of absorbing any additional amount of oxygen. It is only then that the attractions of the elements of organic substances attain a perfect equilibrium with the attraction of oxygen.

Fermentation or putrefaction represents the first stage of the resolution of complex atoms into more simple combination; the process of decay completes the circulation of the elements by transposing the products of fermentation and putrefaction into gaseous compounds. Thus the elements constituting all organised beings, which previously to participating in the vital process were oxygen compounds, such as with carbon and hydrogen, reassume the form of oxygen compounds. *The process of decay is a process of combustion taking place at the common temperature,\** in which the products of fermentation and putrefaction of plants and animal bodies combine gradually with the oxygen of the atmosphere.

No organised substance, no part of any plant or animal, after the extinction of the vital principle, is capable of resisting the chemical action of air and moisture; for all that power of resistance which they temporarily possessed as the bearers of life, the media of the vital manifestations, completely ceases with the death of the organism; their elements fall again under the unlimited dominion of the chemical forces.

The clearing of the primeval forests of America, and the facilitated access of air to that soil, so rich in vegetable remains, alters gradually, but altogether its constitution; after the lapse of a few years no trace of organic remains can be found in it. The soil of Germany in the time of Tacitus was covered with a dense, almost impenetrable forest; it must, at that period, have exactly resembled the soil of America, and have been rich in humus, and vegetable substances, but all the products of vegetable life in those primeval forests have completely vanished from our perceptions. The innumerable millions of molluscous and other animals,

\* In order to avoid the ambiguity attached to the word decay, from its being in vernacular language applied to several processes which it is desirable to distinguish, the author proposed to substitute the term *DECOMPOSITION*, and this has been very generally adopted in scientific treatises, being a convenient mode of expressing the relation of decay to ordinary combustion.

whose remains form extensive geological formations and mountains, have, after death, passed into a state of fermentation and putrefaction, and subsequently, by the continuous action of the atmosphere, all their soft parts have been transposed into gaseous compounds, and their shells and bones, their indestructible constituents, alone remain.

It is only in localities, under peculiar circumstances, where the access of oxygen was limited or altogether precluded, that we still find distinct remains of primeval vegetables in a state of retarded or impeded decay, as for example, in beds of turf and brown coal.

The presence of water and a suitable temperature are indispensable conditions of the oxidising process of decay, just as they are necessary to putrefaction and fermentation. Perfect dryness, or a temperature below the freezing point, suspends all processes of decay and fermentation. The transmission of decomposition from one particle to another presupposes a change of place; it requires that the particles should possess mobility or the power of free motion, and this is imparted to them by the presence of water. In decay it is more especially a certain elevated temperature which increases the aptitude of the elements of organic substances to combine with the oxygen of the atmosphere.

A great number of organic bodies, when in a moist state are capable of absorbing oxygen, whilst many, and indeed most of them, are *per se* entirely deficient in this property.

If we place wet saw-dust, or moistened fragments of wood, into a vessel filled with atmospheric air, all the properties of the contained air become in a very short time completely altered. If a lighted splinter, which, of course, would burn in the atmospheric air, is introduced after the lapse of two or three hours, its flame will be immediately extinguished. The air confined in the vessel, if examined, will be found to have lost all its oxygen, and to have acquired an equal volume of carbonic acid gas. If a fresh supply of atmospheric air is made to replace this, the same process again occurs, all the oxygen becomes converted into carbonic acid.

In the process of bleaching in the open air, or, as it is called grass-bleaching, we have the process of decay applied to an important purpose in the arts upon a large scale. Linen or cotton textures consist of ordinary woody fibre, more or less colored by extraneous organic substances which were either contained in the plant whence the fibre has been derived, or have become mixed with it during the processes of preparation.

When linen or cotton fabrics are moistened with water and exposed to the light of the sun, a slow process of combustion, or decay, immediately begins upon the whole surface; the oxygen of the atmosphere in immediate contact with the linen or cotton is incessantly converted into carbonic acid. The weight of the fabric diminishes every second, precisely because it is in a state of combustion; all the coloring matters gradually disappear and with them a considerable amount of woody fibre, their elements being converted into oxygen compounds. If this action of air and light upon the linen or cotton continues for a considerable time, these substances lose their cohesion and become converted into a matter similar to that used in the manufacture of paper, and this matter still continues to decay as long as the essential condition of this change, that is the absorption of oxygen, proceeds.

The nitrogenous constituents of plants and animals comport themselves towards oxygen in a manner precisely similar to the behaviour of the non-nitrogenous principle we have spoken of, namely, woody fibre. Fresh meat, as well as the first products of the decomposition of the nitrogenous constituents of plants, by fermentation, that is, beer-yeast or wine-yeast, withdraw oxygen from atmospheric air, and, like woody fibre, yield in return an equal volume of carbonic acid.

When the Cemetery of the Innocents at Paris was removed from the interior of the town to the outside of the barriers, the buried corpses, which had accumulated to a depth of sixty feet, were found to a great extent apparently converted into fat. The substance of the skin, muscles, cellular tissue, and tendons, all the soft parts, and even the bones, had completely disappeared, leaving only the fat, which resisting longest the influence of decay, remained in the form of stearic acid. This human fat was employed to the extent of many tons by the soap boilers and tallow-chandlers of Paris, for the manufacture of soap and candles.

If meat be suspended in running water, or buried in moist earth, nothing of it will remain after the lapse of some time except the fat which it contains.

All substances susceptible of decay, when in a moist state, and exposed to the air and light at the common temperature, undergo precisely the same change as they would if exposed to a red heat, in a dry state, that is, they absorb oxygen,—they undergo combustion.

Alcohol, one of the products of the fermentation of saccharine vegetable juices, is altogether incapable of undergoing the process of decay; when exposed to the air, whether



in its pure state or mixed with water, it evaporates without combining with oxygen. Alcohol is readily inflammable at a higher temperature, and in burning is resolved into carbonic acid and water. It is obvious that its elements have a powerful affinity for oxygen; the high temperature is, however, a necessary condition of the manifestation of this affinity. Hydrogen gas and many other inflammable substances, are, in this respect, precisely similar to alcohol, their affinity for oxygen manifests itself only at certain high temperatures.

In the process of decay it has been likewise observed that a substance undergoing this state of elementary transposition exercises a remarkable influence upon the particles of an adjacent substance, which *per se*, would not be capable of passing into the same state of change, decay or transposition.

Many substances, when in contact with another in a state of decay manifest, at common temperatures, an affinity for oxygen; that is, they enter into combination with this element, at this low temperature, whilst under other circumstances such a combination can only be effected by a far higher degree of heat.

The active absorption of oxygen, the combustion of the decaying substance, is transmitted to the particles of other substances in contact with it; they assume its characteristic state of activity; they like it, combine with oxygen, as if undergoing a real combustion; but how this is effected does not appear to admit any further explanation.—Contact with a substance in decay is the chief condition of decay for all organic substances which do not possess the power of combining with oxygen at common temperatures. In consequence of the ensuing combination of its elements with oxygen the temperature of the decaying substance rises above that of the surrounding medium; but great as the influence in which heat exercises in accelerating the process, it is not in this, as in other chemical processes, the cause of the manifestation of the affinity for oxygen.

If, in a vessel filled with common atmospheric air, to which a certain amount of hydrogen gas has been added, a linen bag be suspended, filled with wet saw-dust, vegetable mould, &c. the process of decay will continue just as it would if they were exposed to the open air. They will convert the surrounding oxygen into carbonic acid. But what is very remarkable in this case, the hydrogen also participates in the process, it undergoes decay; that is, from being in contact with decaying substances it acquires the power of combining with oxygen at the common temperature there be a sufficient

amount of oxygen present all the hydrogen gas is converted into water.

Other inflammable gases, both simple and compound, are affected under these circumstances in exactly the same manner as hydrogen. The vapour of alcohol, for example, when in a vessel containing wood or other substances in a state of decay, absorbs oxygen from the atmosphere, and becomes transformed into aldehyde, and subsequently into acetic acid, which upon assuming a fluid state, is withdrawn from the further influence of the oxygen.

It is upon this power of substances undergoing decay, to increase the attraction of all organic substances for oxygen, and especially the affinity of alcohol for this element, that a speedy process for acidifying alcohol is based, which is termed the "quick vinegar process."

The transformation of fermented liquors into vinegar formerly required weeks, and even months to accomplish, in consequence of the imperfect access of the air; we can now convert alcohol into vinegar in less than twenty-four hours, and this is effected mainly by making brandy diluted with water, or any other weak spirituous liquor, trickle slowly through casks filled with wood shavings, and at the same time causing a slight stream of air to circulate through these shavings. This method exposes to the air a surface of alcohol capable of absorbing oxygen by many thousand times more extensive than the old method, and consequently the time which alcohol, under ordinary circumstances, requires for its acidification is abridged in the same proportion. At the commencement of this process it is usual to add to the dilute spirit a small quantity of some substance containing matter capable of undergoing the process of decay, such as beer-wort, hony, vinegar, &c., but after the lapse of a very short time the surface of the wood shavings passes into a state of oxidation, and from that moment effects the transformation of the spirit into vinegar without the farther co-operation of extraneous decaying matter.

The application of our knowledge respecting the phenomena attendant upon decay, to the manufacture of beer and wine, is easy and obvious. The property of beer and wine to be converted into vinegar when in contact with the air, depends invariably upon the presence of foreign matters which transmit their own inherent aptitude to absorb oxygen to the particles of alcohol in contact with them. By removing completely all such substances from wine and beer, these lose altogether the property of acidifying, or of being converted into vinegar.

In the juice of grapes pour in sugar there remains, after the completion of the process of fermentation, that is, after the resolution of the sugar into carbonic acid and alcohol, a considerable amount of nitrogenous constituents retaining the same properties which they possessed in the juice previous to fermentation. This does not happen with the juice of the grapes of southern climates. These grapes are rich in sugar, and a considerable amount of this substance remains undecomposed after all nitrogenous matters have completely separated in an insoluble state, as yeast. Such wines alter very little when exposed to the air; the red wines of this kind, however, acidify because their colouring matter is of ready mutability, and performs, when in contact with the air, the part of the nitrogenous constituents.

The nitrogenous constituents of the grape-juice which remain in wine, after fermentation, are those ferments or excitors of fermentation in the sugar, of which I have already spoken in previous papers. After the complete transformation of the sugar they exercise upon the alcohol exactly the same effect as the decaying wood, they are the exciting causes of the ensuing process of acidification.

The affinity of these substances for oxygen is very powerful; during the short space of time necessary to transfer wine from one cask into another, they absorb oxygen from the air, and induce a state of acidity in the wine, which goes on irresistibly if it be not checked by artificial means. It is well known that this check is practically effected by sulphuration. A piece of sulphur is burned in the cask destined to receive the wine, the contained air is thus deprived of its oxygen, and an amount of sulphurous acid is formed equal to the volume of the oxygen. This newly-formed sulphurous acid is rapidly absorbed by the moist internal surface of the cask. Sulphurous acid possesses a stronger affinity of oxygen than the excitors of acidification in the wine. The acid is gradually diffused from the internal surface of the cask through the wine, and withdraws from those substances, as well as from the wine itself, all the oxygen they have absorbed from the atmosphere and thus reconverts the wine into the state in which it existed previous to being transferred into the new cask. The sulphurous acid in this process becomes converted into sulphuric acid, and exists as such in the wine.

When the wine is stored up in casks to ripen, a constant, although very slow diffusion of air takes place, through the pores of the wood, or, what comes to the same thing, the wine is incessantly in contact with a minute amount of oxygen, by means of

which, after the lapse of a certain time, the entire quantity of the excitors of acidification, that is, the nitrogenous substances present in the wine, oxidise and separate in the form of a sediment, or dregs, termed under-yeast.

The separation of yeast from wine or beer, during the fermentation of grape-juice or of wort, takes place in consequence of the absorption of oxygen, or, in other words, a process of oxidation, occurring in the fermenting liquid. The nitrogenous constituent of barley is in its primary state insoluble in water, but in the process of malting, or whilst the grain is germinating, it becomes soluble in water, it assumes the same condition or nature which belongs to the nitrogenous constituent of grape-juice originally.

Both these substances lose their solubility in wine, or in beer, by absorbing oxygen. According to analyses in which we may confide, made with regard to this point, wine-yeast, and beer-yeast are far richer in oxygen than the nitrogenous substances from which they are derived.

As long as any particles of sugar, in a state of fermentation, are present in the fluid together with these nitrogenous matters, the fluid itself supplies the oxygen required for their transformation into yeast by the decomposition of a small amount of the sugar or of water. This oxidising process within the fluid itself, which causes the nitrogenous constituents to become insoluble, ceases with the disappearance of the sugar; but it is renewed if the fluid is reconverted into a fermenting state, by the addition of new portions of sugar, and it ensues also when the surface of the fluid is exposed to the free access of the atmosphere. In the latter case separation of the nitrogenous constituents is effected by the atmospheric oxygen, and is thus a consequence of their decay or slow combustion.

I have already stated that the presence of nitrogenous matters in alcohol causes the transformation of the alcohol into acetic acid when there is a sufficient supply of air; now it is owing to the inequalities in their relative affinities for oxygen, that during the maturation of wine in the storehouse when the access of air is extremely limited, that the nitrogenous substances alone oxidise, and not the alcohol. In open vessels, under these circumstances, the wine would become converted into vinegar.

The preceding remarks render it obvious that if we possessed any means of preventing the transformation of alcohol into acetic acid we should be able to preserve wine and beer for an unlimited period, and to bring these liquors into a state of perfect maturity; for,

under such circumstances, all those substances which cause wine and beer to acidify would become insoluble by combining with oxygen, and separate from the liquid, and with their perfect removal the alcohol present would altogether lose the property of absorbing oxygen.

Experimental art has discovered a means of accomplishing this purpose perfectly. It consists in maintaining the fluid at a low temperature when undergoing fermentation. The method based upon this principle, and employed in Bavaria, is one which the most perfect theory could scarcely have surpassed in certainty and simplicity, and it seems impossible to devise one more in accordance with science.

The transformation of alcohol into acetic acid by contact with a substance in a state of decay occurs most rapidly at a temperature of  $35^{\circ}$  ( $=95^{\circ}$  Fahrenheit.) At lower temperatures the affinity of alcohol for oxygen decreases, and at from  $8^{\circ}$  to  $10^{\circ}$  C. ( $= 46^{\circ}$  to  $50^{\circ}$  Fahrenheit) no combination with oxygen takes place under these circumstances, whilst the tendency of nitrogenous substances to absorb oxygen at this low temperature is scarcely diminished in any perceptible degree.

It is, therefore, obvious that if wort is fermented in wide, open, and shallow vessels, as is done in Bavaria, which afford free and unlimited access to the atmospheric oxygen, and this in a situation where the temperature does not exceed 8 to 10 degrees ( $= 46^{\circ}$  to  $50^{\circ}$  Fah.) a separation of the nitrogenous constituents, i.e., the exciters of acidification, takes place simultaneously on the surface, and within the whole body of the liquid. The clearing of the beer is the sign by which it is known that these matters are separated. A more or less perfectly complete removal of these nitrogenous substances, however, according to this method of fermentation, depends upon the skill and experience of the brewer. It may be easily conceived that an absolutely perfect separation of them is attained only in rare and extremely happy instances. Nevertheless, the beer obtained in this manner is invariably far superior in quality and stability to that brewed according to the common method.

The exceedingly favourable influence which the adoption of this principle must exercise upon the manufacture of wine is indisputable. It is too evident to admit of a doubt that it will lead to the adoption of a more rational method than has hitherto been employed. The reason that it has not long since been in use, and that the growers of wine have not derived from it the great advantages it is calculated to afford, is obviously their imperfect knowledge respecting

it; nay, I may say the total ignorance of the great majority of wine-growers and manufacturers upon this point.

Wine prepared by this method will, of course, bear the same relation to the wine prepared in the ordinary way, as Bavarian beer bears to common beer, in the fabrication of which the same amount of malt and hops has been employed. In the shortest possible time the same quality, the same maturity, may be attained by the wine which, under ordinary circumstances, result, only after long and protracted storing. If it be borne in mind that the period for the manufacture of wine is the end of October, just at the cool season which is peculiarly favourable to the fermentation of beer, and that no other conditions are necessary to the vinous fermentation than a cool cellar, and open, wide, shallow fermenting vessels; and further, that under all circumstances the danger of acidification being much less with wine than with beer, it is evident that the best success may confidently be expected from the application of this method.\*

The method employed at most places on the Rhine proceeds upon principles the very reverse of this. The wine is left to ferment, not in cool cellars, but in rooms, situated much too high and too warm; the access of air is completely precluded during the process of fermentation by tin-plate tubes, confined with water. These tubes certainly exercise an injurious effect upon the quality of the wine; they are, in every respect, futile—the invention of some idle brain; they serve no object, and yet they are used by people who are too idle to inquire into the matter, and who are wholly incapable of assigning any reason for their adoption.

M. BEAU has never witnessed a case of spontaneous acute peritonitis in old age. When the chronic disease has been observed at this period of life, it has generally been the consequence of cancerous (not tuberculous) productions within the abdomen.

\* One of the most intelligent agriculturists and wine-growers of the Grand Duchy of Baden, Baron von Babo, remarks, in a letter to me, dated April, 1843, "With respect to the application of the Bavarian method of fermentation to the manufacture of my red wine last autumn, I am happy to inform you that it answered excellently. Our wine-makers cannot understand the matter, clear and obvious as it is, that the method which it is universally acknowledged yields most excellent results in the manufacture of beer, should be equally advantageously applied to making wine."

An experiment made with red wine in the autumn of 1841, by the same nobleman, had afforded the same favourable results, especially as to the colour of the wine. Before these successful experiments it might have been thought that red wine was the rock upon which this method would founder, but we are now assured of its universal adaptation to the manufacture of wines.

Cures of various Diseases with Mesmerism, by different Gentlemen.

To the Editor of the *Zeist*.

Sir.—I send you the following accounts of the utility of mesmerism in diseases treated not by myself. The first is written by myself; the others by the gentlemen who did the good. I remain, yours, &c.,  
London, June 26th 1844.

JOHN ELLIOTSON

Allow me to quote the following passage from Mrs. Romer's charming work, called the *Rhone, Darro and Guadalquivir*:

"Shall I not be hailed with a shout of derision when I declare, that I verily believe Petrarch to have been (all unknown to himself, and, as innocently ignorant of his powers as Moliere's Bourgeois Gentilhomme was, who had been making prose all his life *sans s'en douter*) a most expert magnetizer?—I ground my belief upon a passage in his life, which has been dwelt upon by one of his biographers as demonstrating the errors into which a romantic imagination will hurry even a mind like Petrarch's, and the fond credulity with which he made complete abnegation of his powers of reasoning whenever any chance incident occurred of a nature to corroborate his assertions of a mystical sympathy existing between himself and her to whom his affections were exclusively devoted.

"The anecdote sets forth, that, one day at Avignon, Petrarch, who was in the habit of reciting his compositions to Laura, read to her a poem, in which, under suppositious names, the history of his passion, and the misery which the inflexible virtue of its fair object had inflicted upon him, were described with a truth and pathos which left no possibility of misapprehension in the mind of his listener. Laura understood him but too well, yet she abstained from uttering any remark to that effect. When the poem was finished, a long silence ensued; during which the eyes of each were fixed upon the other with an expression of tenderness so intense that their very souls appeared to have become transfused in that absorbing glance. At that time Laura was suffering from a slight ophthalmia; and it so chanced, says the biographer, that, on the following day, her eyes were completely restored to a healthy state, while, by an extraordinary coincidence, those of Petrarch were painfully attacked by the distressing malady under which she had suffered. Her lover, however, firmly believed that the force of sympathy, and, more especially, the ardent desire he had felt, while gazing upon her the preceding day, to relieve her from her sufferings, had given him the power to transfer them from her to himself; for such was his faith in the strength and purity of his love for her, that he believed it capable of performing miracles in her favor.

"Was not this miracle, however, the simple agency of animal magnetism, directed by those two most powerful engines the eye and

the will? I have no doubt in my own mind on the subject; and I have so frequently seen magnetizers affected by the identical symptoms from which they had relieved their patients, that the circumstance of Petrarch having gained the ophthalmia of which Laura had so suddenly been cured is to me an additional and convincing proof, that the occurrence which he had fancied to be a miracle, and which his historian had attributed to the delusions of an overwrought imagination, was neither more nor less than one of those physical phenomena of which I have seen more than one example in the practice of animal magnetism, and which form the most extraordinary and perhaps inexplicable characteristics of magnetic attraction and sympathy in the human frame.

Let those who are inclined to smile at the opinion of this accomplished lady, read the following narration.

I have just been attending a young lady for an affection of her lungs, in conjunction with Dr. Ashburner. The outer half of the white of the right eye became slightly inflamed, and grew very gradually worse for a fortnight. It then got much worse in three days, the aching being changed into sharp pains both in the eye and the temple; and the inflamed portion became of an intense and uniform red, with a palish elevation at one spot as though a pustule would form. We had been anxious to distress and weaken her as little as possible, but were now compelled to take some measure for arresting the disease, and prescribed a blister, and mercurial in medicine.

She was so agitated at hearing of our prescription, that neither the blister was put on, nor the mercurial taken. Mr. Atkinson, being a friend who was frequently at the house, mesmerised the eye the same night, (Friday June 21 st.) In the morning I found she had for the first time during three days been free from the darting pains, had slept all night—a thing she had not done for a considerable time, and that the eye was to my view less inflamed. He mesmerised it the next night, and on Sunday she was still free from all the darting pains and had slept all night, and the eye was decidedly better. He mesmerised it again with all the same results, and on Monday she had lost even the aching which she suffered for a fortnight before the darting pains. On Tuesday, the last night's mesmerisation had almost dissipated the inflammation; and to-day (Wednesday) all I see is that the eye has been inflamed—there is just a vestige left. This is as decided a cure by mesmerism as ever I have witnessed. No means but mesmerism were employed; the disease was severe, and had increased up to the moment of mesmerisation; and declined immediately after the first mesmerisation, and cleared off with a rapidity which was astonishing: and the instantaneous relief of the pain was what could not have been accomplished by any other means so admirably, for the remedy, unlike others, neither caused pain, inconvenience, or weakness.

COROLLARIES.



1. "During health the system is animated by a *spiritual, self moved vital power* which preserves it in harmonious order."

2. "It is only by means of the *spiritual influence* of the morbid agent, that our *spiritual vital power*, can be diseased, and in like manner, only by the *spiritual (dynamic)* operation of medicine that health can be restored."

3. "The homoeopathic healing art develops for its purpose the IMMATERIAL (DYNAMIC) VIRTUES OF MEDICINAL SUBSTANCES, and to a degree previously unheard of, by means of a *peculiar and hitherto untried process*. By this process it is that they become penetrating, operative, and remedial, even those that in a *natural or crude state*, betrayed not the *least medicinal power* upon the human system."

HAHNEMANN

It was the magnetising process by which Hahnemann increased the power of his medicines, and the same as that directed and practised by Clairvoyants, in the mesmeric state.

At one time, men would make for themselves an imaginary incorporeal something, which guided and ruled the whole system in its vicissitudes of health and disease (Van Helmont's *Archæus*, Stahl's *Animal Soul*); at another, they could flatter themselves they had discovered the secret of physical constitutions and temperaments, as well as of the origin of particular diseases and epidemics, in the constellations of the stars, in an influence emanating from the heavenly bodies, many millions of miles distant;—or (according to the modern wide-spread notion, based on ancient absurdities), the human body, in agreement with the primeval mystic Trinity, developed itself in triplicity, presented a miniature of the universe (microcosm-macrocosm); and thus, by means of our knowledge of the great whole, miserably defective as it is, was to be explained, to a hair's breadth. That which had baffled clear chemistry and physics, dim, self-unintelligible mysticism and frenzied fancy were to bring to light: where young natural philosophy had failed, old astrology was to succeed.

Thus did the leaders of the medical sects and their followers, whenever they sought to analyze health and disease, and its cure, deviate more or less widely from the truth; and the only use of piles of folios, quartos, and octavos, which cost a lamentable expenditure of time and energy, is to frighten us from indulging in a like explanation-mania, and teach us that all such immense exertions are nothing but pernicious folly.

HAHNEMANN.

According to theory founded upon an innumerable number of corresponding facts the magnetic forces pervade all space; are innate in, and produce motion in every kind of matter. In the air; in odors; in fluids, and solids; in the solar system, and in the vegetable and animal kingdoms.

These forces which the ancients called male and female spiritual forces, are generally imbued more or less with minute or evanescent portions of different kinds of matter of the bodies with which they are connected, and which apparently modifies their action in some degree, under certain circumstances, and hence the modern names of electricity, galvanism, and electro-magnetism, &c.

Besides these evidences of the ignorance of the moderns upon this subject, they call these forces a fluid. They never it seems can have any conception of any thing finer than a fluid—of spirit, without attaching to it the idea of a fluid, which has in fact no character in common with it. The following article from the *Columbian Magazine*, may, however give them some new and important views of this interesting subject.

MESMERIC REVELATION.

BY EDGAR A. POE.

Whatever doubt may still envelope the *rationale* of mesmerism, its startling facts are now almost universally admitted. Of these latter, those who doubt are your mere doubters by profession—an unprofitable and disreputable tribe. There can be no more absolute waste of time than the attempt to prove, at the present day, that man, by mere exercise of will, can so impress his fellow as to cast him into an abnormal condition, whose phenomena resemble very closely those of death, or at least resemble them more nearly than they do the phenomena of any other normal condition within our cognizance; that, while in this state, the person so impressed employs only with effort, and then feebly, the external organs of sense, yet perceives, with keenly refined perception, and through channels supposed unknown, matters beyond the scope of the physical organs; that, moreover, his intellectual faculties are wonderfully exalted and invigorated; that his sympathies with the person so impressing him are profound; and finally, that

his susceptibility to the impression increases with its frequency, while, in the same proportion, the peculiar phenomena elicited are more extended and more pronounced.

I say that these—which are the laws of mesmerism in its general features—it would be supererogation to demonstrate; nor shall I inflict upon my readers so needless a demonstration to-day. My purpose at present is a very different one indeed. I am impelled, even in the teeth of a world of prejudice, to detail without comment the very remarkable substance of a colloquy, occurring not many days ago between a sleep waker and myself.

I had long been in the habit of mesmerizing the person in question, (Mr. Vankirk,) and the usual acute susceptibility and exaltation of the mesmeric perception had supervened. For many months he had been laboring under confirmed phthisis, the more distressing effects of which had been relieved by my manipulations; and on the night of Wednesday, the fifteenth instant, I was summoned to his bedside.

The invalid was suffering with acute pain in the region of the heart, and breathed with great difficulty, having all the ordinary symptoms of asthma. In spasms such as these he had usually found relief from the application of mustard to the nervous centres, but to-night this had been attempted in vain.

As I entered his room he greeted me with a cheerful smile, and although evidently in much bodily pain, appeared to be, mentally, quite at ease.

"I sent for you to night" he said, "not so much to administer to my bodily ailment as to satisfy me concerning certain psychal impressions which, of late, have occasioned me much anxiety and surprise. I need not tell you how skeptical I have hitherto been on the topic of the soul's immortality. I cannot deny that there has always existed, as if in that very soul which I have been denying, a vague, half sentiment of its own existence. But this half sentiment at no time amounted to conviction. With it my reason had nothing to do. All attempts at logical inquiry resulted, indeed, in leaving me more skeptical than before. I had been advised to study Cousin. I studied him in his own works as well as in those of his European and American echoes. The "Charles Elwood" of Mr. Brownson, for example, was placed in my hands. I read it with profound attention. Throughout I found it logical, but the portions which were not merely logical were unhappily the initial arguments of the disbelieving hero of the book. In his summing up it seemed evident to me that the reasoner had not even succeeded in convincing himself. His end had

plainly forgotten his beginning, like the government of Trinculo. In short, I was not long in perceiving that if man is to be intellectually convinced of his own immortality, he will never be so convinced by the mere abstractions which have been so long the fashion of the moralists of England, of France, and of Germany. Abstractions may amuse and exercise, but take no hold upon the mind. Here upon earth, at least, philosophy, I am persuaded, will always in vain call upon us to look upon qualities as things. The will may assent—the soul—the intellect, never.

I repeat, then, that I only half felt, and never intellectually believed. But latterly there has been a certain deepening of the feeling, until it has come so nearly to resemble the acquiescence of reason, that I find it difficult to distinguish between the two. I am enabled, too, plainly to trace this effect to the mesmeric influence. I cannot better explain my meaning than by the hypothesis that the mesmeric exaltation enables me to perceive a train of convincing ratiocination—a train, which in my abnormal existence, convinces, but which, in full accordance with the mesmeric phenomena, does not extend, except through its effect, into my normal condition. In sleep-waking, the reasoning and its conclusion—the cause and its effect—are present together. In my natural state, the cause vanishing, the effect only, and perhaps only partially, remains.

These considerations have led me to think that some good results might ensue from a series of well directed questions propounded to me while mesmerized. You have often observed the profound self-cognizance evinced by the sleep-waker, the extensive knowledge he displays upon all points relating to the mesmeric condition itself; and from this self-cognizance may be deduced hints for the proper conduct of a catechism.

I consented of course to make this experiment. A few passes threw Mr. Vankirk into the mesmeric sleep. His breathing became immediately more easy, and he seemed to suffer no physical uneasiness. The following conversation then ensued. V. in the dialogue representing Mr. Vankirk, and P. myself.

P. Are you asleep?

V. Yes—no; I would rather sleep more soundly.

P. (After a few more pauses.) Do you sleep now?

V. Yes.

P. Do you still feel the pain in your heart?

V. No.

P. How do you think your present illness will result?

V. (*After long hesitation and speaking as if with effort.*) I must die.

P. Does the idea of death afflict you?

V. (*Very quickly.*) No—no!

P. Are you pleased with the prospect?

V. If I were awake I should like to die, but now it is no matter. The mesmeric condition is so near death as to content me.

P. I wish you would explain yourself, Mr. Vankirk.

V. I am willing to do so, but it requires more effort than I feel able to make. You do not question me properly.

P. What then shall I ask?

V. You must begin at the beginning.

P. The beginning? but where is the beginning.

V. You know that the beginning is God. [This was said in a low, fluctuating tone, and with every sign of the most profound veneration.]

P. What then is God?

V. (*Hesitating for many minutes.*) I cannot tell.

P. Is not God spirit?

V. While I was awake I knew what you meant by "spirit," but now it seems only a word—such for instance as truth, beauty,—a quality, I mean.

P. Is not God immaterial?

V. There is no immateriality—it is a mere word. That which is not matter is not at all, unless qualities are things.

P. Is God, then, material?

V. No. [*This reply startled me very much.*]

P. What then is he?

V. (*After a long pause and mutteringly*) I see—but it is a thing difficult to tell. [*Another long pause.*] He is not spirit, for he exists. Nor is he matter, as you understand it. But there are gradations of matter of which man knows nothing; the grosser impelling the finer, the finer pervading the grosser. The atmosphere, for example, impels or modifies the electric principle, while the electric principle permeates the atmosphere. These gradations of matter increase in rarity or fineness, until we arrive at matter a *unparticle*—without particles—indivisible—one; and here the law of impulsion and permeation is modified. The ultimate, or unparticle matter, not only permeates all things but impels all things—and thus is all things within itself. This matter is God. What man vaguely attempt to embody in the word "thought," is this matter in motion.

P. The metaphysicians maintain that all action is reducible to motion and thinking—

and that the latter is the origin of the former.

V. Yes; and I now see the confusion of idea. Motion is the action of *mind*—not of *thinking*. The unparticle matter, or God, in quiescence, is (as nearly as we can conceive it) what men call mind. And the power of self-movement (equivalent in effect to human volition) is, in the unparticle matter, the result of its unity and omniprevalence; how, I know not, and now clearly see that I shall never know. But the unparticle matter, set in motion by a law, or quality, existing within itself, is thinking.

P. Can you give me no more precise idea of what you term the unparticle matter?

V. The matters of which man is cognizant escape the senses in gradation. We have, for example, a metal, a piece of wood, a drop of water, the atmosphere, a gas, caloric, light, electricity, the luminiferous ether. Now we call all these things matter, and embrace all matter in one general definition; but in spite of this, there can be no two ideas more essentially distinct than that which we attach to a metal, and that which we attach to the luminiferous ether. When we reach the latter, we feel an almost irresistible inclination to class it with spirit, or with nihilism. The only consideration which restrains us is our conception of its atomic constitution; and here, even, we have to seek aid from our notion of an atom, possessing in infinite minuteness, solidity, palpability, weight. Destroy the idea of the atomic constitution and we should no longer be able to regard the ether as an entity, or at least as matter. For want of a better word we might term it spirit. Take, now a step beyond the luminiferous ether—conceive a matter as much more rare than the ether as this ether is more rare than the metal, and we arrive at once (in spite of all the school dogmas) at an unique mass—at unparticle matter. For, although we may admit infinite littleness in the atoms themselves, the infinitude of littleness in the spaces between them is an absurdity. There will be a point, there will be a degree of rarity, at which if the atoms are sufficiently numerous, the interspaces must vanish, and the mass absolutely coalesce. But the consideration, of the atomic construction being now taken away, the nature of the mass inevitably glides into what we conceive of *spirit*. It is clear, however, that it is as fully *matter* as before. The truth is, it is impossible to conceive spirit, since it is impossible to imagine what is not. When we flatter ourselves that we have formed its conception, we have merely deceived our understanding by the consideration of infinitely rarefied matter.

P. But, in all this, is there nothing of irreverence? [I was forced to repeat this question before the sleep-waker fully comprehended my meaning.]

V. Can you say *why* matter should be less revered than mind? But you forget that the matter of which I speak is, in all respects, the very "min" or "spirit" of the schools, so far as regards its high capacities, and is, moreover, the "matter" of these schools at the same time. God, with all the powers attributed to spirit, is but the perfection of matter.

P. You assert, then that the unparticled matter in motion, is thought?

V. In general, this motion is the universal thought of the universal mind. This thought creates. All created things are but the thoughts of God.

P. You say "in general."

V. Yes. The universal mind is God.—For new individualities, *matter* is necessary.

P. But you speak of "mind" and "matter" as do the metaphysicians.

V. Yes—to avoid confusion. When I say "mind," I mean the unparticled or ultimate matter; by "matter," I intend all else.

P. You were saying that "for new individualities matter is necessary."

V. Yes; for mind existing unincorporate, is merely God. To create individual, thinking beings, it was necessary to incarnate portions of the divine mind. Thus man is individualized. Divested of corporate investiture, he were God. Now, the particular motion of the incarnated portions of the unparticled matter is the thought of man; as the motion of the whole is that of God.

P. You say that divested of the body man will be God?

V. (*After much hesitation.*) I could not have said this; it is an absurdity;

P. (*Referring to my notes.*) You did say that "divested of corporate investiture man were God."

V. And this is true. Man thus divested would be God—would be unindividualized.—But he can never be thus divested—at least never *will* be—else we must imagine an action of God returning upon itself—a purposeless and futile action. Man is a creature. Creatures are thoughts of God. It is the nature of thought to be irrevocable.

P. I do not comprehend. You say that man will never put off the body?

V. I say that he will never be bodiless.

P. Explain.

N. There are two bodies—the rudimental and the complete; corresponding with the two conditions of the worm and the butterfly. What we call "death" is but the painful metamorphosis. Our present incar-

nation is progressive, preparatory, temporary. Our future is perfected, ultimate, immortal. The ultimate life is the full design.

P. But of the worm's metamorphosis we are palpably cognizant.

V. We, certainly—but not the worm.—The matter of which our rudimental body is composed, is within the ken of the organs of that body; or more distinctly our rudimental organs are adapted to the matter of which is formed the rudimental body; but not to that of which the ultimate is composed. The ultimate body thus escapes our rudimental senses, and we perceive only the shell which falls in decaying from the inner form; not that inner form itself; but this inner form, as well as the shell, is appreciable by those who have already acquired the ultimate life.

P. You have often said that the mesmeric state very nearly resembled death. How is this?

V. When I say that it resembles death, I mean that it resembles the ultimate life; for the senses of my rudimental life are in abeyance, and I perceive external things directly, without organs, through a medium which I shall employ in the ultimate, unorganized life.

P. Unorganized?

V. Yes; organs are contrivances by which the individual is brought into sensible relation with particular classes and forms of matter, to the exclusion of other classes and forms. The organs of man are adapted to his rudimental condition, and to that only; his ultimate condition, being unorganised, is of unlimited comprehension in all points but one—the nature of the volition, or motion, of the unparticled matter. You will have a distinct idea of the ultimate body by conceiving it to be entire brain. This it is *not*; but a conception of this nature will bring you near to a comprehension of what it is. A luminous body imparts vibration to the luminiferous ether. The vibrations generate similar ones within the retina, which again communicate similar ones to the optic nerve. The nerve conveys similar ones to the brain; the brain, also, similar ones to the unparticled matter which permeates it. The motion of this latter is thought, of which perception is the first undulation. This is the mode by which the mind of the rudimental life communicates with the external world; and this external world is limited through the idiosyncrasy of the organs. But in the ultimate, unorganized life, the external world reaches the whole body, (which is of a substance having affinity to brain, as I have said) with no other intervention than that of an infinitely rarer ether than even the luminiferous.



ous; and to this ether—in unison with it—the whole body vibrates, setting in motion the unparticled matter which permeates it.—It is to the absence of idiosyncratic organs, therefore, that we must attribute the nearly unlimited perception of the ultimate life.—To rudimental beings, organs are the cages necessary to confine them until fledged.

P. You speak of rudimental “beings”.—Are there other rudimental thinking beings than man?

V. The multitudinous conglomeration of rare matter into nebulae, planets, suns and other bodies which are neither nebulae, suns, nor planets, is for the sole purpose of supplying *potulum* for the idiosyncrasy of the organs of an infinity of rudimental beings.—But for the necessity of the rudimental, prior to the ultimate life, there would have been no bodies such as these. Each of these is tenanted by a distinct variety of organic, rudimental, thinking creatures. In all, the organs vary with the features of the place tenanted. At death, or metamorphosis, these creatures, enjoying the ultimate life, and cognizant of all secrets but *the one*, pervade at pleasure the weird dominions of the infinite.

As the sleep-waker pronounced these latter words, in a feeble tone, I observed upon his countenance a singular expression, which alarmed me, and induced me to awake him at once. No sooner had I done this, than, with a bright smile irradiating all his features, he fell back upon his pillow and expired. I noticed that in less than a minute afterwards his corpse had all the stern rigidity of stone.

#### Observations in Midwifery.

BY TYLER SMITH, M. B., London.

#### Sketch of the Physiology of Parturition.

“At the time of labour a new principle supercedes those of ascension and descent. This gives a disposition to the uterus to exclude whatever is contained in its cavity, and the effect produced is in proportion to the energy of the principle, and to the power of the uterus. A perfect intelligence of this principle, and of the mode of its operation, would probably be of infinite use in practice, as we might be enabled to suppress the action thereby occasioned when premature, moderate it when too violent, strengthen it when too feeble, and regulate it in a variety of ways conducive to the welfare of our patients. On the knowledge we at present have of the manner in which this principle operates, and the circumstances by which it is influenced, the assistance which science and dexterity

can give in cases of difficult parturition, and in preventing abortions, very much depends.”—Denman.

Up to the present time it will be acknowledged that the parturient function of the uterus has been an *unwritten* chapter in physiology. The nature and causes of the motor forces which expel the foetus have been in great measure lost sight of, obstetricians having chiefly occupied themselves with an examination of the mechanism of labour,—in defining the mensuration of the different diameters of the pelvis and of the foetal head,—and in settling the precise axis along which the child passes. These are points of practical moment, inasmuch as by a knowledge of them we judge if the passage of the head can be accomplished without artificial assistance; but they are not capable of more extended application to the management of labour.

The motor power exerted in natural parturition is of a mixed kind, being in part *voluntary*, partly dependent on *emotion*, and partly *excito-motor*. Volition is generally exerted in the latter part of labour, especially in labours subsequent to the first, the voluntary effort being similar to the voluntary part of the act of defecation. In primipara little voluntary effort is made unless the patient has been mal-advised.

Emotion is chiefly of importance as *modifying* reflex motor action. It is matter of experience that confidence, hope, fear, anger, or despair, may either increase or diminish the voluntary and reflex actions concerned in parturition. The motor forces dependent on *emotion*, and on the *will*, are intended to be *accessory*, but they are not *essential*, to the expulsion of the child. The evacuation of the gravid uterus can be performed perfectly by reflex motor action alone, as a function of the true spinal system. Delivery may take place during the coma of puerperal convulsions, during sleep, paraplegia, or even after the death of the mother, when the functions of the cerebrum are either suspended or annihilated.

It may be stated briefly that labour consists of positive dilatation of the os uteri and the vagina, the action of the muscles of expiration, and contraction of the uterus and the vagina; all *excito-motor* phenomena, which are *aided* by volition, and *modified* by emotion.

To give the proofs that the act of parturition is *excito-motor* :—

1. The abdominal segment of the dragon-fly lays eggs after its separation from the other part of the body of the insect.

2. If the border of the cloaca in the hen be irritated with a few grains of common salt,

parturient action is excited, and the egg expelled.

3. Irritation of the os uteri produces abortion by inducing contractions of the uterus.

4. The coal water douche upon the abdomen excites contractions of the uterus in uterine inertia and in uterine hæmorrhage.

5. But the most positive and conclusive proof, and one which can alone be accounted for on the principle of reflex action, is the fact recognised by experienced accoucheurs, that the application of the child to the breast excites distinct uterine contractions.

6. Equally conclusive, if proved, is the reflex action between the stomach and the uterus. It has not been noticed hitherto as such, but I believe that irritation of the gastric division of the pneumo-gastric nerve during labour excites distinct uterine contractions. This subject I propose to treat of in a separate paper.

I reserve, too for another occasion, the inquiry into the immediate causes which give to the nerves and muscles of the uterus, and the other parts concerned in the expulsion of the fœtus, the tendency to be excited in such manner as to produce labour at a particular time; and shall now proceed to examine the phenomena of excito-motor action as they actually occur.

In the present place I insert a division of natural labour into three stages, in accordance with the physiological action of the parts engaged in the act of parturition. My readers will be enabled to judge, from the argument that follows it, of the propriety of such an arrangement.

#### FIRST STAGE.

Dilatation of the os uteri. Commencement of the dilatation of the vagina. Contraction of the fundus and body of the uterus.

#### SECOND STAGE.

Closure of the glottis. Closure of the cardia. Forcible contraction of the muscles of expiration. Contraction of the uterus. Complete dilatation of the vagina.

#### THIRD STAGE.

Closure of the glottis. Closure of the cardia. Contraction of the muscles of expiration. Contraction of the uterus. Contraction of the vagina. Probable contraction of the levatores ani. Dilatation of the sphincter ani.

For some days before the accession of the regular pains which are recognised as constituting labour, the fundus and body of the uterus contract upon its contents in an equa-

ble and continuous manner, so as to force the head of the child low down into the pelvis, and thus the patient's size is considerably diminished. This contraction of the uterus is caused by the presence of the fœtus. The same kind of unintermittent contraction is observed in certain labours where, in lieu of regular pains, the uterus remains for many hours firmly contracted round the fœtus without any remission. In consequence of this kind of contraction, and the gradual disappearance of the cervix uteri in the latter months of pregnancy, the head of the child becomes placed directly in contact with the os uteri, the portion of the uterus most sensitive.—in fact, most excitor of all the parts concerned in parturition. At the same time, or nearly so, that the fundus and body of the uterus contract, the os uteri commences its dilatation.

I do not, on the present occasion, attempt to decide how much of this continuous action of the uterus, which precedes, and mingles with, the regular pains of labour, is dependent on the direct action of the *vis nervosa*; or, in other words, on the irritability of the contractile fibres of the uterus. Nor shall I attempt to define the modifications of true spinal action produced by the development of the ganglionic nerves of the uterus during pregnancy, as described by Dr Lee. The continuous and periodic contractions ought to be arranged under different heads, and we must probably attribute the periodicity of uterine action to the influence of the ganglionic system.

When labour has actually commenced the whole internal surface of the uterus, the cervix and os uteri, and the vaginal passage, are in high degree excito-motor. The incident spinal nerves proceeding from these parts are the principal excitors of the reflex actions in natural labour. Impressions on any part of their extensive surfaces produce reflex-motor action in the uterus itself, or in the other muscles associated with this organ during parturition.

The motor phenomena of labour are, as I have already stated, of two distinct kinds, namely, *contraction* and *dilatation*. Contraction of the uterus and of the abdominal and other muscles, so as to increase the action of the uterus, and dilatation of the outlet of the uterine cavity and the whole vaginal passage, to permit the exit of the child. Subsequent to the dilatation of the vagina, contraction of this part occurs to expedite delivery; I proceed, in the first place, to treat of the mode in which the dilatation of the parts is affected—a novel and important subject.

*Positive Dilatation of the Os and Cervix Uteri, and of the Vagina, during Labour.*

Accoucheurs have noticed, as remarkable facts, that for some time before the accession of labour and during its first stage, the os uteri is sensibly dilated, and that the vagina dilates long before the mechanical pressure of the head of the child can possibly have had any share in the process. No satisfactory attempt has hitherto been made to explain these curious phenomena. The study of reflex-motor action appears to afford a clue to the solution of the difficulty, and to point out the source of the discrepancies of midwifery writers on this point.

Let us examine other physiological actions which resemble the dilatation of the vagina and os uteri. We may observe that in the process of defecation, at the same time that the abdominal and other muscles contract so as to lessen the cavity of the abdomen (and thus exert pressure on the rectum, which has besides its own independent contraction) there is a *positive dilatation of the sphincter ani*. The feces could not, in fact, be extruded unless the sphincter opened during the instant of the action of the other muscles. This positive dilatation takes place in the involuntary action of the bowels, when it is purely a reflex act, or the sphincter may be dilated by a voluntary effort. Thus, what do we direct in the severe pains produced by the impaction of internal hæmorrhoidal tumors within the contracted sphincter? We recommend the patient to strain as if at a stool, and immediately the sphincter dilates, the tumor may be returned and the pain departs. The old explanation of this action of the sphincter was that the longitudinal fibres of the rectum dragged the sphincter open by their contraction, though the sphincter is infinitely the more powerful of the two.

Dewees, Sir C. Bell, and Rigby have thus explained the dilatation of the os uteri. The latter says, "it does not dilate merely by the mechanical stretching which the pressure of the membranes and presenting part exert upon it; it dilates in consequence of its circular fibres being no longer able to maintain that state of contraction which they have preserved during pregnancy; they are overpowered by the longitudinal fibres of the uterus, which, by their contractions, pull open the os uteri in every direction." There is here no recognition of the *positive dilatation* of the cervix uteri for which I am contending. Dr. Ramsbotham, though he perceives the fallacy of a mere mechanical distention of the os uteri is exceedingly vague in his explanation of the matter. His words are, "Some physiologists would teach us to believe that dilatation in labour is entirely a mechanical

act; that, as the uterus contracts, it propels the head first through the os uteri, by dilating it mechanically, then through the vagina, and lastly, through the external parts, solely by the same forcible distention. It is evident from the structure of the organs that a mechanical dilatation to such a great extent never could take place unless a corresponding disposition to relax were given them at the same time; therefore we must consider the dilatation of the passages *not entirely dependent on mechanical distention*, but that it is in great measure to be referred to that institute of nature which induces them to become relaxed and softened when the uterus is about to commence contraction." The "disposition to relax" is a *positive dilatation*, the "Institute of nature," the reflex-motor-function, now first applied to this subject.

To give another illustration. In the case of deglutition, the act of swallowing consists of contraction of the constrictors of the pharynx, with a simultaneous dilatation of the cardia. The cardia dilates to receive the food in deglutition, while in defecation it contracts, otherwise the contents of the stomach would be expelled at the same time with those of the rectum. The dilatation and contraction of the cardia may either depend on reflex action or on volition. In swallowing, in defecation, and in vomiting, the action of the cardia is purely excitomotor; but there are many persons who can voluntarily open the cardia so as to allow of the passage of gas from the stomach to the pharynx. Some can even imitate the ruminants, and return the food to the mouth in the same manner.

To apply these physiological facts, all of which are entirely deduced from the researches of Dr. Marshall Hall into the physiology of the true spinal system, to the explanation of the process of parturition:—

It has been already remarked that before the commencement of actual labour the os uteri sensibly dilates and softens. The dilatation at this time can neither depend on any expulsive force brought to bear against it, nor on any contraction of the longitudinal fibres. It is confined to the os uteri, and must be essentially positive. It is also without doubt reflex in its nature, closely resembling the opening of the cardia from the presence of food in the pharynx, though it takes place in a more gradual manner. The whole of the uterus is composed of the same contractile tissue, and let us observe what would be the result if the whole organ contracted at the same time.—The fundus and body of the uterus would contract, and undoubtedly the os uteri would close firmly if there were any contraction of the circular fibre. Let those who think the

body and fundus of the uterus could overpower the contraction of the os uteri, consider for a moment that the united force of all the respiratory muscles is sufficient to force the small muscles which closes the glottis.

During the recession of a pain the os uteri is in some degree closed, even when its dilatation has considerably advanced. There is an alteration of action in the two parts. When the expulsive pain comes on, and the head of the child is pressed downward by the contraction of fundus and body of the uterus, at this moment the os uteri is most widely opened. In fact, this dilatation during a pain is held to be a diagnostic mark of the true labor-pain. If the uterus contracts forcibly without any distention of its mouth, the pains are said to be false. Nothing can be more conclusive than this as evidence of *positive dilatation*.

Thus, then, we have a simple physiological explanation of the opening of the os uteri previous to the commencement and during the continuance of uterine contractions. This function continues throughout the process of natural labor, under the influence of reflex-motor action, and is a beautiful provision against the rupture of the uterus.

The *dilatation* of the vagina before the head has passed through the os uteri, frequently considered the result of pressure or *passive dilatation*, is of the same *positive* kind. It is one part of the concatenation of events by which delivery is effected. At the same time that active contractions are going on in the uterus, a *positive dilatation* is going on in the passages through which the fetus has to be expelled. When the second stage of labor has commenced, and the abdominal muscles are acting forcibly, this dilatation of the vagina is increased by the effects of mechanical pressure. I shall have to revert to this point hereafter. The dilatation commences at the os uteri, and gradually proceeds downwards to the vulva; but in its whole course it distinctly precedes the mechanical pressure of the child upon the parts.

On a future occasion I propose to examine whether there is not during pregnancy, in addition to the constrictor vaginae, a development of the cellulo-fibrous sheath which envelops the vagina, and which, at its upper part is continuous with the fibrous structure of the uterus; similar in kind, though not in extent, to that which takes place in the uterus. We know that in the early months there is contraction, but afterwards a dilatation and even protrusion of the vagina; and during labor not only is its diameter increased, but its length becomes greater. These would form *a priori* reasons for believing in the growth of the part, but during labor the contractile

power of the vagina is also considerably increased. The exclusion of the placenta by the action of the vagina alone, is a proof of this.

### *Excito-motor Action of the Uterus.*

The action of the uterus is usually periodic, consisting of intervals of contraction and relaxation. The fetus is the natural stimulus of the uterus, but all the reflex acts which constitute labor may be excited by any other irritation of the uterus; such for instance, as the presence of polypus or hydatids. I have known the uterus ruptured by the violence of its own contractions when thus excited. The power of irritation of the mucous surface of the uterus to produce reflex action of the organ, is seen when the hand of the accoucheur is introduced in the operation of turning. The introduction of the hand to promote the exclusion of the placenta, or to arrest hæmorrhage, by causing contractions of the uterus, are other familiar instances of excito-motor action, though they have not been accurately recognised as such.

The os uteri is an excitor of reflex action to a greater extent than any other part of the uterus. The pains of labor are more violent when the head of the child is pressing on the os uteri, or passing through it, than they are before. It is well known that if the membranes are broken early, and the water evacuated so as to permit the head of the child to press on the os uteri, the pains are much increased in severity and frequency, though the labor is often tedious in consequence of the motor force being expended in the evacuation of the amniotic fluid. It is on this principle that premature labor is induced by perforation of the os uteri. Some obstetric authorities have recommended the introduction of a plug into the upper part of the vagina, so as to irritate the os uteri, as a mode of procuring delivery in certain cases. Very recently it has been observed that even the *ballotement*, if rudely performed, is sufficient to cause abortion.

In natural labor the presence of the child only excites the action of the uterus itself during the first stage of labor; no other motor effort of an expulsive kind takes place, either voluntary or reflex. Those cases must be considered complicated in which the muscles of the abdomen are excited to contractions, or in which spasmodic actions of other muscles occur in this stage.

### *The Excito-motor Actions caused by the presence of the Child in the Vagina.*

When the second stage of labor, as it is termed, has commenced, and the head of the

child has entered the vagina, the muscles of the respiratory system become powerfully excited, in addition to the action of the uterus. Accoucheurs have held the most contradictory opinions concerning the muscular efforts made in this stage of labor. Many look on the extra-uterine contractions as entirely voluntary, while others hold exactly the contrary opinion. Thus, Dr. Ramsbotham says that "the auxiliary muscles which assist the uterus in its contractions are, in a great degree, voluntary." Dr. Lee, on the other hand, is of opinion that there ought to be no voluntary action in parturition. I would maintain that the greater part of the extra-uterine muscular action is as purely excito-motor as that of the uterus itself, though patients frequently mix up voluntary exertions with the true reflex actions, so as, in some measure, to confuse them. It will, however, be found that during a severe pain they have no power to arrest the contractions of the abdominal muscles, though they can increase their intensity by an effort of the will.

That the action of the respiratory muscles is involuntary and reflex, I have no doubt, and I may here instance an illustration of the wisdom of such an arrangement. If the tremendous efforts made by women in labor, often for many hours successively, were voluntary, they would necessarily produce excessive fatigue; whereas Dr. Marshall Hall has shown that the reflex motions are of greater energy than the voluntary motions, and continue without causing the same degree of weariness. It is perfectly wonderful to see delicate and emaciated females, with little muscular strength, after twenty-four or thirty six hours of severe labor, appear calm and refreshed immediately their delivery is accomplished.

During the severe pains produced by the presence of the head of the child in the vagina, the glottis is closed, so as to fix the chest, and the cardia and sphincter ani are also shut, while all the respiratory muscles are acting as in forcible expiration. Closure of the glottis is an important feature; but in severe pains, it is as perfectly involuntary as it is in deglutition, in vomiting, or even in epilepsy. When the glottis is closed, the patient by voluntary effort, assists in fixing the chest by grasping with the hands and planting the feet against some fixed body. Dr. Ramsbotham supposes that the diaphragm acts during the expulsive effort. A moment's consideration will show the fallacy of this. The action of the respiratory muscles, those of the glottis, the intercostals, and the abdominal muscles, is that of forcible expiration with the glottis closed. Now, the diaphragm is the great muscle of inspiration; it can only act in fil-

ling the chest. During the parturient efforts it must, therefore, be in a state of relaxation floating between the cavities of the thorax and abdomen, so as to render them, in effect, as one, precisely as in vomiting.

These, then, are the true distinctions between the first and second stages of labour. In the first the excito-motor action is confined to the uterus, or nearly so; in the second it is more extensive. The only obstetricians whom I can discover to have held any thing approaching to this opinion are Wigand, and after him, Dr. Rigby; but they refer to mere sympathy between the vagina and the abdominal muscles. Dr. Rigby is the most explicit. He considers "there is the same relation between these muscles (the abdominal) and the vagina, as there is between them and the rectum." Dr. Rigby is, however, silent about the more extended muscular actions excited through the vagina, and their excito-motor nature. On the other hand, Dr. Fleetwood Churchill, one of the most recent writers on midwifery, expresses himself thus: "It is not easy to explain the change in the character of the pains, nor why straining should only occur in the second stage. Wigand attributes it to the sympathy between the abdominal and other muscles. *It certainly cannot be merely owing to the presence of the fetal head in the vagina.*" Besides the support afforded to the uterus in the parturient process, by the action of the expiratory muscles, it is of essential service in another mode. While the irritation of the vagina excites the action of the abdominal and other muscles, the straining thus occasioned tends to dilate the vagina itself. This seems the most probable explanation of the mode in which the positive dilatation of the vagina of which I have spoken, as independent of mechanical pressure, is chiefly produced. Women can themselves feel, even before the head has entirely descended into the vagina, that at each pain there is a straining, a sensation of muscular effort, in the vagina itself. Manual examination demonstrates that in the first, and more particularly in the second stage of labour, this action is dilatation, and not contraction.

In the first stage of labour, when the head of the child is wholly within the uterus, and the reflecto-motor action is confined to this organ, the patient is generally timid and irritable, manifesting considerable impatience of her sufferings and alarm for the result. But when the second stage has commenced, and the descent of the head into the vagina calls the respiratory muscles into action, the woman is no longer irresolute. She exhibits a remarkable change from timidity to confidence and determination. In the one case her cries

are frequent and distressing, in the other she remains silent, or, at most, only a slight cry escapes her on the subsidence of a pain. Yet her sufferings in the latter are equally acute. Her silence may be said to depend on the closure of the glottis, but the change of mind is evident in her whole physiognomy. Dr. Marshall Hall has shown, that whatever may be their seat, the manifestations of passion and emotion, are invariably made through the medium of the true spinal system; and it is remarkable that the purely involuntary, or reflex-motor efforts, made in the second part of labour, exactly represent the change which has taken place in the mind of the patient. The involuntary and reflex workings of the muscles of expression are precisely those which would be called up to portray the most intense degree of mental energy and resolution. I am not here attempting to place these facts in the relation of cause and effect, but merely marking their coincidence.

When the dilatation of the os uteri, the vagina, and the external parts is accomplished and while the respiratory system and the uterus unite in energetic contraction, a new series of actions commence and facilitate the final expulsion of the child and afterwards of the placenta. This though an innovation I have ventured to call the *third stage* of labour. It consists of contraction of the vagina itself; retraction of the perineum over the head of the child, assisted probably by contraction of the levators ani, and dilatation of the sphincter ani, which in the previous stages remains closed. The head of the child is generally expelled with considerable force at once, but the trunk remains for a short time, if allowed to do so, in the vagina. I believe that when in this situation it has, in great measure, escaped from the action of the uterus, and is expelled by the contractions of the vagina. It is well known that when the placenta has descended into the vagina, it has the power of excluding it without assistance. Indeed, Denman recommends that this practice should be followed in order to diminish the intensity of the after-pains. This action of the vagina would certainly favour the idea of the development of its fibrous covering during pregnancy, as its contractile power is very slight in the unimpregnated state.

In certain cases, irregular, or as they have been termed, metastatic pains occur, and prove embarrassing to the practitioner, and are a real impediment to the progress of labour. They sometimes affect the bladder, at other times the abdominal muscles, but not synchronously with the uterus; or the rectum, the thighs, and other parts, the uterus being either little or only irregularly affected. They

are generally dependent either on the *vis nervosa* being reflected from the uterus in irregular arcs, or the irritation, instead of proceeding from the fœtus, is caused by fatigue, general irritability, a loaded state of the stomach, the rectum, the large intestine, or the bladder, according as the case may be.

#### TABLE OF THE ACT OF PARTURITION IN FIRST STAGE.

##### I.

##### *The Excitors.*

The incident nerves proceeding from the inner surface of the uterus, particularly the os and cervix uteri.

##### II.

##### *The Centric Organ.*

The medulla spinalis.

##### III.

##### *The Motors.*

1. The motors which *contract* the fundus and body of the uterus.
2. The motors which *dilate* the os uteri and the vagina.

#### TABLE OF THE ACT OF PARTURITION IN THE SECOND STAGE.

##### I.

##### *The Excitors.*

1. The incident nerves proceeding from the inner surface of the uterus.
2. The incident nerves proceeding from the vagina.
3. In numerous cases the gastric branches of the pneumogastric and the incident nerves of the rectum and bladder become excitors of parturient action. It remains to be decided whether these facts should be classed with physiological or pathological phenomena.

##### II.

##### *The Centric Organ.*

The medulla oblongata and spinalis

##### III.

##### *The Motors.*

1. The motors which *close* the glottis.
2. The motors which *close* the cardia.
3. The motors which *contract* the uterus.
4. The motor nerves of expiratory effort.
5. The motors which *dilate* the vagina.

#### TABLE OF THE ACT OF PARTURITION IN THE THIRD STAGE.

##### I.

##### *The Excitors.*

The same as in the previous table.

##### II.

##### *The Centric Organ.*

The medulla oblongata and spinalis.

##### III.

##### *The Motors.*

1. The motors which *contract* the vagina.
2. The motors which *dilate* the sphincter ani

3. The motors which contract the levatores ani.

4. The rest, the same as in the previous table.

The foregoing does not pretend to be more than a sketch of this interesting and hitherto unattempted subject. Future opportunity and observation will, I trust, enable me to fill up and correct this imperfect outline, and draw numerous practical deductions from the facts I have detailed. Now that the physiological principle which presides over the function of parturition, which Denman and others anticipated, is discovered to be a part of the function of the true spinal marrow, of the principle which presides over all the acts of ingestion and egestion:—the detection of which we owe to Dr. Marshall Hall, though the profession has been tardy in appreciating its importance, or I should not at this late period, twelve years from its discovery, be engaged in the first attempt to apply it to the whole obstetric art; now that this principle is recognized, the entire phenomena of natural pregnancy, from the act of conception (itself excitomotor) to the return of the uterus after delivery to the unimpregnated state, inclusive with many other cognate subjects of equal importance, must inevitably be treated of as the physiology of the uterus, and as one branch of the physiology of the true spinal system.

Bolton-street, Piccadilly, May, 1844.

#### THE PERIODS

#### REGULATING THE RECURRENCE OF VITAL PHENOMENA.

*Being a General Summary of Previous Contributions to Proleptical Science.*

By THOMAS LAYCOCK, M. D., Physician to the York Dispensary.

The communications I have made to THE LANCET from time to time on the laws of periodicity, as exhibited in the recurrence of vital phenomena, have been published at considerable intervals, and extend into two or three volumes. I have thought it would be well to give the readers of my previous papers such a general view of the whole as may assist them in appreciating the importance and extent of the subject, and guide them in any further remarks they may be inclined to make.

While it is the prerogative of reason to look both "before and after," man has always manifested the most earnest desire to look before and know the future. Two means have been adopted, in all ages, to at-

tain this end, namely, divination, or the consultation of supernatural beings, real or supposed; and the observation of natural phenomena, and of the times of their recurrence. It must have been soon found that there was a regularity in the latter. Day constantly followed night, and night day; spring succeeded winter, and summer succeeded to spring; the ebbing tide changed into the flood, and the flood-tide fell to the ebb. And so, also, with physiological phenomena; the infant grew into youth, the youth became a man, and manhood sunk gradually into the decrepitude of old age. Hence, man has learnt to predict a variety of events in nature and society with absolute certainty. He knows that the storms of winter will surely pass of way and be succeeded by the warmth of spring; that the flood tide will assuredly, in a few hours, be at ebb; and so, also, with a variety of phenomena implicating the individual, as the duration of pregnancy, the recurrence of the hour of sleep, &c. Now, all natural phenomena being finite, must be periodic, because the time within which they are circumscribed is itself a period and capable of division into less periods. The science which investigates the laws of recurrence of events involving individuals and societies of men, measures their periods, and applies the knowledge thus obtained to practical uses in connection with the sciences of medicine and of political and social economy, is the science which I have termed PROLEPTICS,—an anticipation, to anticipate, seize before.—Proleptics, then, is the science of anticipating events.

Of course the science of proleptics recognises no mysterious or supernatural agency more than is recognized in astronomy, or any other natural science; it is founded altogether on the observation of phenomena, with special reference to the order in which they arise. That order may be ascertained by pure observation, or may be calculated from principles and laws already known, or may be inferred from the relations of cause and effect.

In predicting proleptically the return of an ague-fit we are guided by pure observation; from this source we know that if the fever be a quotidian the febrile paroxysm will return next day, at the same hour, as surely as the sun will rise after having set, and we anticipate it accordingly. In like manner we know that in a malarious district we may expect to have bilious remittents in summer, quotidians and tertians in spring and autumn, and quartans in winter.

Proleptics is not limited to periods of any particular duration; it applies itself alike to periods of hours or of thousands of years.—

It is within its provence to investigate the changes induced in the earth and in society at the completion of grand cycles, as well as the changes induced during a single revolution of the earth on its axis or round the sun. It concerns itself with all astronomical phenomena, because they are eminently periodic; it traces the laws of recurrence of cosmic and telluric changes with special reference to the influence of those changes on man, either as an individual or in society.—Proleptical science is not confined to circular phenomena, for it sees polarity and oscillatory movements in regularly recurring events. The impulse given to human society by an exoteric force, as, for example, when meteorological changes induce destructive epidemics, may continue long after the cause has passed away, just as a pendulum swings backwards and forwards after the hand that put it in motion is removed. ] What happens to societies will occur also to individuals.

It will be seen, from this brief outline, that proleptics, being eminently a practical science, hesitates not to draw its data from every available source. It watches the progress of geological science, that from what has happened it may deduce what terrestrial changes will happen in future, and when.—It cultivates meteorology to find out the law of recurrence of meteorological phenomena, knowing how much the latter influence man's condition under all circumstances,—his health, his personal comfort, relief if diseased, or his social prosperity and progress. It considers man as a part of the great whole of organized beings, and seeks a knowledge of the laws of recurrence of vital phenomena in all nature, that it may apply that knowledge in administering to the relief and cure

of man when sick, and to his comfort when well.

Having premised these explanatory observations I will subjoin a summary of the contributions I have made to the science. I would wish to observe, however, that these contributions were made principally with the object of placing it on a true foundation, and of constituting a nucleus round which future observations might be arranged. It will be seen, in reference to the paper alluded to, that I have divided periodic vital phenomena into three classes, namely, the exoteric, esoteric, and endexoteric, the first comprising those resulting from causes internal and proper to the organism; the second those resulting from causes external to and independent of, the organism; and the third those compounded of the two.

The esoteric series of periodic changes commence with conception and the first development of the ovum, and goes on until death,—the major periods involving and being constituted by the minor. They are marked by the evolution of the teeth in the embryo and fœtus, by the reproduction or shedding of the latter in infancy and youth, and by physiological changes recurring at larger intervals—the septenary periods—in after life. After birth the periods become, in a great measure, endexoteric, the exoperiodic influences coming then into operation, and complicating the esoperiodic changes. They are marked in animals by a variety of phenomena, and the periods are of diversified length, just as we observe in the recurrence of meteorological changes. The primary unit is a day of twelve hours, comprising one barometric maximum and one minimum. A tabular view will best illustrate the order of the minor periods, deduced from a multitude of observations.

### I.—The Esoteric and Exoteric Periods.

- |                                                                 |                                                   |
|-----------------------------------------------------------------|---------------------------------------------------|
| 1. Two minor periods, including a maximum and minimum . . . . . | } = { A lunar, barometric, or meteorological day. |
| 2. Two barometric or lunar days . . . . .                       | = A solar day.                                    |
| 3. Seven solar days . . . . .                                   | = A lunar week.                                   |
| 4. Four weeks . . . . .                                         | = A lunar month.                                  |

### II.—The Endexoteric Periods.

In marking these I shall take the periods of fevers as the most familiar example, although all periodic physiological phenomena illustrate them.

Let *a* = the barometric or lunar day.

Then *a* = the term of a bi-quotidian and of certain physiological acts.

2 *a* = the diurnal or quotidian period.

4 *a* = the tertian period.

6 *a* = the quartan period.



As in agnes the *interval* is calculated from the beginning of one paroxysm to the beginning of the next, the unit of the second series must comprise the time occupied by the last paroxysm, as well as the period of intermission, so that we have  $6a + a = 7a$ , or one week of seven days of 12 hours; let  $b$  represent this period.

- Then  $b$  = the half-week of physiological periods and the fourth day of fevers.  
 $2b$  = one week, and the seventh day of fevers.  
 $4b$  = fourteen days, a physiological period, and a critical day in fevers.  
 $6b$  = a minor menstrual period, and the limit of a "twenty one day fever."  
 $6b \times 2b$  = the menstrual period, and its analogue in hæmorrhoidal and neurotic patients.

Thus, then, the minor periods may be considered to be multiples of four basic units.—

1. The day of twelve hours; 2. The day of twenty-four hours; 3. The week of twelve hour or lunar days; 4. The week of solar days. If any of these be multiplied by 2, 3, or 4, or by 4, 6, 8, the products yield all the observed periods of menstruation, four weeks being the normal period. Of course the catamenial excitement is only indicative (as I have elsewhere shown, —*Treatise on the Nervous Diseases of Women*, p. 44,) of a *nisus* in the ovaria, and marks the period when an ovum or ova are expelled. In fact, the processes of generation and development display throughout the most striking examples of periodicity. Similar multiples give the periods of mixed fevers, the cycle of paroxysms observed in intermittents, gout, &c.

The preceding are the minor periods of development, the esoteric series commencing with conception, and so regularly on unless broken up, and a new series be begun, by some powerful influence on the system. It is by these, too, that we can understand the "singular coincidences" observed in families, as to death, time of sickening from contagious fever, &c., the period of conception of the mother being a common point to which the esoteric periods of the offspring can be referred in virtue of these periods being precisely alike as to the date of conception, and the circumstances of their life undergo similar vital changes at the same time, because they are equally exposed to the same exoteric agencies, and undergo the same series of esoteric changes. The coincidences of this kind have been attributed to animal magnetism, and adduced as a proof of the reality of the zoo-magnetic force.

The seasonal and annual changes and the period of utero-gestation and of fetal life, are intermediate between the preceding and the major periods of development. The term of fetal life is composed, both as regards the

parent and offspring, of minor esoteric periods, consisting either of the week of seven lunar days, or the week of seven solar days, but generally the latter. The analogous process in insects occupies the whole life, from the vivification of the ovum to the imago state, and its minor periods are marked by the evolution of the animal from the ovum the successive moults, and the chrysalis state. This period of embryonic and fetal life is of varying length in insects, reptiles, fishes, birds, and mammals, but is always a multiple of a lunar or solar day, and always hepatal, or referable to 7.

The intermediate periods above alluded to pass insensibly into the major, and the major periods complete the whole period of life.—The primary unit of the latter is a solar year, subdivided into four portions, by the equinoxes and solstices, which constitute two means, one maximum, and one minimum.—All the preceding have reference to the individual, and the minor have reference to the individual exclusively. The basic unit of years has, however, a bearing upon man, as constituting society, and is the unit limiting the periods of those esoteric causes which influence the spread and mortality of epidemics, and induce physiological mutations on a large scale, as well in man as in animals, and vegetables, through their action on the atmosphere, and the crust of the earth.

To recapitulate, according to the facts previously stated, the periods upon which others must be calculated are the following:—1. The barometric or lunar day; 2. The solar day; 3. The lunar week; 4. The solar week; 5. The lunar month; 6. The solar year, with its four subdivisions; 7. The week of years, or septenary period; and, lastly, the lunar cycle of eighteen years, with one maximum and one minimum. Probably others will be added to these, as, for example a lunar year, with five or six subdivisions, a large cycle of years, &c. I think, however, facts sufficiently numerous have been stated to point out those just enumerated, as the periods round which future observations should be grouped.

## CASE OF OVARIAN DROPSY

In which

*Tapping was performed Seventy-eight times.*

By J. C. ATKINSON, Esq.

Of late there has been much discussion on the subject of ovarian dropsy or tumour; some practitioners contending for the extirpation of the diseased ovary and others for palliative and constitutional measures, as less likely to endanger the patient's life. The following case will go some way to prove how often the operation of paracentesis abdominis may be performed without in any way interfering with the ordinary duties of domestic life, or its enjoyments. The subject of the present paper was always prepared, five or six days after tapping, to go about her usual avocations with cheerfulness, and to frequent places of amusement, and this she preferred to leading an inactive life.

Mrs. Herapath, aged fifty-three, of John-street, Westminster, came first under my care in the latter part of 1836; she had previously consulted medical men of authority, and had followed their prescriptions, but with no diminution of bulk. Eventually it was thought advisable to tap her, and from that time till May last she had been operated on no less than *seventy-eight times*, by me *seventy-two times*. The fluid at first abstracted was grumous, opaque, and highly charged with albuminous matter, as proved by the common test and the quantity averaged about *six gallons*. For the last twenty times the fluid had been nearly one-half less, its specific gravity considerably diminished, nearly colorless and transparent, and almost wholly void of albumen; and I would observe that her health seemed to have been better when the quantity of discharged albumen was larger. I must here remark that the treatment employed by me to moderate the effusion of the liquid in the ovarian sac,—acupuncture, friction, diuretics, mercurials, pressure, change of air,—were one and all attempted at various times, according to circumstances, but with no definite results. There was an interval of nearly five months from the first operation to the second; from this to the last the period gradually lessened, till three weeks were as much as it was possible for the patient to endure the distention of the abdomen; and owing to the great inconvenience in the epigastrium, and the constant rejection of all food, it was found imperatively necessary to evacuate the fluid at the above mentioned period.

The part of the abdomen commonly selected by me for the operation of paracentesis abdominis was midway between the umbilicus and the os pubis, and the area within which it was performed was six inches by four, suppo-

sing the length to lie between the iliac bones. From experience of its propriety I always carefully avoided wounding the external epigastric arteries or veins, and through this precaution much of the hæmorrhage which usually follows the incision of the lancet was prevented, and which, on several occasions at first, entailed on the patient needless fatigue and faintness.

On the post-mortem examination it was found that the left ovary alone was diseased, enlarged, and full of cysts, about an inch in length, and filled with gelatinous matter the right being in its normal condition. The abdominal viscera generally were healthy, and the only cause of her death, in my opinion, appeared from mechanical obstruction offered to the food by the rapidly-accumulating fluid, and the excessive exhaustion consequent thereon. There was great emaciation of the whole body. The weight of the tumour was five pounds, and perfectly unattached. At a future time I will enter more minutely into the comparative value of the plans of treatment pursued in this case.

Romney House, Westminster.

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"New Magnetic Fluid."

M. M. Thilorier and Lafontaine have presented to the academy a memoir containing the result of a series of experiments which they have lately made, and which, they say, establish the existence of a new imponderable fluid. This fluid, which they call *nervous*, is classed by them between electricity and magnetism. M. Arago has undertaken to go through the experiments with the authors, and to report on them to the academy. The experiments quoted were made with a galvanometer.—*London Lancet*.

The smallest wonders in science are so thankfully received in Europe by the grasping multitude who have to depend upon a certain school of savans for a supply, that the latter are induced to resort to every species of ingenuity to furnish it. They will take old discoveries, "familiar as their garters" and, with scarcely a change of pattern, envelope them in new pretensions, label them with new names, and pass them off as profound and invaluable originalities! "*A new Magnetic Fluid!*" Why not discover a new kind of day light? "*A new Nervous Fluid!*" Why not announce an entirely new sort of blood, in the whole ancient creation?

It seems extraordinary that professional men, of the slightest claims to character,

should descend to such puerilities, and scarcely less so that any work of reputation should announce them, unaccompanied by ridicule. There cannot be a man of science, or even of general reading, in the whole civilized world, really ignorant of the fact that the magnetic influence, in some modification or other, has long been adduced by a host of experimenters, in almost every country, as the influence (clumsily called "fluid") which operates upon the nervous system, and endows it at once with sensibility and motive power. The claim is at least as old and as notorious as the demonstrations of Galvani, and while it has been maintained by innumerable applications of electricity and electro-magnetism, the abstract identity of every form of magnetism, called electricity, and electro-magnetism, with the old and simple forces of metallic-magnetism, is now scarcely disputed. Yet these learned Frenchmen crown themselves with wreaths and plumes for having ascertained the existence of this nervous fluid by the ordinary galvanometer! They say it is neither electric nor magnetic, but something intermediate.—Since they discovered it by the galvanometer, perchance it is galvanic!—and if they should pursue their discovery to this brilliant conclusion, they may next favor us with a luminous distinction between the three "fluids" here contending for the honor of their patronage.

It is well known that, for more than thirty years, the Editor of this Medical Journal has pursued a system of practice based entirely upon the fact, more clearly understood and explained, which these gentlemen have now the excessive modesty to submit to the world as a recent discovery of their own. We have asserted, exemplified, and demonstrated it, in various distinct works upon the subject, of which tens of thousands of copies have been circulated in this country and in Europe. It has been diffusively illustrated in every number of this Journal, which is read both at home and abroad; and for the most overwhelming proofs of this fact, collected within brief limits, we need only refer the reader to the masterly "lecture on the magnetism of

the human body," by Professor R. W. Gibbs, M. D., of South Carolina, published in the 2nd and 3d numbers of this Journal.

#### MESMERISM.

A Young Lady of this city was magnetized a few evenings since by a young gentleman who had very little knowledge of the art, and after exciting the organs of combativeness, destructiveness, self-esteem, and firmness, at short intervals during an hour and a half, he attempted to awake her, but his success was only partial. He could not awake these organs, or calm the storm he had raised; for she continued the pugilistic exercise of her arms through the night. The next morning she was induced to accompany a young Lady to our office for the purpose of trying the power of the Rotary Magnetic Machine upon her. On an examination of the case we found the spasmodic actions of her arms very strong. The positive button was then placed on the back of her neck, and the negative held in her hand under the full power of the Machine during a few minutes, but it produced little or no effect upon her. A clairvoyant happened to come in at this time, and we instantly put her into the somnolent state, and directed her attention to the young Lady, when the Clairvoyant placed her hands on the same organs in her own head, and observed that the brain appeared to be diseased in those places; and when we inquired how diseased? she observed "the brain looks darker, or higher colored in these places."

Her magnetiser at our suggestion now attempted to put her other organs to sleep again, but failed. On the evening of the second day after she was mesmerised, the spasms of her arms were observed to be less violent, and on the third day they disappeared.

#### INFLUENCE OF OPIUM ON THE CATALMENIAL FUNCTIONS.

Dr. McCune Smith records in the *New-York Journal of Medicine*, five or six cases in which the habitual use of opium seemed to cause a suspension of the menstrual functions, without producing constitutional disturbance. He hence infers that its use is indicated when such effect is required.

## ON THE INORGANIC CONSTITUENTS OF PLANTS.

By Drs. H. WILL and R. FRESENIUS.

In pursuing the investigations sketched out in his works on Animal and Vegetable Physiology, Professor Liebig has entrusted to the able hands of his assistants in the Giessen laboratory the task of devising a method for the qualitative and quantitative determination of the inorganic constituents of vegetable substances. The question to be determined is what are the essential, indispensable ingredients and what are the substances which, being present in the soil, enter into the organisms of plants, and are left in the ashes, and yet are unnecessary to the vital processes of the plants? In order to obtain an answer to this question which shall be satisfactory to the physiologist and the agriculturist, analyses must be made of the acids of plants grown under every variety of circumstance and condition. Before these analyses could be made it was very desirable that a method, simple and sure, should be in the hands of chemists, and as a preliminary to the interesting investigations into the ashes of particular plants and parts of plants in which Drs. Will and Fresenius have been engaged, they have presented such a method to chemists. The following is an abstract of this valuable paper:—

“The analysis of De Saussure and others, inasmuch as they were not in possession of means sufficiently accurate to determine the quantity of many elements present, are no longer trustworthy. De Saussure first pointed out the necessity for such investigations, and Berthier discovered that the composition of the ashes of plants depends in a measure upon the properties of the soil, but while the latter found that the ashes of the same kind of wood grown upon different soils varied, he also discovered that the ashes of different kinds of plants grown upon the same soil are dissimilar, and that plants, either of the same or related species, when grown upon the same soil, yield ashes either identical or very similar.

Plants take up all the soluble constituents of the soil, but to subserve their vital processes they select the suitable materials, so that vegetable organisms take up and appropriate the necessary elements. Hence in analysing ashes, substances will be found which have not entered into the composition of any organ or part of the plant, but are only accidentally present in the juices; we cannot, therefore, prevent such matters from being found in the ashes, together with that capable of assimilation.

Nature has provided in the seeds of plants as in the eggs of birds, and the milk of ani-

mals, every thing necessary for the development of the infant being, so long as it is incapable of deriving its sustenance from without. The indispensable mineral food of plants, therefore, will be found almost pure in seeds.

The ashes of the seeds of the *cerealia*, the *leguminosæ*, the *cruciferae*, and the *coniferae*, consist almost exclusively of phosphates of the alkalies and earths, with variable quantities of silica and sulphates. But these ashes do not effervesce with acids, and contain only mere traces of chlorides.

The ashes of the seeds of the *oak*, the *chestnut*, and other trees, of which the seeds abound in starch, but contains no fat, effervesce strongly with acids. They contain a large proportion of carbonates which have been formed during the combustion, from salts of vegetable acids, and they contain also phosphates. The amount of chlorides, silica, and sulphates, is very small in these ashes.

From these facts it must be concluded that the alkaline and earthy phosphate are indispensable to the *cerealia*, and that the *oak* and the *chestnut* require, besides these phosphates, alkalies and earth not combined with mineral acids.

It is not possible at present to distinguish between essential and non-essential constituents of ashes. Various mineral substances and variable amounts of them are required by plants during the several stages of their growth. Nothing found in the ashes of plants can be deemed unessential, but we can distinguish between those constituents which have been already assimilated by the plant and those which exist in its juices unassimilated. Some of the latter, however, only await the further progress of growth in order to subserve their proper purpose. Thus, alkaline chlorides and sulphates, are always present in ashes; they always exist as soluble compounds in vegetable juices; they do not themselves enter into the composition of the organs, but they yield some of their elements. The bases of the salts of vegetable acids are probably derived from chlorides, the latter being decomposed. But their electro-negative element being unimportant, these chlorides may probably be replaced by other compounds of the same bases, provided the latter be equally soluble, and not injurious to the vital textures of the plant. The quantities of chlorides are very variable, and this without their being replaced by any other substance; they are, therefore, probably unessential. The quantity of sulphates found in the ashes depends in some measure upon the preparation of the ashes. The sulphur of the nitrogenous constituents of the plant

may, by a strong heat and free access of air, be converted into sulphuric acid during the combustion. On the other hand, an insufficient heat, with the subsequent addition of an acid, may evolve sulphuretted hydrogen. In order to make a quantitative analysis of ashes we must heat them until all the sulphurates are completely oxidised.

Carbonic acid and charcoal are generally accidental constituents of ashes, having their origin in the combustion. Some seeds, however, contain carbonates. The amount of carbonaceous matter and carbonic acid in ashes depends upon the nature of the bases present, and the degree of heat employed.

| Bases.              | Bodies combined with Bases. |
|---------------------|-----------------------------|
| Potass.             | Chlorine.                   |
| Soda.               | Iodine.                     |
| Lime.               | Bromine.                    |
| Magnesia.           | Fluorine.                   |
| Peroxide of iron.   | Acids.                      |
| Oxide of manganese. | Silicic acid.               |
| Alumina.            | Phosphoric acid.            |
|                     | Sulphuric acid.             |

All these acids and bases, except iodine, bromine, fluorine, and oxide of manganese, are found in almost all ashes of plants. Alumina is said by many chemists to be found in vegetable ashes. De Saussure states that the ashes of the bilberry, the pine, and the oleander, contain 17.5, 14.8, and 28.8 per cent. of alumina, but he mistook the phosphates for alumina, because when he made other analyses to determine the amount of phosphates, he found no alumina, or only a trace. Pure alumina is insoluble in solution of phosphoric and carbonic acid. The phosphate of peroxide of iron found in plants which is equally insoluble with alumina, is probably taken up as phosphate of protoxide which is soluble in solution of carbonic acid. The traces of alumina found in ashes of plants, are probably derived from some adhering dirt not having been carefully removed previously to combustion. This, no doubt, also gives rise to the presence of sand.

In some parts of Germany grain is steeped in solution of sulphate of copper, in order to prevent blight; this accounts for the presence of oxide of copper in the plants; it may also be derived from the presence of salts of copper in the soil, but is only an accidental constituent of vegetable ashes.

A large number of analyses are necessary ere a classification of plants, according to the constitution of their ashes can be accurately made. For the present purpose they may be arranged into three groups.

A. *Ashes rich in alkaline and earthy carbonates*; to this belong woods, lichens, since these contain salts of organic acids.

B. *Ashes abounding in the phosphates of alkalies and earths*, as the ashes of seeds.

C. *Ashes rich in silica*. The gramineæ, equisetaceæ, &c., belong to this group.

This classification is not to be considered more than an approximation. The ashes of mistletoe (*viscum album*), the ashes of the seeds of the oak, and chestnut contain both carbonates and phosphates. Those of *miliun sativum* (millet), oats, and barley, abound in silica, and might, with equal propriety be placed in either the second or the third class.

According to the beautiful law of substitution established by Professor Liebig the predominance of potass or lime in the ashes of a plant depends upon the bases existing in the soil. Tobacco would generally be considered to belong to the lime plants, but recent analyses, which are highly interesting in relation to the law of substitution, prove that when grown in a soil abounding in potass, tobacco would equally belong to the potass plants.

#### ROYAL MEDICO-BOTANICAL SOCIETY.

Thursday, June 27th, 1844.

HENRY COPE, JR., Esq., in the Chair.

After some discussion, a communication on the atropa belladonna, from Mr. LEY, was read.

In this essay, Mr. LEY endeavoured to point out that belladonna was not of so deadly a nature as its name, and the dread entertained of it by the profession and the public would lead one to suppose, and he quotes several cases to show that a fatal result rarely attends its ingestion. He observes that its effects are rapid and constant, therefore if understood, most highly valuable. The difficulty is in seeing and describing them so clearly that future observers shall recognise the same results from medicinal doses. For this purpose the variety of the observations recorded, and even the varieties of language in which the narratives are clothed, become useful information for future observers, to test and reject that which is least precise and perfect. In testing the medicinal influence of a medicine by which we seek to relieve pain, spasm, and irritability of system, and to procure sleep, its approximation to or secession from opium in its action on the system, will form a very good standard to judge

of its effects, and tried by this test, Mr. Ley has found that the action of opium and belladonna is very similar. He has himself taken belladonna, and has given it frequently, in doses of from half a grain to a grain, and in describing its action, instead of saying that it diminishes sensation, irritability, and arterial action, in the first stage of its influence, he believes that it increases them all, and that the peculiar action of the remedy being exhausted, reaction takes place and its effects, to wit, diminution of sensation, irritability and arterial action follow. He observes, that soon after taking a grain of the extract, there is a peculiar taste in the mouth, and a diffused, novel sensation over the whole body, which excites the attention forcibly and unpleasantly. Saliva is secreted in diminished quantity. The nervous excitement becomes absolutely painful, with restlessness, and with the attempt to move, giddiness, with an affection of the cerebrium, become evident. There is difficulty in swallowing, and the voice becomes hoarse; it is as if the action of the parts were impeded by great loss of the lubricating moisture of the mucous membranes. The sight is affected and indistinct, and the eye has the same sensation (perhaps of coldness) that is felt over the body. The lids become dry, and the general sensation is similar to that experienced after long watching. Pain in the bowels may occur, and perhaps an evacuation may take place, but neither purging nor diuresis is caused by it. Sore-throat and redness of the skin, resembling scarlatina, is sometimes produced, and inordinate menstrual discharge may occur suddenly in females. The attention is so entirely absorbed by the peculiar sensation, and the irritability of system, that no pursuit can be followed; the eye can see, but is indisposed to maintain attention to the object, and the ear has sensation, and hears peculiar noises. The disposition to withdraw from all the excitements of passing influences becomes active, and the retirement-like weariness brings repose. In this stage of excitement Mr. Ley observes, it is not difficult to trace an increased arterial action approaching inflammation; and this being the first and immediate action of the remedy, we ought to reckon the rapid subsidence or evanescence of these effects among the virtues of the medicine. In Dr. Pereira's opinion belladonna is not fitted for plethoric constitutions, nor for febrile and acute inflammatory cases, in which Mr. Ley coincides, but he thinks it may be rendered so by combination with other medicines, or by preceding its use by blood-letting. It has been his habit, he says, to produce the excitement, and to allow the reaction to go on undisturbed for a day or two. He expects more

benefit in the second or third day of inaction than from the immediate effect of the drug. In this way relief is experienced in scrofulous ophthalmia, in toothach, &c., when the state of excitement has passed away. A decided astringent effect is produced by the exhibition of belladonna in some chronic discharges from the mucous membranes, and the secretion in ulceration of the trachea is diminished, and the cough relieved by it; various vesicular eruptions on the skin is also removed by it, and when the contents of the vesicle have become semi-purulent, the true skin ulcerated, the ulcer being deep and devoid of healthy granulations, the edges being under the influence of the creeping vesicle, a single grain of the extract of belladonna will annihilate the eruption, and the ulcer will immediately assume a healthy appearance. This influence is well exemplified by that affection of the finger where the cuticle is raised by a semi-purulent fluid round the nail. The cuticle being removed the circle will still be enlarged by the separation of fresh cuticle, and the denuded surface pours out a copious discharge. The effect of one dose of belladonna is to dry the denuded surface, so that the disease no longer exists, and this is effected with so much rapidity as almost to seem like magic.

Mr. Ley quotes two cases from Mr. Liston's practice in University College Hospital, in one of which minute doses of belladonna cured an attack of erysipelas in two or three days; and in the other, a case of small ulcerations on the legs, aggravated by a scald, and attended by much inflammation and fever, after the fever was subdued the belladonna also speedily effected a cure. In conclusion Mr. Ley adverted to the difference presented by the extracts as met with in the shops, and stated that he had found a scaly black, tobacco-smelling extract, most efficacious for external application. This, he considers, may be owing to the mixture of the fruit with the leaves, or to the adulteration of the extract with some other drug, and in that case he thought it would be advisable to try the adulterated drug itself.

#### ANALYSES OF BLOOD IN DISEASES.

Dr. Scharlau, of Settín, having sent to Professor Liebig some specimens of blood drawn from patients suffering from various diseases for the purpose of having their amount of carbon and hydrogen determined, Professor Liebig entrusted the investigation to Dr. Herman Hoffman. The specimens, as sent to Giessen, were inclosed in waxed paper, having been dried and coarsely powdered. They were examined by the usual meth-

od of organic combustion with oxide of copper, the following results were obtained.

Ashes. Carbon. Hydrogen.

1. Blood from a patient laboring under pneumonia which was drawn from the arm and exhibited a buffy coat (1st bleeding) . . 4.365 57.428 8.615
2. Do. do another specimen (2nd bleeding) 4.081 52.280 ———
3. Do. another specimen (1st bleeding) . . 3.880 51.966 8.543  
(2nd bleeding) . . . . 3.784 51.149 7.832
4. Typhus . . . . . 3.901 54.954 8.542
5. Tubercular phthisis; no buffy coat . . . . 4.026 53.734 7.451
6. Typhus abdominalis, fifth day; from the arm . . . . . 3.209 50.901 8.925
7. Do. do. second day, from the arm (1st bleeding) . . . . . 3,108 54,184 8,493  
(2nd bleeding) . . . . 3,479 55,295 7,945
8. Do. from the head . . . . 4,702 ——— ———
9. Do from the venacava . . 3,509 49,281 7,217
10. Do. do. . . . . 3,960 45,575 7,897
11. Do. from the aorta . . . 4,184 ——— ———

— *Liebig's Annalen.*

*Tabular View of One Hundred and Eighty Cases of Tubercle of the Lungs in Children, with some remarks on Infantile Consumption.*

By P. HENNIS GREEN, M. B.

The author commences his paper by observing that the remarks appended to the tabular view are rather intended to point out a few of the peculiarities which distinguish infantile consumption from phthisis of adults, than to give any complete history of phthisis in the young subject.

The main character which distinguishes the phthisis of children from that of adults is this,—in children the tubercular deposit occupies a much larger surface of the lung, is more rapidly secreted, and complicated with tubercular disease of the organs more frequently than in the adult.

Having briefly described the varieties of tubercular deposit in the lungs of children, the author gives some statistical results relative to crude tubercle and caverns, as deduced from his table.

The complications of pulmonary tubercle in the child are numerous and varied. The author compares his own results with those given by M. Louis for the adult, and shows the proportion in which various other organs were affected with tubercular disease.

The symptoms are referred to two varieties,

one occurring in children of from ten to fourteen years of age, and resembling the disease in adults; the other affecting younger children, and presenting several peculiarities. In the acute form of this latter variety the patient is often cut off long before the disease has arrived at the stage of cavern, while the widespread and rapid diffusion of tubercular deposit may excite in the head hydrocephalus, or meningitis; in the chest, pleurisy; in the abdomen, peritonitis; and in the intestinal canal, tubercular ulceration. In the chronic form of this variety the author remarks that the signs of cavern are very frequently absent altogether, and that this absence may depend on the seat of the cavity (middle or lower lobe,) or the small calibre of the bronchial tubes.

The author next examines, successively, the rational symptoms, and indicates the peculiarities which may attend each. With regard to hæmoptysis, he observes that it is not so rare a symptom as many eminent authorities assert.

The question of diagnosis having been discussed, the author concludes with a brief description of bronchial phthisis. The mechanical and physiological effects produced by the enlarged glands on the neighbouring tissues and organs are first pointed out; the symptoms are then indicated, and the author sums up with some valuable remarks relative to the diagnosis of its variety.

The author does not enter into the question of treatment, which he regards as merely palliative, but he states his belief that under favorable circumstances we have a much greater chance of arresting the progress of incipient tubercle in the child than in the adult.

The Society adjourned until November next.

*On the Exclusion of the Atmospheric Air in the Treatment of Certain Local Diseases.*

Some years ago I attended a fatal case of peritonitis. On a post-mortem examination I was struck with the florid red appearance of those parts of the intestines which were contiguous and adherent to the abdominal parietes, and the perfectly pale condition of those other parts of the intestinal canal which were contiguous and adherent to each other. Both surfaces were equally covered with a layer of rather opaque and moderately-consistent coagulable lymph. I could only account for the difference in the appearance of these two portions of the same intestine by supposing that one was affected by the absorption of oxygen from the atmospheric air, whilst from the other this gas was excluded.

It is usual in the Parisian hospitals to trust the treatment of pleuritis greatly to the application of cataplasms. I confess that when I first heard of this mode of treatment I thought it trifling. I have since considered that these cataplasms may entirely exclude the influence of the atmospheric air, and thus prove of real efficacy. But whatever may be the *rational*, the fact remains as I have stated it, and where the treatment of pleuritis consists greatly in the application of mere cataplasms, a post-mortem in this disease is scarcely or not to be obtained, so generally do the patients recover.

I have now to add a fact from my own personal experience. I have recently seen the most satisfactory result, both in pleuritis and peritonitis, from the assiduous application of cataplasms of powdered linseed.

It is probably by the exclusion of the atmospheric air that other remedies for inflammatory diseases act; the various plasters, the nitrate of silver, even blisters have this effect. I do not, however, mean to insinuate that they have no other. Cataplasms may further act by their warmth and moisture. The nitrate of silver possesses some extraordinary power over the actions which constitute or coincide with inflammation. But certainly, more adhesive plasters have an efficacy in cases of chronic chest affection, in lumbago, sciatica, and other forms of rheumatism, in neuralgia, and even of scirrhus, which cannot be easily explained.

One of my patients, a martyr to extensive sciatica, was desired to envelope the limb in adhesive plaster. He was a joiner and an ingenious man. He prepared the common stocking material with glue, dissolved in the proportion of one ounce to two pints of water, and had it spread over, when dry, with galbanum plaster, and if this exuded it was dusted with flour. By the steady application of this plaster his severe rheumatism was cured.

I was once informed by a celebrated physician that he had prescribed adhesive plaster to be applied over a scirrhus tumour of the mamma. It remained adherent for years, and the disease remained stationary. The plaster then separated, and from that period the disease pursued its devastating progress.

Certain modes of the treatment of burns consist in excluding the influence of the atmospheric air.

Some affections of the face are remedied by applying a layer of gelatine. Isinglass is dissolved in water, and the solution is applied with a camel's-hair pencil, and allowed to dry. I have just witnessed some very remarkable effects of this mode of treatment, which I will communicate hereafter.

*On the Microscopical Characters of Milk and the use of the Microscope in the choice of a Nurse.*

Recent inquiries have shown that human milk, examined by the microscope, presents different characters:—

1. Large globuled.
2. Small globuled, generally "pulverulent" milk.
3. Milk of medium-sized globules.

None of these are found in this fluid to the complete exclusion of the others. The first variety is the most nutritive, and the others in proportion to the size of the globules. The microscope, then, will enable us to determine, in doubtful cases, whether a given milk be of a strong or weak class, and will guide the physician in the choice of a nurse whenever the question turns on the advisability of one or other of these kinds. Milks differ not only in respect of the size of their globules, but also of the abundance of these; high or low amount of globules signifies richness or poorness of the milk generally.—*British and Foreign Review.*

*Mineral Marmoratum, or Paste, to fill Hollow Teeth.*

Take *Anhydrous phosphoric acid*, forty-eight grains;

*Pure caustic lime*, forty-two grains; finely pulverised. Mix rapidly in a mortar.

The powder soon becomes moist; it must therefore be brought as quickly as possible into the cavity of the tooth, which has been cleaned and dried; the powder is to be well pressed into the cavity, smoothed off, and moistened on its surface.

TOOTH POWDERS.

Take *Powder of red bark*.

*Bole armeniac*, sifted, of each one ounce;

*Powder of cinnamon*, half an ounce;

*Bicarbonate of soda*, half an ounce;

*Oil of cinnamon*, two or three drops.

Mix.

This is an excellent tooth-powder, unobjectionable in every respect.

Carbonate of magnesia may be substituted for the bicarbonate of soda, or precipitated carbonate of lime; but the solubility of the bicarbonate of soda renders it preferable.

*Cases reported for the Dissector by A.H.—M.D.*

MONTGOMERY, ORANGE, Co., N. Y.

17th April, 1844.

Dr. H. H. SHERWOOD,

My Dear Sir,—I was called on the 20th of February, 1842, to visit T. K. of Ulster County, in this State. He was a young man



of sanguine temperament, good physical and mental endowments, and up to the time of his present sickness, had enjoyed uninterrupted good health. He was 18 years of age, and by avocation a farmer.

His illness commenced Sept. 3d, 1841, with swelling in the left knee, and after a few weeks in its fellow also, both joints being very painful. These swellings continued for a few weeks and then subsided, leaving stiffness, languor, &c. Seven weeks after the swelling of the knees had subsided, the shoulder and hips became similarly affected.—Chills, fevers, and head-aches immediately followed. The family physician being called pronounced the disease *Rheumatism*, and placed the patient under the usual antiphlogistic treatment. Notwithstanding this, however, the disease continued, but was erratic in its character, sometimes attacking the chest, then the head. In July, the throat and tongue became swollen, pus formed under the tongue, afterwards the chin, and then the cervical glands swelled and suppurated. The pain in the left knee and hip, at length gave way to counter irritation, blisters, &c. and from the use of porter, the strength gradually augmented, enabling him to sit up. But thus far the use of the left limb was not recovered, at the same time at this period, great tumefaction and edema took place; in this state bandages were applied, and in September the formation of pus was discovered; on the 15th, the abscess was opened, by incision in the thigh, about midway, on the outside; on the 23d, another abscess which had formed on the opposite side broke; on the 20th of October he was again able to sit up, and on the 1st of November, could walk with the aid of crutches.

On the 15th of November, while walking he had the misfortune to fall, by which the thigh was fractured 6 inches above the knee. As a matter of course, the limb was placed in splints, the ulcer continuing to discharge.

About the 1st of January 1842, the patient exhibited all those symptoms that indicate the ebbing of the tide of life, and that usually follow suffering from a protracted, and painful disease. He had a dry hacking cough, the hectic fever appeared, the frame was emaciated to a skeleton, and two additional abscesses had formed, and become running ulcers. The usual remedies of blistering, creating counter issues, and prescribing Iodine, Hydriodate Potassa, Extract of Sarsaparilla, Blue Pill, Spanish Rob!!—Swain's Panacea, &c., &c., constituted the treatment until February, at which time I was called in.

When I first saw the patient he was sub-

ject to colliquative sweats, his cough was obstinate, and his pulse seldom varied from 120. The whole left limb displayed the presence of great tumefaction, particularly the iliac region. The tubercular character of the disease was plainly indicated by these symptoms which were exceedingly unfavorable. He was also subject to great pain, which continued without any visible abatement, or interval of ease. Large doses of morphine were administered to quiet him, and as he and his friends remarked "to smooth the passage to the grave." For 17 weeks he had not left his bed, the pain of moving being too great to be endured. He had availed himself of the services of several experienced surgeons and physicians, some of whom had pronounced him beyond the reach of art.

From the condition of the patient when I was called in I felt the responsibility to be almost terrible; however I entered upon my duty, trusting for success solely on those principles, which for many years past you have been laboring to establish.

Upon a careful examination, I found the diagnosis to be tubercula of the left knee, (white swellings,) half the former implicated with tubercula of left lung, liver, throat, heart, stomach and mesentery, accompanied with a total loss of appetite.

On the patient being placed under my charge, all former prescriptions were thrown aside. The diseased limb was bandaged smoothly from the instep to the knee, and wetted, with a strong solution of Sal Ferri, Capsia &c., at the same time fermenting poultices were applied to the thigh every evening. I prescribed a pill morning and evening, and covered the whole thigh with a plaster. I also placed one on the lumbar region, to be taken off at night, however, and the poultice applied.

Under this the magnetic treatment, 12 days from its commencement, the appetite returned, the palpitations ceased, and the pulse assumed a healthy standard. In three weeks the cough and expectoration ceased, the tumefaction subsided, pus of a more healthy character was discharged, and in one week more the patient was able to sit up. In July he could walk with the aid of sticks, and continued to improve steadily. In December last the ulcers, four in number, gradually closed up, and swelling with some pain followed. To alleviate this, one of the ulcers near the knee was re-opened, and serous matter with exfoliation of carious bone was discharged.

Since the re-opening of the ulcer near the knee the patient has improved rapidly. At this time he is able to walk without inconvenience, and labor at his business although

not so well as before his illness. Indeed this was not to be expected. The patient when I was called in, was in an almost hopeless state, diseased in his entire system, and emaciated to a skeleton, therefore the cure must necessarily be very slow, almost as much so as is the growth from infancy to manhood. I have deemed it proper to be thus explicit, in order to show the error in judgment that occurred at the commencement of the disease, as well as the mistakes in treatment that followed. He owes his life to your remedies."

"Mr. M. R. of Orange County, New-York, had been out of health two years, during which time he had received the professional services of 8 or 10 different physicians from whom he obtained little or no relief. About the first of last February, I was called in to see him, and on examination detected tubercula,—

1st—in the left lung. 2nd—in the stomach. 3d—in the kidneys. 4th—in the spleen, and 5th—in the large intestines. 6th—in the brain.

"In addition to this wretched condition of the body, he was also affected with Hypertrophia of the heart, liver, &c. The action of the heart was very much diseased, the most gentle exercise being followed by a prostration nearly approaching to absolute exhaustion. The most trifling emotion of the mind, the least surprise, as the entering of a stranger into his room, was attended with the most violent and painful palpitations, so great at times as to threaten immediate dissolution.

Nor was this all the disease from which the patient suffered; his spine was curved laterally, with an excavation on the left side, owing to paralysis of the abdominal and intercostal muscles, with perfect immobility of the left side, as indeed, could not be otherwise; this state was accompanied with an extreme derangement of the digestive organs, so great, in fact, as to prevent the exercise of their functions. The offices of nature were entirely suspended, except under the influence of medicine. The patient was in continual pain about the region of the pleura, and sleep could only be procured by large doses of morphine. In addition to this, for more than a twelvemonth, he suffered from headache without intermission. In this state he had been confined for nearly two years, seldom leaving his room, and was emaciated to the last degree, when I was consulted. The gentlemen who had preceded me, and who are the most eminent in that section of the country, and deservedly so, had placed him

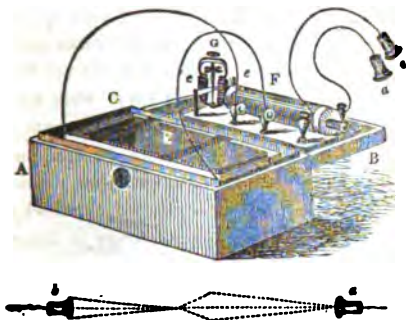
under the antiphlogistic treatment; indeed, the first symptoms were those of pleurisy, and in consultation with them they recommended an adherence to the course of treatment prescribed for inflammatory disease.—Notwithstanding this, however, I resolved to attempt the magnetic remedies as prescribed by Dr. H. H. Sherwood, having applied them before in many cases with the most satisfactory results; under this treatment the patient soon exhibited signs of improvement, and has continued to mend from that time to the present. He no longer suffers from pain, his appetite has returned, his sleep healthy and refreshing, and his appearance favorable; and so far as the radical cure of the complication of disease described is concerned, he has now entirely recovered his health; he is able to walk about his farm, eat the ordinary food provided in a farmer's household, and can ride a number of miles on horseback without fatigue. The magnetic treatment has rescued him from what was literally a "living death."

#### AMERICAN MEDICAL STUDENTS AND THEIR HABITS.

We extract the following very gratifying observations from a late number of the *Philadelphia Medical Examiner* :—

"The improvement in education and general character of the medical students at the colleges in Philadelphia within the last few years is the common subject of remark with all who have had the opportunity of judging. There are at this time between seven and eight hundred of these young gentlemen in this city,—connected from nearly all parts of the continent and the adjacent islands, surrounded by the temptations of a large city, and without the restraining presence of parents and relations,—as quietly and diligently engaged in the pursuit of knowledge as any grey-headed philosophers that ever congregated together. They afford an example, indeed, to the young men of other professions in the place, which it would be profitable for them to follow. Among other evidences of their self-denial and rigid determination to keep out of the way of temptation, is their voluntary association as members of a temperance society, on the principle of total abstinence. Early in the session of last year, such a society was formed among them, and embraced a considerable number; the present winter a similar movement was made early in the session; two public meetings have been held, at which nearly all the students in the city were present, and a very large number signed the pledge."

**The Rotary Magnetic Machines, and the Duodynamic treatment of Diseases.**



The savage Rotary Magnetic Machines are of different sizes, and are fitted into neat mahogany cases, including the battery. The case of the first size is ten inches long, five wide, and three deep. The second size is eight inches long, four wide, and three deep. The third size is seven inches long, three wide, and two and a half deep. The fourth size is six inches and a half long, three wide, and one and a half deep. The instruments are set on the covers in magnetising, as seen in the figure, and are made in a very superior style; are jewelled and run in the best manner.

A, case; B, the cover; C, sheet copper vessel; E, sheet copper, the lower edge of which is soldered on the bottom of the copper vessel C; D, copper piece connected with the zinc between the copper surfaces, containing a solution of sulphate of copper; F, cylinder of copper wire; G, magnet and armature; e, e, conductors to the armature; c, negative, and a, positive button for magnetising.

A great many physicians, as well as many private families, have been testing the effects of the Rotary Magnetic Machines during the last six months, and so far as we can learn, they are very generally well satisfied with the results they have obtained, but complain much of the imperfection of the old instruments—of the bungling manner in which they have been made—of their liability to get out of order—of the difficulties in running them, and of the necessity of frequent resort to the aid of blacksmiths, gunsmiths, &c. &c.

It was useless to talk to the manufacturers of these machines on the propriety and importance of manufacturing a more perfect instrument, so long as those that were coarse and cheap could be sold at a great profit. To obviate these objections, we were at last compelled to employ a jeweller to make the machine represented in the engraving at the head of this article, under our direction, as mentioned in our last number.

These machines are made upon a new and mathematical arrangement of a new principle in Duodynamics, are very light, neat and portable, and will last a life time.

It has been the great object of those who have before planned, or constructed the Rotary Magnetic Machines, to make them in a manner to obtain the greatest or most severe shocks, and for this purpose, large machines or instruments were supposed to be necessary, and those ideas were very natural, especially in those having large organs of marvellousness. They proceeded upon the erroneous principle "that the greater the machine the greater the power," or that the power increases *pari-passu* with the size of the machines, whereas the reverse of this proposition is true; for the power of these instruments increases as their size decreases—other things being equal, as is seen on a comparison of the old machines with the Savage instruments. The motions of the forces from the latter are continuous and agreeable, and produce the most violent action of the muscles and of the poles of the organs, without the severe and painful shocks of the former, which are more or less injurious, and always very unpleasant to adults, and are borne with great difficulty by children.

There are, in fact, many cases in which these shocks do a positive injury, like the electrical machines. The value of these machines consequently increases as the shocks decrease, or as the motions of the forces from them are more continuous, other things being equal. It was a principal object in the plan upon which the Savage machines are constructed to avoid these shocks, as much as possible, and it was in a great degree suc-

cessful, but not perfectly so. We have however at last succeeded in our object, by having a cross or four or more arms to the shaft of the armature as seen in the figure, with a corresponding number of breaks or pole changers, and adjusting screws, which make the motions of the forces continuous. The *armatures* and *pistons* are gilded, the battery improved, and their power and value greatly increased.

The price of these improved machines is \$20, while that of the others remain the same as before, or \$18 for the largest size, and \$15 for the 2d and 3d size, although they are improved by the cross and adjusting screws, which increase the power of these machines, and make the forces more continuous.

The figure drawn below the engraving is intended to represent the direction of the forces as they proceed from the buttons in magnetising:—a, the negative button, repels and expands, while the positive button, b, attracts and contracts. Besides the negative force exerts an alkaline, and the positive an acid influence upon the fluids and solids of the body, and hence the importance of a scientific application of the buttons in diseases of the different membranes, or of the serous and mucous surfaces.

The form of the buttons for magnetising, and the different kinds of metals of which they are made, is a matter of some importance. Brass cylinders were connected with the machine, and held in the hands to show the power of the instrument, before we applied the buttons seen in the figure. It was then a mere toy, but is now an important and indispensable instrument in the treatment of diseases. Besides these buttons, we have found other forms very useful in magnetising the eye, and in some cases of disease of the uterus, urethra, &c., and these are now forwarded with the machines.

#### Effects of the Rotary Magnetic Machines.

In describing the effects of these machines in the April and July numbers of this work, we were very cautious in our commendations of this new mode of treating diseases, as a

sufficient time had not elapsed since we commenced magnetising with these instruments to obtain a full and unbiased view of the subject. We had many doubtful cases under treatment, the result of which could not then be known. Among these there were some of the worst cases of *distortion* of the spine, and *lumber abscess* in children, of from one to eight years old, we have ever seen. Some of these cases were complicated with disease of the sacrum, hip joint, mesentery or lungs. Some of the worst cases are now cured, and all the others are so far advanced in the cure, as to leave little doubt of their entire recovery.

The great number of lateral curvatures of the spine, and the extraordinary effects of the machines in these cases, continue to excite the greatest interest. The cases we are now magnetising have continued from one to twenty-eight years, and many of them are of the worst description, yet they are all advancing to an erect position. In some of these cases the extent of the curvatures has been so great as to cause a displacement of the heart, lungs, stomach, spleen and intestines. The heart beats in the right, and is not heard in the left side, while the left lung occupies its position. The stomach and spleen are depressed, and crowded into the left or right side, and displace the intestines, but as the spine becomes more erect, they gradually resume their natural positions. These are all cases of tubercular disease of the muscles, or *rheumatism*, in which *white swellings* are often formed under, over and around, the shoulder blades, on the hips—the side of the lumber vertebræ, and sometimes on the lower extremity of the spine.

Young females who have rheumatism, are always in danger of such a deplorable result. The disease is easily distinguished; for if a person has rheumatism—no matter what part of the body or limbs is affected by it—pressure with the fingers upon the intervertebral spaces of the cervical vertebræ will produce pain more or less severe, in proportion to the intensity of the disease. In cases of rheumatism, acute or chronic, affecting the head, face or limbs, the machine is, and will con-

time to be, invaluable. Nearly all the cases of dizziness in the aged, are cases of rheumatism, and are the premonitory symptoms of palsy or apoplexy, which may be easily reduced, and their lives prolonged by the use of this instrument. Rheumatism may, and does attack, one or both hemispheres of the brain, as it does a finger, hand or arm, and may paralyze them in the same manner, or the spasms from this cause may be so strong as to rupture the blood vessels of the brain, as they frequently do; when the blood flows into the sinuses, and ventricles, or forms deposits in its substance, as every physician knows, who distinguishes diseases by the magnetic symptoms.

In all the cases of disease of the organs the machine is of great service, and in some cases it is indispensable to a successful treatment, among which are some cases of amenorrhea, chlorosis, leucorrhœa, and prolapsus uteri, &c.

We have used the instrument in one severe case of bilious fever with great success. It reduced the pain in the head, stomach, liver, and back, with the paroxysms of fever, in the most prompt manner. In examining this case, severe pain was produced by pressure on the sub-occipital nerves connected with the brain, and pressure on the ganglions of the spinal nerves, in the intervertebral spaces connected with the stomach, liver, secum, and small intestines, produced the same effect, showing it to be a case of acute tubercula of the serous surfaces of these organs, instead of a case of gastro-enterete, or acute disease of the mucous surfaces of these organs.—These magnetic and invariable symptoms which point to the disease, like the needle to the pole, are always present in bilious, remittent, congestive, yellow, and *nervous* fevers. We have always found them in every case we have seen from the great lakes, to the Balize in the Gulf of Mexico, and we have published and circulated more than 20,000 copies of different medical works, in which these symptoms are delineated; yet the Professors of Astrology in our Medical Colleges call these fevers, cases of disease of the mucous surfaces of the stomach and in-

testines, from the aspects of the tongue and urine, and the color and odor of the stools, as in other cases of disease, and continue to teach such nonsense to the students of medicine. They have even had the address to induce grave legislators (tell it not in Gotham) to pass laws to prevent any person from practising physic until his head was full of such absurdities, as seen by their sign manual.

In two cases of paralysis, in consequence of prostrated fever; one of the entire left arm and hand, and the other of the extensor muscles of the left leg; the machine has had the happiest effect.

The first was a case of a little girl aged eight years. She had bilious fever when she was four years old, during which time the left arm was observed to be paralysed; since which time it hung by her side like a rag without the least power in the muscles of her arm, hand or shoulder.

On the first application of the buttons to the hand and shoulder; about two months since she raised her elbow two or three inches, and she can now flourish a cane with the same hand.

The second case was that of a young gentleman aged 20 years. He had bilious and then typhus fever, more than a year since, and when beginning to recover, found he was unable to raise the left leg. Various remedies were resorted to including the spring and bandage, without the least effect. We commenced magnetising the leg about ten weeks since under the full power of the machine, which he bore every day without the least uneasiness, or any apparent effect during three weeks. He however soon began to raise his toes, and then his foot, and next his leg, and in about eight weeks from the time we first commenced magnetising him he began to walk without his cane.

A recent but bad case of paralysis, of the right arm, of a mechanic aged 28 years was cured with the action of the machine in about two weeks. We have also apparently cured in the same way, four cases of recent and partial paralysis of one side of the face, in one of which there was slight paralysis of the right arm and leg.

These cases of paralysis were not complicated with disease of the organs, and required no medicine. We have also had three or four cases of paralysis of the muscles about the ankles, approaching what is called club feet that required no medicine, but nearly all of the other cases we have had since we commenced magnetising with the machine have required medicine.

We have tried faithfully to cure chronic diseases of the organs with the machine alone, but have failed in every case of any importance, and were at last compelled to resort to the aid of medicines applicable to the cases, when the disease has given way, and such patients have recovered their healths much sooner than they have before when under the influence of medicine alone.

Besides many recover when in the last stage of the disease, who could not do so under the influence of medicine alone.

We have also observed the daily effects of the machine alone, on tubercular and mucous disease of the throat and eyes, and also its combined action with medicine in these cases where we could see, as well as hear, of the daily and weekly progress of the cure, so as to be able to form a more correct prognosis of the progress of the cure in the lungs or other organs, and the results have been so palpable as to leave no doubt of the great importance of combining the action of the machine, with other remedies in diseases of the brain, throat, heart, lungs, stomach, intestines, liver, kidneys and uterus, as well as diseases of the spine, muscles and joints of the limbs.

On a comparison of the effects of the machine in a great number and variety of cases, it appears that its extraordinary effects must be imputed mostly to its power of restoring lost motion, by its action upon the magnetic organization of the system.

In acute or inflammatory diseases the motion of the forces along the membranes or substance of an organ, are obstructed at some point, when the motions of the fluids in the blood vessels, are instantly impeded and accumulate around that point and distend it. The forces from the machine if soon ap-

plied, re-establish the motions of the forces in the membrane or substance, and consequently the motions of the accumulated fluids, and health is re-established in the most prompt manner.

In chronic diseases, the phenomena presented to us are very different. The motions of the forces along the minute lymphatic and absorbent vessels of the serous surfaces become obstructed, when the motions of the fluids in these vessels are impeded, and accumulate in them and in the lymphatic or secreting glands and distend them, or the follicles or excreting glands of the mucous surfaces are distended in the same manner.—The strength of the magnetic organization of the glandular system of these different surfaces of an organ, limb, or other structure is consequently increased; while that of the general organization of the system is decreased in the same proportion; for the strength of the body or of a limb, depends entirely upon the strength of their magnetic organization; the muscles being the mere pulleys and ropes by which it moves the body, head, eyes, or limbs.

Besides, acute diseases announce their advent, as thunder does a storm, while chronic diseases advance stealthily and slowly, and rarely excite the attention of their victims—guardians, or their attendant professors of Astrology, until these tuberculations in one case, and vegetations in the other, has gained great advantages in age and strength, and it must consequently, and does require a much longer time to reduce and restore lost motion in these regular organizations, than that of mere accumulations of fluids, as in the case of acute diseases.

If, however, we commence magnetising in the first stage of chronic diseases, they are reduced very fast as in the cases of tubercular disease of the throat and lungs, and there is no reason why physicians should not do so as there is now no difficulty in distinguishing chronic diseases with facility and certainty in the first as well as the last stage.

Besides restoring lost motion the *Savage Rotary Magnetic Machines* (at least) opens the pores of the skin, and increases the

strength, and these effects of these instruments are very constant, and uniformly noticed by these patients.

In nearly all the cases we have magnetised including the case of fever, we have found it necessary to use medicine of some kind, or that indicated by the disease, and such patients have not only recovered much faster than they usually do under the old treatment but a great many entirely recover their health in cases in which the common allopathic and homœopathic remedies and a great variety of quack medicines have entirely failed.

The following is a postscript in a letter from Dr. L. D. Fleming, of Newark, N. J.

"July 4, 1844.

"I commenced treating Mr. S—, of New Vernon, for a tumor, or enlarged lymphatic gland, on the right side of the neck, of the size of a walnut, which had continued there 9 or 10 years. I Magnetised it with the Rotary Magnetic Machine 6 or 8 times in as many weeks, when it suppurated, and by the 1st of September the cure was complete. The effect of the instrument was the same upon a similar tumor on the lower part of the sternum of 30 years standing."

#### The Curability of Cerebral and Spinal Softenings.

Though numerous observations have fully demonstrated the possibility of this occurrence, Dr. Bennett considers that the anatomical marks or appearances, by means of which pathologists have endeavoured to demonstrate the fact, are very fallacious. The slight indurations occasionally met with in the nervous substance are spoken of by some authors as *cicatrices*—a term he thinks wholly inapplicable to them. Durand-Fardel alludes to the softening resembling chalky milk, as a proof of the passage of the lesion into a state of cure, and Dr. Sims speaks of the fawn-colored cavities as evincing the same fact. In one case of hemiplegia of long standing, in which the chalky milk-softening was found, the granules of the exudation-corpuscles were seen to be large, equal in size, and very transparent, in fact presenting a very unusual appearance; it is not improbable, therefore, that the granules were undergoing absorption; and consequently that the opinion of Durand-Fardel may be correct. On the other hand, the appearances described

by Dr. Sims were met with in one case, but here, on the application of the microscope, numerous exudation-corpuscles and granules were met with, precisely similar to those seen in parts undoubtedly affected with acute inflammation. Intense rigidity of the opposite side of the body also existed, without any other lesion than this which could at all account for it. Dr. Bennett's opinion therefore is, that the fawn-colored spots described by Dr. Sims are no evidence of the cure of inflammatory softening.—*Medico-Chirurgical Review*.

#### OBSERVATIONS IN MIDWIFERY.

BY TYLER SMITH, M. D.

##### *The Spinal Uterine Actions excited through the medium of the Stomach.*

Uterine action may be excited in three different modes:—

I. By the direct action of the *vis nervosa* from the central organ, the spinal marrow, in the direction of the motor nerves distributed to the uterus.

II. By the immediate action of the uterus itself, in virtue of its own irritability, on the application of an appropriate stimulus.

III. By the reflex action of the *vis nervosa*, along incident nerves, proceeding to the central organ, and from thence reflected by motor nerves to the uterus.

It is to one variety of the latter kind of action which has not hitherto been noticed as such, that I am desirous of drawing attention, namely, the uterine action excited through the medium of the pneumogastric nerve in the stomach.

I have looked in vain in the therapeutic treatises of Drs. Paris, Christison, Pereira, and A. T. Thompson, for any reference to a motor action of the uterus, dependent on the application of a stimulus to the stomach. They make the common remark that emetics should not be given in the latter months of pregnancy, but the rationale of this contra-indication has been, that the straining of the abdominal muscles, and the concussion would prove injurious. It has also been the general belief that stimulants excite contractions of the uterus, but this has been explained by their simple exciting effects on the system generally. Another fact observed, namely, that sickness or nausea favors the dilatation of the uterus, has been thought to depend on the general effects of nauseants, and not on a particular action on the uterus.

In fact, as far as I am aware, the idea of a spinal action from the stomach to the uterus, or even a sympathy acting in this direction, has completely eluded the writers on materia

medica. The converse of this, the action of the uterus on the stomach has been well understood, and the knowledge of reflex motor action supplies the true explanation. Practical accoucheurs, have, however, recorded numerous facts, showing that excitation of the gastric nerves is usually followed by uterine contraction, but none of them have attempted to account for such facts on the principles of reflex motor action.

Among the proverbial philosophy of the lying-in-room, nothing is more popular or more true than that "sick labors are always safe." I believe the explanation of this to be found in the circumstance that irritation of the stomach promotes the actions of the uterus, increasing both its contractions and the dilatation of its mouth. In the first place I proceed to consider briefly the evidence of the former kind of action.

#### *Uterine Contractions excited through the Medium of the Stomach.*

Dr. Rigby observes that "a sudden drink of cold fluid will generally excite contractions of the uterus, owing to the close sympathy which exists between it and the stomach."

Heat, as well as cold, is a powerful excitator of reflex motor action. It was the old practice, and is still the rule with nurses and others, to give patients warm drinks from time to time during labor, with a view to strengthen the pains.

Much discussion has been raised about the proper mode of exhibiting the ergot of rye, but it is singular that almost all accoucheurs consider the warm or cold infusion to be most efficacious. Is not this because either the warm or cold liquid tends to excite the uterus, and in this manner adds to the power of the ergot? Without doubting the specific action of the ergot, I may adduce, in favor of this opinion, a remark made by Mr. Headland, at a recent meeting of the London Medical Society, to the effect that he knew a gentleman who had kept a table of the relative effects of the ergot, and warm brandy and water, and had found them nearly equal in power. It is also well known that taking warm fluids into the stomach immediately excites after-pains when delivery has taken place.

Spontaneous sickness sometimes occurs in uterine hæmorrhage, and excites uterine contractions. With reference to this point. I quote the following interesting passage from Denman:—

When patients have suffered much from loss of blood, they will often have a sudden and violent fit of vomiting; and sometimes, under circumstances of such extreme debility, that I have shrunk with apprehension lest

they should have been destroyed by a return or increase of the hæmorrhage, which I concluded would be an inevitable consequence of so violent an effort. But there is no reason for this apprehension; for although the vomiting may be considered as a proof of the injury which the constitution has suffered by the hæmorrhage, yet the action of vomiting contributes to its suppression, and to the immediate relief of the patient; perhaps by some revulsion, and certainly by exciting a more vigorous action of the remaining powers of the constitution, as is proved by the amendment of the pulse, and of all other appearances, immediately after vomiting, which I have therefore in some cases attempted by gentle means to promote."

Though the true *modus operandi* of vomiting is not given in this passage, it is clear from the context the writer was aware of its causing uterine contraction, for he remarks that "during faintness the advantage arising from contraction of the uterus is obtained; for this acts, or makes its efforts to act, in sleep, during faintness, and sometimes even after death." He adds that the nausea produced by medicines "has by no forced construction been considered an artificial imitation of faintness, and found serviceable, and medicines have been given expressly for this purpose" in cases of hæmorrhage.

In cases of abortion from excessive vomiting in the last months of pregnancy, I believe the accident is caused by the uterine contractions it excites, and not by the concussion of the system, or the spasmodic action of the abdominal and other muscles as generally supposed.

#### *Dilatation of the Os Uteri through the Medium of the Stomach.*

The belief in the power of nausea or vomiting to relax the uterus is common with other parts of the body, is of very ancient date. Dr. Ramsbotham, however, appears to have been the first to recognize a practice founded on this idea. This physician observes, "Under a state of preternatural rigidity of the os uteri, it not unfrequently happens that without any cause, and independent of any means being used, sudden relaxation takes place and from that time the labor progresses with much greater rapidity. This favorable alteration in the condition of the organ is generally accompanied by sickness, and I always hail an attack of vomiting under such circumstances, provided there be no symptoms of exhaustion present, as the harbinger of a fortunate change. I have stated above that emetics have been recommended for the purpose of facilitating the dilatation of the ute-



rine mouth, under the erroneous idea that the vomiting was the *cause* of the softening observed; but that artificial vomiting induced with this view had disappointed the expectation of its advocates. Antimony, nevertheless, taken in doses sufficient to keep up a feeling of nausea, has been exhibited in these cases with marked advantage." In another passage Dr. Ramsbotham repeats that nauseating doses of emetic tartar are of service in dilating the os uteri. I agree with his conclusion, but not with the mode in which it is arrived at. The action of the uterus on the stomach is recognized by him, but not the reciprocal action of the stomach on the uterus. Hence the contradiction involved in Dr. Ramsbotham's view of the subject. He considers the idea that vomiting causes dilatation to be erroneous, and yet admits that nausea is of marked benefit in dilating the os uteri. If nausea have the power of dilating the os uteri, then emetic substances must *per consequence* be a *cause* of uterine dilatation. The difficulty is solved if we recognize in the action of the two organs what Sir C. Mansfield Clark called a double sympathy, in other words, a double reflex action; in fact, if we believe that irritation of the uterus excites nausea and vomiting, and that these, in turn, excite the action of the uterus through the medium of the spinal marrow.

Other physicians besides Dr. Ramsbotham have testified to the effect of emetic tartar in dilating the os uteri. We may illustrate its action on this part by referring to the more extensive effects of nausea and vomiting on the system.

Emetics have been commonly looked on as relaxing all the soft tissues, and in this general relaxation the active dilatation of a reflex kind which they cause in different parts of the body has been completely merged. I believe that nausea dilates the os uteri under the influence of reflex action, but I further believe that a more extended view than this may be taken of the action of vomiting, and that we may look upon it as the means of dilating all the contractile orifices and canals of the body in cases where dilatation is required. In all irritations of mucous ducts and canals, either nausea or vomiting is excited, and accompanies the attempt to eject the cause of irritation; or, more properly, we may term it a provision for effecting their expulsion. In this sense the power of vomiting to dilate the sphincters, or contractile passages, assumes the utmost importance; its object being to remove all obstructions from the mucous surfaces. It dilates the œsophagus, the cardia, the lips,\* the gall-ducts, the

\*This is more particularly seen in the vomiting of infants, in which the opening of the mouth in sickness is as clearly a reflex act as its closure in sucking.

Eustachian tubes, the ureters, the urethra, the cervix vesicæ, the sphincter ani, probably also the bronchial tubes, and, as I believe the os uteri and vagina during labor. All this is not evident in ordinary vomiting, because some of the parts are closed by voluntary effort; but in excessive sickness, or where volition is suspended, as in the combination of vomiting with syncope, such an extended action of the spinal system occurs. In vomiting the cardia and œsophagus are always dilated, and I believe that in cases where there is no preternatural rigidity, the os uteri is dilated by vomiting in parturition. It is also certain that in severe vomiting, and in the vomiting of children, the faces and urine are sometimes expelled. It is likewise known that obstructions of the Eustachian tubes, and biliary and renal calculi, are often dislodged during a fit of vomiting. This has been referred to concussion, but it would be more physiological to attribute it, in great measure, to a *positive dilatation* of these canals.

Diaphoresis is a very constant attendant on vomiting, and I know that Dr. Marshall Hall believes every perspiratory pore to be endowed with its sphincter, which is relaxed and contracted to different causes. According to his view the sweating of sickness, or from drinking warm fluids, would depend on the dilatation, by reflex action of the innumerable sphincters of the cutaneous surface; and the *cutis anserina* in the cold stage of ague, or on the application of cold, would be owing to their contraction.

But let it not be supposed that in pursuing this train of reasoning I would deny that simple relaxation is really caused by vomiting and nausea. We know that a strangulated hernial tumor is sometimes reduced during the continuance of nausea, which it was previously impossible to reduce; and we know that volition is impaired, and the power of the voluntary muscles enfeebled by nausea; but we are also aware that while the voluntary muscles are thus affected, those concerned in vomiting under the influence of spinal action, are powerfully contracted. On the other hand, while the soft tissues and the voluntary muscles are relaxed, the sphincters, and muscular canals are in a state of positive dilatation as long as vomiting or nausea continues.

We are bound to acknowledge the distinction between relaxation of the muscles under the influence of the *cerebrum* and the contraction of those under the control of the *spinal marrow* during vomiting. We must likewise recognize the difference between *passive relaxation* of the soft tissues generally, and the *positive dilatation* of the sphincters under spinal influence. Without admitting

such distinctions it is difficult to understand the effects of gastric irritation on the uterus in producing at the same time *contraction and dilatation*.

There is another subject related to the present which I propose to consider on a future occasion. I mean the *vascular and sensory* connection between the stomach and the uterus, particularly in the direction *from the stomach to the uterus*. This will embrace the effects of nauseants and other gastric excitants in increasing and producing the catamenia; the action of emetics in puerperal fever; the power of dyspepsia as a cause of dysmenorrhœa, amenorrhœa, chlorosis, sterility, abortion, and other important points of a practical nature.

Bolton street, June 7, 1844.

The subject of the above article will be better understood by a reference to the diagram of the magnetic organization of the human system in the last or July number of this Journal, as traced by the Rotary Magnetic Machine, in which it will be seen a magnetic axis exists between the cerebellum, the organ of motion, and the uterus, and the stomach and uterus, or a direct magnetic connection between them, without any regard to the spinal nerves. There is also a direct connection between antagonist muscles, by means of magnetic axes, and all these axes are so connected as to concentrate their power upon the uterus. There is no other way by which such a tremendous power, as is seen in many cases, can be made to bear upon the uterus.

#### Case of Complicated Ovarian Disease.

By Charles Hogg, Esq., M.R. C. S., Lon.

Jane Rickets, aged 55, Brick Lane, Old-street-road, consulted me on the 8th of March, 1841. She then complained of obtuse pain over the whole right hypochondriac region, extending to the scapula of the same side; pulse feeble; tongue coated with a brownish fur; appetite bad; acidity, with flatulence and constipation; difficulty of breathing on exertion, but no fixed pain in the chest, except in the inter scapular region already alluded to; complexion sallow, and the general health much impaired; considerable morbid sensibility. On examination the liver felt

hard and considerably enlarged, painful on pressure. In the abdominal region there was considerable enlargement, and fluctuation was distinctly perceptible. The urine was scanty, pale, but sometimes turbid, and depositing a sediment; a very trifling quantity of albumen was discoverable by the ordinary tests during the whole course of the disease. Her general health, for several years back, had been indifferent; she was considered temperate in her habits. Large doses of extract of taraxacum, with sulphate of magnesia and tincture of rhubarb, occasionally three grains of blue-pill, with five of compound extract of colocynth, apparently restored the liver to a healthy state. She also took a vapour-bath twice a week. The digestive organs regained their former vigour; with this her usual strength; both the skin and kidneys performed their functions healthily.

Iodine, in its various preparations, was employed, also diuretics, hydragogue cathartics &c; but notwithstanding every effort the water accumulated, and I was compelled to have recourse to tapping on the 21st of April of the same year. On proceeding to the operation I found to my surprise, as well as that of my friend, Mr. Sparke, who saw the case two or three times, a hernia about the size of a full-grown child's head, protruding an inch below the umbilicus. It was easily reducible after bandaging and twenty-five quarts of fluid were drawn off. The consistence of this fluid was about that of olive oil, horribly offensive, and of a greenish yellow color.

I now discovered the existence of what the general swelling had prevented me from ascertaining earlier, viz; a lobulated tumour extending beyond the pelvic into the abdominal region; measuring, as nearly as I could estimate, ten inches in length by five or six in breadth. It was extremely tender on pressure, and even on touch, although no pain was complained of on repose.

Moderate antiphlogistic treatment was had recourse to, and the vapor bath continued. The recovery was rapid, and as she became apparently in excellent health and spirits, I had begun to hope that permanent good had been done. On the 2nd of August, 1841, she again requested my attendance; the abdominal enlargement was as great as before. Twenty-five quarts were again removed, the fluid was less offensive in smell, consistence, and colour than before. The former treatment was resumed, with the same effect, that is, the general health alone was benefited; the fluid now secreted more rapidly, which obliged me to remove it every fourth or fifth week, until the number of operations amounted to twenty nine, thus making altogether *one hundred and seventy gallons* of

fluid which had been abstracted. I have unfortunately mislaid my memorandum of the specific gravity. About the middle of January, 1844, unfavourable symptoms began to appear, which were ushered in by alternate rigors and hot fits; face flushed; pulse unusually feeble, at times scarcely perceptible; she complained now of violent pain in the right hip, which did not yield to either general or local applications, vomiting, cold perspirations, and at last she died on the 8th of the present month.

*Examination, Twenty-six Hours after Death*

The body was by no means emaciated; after removing about ten quarts of fluid, the abdomen was laid open. Instead of the usual appearance, the omentum presented small pieces of greenish fatty matter. No traces of inflammation to any extent were observable; the parietal peritoneum was much thickened and of a cartilaginous consistence. The liver was greatly enlarged, and of a dark-slate colour. On an incision being made, there gushed out a dark grumo-purulent fluid, having a most offensive smell. The organ seemed to have become one extensive abscess, but little of its parenchyma remaining. The lungs, heart, kidneys, pancreas, spleen, did not exhibit any appreciable marks of disease. On first examination the ovaries, uterus, &c., appeared one mass of disease, connected by thin membranous bands to the surrounding parts. On carefully separating the tumor from its adhesions, the uterus and Fallopian tubes were found free from disease; there was more vascularity found than in the natural and healthy state. The patient was supposed to have some disease in the uterus twelve months before I saw her, and was treated for some time with reference to such disease. The tumor itself appeared to be composed of cells; their exact structure could not well be ascertained, as they seemed as if crushed into each other. The diseased ovarian mass was very vascular, several of the arteries were of considerable calibre; it appeared to be about the fourth of the size which it presented when noticed after the first tapping.

I have occupied too much space already to make many reflections on the case. I was most surprised at the state of the liver; after the first three months I had no reason to suppose there was much disease existing in that organ from the nature of the symptoms. The marked improvement in the general health and strength led me to suppose that the hepatic disease had been overcome.

Finsbury-place South, March 19, 1844.

**ASTONISHING EFFECT OF ELECTRICITY IN CUREING HYSTERICAL LOCKED JAW.**—The

following account of the efficacy of this extraordinary remedy, we should do wrong in withholding, though it should never again prove effective. We have the account from some friends who chanced to be present, and saw the patient eating the first meal she had taken in five days, a few minutes after the spasm had ceased. She had been previously nourished by drawing milk through the apertures of the closed teeth, through which the edge of a knife could be passed with the greatest difficulty. The young woman was thus affected in consequence of exposure to cold and fatigue, and was completely recovered by the Electro Galvanic apparatus applied to both angles of the jaw. The machine had not made forty revolutions, when the jaw opened to its full and natural width. We learn that it has been successfully applied for many nervous diseases of the eye; also in a case of poisoning by laudanum, where two entire ounces had been swallowed. In this case the patient was revived by the machine, and collapsed alternately, during five hours, the intervals becoming shorter till speech was re-established. Curvature of the spine has also yielded to its power. Indeed its proper application is as varied as diseases of general debility and irregular nervous action. It was applied by Dr. E. H. Dixon, of 5 Mercer street.

N. Y. JOURNAL OF COMMERCE,  
September 1, 1844.

NOTE.—We saw this case soon after the jaws were opened and she had eaten her first meal.—Editor.

**THE "TRAITEMENT ARABIQUE"**  
IN OBSTINATE CASES OF  
**SKIN DISEASES.**

By G. M. Dangerfield, M. D., Newport.

The very remarkable success I observed to follow the under-mentioned novel treatment in some of the worst and most obstinate cases of chronic cutaneous affections in the south of France, induces me to make it known to the profession through the medium of THE LANCET. Most medical men in extensive practice can testify as to the obstinacy of certain cutaneous affections, and will appreciate any mode of treatment calculated to aid them in their endeavours to effect a cure when all ordinary means have failed; such, from the few cases I have seen, I am induced to hope will be the result of the following treatment if perseveringly carried out. I have hitherto had no opportunity of proving its efficacy in this country, but would urge its adoption by the profession at large, and particularly by those having the advantage of

hospital discipline to carry it out, believing it to be our duty to investigate the merits of any treatment likely to relieve those obstinate cases of cutaneous disease which render the patient's life a misery to him, and often defy the utmost exertions of our art.

These means consist in a treatment known in France by the name of *Traitement Arabe*,—composed of pills, an electuary, a decoction, and a particular diet (*diete seche*.) The pills are the following:—Quicksilver, bichloride of mercury, of each half a drachm; senna, pellitory of Spain, agaric, of each one drachm.

The bichloride and quicksilver are first rubbed together, the vegetable substances are then reduced to a very fine powder, and all mixed with the mercury, until the globules have disappeared; then made into a mass with honey, and divided into *four* or *six* grain pills. The electuary consists of—Sarsaparilla root, six ounces; China root (squine,) three ounces; dried nut shells, (*ecorce de noisettes torrefiees*), one ounce; cloves, two drachms. Reduce all to a fine powder, and make an electuary with honey. The decoction:—Sarsaparilla root, two ounces; water, three pints. Boil to a quart, and strain.

The diet, which particularly appears to influence the treatment, consists in the patient confining himself for twenty-five, thirty, or forty days (seldom more) rigorously to the following regimen: avoiding all other substances, he shall eat only *cakes*, biscuits, and dried fruits, such as nuts, walnuts, figs, almonds, &c. To drink *no fluid of any description*, except decoction of sarsaparilla.

This severe regimen, however, cannot always be enforced in very debilitated subjects; hence in these extreme cases a broiled mutton-chop may be allowed once a day, but experience has shown that this has been rarely necessary. The medicines are administered in the following manner:—

A pill is given every night and morning, followed by a wineglassful of the decoction; an hour after the pill a drachm of the electuary, gradually increased to six drachms, is to be taken, the decoction being drunk at intervals during the day.

The mode of treatment must vary, of course, according to the age and temperament of the patient, and the intensity and duration of the disease. The practitioner must exercise his own judgment as to augmenting or diminishing the dose of the pills, when to suspend or recommence them; in a word, it is for him to modify but not to diverge more than possible from the rules laid down until the disease is removed.

There is one remark I would make relative to the pills, as the cause of their requiring the

constant attention of the practitioner depends upon their producing frequently, sooner or later, salivation. It has been remarked that this effect commonly depends upon their being recently prepared, and that when they have been made *two* or *three* months, such accidents rarely take place. This depends doubtless upon the constant contact of the bichloride with the quicksilver and other ingredients, it becomes modified in its chemical condition, and loses more or less its corrosive qualities, and hence is more adapted for its present application.

My sole object in bringing this treatment before the profession is a desire to hear of its merits being put to the test of experience. In the few cases in which I have seen it employed (cases of maculæ syphiliticæ, syphilitical psoriasis, idiopathic chronic eczema, psoriasis) it was singularly successful, after the ordinary remedies had failed, and I may remark that it has now stood the test of a considerable number of cases of the most obstinate and inveterate character in the hospitals of Montpellier and Marseilles. The most singular part of it is, that in some cases of syphilitic psoriasis, where mercury pushed to salivation, decoction of the woods, mercurial bath, nitric acid lotions, &c., had been administered without permanent benefit, the employment of the *traitement Arabe* was successful, and that in the short space of four or five weeks. These are points for reflection, and it will be for experience to determine how far the withdrawal of all fluids from the diet, with the exception of decoction of sarsaparilla, can influence the action of the preparations of mercury, for these cases had a syphilitic origin, and mercury had been given previously a fair trial. Again, what is the *modus operandi* in those cases where no syphilitic taint exists? and it has been found as serviceable in those as in the former. The humoral pathologist may account for it by arguing that the action of the skin will be modified by the quantity of the circulating fluid being diminished, on the principle that a supply of fluid to the blood is necessary to exudation, &c.; and "those who have dined off dry food or laboured in the tropics will, perhaps, admit of both force and truth in the remark." To diminish the blood and alter its constituents are decidedly depletory acts, and thus local inflammatory action may be removed; and the diaphoretic action of the sarsaparilla, &c., may equalise the humoral distribution, and thus tend to restore a healthy action of all the functions. Mercury, it is true, excites certain secretions, but modifying morbid ones restores the balance, and both subsiding together, health and natural actions are restored. Without attempt-

ing, however, to explain the operation, leaving that to an abler pen, I place the matter in the hands of the profession, trusting that some one may have the means ere long of confirming or removing the favourable opinion I have formed of its merits.

#### MEMORY :

#### *Its Influence and Importance as a source of action in animals.*

By J. Johnson Kelso, M. D., Lieburn.

Besides the influence of memory as a source of action in animals, the consideration of which is here more immediately to engage us, there are very obviously and distinctly these other influences in addition :—

1. Instinct;
2. Intellectual action, or ratiocination ;
3. Mental feeling, or emotion. .

Of these latter sources, or principles of action, instinct only, as we shall find, is entirely independent of an exercise of memory in reference to prior sensations or impressions. Therefore, when in addition to the *direct* and unequivocal influence of memory, whose extensive diffusion through the animal kingdom we shall, it is hoped, be able satisfactorily to establish, we take into account its *indirect* influence, as manifested through processes of intellectual action, or a species of reasoning and mental feeling or emotion, the vast importance of this faculty, as a stimulant and guide of action in many different genera and tribes of animals, at once discloses itself, challenging very forcibly detailed inquiry and exposition. It is certainly only consistent with ordinary correctness to refer phenomena to their proper causes, and this equality in the psychical and in the physical world.—But certain it is that almost all recent writers on instinct, of any degree of celebrity, have referred many phenomena to this peculiar influence, which more or less evidently pertain to an operation of memory, or the intellectuality of the animals ; this, undoubtedly, is an error which imperatively calls for correction, at least as far as may be. Hence, in order to place the subject in a proper light, to distinguish those actions which are the result of memory from those that belong to instinct,—in a word, to eliminate, as far as practicable, truth from error, it will be absolutely necessary to go somewhat largely into details ;—to review not only the phenomena of memory in animals, and those active mental manifestations connected with their nature, involving, as an essential condition, an exercise of this faculty, but also the principle of instinct itself,

and its immediate consequences or effects.—

With a view to this important object, the following communications are placed at the option of *THE LANCET* ; and, although the ground which we shall have to traverse is, as will be apparent, rather extensive, and rich besides in topics of no ordinary interest, still I hope not to trespass too largely on the valuable space of that journal.

Memory, as is perfectly clear, pertains not exclusively to the mental or intellectual constitution of man ; it exhibits itself, also, in some degree, in many, very many, of the lower animals, influencing, or guiding and controlling their actions to an extent little short, probably, of that of the power of instinct itself.

With reference to all the higher species of animals, the indications of the influence of memory are numerous, indeed, and most unequivocal ; and it may be stated here, generally, that in them, equally as in ourselves, it constitutes the main-spring of all those actions that have conventionally been denominated *intelligential*. But, in regard to the more humble and essentially instinctive orders and tribes of creature life, the existence and active play of this faculty, as evidenced in *certain* of their actions, has, tacitly at least, been hitherto altogether denied, though as I am disposed to think, quite erroneously. In a word, as a source or principle of action both in vertebrate and invertebrate animals the influence of memory, directly or indirectly, through processes of comparison and combination, has been hitherto either wholly overlooked, or only casually and incidentally adverted to in explanation ; and by no one, so far as I am acquainted, has the question received that degree of attention which its importance most undoubtedly demands.

The different sources, or principles of action in animals, we have just now indicated, and it will be seen that they naturally divide themselves into *instinctive* and *non-instinctive*. Of the latter, it has been equally observed, that memory is either the sole spring or agent, or the chief and indispensable actuating power, or rather element of those composite principles and feelings which constitute the source of numberless and infinitely varied actions, habitual or incidental, in many different genera and tribes of the lower orders of creation.

It may be as well, then, briefly to advert, in the commencement, to those actions which are the result, not of memory *per se*, but of mental or intellectual processes *necessarily* involving an exercise of this faculty in some degree, and they may not inappropriately be viewed here under the general head of

## ANIMAL INTELLIGENCE.

That there are many different species of the lower orders which, habitually will and perform many actions that are admirably suited to the attainment of certain ends,—and these often remote and obscure, and known to us only by repeated observation, or experience and reflection, and reasoning on the inductive principle,—is a proposition the correctness of which there are few, now-a-days, who would be disposed seriously to call in question. And as actions of this kind can never, with any pretensions to common accuracy, be considered as at all pertaining to the power either of instinct, or of memory *per se*,—far less, certainly, to mental feeling or emotion,—they have, very correctly, been referred to processes of intellectual action or rationality; implying equally an exercise of these essential powers or elements of reason—*comparison* and *combination*, and memory or recollection of previously experienced sensations, or acquired perceptions.

It was, as is well known, the opinion of both Descartes and Buffon, that animals are nothing more than automata—mere pieces of artificial mechanism, insensible equally to pleasure and to pain, and incapable of internal feelings or emotions, as well, of course, as processes of ratiocination, implying an exercise of several distinct mental faculties—akin to those of which we are susceptible ourselves. If this were the case, the objects of creation would for ever remain a dark and unfathomable mystery. But the very reverse happens to be the fact. I shall, I feel persuaded, be able satisfactorily to demonstrate that the vast majority of animals are susceptible, in some degree, not only of the common feeling of enjoyment, but of several distinct mental feelings, or emotions, analogous to those which agreeably or disagreeably influence ourselves. I cannot, too, but think myself capable of establishing, quite clearly, the fact of many animals of different orders, genera and species, being influenced and guided in their actions to an extent not generally known or conceded through an operation of memory in reference to prior sensations or impressions, felt and remembered. Further, I shall be able, I feel convinced, satisfactorily to show that many animals of all the higher orders and classes are possessed, in addition, generally, to great natural sagacity, of limited powers of reasoning from premises to a conclusion. It is the consideration and illustration of the latter highly interesting and important question to which, with permission, we now propose to turn; and, commencing with insects, the ants may be first noticed as furnishing us with some

unequivocal indications of the influence not only of strong natural sagacity, but apparently of a degree of intelligence and memory.

I may here drop the subject for the present and, with permission, will resume it in an early publication.

Lisburn, April 29, 1844.

## Physometra or Tympanitis of the Uterus.

MM. Stoltz and Naegele, two of the most celebrated practitioners in the diseases of females of the present day, at the medical congress held at Strasbourg, 1842, expressed their belief that tympanitis of the uterus was impossible, and that the alleged cases of its occurrence were apocryphal. M. Lisfranc has seen several cases in which physometra was caused by the decomposition of extraneous matter included in the uterus. In one of these cases the womb extended three inches above the pubes, and occupied nearly the whole transverse diameter of the hypogastrium; on examining the uterus with the finger in the vagina, the other being applied on the hypogastrium, he felt a tumour of extraordinary elasticity; during the manipulation the neck of the uterus suddenly dilated, a volume of gas escaped with considerable noise, and the abdomen resumed its natural size; the uterus, however, remained slightly dilated, and at short intervals audibly expelled portions of air. After the lapse of a few days a fleshy mole was expelled. M. Lisfranc argues, that as the mucous membrane of the intestinal canal indisputably often secretes air, it is unreasonable to deny that the lining membrane of the uterus may also do the same; and in answer to the objection, that any gas generated in the womb when its cervix is not mechanically obstructed must escape, he observes, that every surgeon who has had much experience in examining the uterus must have often observed the remarkable facility which the inferior orifice of the uterus contracts."

The reviewer remarks that M. Lisfranc does not appear to have seen any case in which the tympanitis was purely *dynamic*, that is independent of the presence of an extraneous substance in the womb. He refers to a case, however, which is perfectly satisfactory on this point. In this instance, during three years, gas had been freely generated, though there had been no evidence of the presence of any other foreign body in the womb. The abdomen became at certain intervals distended and returned, on the expulsion of the gas, to its former size.—*British and Foreign Review*.

**Extirpation of the Uterus by Ligature.**

Two cases of this formidable operation have been recently recorded, one by Dr. Es-selman, in an American journal, quoted in the *Medical Gazette*; the other by Dr. Toogood, in the *Provincial Journal*. The first was the case of a married lady who had laboured under disease of the womb from the date of her first confinement, twelve years previously. It was finally determined to remove a polypus like tumour which was found occupying the vagina. A ligature was applied and tightened every morning, for eighteen days, at which time the tumour came away, and, to the surprise of her physician, instead of a polypus, proved to be the uterus itself, much reduced in size by ulceration and strangulation.

The patient, thus accidentally deprived of her womb, did well; at each monthly period, however, she suffered from cerebral congestion.

The case related by Dr. Toogood was that of a single lady who had suffered for many years from what was called a prolapsus of the uterus. It was ultimately found impossible to give the patient relief by the usual remedies, and "a careful examination having shown that the neck of this large mass, as it entered the vagina, rather diminished in size," it was resolved to remove the whole.

"The mass removed was about two pounds weight, the shape of the uterus, but its structure much altered in character, the cavity being quite obliterated, and the os uteri become almost cartilaginous." The patient recovered, and "on examination no uterus could be discovered," nevertheless, the history of the case and the description of the mass removed, excites some suspicion as to its nature.

We should hesitate before relieving "it as an additional example of the safety and propriety of removing the uterus under certain circumstances."

**REMEDIES FOR NEURALGIA.**

By R. H. Allnatt, M.D., M.A., F.S.A., &c.

IN reference to a notice of mine, which appeared some time since in *THE LANCET*, of certain "Remedies for Neuralgia," Mr. Chippendale has courteously mentioned two cases, which he states to have been successfully treated by the application of the infusion of tobacco; and, he adds, "it appears to me that an extract might be prepared from tobacco, which, being mixed with simple cerate, would be a convenient form for frictions."

In the category of antagonist "unsuccessful remedies," recorded by me in my work on "Tic Douloureux," I find a mention of this

extract; and I also find that tobacco, in all its forms and modes of preparation,—its cataplasms of dried leaves, tincture, infusion, extract,—have all been resorted to, at different periods, by the despairing practitioner.

The potassio-tartrate of antimony, also mentioned by Mr. Chippendale, has been often tried, and almost as frequently rejected as useless. Dr. Scott was the first, I believe, to propound this remedy,—upon what principle it would be difficult to conjecture; and Magri, following the wake of an empirical practice, applied compresses moistened with a strong solution of tartarised antimony, until redness, approaching to pustulation, had been produced. These two agents, Mr. Chippendale has cited as having been simultaneously employed; the example, I can assure him, is by no means an isolated one; and I cannot but congratulate him for repudiating the doctrines which would enforce the adoption of such heterogeneous, conflicting elements in combination.

In sober truth, *tobacco* was designed for a far less noble purpose than the cure of neuralgia, and Mr. Chippendale will, I am sure, pardon me for stating, that I rather doubt whether or not the cases to which he has alluded were, *ipso facto*, anything more than neuralgia *notha*, or a spurious kind of *rheumatic* tic. I can hardly persuade myself that the peripheral pangs of true ganglionic irritation can be appeased by any measure that falls short of at once striking at the root and origin of the evil.

Having now encountered a vast variety of these maladies in all their phases, in their various complications, and in all stages of their manifestations, from the functional form of a few day's growth, to the hideous organic variety of thirty years; and having, as far as these opportunities have enabled me, searched diligently into matters connected with their history, past and present, and traced the rise and progress of the accompanying pathognomonic symptoms, I have little hesitation in expressing a decided conviction of the truth of the following propositions:—

1. That peripheral neuralgia never occurs as a primary idiopathic affection, but that (independent of organic disease,) its invariable source may be ascribed to irritation of the ganglionic centres.
2. That this condition is transmitted by direct communication, irrespective of the laws of "sympathy."
3. That (functional) tic is an affection peculiarly amenable to constitutional treatment.
4. That local applications, whether sedative or stimulating, anodyne or destructive, are more frequently detrimental than sanative in their operation.

Dr. Copland, in the last number of his "Dictionary of Practica Medicine," a work which has been applauded by the unanimous voice of the whole profession, states that "Sir Charles Bell and Dr. Allnatt have praised the decided exhibition of croton oil as a *purgative*," in cases of neuralgia. A few words will suffice to explain upon what principle I have recommended the adoption of this agent.

I do not, in the majority of instances, employ croton oil uncombined, or with a view to obtain its purgative effects. In fact, so minute and subdivided are the doses requisite to ensure its remedial action, as to preclude altogether the idea that its salutary operation resides in the power it possesses of producing catharsis. Croton oil is a *specific* purgative; that is, its properties are equally manifested whether externally applied on an absorbing surface laid over the abdomen in the form of a cataplasm, or exhibited internally. The active principle—the *tigline*—is absorbed, and is carried by the circulating mass of the blood into direct contact with the disordered tissues. Its *modus operandi* is still a mystery.

#### ABSURDITIES OF THE FACULTY.

We have before stated that one of the chief objects in establishing this Journal was to expose and correct the errors in medical science, which a long course of prescription seems to have sanctioned as if incontrovertible.

These errors pervade all the branches of medical science, while the number in each, and the extent to which they are carried, are almost incredible. One of the most common subjects of misrepresentation, is as to the nature of the simplest functions in animal physiology. We have a delectable specimen of the ignorance and folly, which characterize a class of men, professing to be learned, to base every thing upon unerring facts, and to reason in strict conformity with the principles of inductive philosophy, in the little article of which this notice is introductory. Though taken from one of the most respectable Journals of Medicine, a greater absurdity was never uttered in the name of science.

To call the effete matters which are habitually thrown off from the emunctories of the human system, animal secretions, is a per-

version of language, which the common sense of every reflecting man, would prevent his using. Every one knows that *secretion* and *excretion* are very different terms, and imply very different duties.

The merest tyro in physiology, is aware that the former is a result of the function of the lymphatics, that through it the *isabulum* of life is supplied, and that its products are invariably transmitted to the heart, and thence into the general circulations. The excretions are, so to speak, the debris of the general man; they are the portions of the system, which, having fulfilled their duties are thrown off as excrementitious. The distinction between these two functions, is so simple and obvious that every pretender to scientific knowledge ought to recognize it at a glance; and yet we see medical writers, and medical teachers, as the Professors in our Colleges, in the constant practice of confounding them as if they were one and the same.

The error in this instance, is not one of very great importance; and we only allude to it as illustrative of the absurdities, which those accustomed to copy their opinions from authority are prone to fall into. The doctrine of the equal powers of repulsion and attraction, in animal, as in all other matter, which we have taught for many years, would if generally known, prevent the commission of such errors.

#### ON MUCOUS MEMBRANES AND THEIR SECRETIONS

Mucous is found, on microscopic examination, to be composed of a viscid stringy fluid, and of a solid matter, that consists chiefly of shreds of the epithelium. It is sometimes acid, and at other times alkaline. Donne distinguishes three kinds of mucous membranes:—1. Those that are analogous to the skin, which furnish a frothy acid secretion; for example, the lining of the vagina. These acid mucous membranes, which our author calls *false*, never exhibit any vibratory cilia on their surface. 2. *True* mucous membranes—as that of the bronchi—which secrete a fluid that possesses alkaline properties, is viscid, and contains mucous globules: these are supplied with vibratory cilia. 3. Intermediate mucous membranes, which secrete a mixed kind of mucous: of this kind are those which exist around the orifices of the mouth, nose, anus, &c.—*Med. Chir. Review.*



# INDEX

TO

## FIRST VOLUME.

|                                               | PAGE |                                                   | PAGE |
|-----------------------------------------------|------|---------------------------------------------------|------|
| The Mysteries of the Faculty. . . . .         | 1    | Researches into the Local causes of Deaf-         |      |
| Symptoms of Tubercular Disease. . . . .       | 2    | ness. . . . .                                     | 44   |
| European Discoveries in Tubercular Dis-       |      | Changes of Mercurials in the System. . . . .      | 45   |
| ease. . . . .                                 | 7    | Statistics of Lithotomy and Anal Fistula. . . . . | 45   |
| The Sequel of Homeopathy. . . . .             | 11   | Ovarian Tumors, and Symptoms of . . . . .         | 46   |
| Effects of Galvanism known to the An-         |      | Muscular Motions, New Pessaries . . . . .         | 46   |
| cients. . . . .                               | 17   | Tuberculous Deposit in the Pia Mater. . . . .     | 47   |
| Plans to prevent the transmission of He-      |      | Operation in the Mesmeric State . . . . .         | 47   |
| reditary Diseases. . . . .                    | 18   | Pathology of the Spleen. . . . .                  | 47   |
| Lunar Influence. . . . .                      | 19   | Editor of the Lancet and Animal Magnet-           |      |
| Hemorrhage from the Lungs. . . . .            | 25   | ism. . . . .                                      | 48   |
| Diagnosis by the Pulse, and Hemorrhage        |      | Iron and Iodine, Tendinous Re-union,              |      |
| from the lungs. . . . .                       | 26   | Mezereon. . . . .                                 | 48   |
| Spinal Meningitis. . . . .                    | 27   | New Phrenological Organs. . . . .                 | 49   |
| Tubercular Consumption. . . . .               | 28   | Mr. Burritt the "Learned Blacksmith,"             |      |
| Statistics of Cancer. . . . .                 | 28   | to the Rev. Leroy Sunderland. . . . .             | 50   |
| Scrofulous Abscess of the Testis. . . . .     | 28   | Spermatozoa. . . . .                              | 50   |
| Sudden Shock of the Brain and recovery        |      | Commentaries on some Doctrines of a               |      |
| by similar means, (Similia Similibus.)        | 29   | Dangerous Tendency, in Medicine. . . . .          | 50   |
| Making believe to administer Arnica. . . . .  | 30   | Operations in Disease of the Ovaria, &c. . . . .  | 51   |
| Determination to the Skin in Scarlatina       |      | Effectual Reduction of Strangulated Her-          |      |
| and Measles. . . . .                          | 31   | nia, by Ether. . . . .                            | 52   |
| Clinical Lectures on Diseases of the Ner-     |      | Nitric Acid in Internal Hemorrhoids. . . . .      | 52   |
| vous System. . . . .                          | 31   | Analogy between Diseases of Different             |      |
| Rotary Magnetic Machine, effects of . . . . . | 31   | Periods of Life, and Corresponding Pe-            |      |
| The Agent in Animal Magnetism. . . . .        | 34   | riods of the Year, . . . . .                      | 52   |
| Remarkable Case of Magnetism. . . . .         | 35   | Ancient Ruins, . . . . .                          | 53   |
| Observations on Spermatorrhœa. . . . .        | 37   | Amputation in Paris, . . . . .                    | 53   |
| The Power of the Human Will. . . . .          | 40   | Formula for Rheumatism, . . . . .                 | 53   |
| Mental Powers of Clairvoyance. . . . .        | 41   | Digestion of Alimentary Substances . . . . .      | 53   |
| Scarlatina, Erysipelas, and Sulphate of       |      | Prevention of sore Nipples, . . . . .             | 53   |
| Quinine. . . . .                              | 42   | Rhus Toxicodendron, . . . . .                     | 53   |
| Sub-Arachnoid Hemorrhage. . . . .             | 43   | Arsenic in the Chronic Pleurisy of Sheep. . . . . | 54   |
| Cholera, Nervous Headache, Tetanus. . . . .   | 43   | Carbo Animalis in Buboes, . . . . .               | 54   |
| Paralysis of the Bladder, and Tincture        |      | Poisoning by Stramonium, . . . . .                | 54   |
| Cantharides. . . . .                          | 44   | Effects of an over dose of Cina, . . . . .        | 54   |

|                                             | PAGE. |                                              | PAGE. |
|---------------------------------------------|-------|----------------------------------------------|-------|
| Cicuta, - - -                               | 55    | Lateral Curvatures of the Spine, -           | 96    |
| Muriate of Tin in Chorea, - -               | 55    | White Swellings of serous Surfaces of        |       |
| Chronic Bronchitis, Hooping Cough,          | 56    | Joints and Limbs, - - -                      | 97    |
| Cough,—Hawking, - - -                       | 56    | Bronchocele or Goitre, - - -                 | 97    |
| Purpura Hemorrhagica, - - -                 | 56    | Deafness, Tubercular Disease, -              | 98    |
| Increase of Knowledge, - - -                | 56    | Eye, diseases of, - - -                      | 98    |
| The Magnetic Poles and the Moon,            | 56    | Erysipelas, - - -                            | 98    |
| Variation at City Hall, - - -               | 56    | Tubercular Disease of Neck (King's           |       |
| Magnetic Organization of the Human          |       | Evil,) - - -                                 | 99    |
| System, - - -                               | 57    | Strabismus, - - -                            | 99    |
| Number of Poles in the Brain, -             | 58    | Entropium—Aphonia, - - -                     | 99    |
| Number of Poles in the Heart, -             | 58    | Throat—Tubercular Disease of, -              | 99    |
| Action of Magnetic Poles, - -               | 59    | Acute Diseases, - - -                        | 99    |
| The Vagus Nerve, - - -                      | 61    | Tubercular Disease of the Organs, -          | 99    |
| Seat of Tubercles in Phthisis, -            | 61    | Rules in Magnetizing, - - -                  | 100   |
| Lecture on the Magnetism of the Human       |       | Animal Magnetism, - - -                      | 101   |
| Body, by Professor R. W. Gibbons, M.        |       | Extraordinary Instance of Clairvoyance,      | 101   |
| D., of South Carolina, - - -                | 61    | Animal Electricity, - - -                    | 102   |
| Polarity of the Brain, - - -                | 62    | Mr. Sunderland and the Ghost, -              | 103   |
| Opposite Polarity in right and left side of |       | Mesmeric Prevision, - - -                    | 103   |
| the Body, - - -                             | 65    | Fever—treatment of, - - -                    | 105   |
| Major Periods of Development in Man,        |       | Colchicum—poisoning by, - - -                | 105   |
| being a sixth Contribution to Proleptics,   |       | Hydrocephalus—Inspissated Bile,              | 106   |
| by T. Laycock, M. D., Physician to the      |       | Croup and Sulp. Copper, - - -                | 106   |
| York Dispensary, &c., - - -                 | 67    | Volvulus—treatment of, - - -                 | 107   |
| New Era in the Practice of Medicine.        |       | Mania and Antimony, - - -                    | 107   |
| Lecture delivered at the Egyptian Hall,     |       | Dartres—Pilula Ferri, - - -                  | 107   |
| Piccadilly, London, 1840, by S. Dick-       |       | Hydrocephalus—compression in,                | 107   |
| son, M. D. Lecture 1, Fallacies of the      |       | Diabetes—Incontinence of Urine,              | 108   |
| Faculty. Introduction, - - -                | 73    | Dropsies—Elder Bark in, - - -                | 108   |
| Phenomena of Health, - - -                  | 77    | Aphonia cured by Galvanism, -                | 108   |
| “ Disease, - - -                            | 79    | Femoral Hernia, - - -                        | 109   |
| Cause of Disease, - - -                     | 79    | Strabismus, - - -                            | 109   |
| Arsenic in Diseases of the Skin, by J. E.   |       | Deafness—Electro—puncture in -               | 110   |
| Erickson, Esq., - - -                       | 80    | Night Blindness—Leeches, - - -               | 110   |
| Arsenic in Tumors and Abscesses of the      |       | Par Vagum—Saffron, - - -                     | 111   |
| Tongue, by Sir. B. C. Brodie -              | 81    | Facial Neuralgia, - - -                      | 111   |
| Phthisis, by Dr. Graves, Dublin, -          | 81    | Black Drop, - - -                            | 111   |
| Observations on Dr Graves' Views, -         | 82    | Dropsy—Bronchitis, - - -                     | 111   |
| Similia similibus curantur. Corollaries, -  | 82    | Cæsarian Section, - - -                      | 112   |
| Polemical Powers of Hahnemann. From         |       | Venereal Warts, - - -                        | 112   |
| the British Journal of Homœopathy.          |       | Uterus—Rupture of, - - -                     | 112   |
| Introduction to the proving of Arsenic.     |       | Leeches in the Liver, and Snakes in the      |       |
| By Samuel Hahnemann, - - -                  | 82    | Stomach, - - -                               | 112   |
| Magnetised Arsenic, - - -                   | 83    | Naptha, - - -                                | 112   |
| Numbering, its importance to Physicians, -  | 84    | Revelations in Mesmerism, - - -              | 112   |
| Connection of Respiration with Sensibil-    |       | New Era in the practice of Medicine.         |       |
| ity. New explanation of an old riddle, -    | 86    | Lecture delivered at the Egyptian Hall,      |       |
| The Cold Water Dash and Reflex Action, -    | 87    | Piccadilly, London, 1840, by S. Dick-        |       |
| Magnetic Poles, and Heat and Cold, -        | 87    | son, M. D. Lecture II—Fallacies of           |       |
| Case of Hematemesis, by J. Epps, M.D. -     | 89    | the Faculty. Introduction, - - -             | 113   |
| Auscultation, - - -                         | 91    | Intermittent Fever—or Ague - - -             | 114   |
| Curability of Phthisis, by M. Boudet, -     | 91    | Spasmodic Complaints, - - -                  | 118   |
| Confirmation of M. Boudet's Views, -        | 93    | Paralysis, - - -                             | 120   |
| Rotary Magnetic Machine, description of, -  | 94    | Intermittent Fever following local injury, - | 126   |
| Extraordinary Effects of, in Toothache.     |       | Lecture on the Magnetism of the Hu-          |       |
| Jumping, - - -                              | 95    | man Body, by Professor R. W. Gibbs,          |       |
| Tic Douloureux, - - -                       | 95    | M. D., (continued from page 67.) -           | 127   |
| Toothache, with swelled Face, - -           | 95    | Magnetic organization of the organs of       |       |
| White Swellings of mucous Surfaces, and     |       | the human body, as traced by the Ro-         |       |
| Encysted Tumors, - - -                      | 95    | tary Magnetic Machine, - - -                 | 135   |

|                                                                                                                                                                                                                                                                       | PAGE.   |                                                                                                                                                               | PAGE. |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| Motions of the Magnetic Poles, and of the Earth and Planets, -                                                                                                                                                                                                        | 136     | Directions for distinguishing Acute Disease of the Serous Surfaces, and for Magnetising in these cases, and in Fevers, Acute Bronchitis, and Shaking Palsy, - | 162   |
| The "Water Cure" analyzed, -                                                                                                                                                                                                                                          | 144     | Diseases of the Skin. Directions for Magnetising in Diseases of the Skin, -                                                                                   | 162   |
| Digitalis in Epilepsy, -                                                                                                                                                                                                                                              | 146     | Effects of Magnetising on the Magnetizer—Magnetic Sleep, -                                                                                                    | 163   |
| Incontinence of Urine, and Enuresis cured by Electricity, -                                                                                                                                                                                                           | 146     | Spine, Lateral Curvatures—Directions for Magnetising in these cases, -                                                                                        | 163—4 |
| Amputation performed during the Magnetic Sleep, -                                                                                                                                                                                                                     | 147     | Classification of Diseases, -                                                                                                                                 | 164   |
| Period of incubation in Syphilis, -                                                                                                                                                                                                                                   | 147     | Directions for running the Savage Rotary Magnetic Machine, -                                                                                                  | 164   |
| Tapping the Chest, -                                                                                                                                                                                                                                                  | 148     | Animal and Vegetable Electricity, -                                                                                                                           | 165   |
| Belladonna in Scarlet Fever, -                                                                                                                                                                                                                                        | 148     | Mercury and Iodine in Syphilis, -                                                                                                                             | 167   |
| Paralysis, -                                                                                                                                                                                                                                                          | 148     | Treatment of Stricture of the Urethra, -                                                                                                                      | 167   |
| Tests for Arsenic, -                                                                                                                                                                                                                                                  | 148     | Effects of Tartar Emetic on Infants, -                                                                                                                        | 167   |
| Influence of Factory Labor on growth, -                                                                                                                                                                                                                               | 146     | Lateral Curvatures of the Spine, -                                                                                                                            | 168   |
| Treatment of Erecile Tumors of the Eyelids, -                                                                                                                                                                                                                         | 149     | Structure and Diseases of the Eustachian Tube, -                                                                                                              | 168   |
| Case of large Ovarian Tumor removed by operation, by F. Bird, M. D. -                                                                                                                                                                                                 | 149     | Copaiva Sugar Plumbs, -                                                                                                                                       | 168   |
| On the true character of Idiopathic Erysipelas, by J. A. Wilson, M. D., -                                                                                                                                                                                             | 151     | Original seat of Cancer in the Eyelids, -                                                                                                                     | 168   |
| The Rotary Magnetic Machine, -                                                                                                                                                                                                                                        | 155     | Fallacies of the Faculty, -                                                                                                                                   | 169   |
| The Savage Rotary Magnetic Machine, -                                                                                                                                                                                                                                 | 156     | Apoplexy, -                                                                                                                                                   | 171   |
| The direction and character of the forces as they proceed from the Buttons, -                                                                                                                                                                                         | 156     | Ruptured Blood-vessel or Hemorrhage, -                                                                                                                        | 172   |
| The extraordinary effects of these instruments, -                                                                                                                                                                                                                     | 157     | Diseases of the Heart, -                                                                                                                                      | 175   |
| The great number and variety of cases in which they have been tested, -                                                                                                                                                                                               | 157     | Pulmonary Consumption, or Decline, -                                                                                                                          | 177   |
| The great importance of the machine in incipient Tubercular Consumption, -                                                                                                                                                                                            | 157     | Lectures on Organic Chemistry, -                                                                                                                              | 179   |
| Tubercular disease of the Serous Surfaces; Directions for Magnetising the Heart, Pleura, Stomach, Liver, Spleen, Large Intestines, Small Intestines, Mesentary, Kidneys, Cystis, Prostate Gland, Uterus and Ovaria, -                                                 | 158     | Cures of various Diseases with Mesmerism, by different Gentlemen, -                                                                                           | 184   |
| Directions for Magnetising in Chlorosis, Amenorrhœa, Leucorrhœa. Prolapsus-uteri, Disease of the Stomach and Uterus, Disease of the Cerebellum and Uterus, Brain, Sick-head-aches, Tic-Dolereux, Strabismus, Eye, Nose, Antrum, Tooth-ache, Throat, and Rheumatism, - | 159     | Corollaries, -                                                                                                                                                | 185   |
| Directions for Magnetising in Paralysis, Chorea, St. Vitus' Dance, Epilepsy, Catalepsy, Deafness, Joints and Limbs, Spine in distortions, and distortions in Lumbar Abscess and Aphonia, -                                                                            | 160     | Mesmeric Revelation, -                                                                                                                                        | 185   |
| Directions for distinguishing Tubercular diseases of the Organs, and for graduating the power of the Machine in these cases, and the time occupied in Magnetising at each sitting, -                                                                                  | 160 161 | Observations in Midwifery, -                                                                                                                                  | 189   |
| Hypertrophy of Mucous Surfaces. Directions for Magnetising in Bronchitis, Chronic and Mucous disease of the Throat, -                                                                                                                                                 | 161     | Excito-motor Action of the Uterus, -                                                                                                                          | 192   |
| Acute Diseases; Inflammation of the Serous Surfaces; Acute Tubercula; cases in which the Machine has been used, -                                                                                                                                                     | 161 162 | The Excito-motor Actions caused by the presence of the Child in the Vagina, -                                                                                 | 192   |
|                                                                                                                                                                                                                                                                       |         | Table of the Act of Parturition in First Stage, -                                                                                                             | 194   |
|                                                                                                                                                                                                                                                                       |         | Table of the Act of Parturition in the Second Stage, -                                                                                                        | 194   |
|                                                                                                                                                                                                                                                                       |         | Table of the Act of Parturition in the Third Stage, -                                                                                                         | 194   |
|                                                                                                                                                                                                                                                                       |         | The periods regulating the Recurrence of Vital Phenomena. -                                                                                                   | 195   |
|                                                                                                                                                                                                                                                                       |         | Case of Ovarian Dropsy, -                                                                                                                                     | 198   |
|                                                                                                                                                                                                                                                                       |         | "New Magnetic Fluid," -                                                                                                                                       | 189   |
|                                                                                                                                                                                                                                                                       |         | Mesmerism, -                                                                                                                                                  | 199   |
|                                                                                                                                                                                                                                                                       |         | Influence of Opium on the Catamenial Functions, -                                                                                                             | 199   |
|                                                                                                                                                                                                                                                                       |         | On the Inorganic Constituents of Plants, -                                                                                                                    | 200   |
|                                                                                                                                                                                                                                                                       |         | Royal Medico-Botanical Society, -                                                                                                                             | 201   |
|                                                                                                                                                                                                                                                                       |         | Analyses of Blood in Diseases, -                                                                                                                              | 202   |
|                                                                                                                                                                                                                                                                       |         | Tabular View of One Hundred and Eighty Cases of Tubercle of the Lungs in Children, with some remarks on Infantile Consumption, -                              | 203   |
|                                                                                                                                                                                                                                                                       |         | On the Exclusion of the Atmospheric Air in the Treatment of Certain Local Diseases, -                                                                         | 203   |

|                                                                                                             | PAGE. |                                                                                 | PAGE. |
|-------------------------------------------------------------------------------------------------------------|-------|---------------------------------------------------------------------------------|-------|
| On the Microscopical Characters of Milk<br>and the use of the Microscope in the<br>choice of a Nurse, - - - | 204   | Dilatation of the Os Uteri through the<br>Medium of the Stomach, - - -          | 212   |
| Mineral Marmoratum, or Paste to fill<br>Hollow Teeth, - - -                                                 | 204   | Case of Complicated Ovarian Disease, - - -                                      | 214   |
| Tooth Powders, - - -                                                                                        | 204   | Examination, Twenty-six Hours after<br>Death, - - -                             | 215   |
| Cases reported for the Dissector, by A.<br>H.—M. D. - - -                                                   | 204   | Astonishing effect of Electricity in cu-<br>ring Hysterical Locked Jaw, - - -   | 215   |
| American Medical Students and their<br>Habits. - - -                                                        | 206   | The "Traitement Arabique" in obsti-<br>nate cases of Skin Diseases. - - -       | 215   |
| The Rotary Magnetic Machine and the<br>Duodynamic treatment of Diseases, - - -                              | 207   | Memory, its Influence and Importance<br>as a source of Action in Animals, - - - | 217   |
| Effects of the Rotary Magnetic Ma-<br>chines, - - -                                                         | 208   | Miscellaneous Items, - - -                                                      | 118   |
| The Curability of Cerebral and Spinal<br>Softenings, - - -                                                  | 211   | " " " - - -                                                                     | 219   |
| Observations in Midwifery, by Tyler<br>Smith, M. D., - - -                                                  | 211   | Absurdities of the Faculty, - - -                                               | 220   |
| Uterine Contractions excited through<br>the Medium of the Stomach, - - -                                    | 212   | Index to the First Volume, - - -                                                | 221   |
|                                                                                                             |       | " " " - - -                                                                     | 222   |
|                                                                                                             |       | " " " - - -                                                                     | 223   |
|                                                                                                             |       | " " " - - -                                                                     | 224   |

## NOTICE.

This number completes the First Volume of this Journal, and it is consequently accompanied with an Index. The commendations of the course we have pursued in conducting it, from many of the most distinguished men of the profession, who have become tired and ashamed of the old visionary theories and practice of the schools, and the patronage which has been extended to it, has encouraged us to publish another Volume, quarterly, the first number of which will be out on the First of January next.

The introduction of the Rotary Magnetic Machine, in the duodynamic treatment of diseases, has marked a new era in the practice of physic and surgery. We have sold more than a hundred of these machines to physicians during the last three months, and we shall be pleased to receive from those who are using them, any information that may be new and useful in the use of these instruments, for the next and succeeding numbers.

H. H. SHERWOOD, M. D.

# THE DISSECTOR.

Vol. II.]

NEW-YORK, JANUARY, 1845.

[No. 1.]

## FALLACIES OF THE FACULTY.

Lectures delivered at the Egyptian Hall, Piccadilly.  
London, 1840.

BY A. DIXON, M. D.

## LECTURE IV.

Inflammation—Blood Letting—Abstinence.

GENTLEMEN :

When medical men hear that I am in the habit of treating all kinds of disease *without* Blood-letting, they generally open their eyes with a stare, and ask me what I do in INFLAMMATION. Inflammation!—who ever saw any part of the body *on fire*, or in FLAMES? for the word, if it means any thing at all, must have something like that signification. To be sure, we have all heard of “spontaneous combustion,” but I confess I never saw it, and what is more, nobody that ever did! What, then, is this inflammation—this term which our great modern doctors so dogmatically assure us is the head and front of every corporeal disorder? It is a metaphor merely—a theoretical expression, which, torture it how you please, can only mean a quicker motion and a higher temperature in the moving atoms of a given structure, than are compatible with the healthy organization of that structure. When you find a considerable degree of heat and swelling, with pain and redness in any part, that part in medical language is *inflamed*. Now, what are these phenomena but the signs of approaching structural decomposition? During the slighter corporeal changes, the coincident variation of temperature is not always very sensibly perceptible; but whenever there is the least tendency to decomposition, this thermal change is sure to be one of the most prominent features. The phenomena of inflammation, then, very closely resemble, if they be not indeed identical with, the chemical phenomena which take place preceding and during the decomposition of inorganic substances. Now, when this kind of action proceeds unchecked, the result in most cases, is a tumour containing *purulent matter*, which matter, being a new *fluid* product, differs entirely in its appearance and consistence from the original tissue, in which it chanced

to become developed. This tumour we call *abscess*. And how is it to be cured? In most instances, the matter, after working its way to the surface, escapes by an ulcerated opening of the integument, while in others, an artificial opening must first be made by the knife of the surgeon. In either case, the part in which the abscess was situated, generally recovers its healthy state by the reparative powers of nature. But there is yet another mode in which a cure may be effected, namely, by *Absorption*; that is to say, the matter of the abscess may be again taken up into the system, and by the inscrutable chemistry of life, become once more a part and parcel of the *healthy* fabric of the body!—being thus again reduced to the elements out of which it was originally formed. How analogous all this to the operations of the chemist, who, by means of the galvanic wire, having first reduced *water* into its elemental gases, again converts these, by electrical means, into the water from whose decomposition they proceeded! Such, and many more chemical operations, Nature daily performs in the animal body; and that she does all this through the electric or galvanic medium of the BRAIN and NERVES, cannot possibly admit of dispute, when you come to consider that under the influence of a Passion (the most unquestionable of *cerebral* actions) large abscesses, and even solid tumours, have often disappeared in a single night. Gentlemen, there is not a passion,—Grief, Rage, Terror, or Joy,—which has not as effectually cured abscesses and other tumours, as the most powerful agents in the *materia medica*. The writings of the older authors abound in instances of this kind. But there are yet other terminations to the inflammatory process. For example, after having proceeded, to a certain extent, in the way of change, but still falling short of actual purulent decomposition, the atoms of the inflamed part, by the renewal of a healthy condition of the body generally, or by the direct application of cold or other agency, may again, with more or less quickness, subside into the degree of motion and temperature characteristic of their natural revolutions. This termination is called *Resolution*. When the inflammatory action is more than usually

rapid, the result may be the complete death of the part implicated,—a black inorganic mass being left in the place of the tissue which it originally composed. This last we term *Mortification* or *Gangrene*.

But, Gentlemen, medical men extend the term inflammation to some other morbid processes, which, under the various names of Gout, Rheumatism, and Erysipelas, we shall in another lecture, have the honour to explain to you. A great many books have been written upon the subject of Inflammation, but I must own I never found myself one whit the wiser after reading any of them. Their writers, in almost every instance, use language which they do not themselves seem to have understood, otherwise they would have confined themselves to one sense, instead of including under the same term, states the most opposite. Were I to tell you that the word "Inflammation" is used by many writers when a part is more than usually cold, you would think I was laughing at you; yet there is nothing more true, and I will give you an instance.—A carpenter had his thumb severely bitten by a rattlesnake; and the effects of the venom are thus described by one of the most learned of living medical writers, Mr. Samuel Cooper:—"The consequence was, that in ten or twelve hours, the whole limb, axilla, and shoulder became very cold and enormously swollen up to the neck; in fact, the whole surface of the body was much below the natural temperature. The swelling, you know, is produced by that kind of INFLAMMATION which is called diffuse inflammation of the cellular tissue."—[MR. S. COOPER'S LECTURE IN MED. GAZETTE.] Gentlemen, was there ever such an abuse of words—such an abandonment of common sense as this? The arm was "very cold"—"much below the natural temperature,"—yet it was *inflamed*—on fire!

Restricted to the sense in which I have already spoken of the term, namely, heat, swelling, and pain, "inflammation," like "fever," or any other abstract word, may be used as a "counter to reckon by," and, like almost every other phenomenon of disease, it is a development of previous constitutional disturbance. I do not speak of immediate local inflammation produced by a chemical or mechanical injury—leaving that to the surgeons to elucidate or mystify, according to their particular inclinations; I talk of inflammation from a general or constitutional cause. Has an individual, for example, exposed himself to a cold draught, or to any other widely injurious influence, he shivers, fevers, and complains of pain, throbbing, and heat in the head, chest, or abdomen, phenomena gradually developed according to the

patient's predisposition to organic change in this or that locality. Phrenitis, Pneumonia, Peritonitis, (technical terms for inflammation of the Brain, Lungs, and Membranous covering of the Bowels,) are consequences or features, not causes of the constitutional disorder. But are the symptoms of inflammation in such parts equally intermittent with the diseases of which we have already treated? Listen to Lallemand:—"In inflammation of the brain," he tells you, "you have spasmodic symptoms, slow and progressive paralysis the course of the disorder being *intermittent*." So that inflammation, like almost every other morbid action, is for the most part a feature or development of intermittent fever. Dr. Conolly, in his Cyclopædia of Medicine, says "diurnal remissions are distinguished in EVERY attack of inflammation." Now, if you prefer the evidence of another man's eyes to your own, this statement ought to be more than convincing, for it comes from the enemy's camp. Gentlemen, it is the language of an opponent, the Editor of the British and Foreign Medical Review—the same individual who lately told his readers that the *Unity of Disease* was a silly book. If it was so silly as he says, why was he so silly as to abuse it? But against his authority,—if authority, in these days, be still permitted to take the place of examination—you have the opinion of Sir Astley Cooper, who, with his usual candour and good feeling, at once pronounced it to be a "valuable work." Now, who in his senses would think of comparing these two men together,—Astley Cooper, the father of English surgery, and John Conolly, the Mad-doctor?—"Hyperion to a satyr!" But, Gentlemen, you have no idea what tricks these medical Reviewers are in the habit of playing. Some time ago I showed up one of them in a way he will not soon forget. Dr. James Johnson, were he here, would know the person I mean; for *he*, Gentlemen, as I have already told you, reviewed my "Fallacy of the Art of Physic as taught in the Schools, in the Medico-Chirurgical Review." A most unlucky business it turned out for him, for were I to tell you how I replied to his criticism, you never could again hear his name mentioned without laughing. Why has he not, in revenge, "cut up" the *Unity of Disease*? The editor of the Medical Gazette, not long ago, pretended to Review that work. He did not, however, like Dr. Conolly, call it a silly book;—he admitted, on the contrary, that it had "both pith and point" but he contended that it was only a straw thrown up at a lucky moment when the wind of medical opinion was turning against the "bleeding mania,"—a mania which he said he also reprobated. I wrote to him to ask,

if that were really the case, why he Mr. Editor had never reprobated that mad practice before, and knowing it to be so murderous in its effects, as he said he did, how in common humanity he allowed my strictures upon it to remain so long unnoticed in his pages; while all the years that these strictures had been before him, he had not only continued to fill his journal with cases treated after the sanguinary fashion, but had even held them up to the world as *models of practice*! True, in one or two instances, where the person he quoted was his enemy, he had certainly hinted that the treatment was bark. But these were very sorry exceptions. So far from my book being a straw which showed which way the wind blew, I was the first, (I maintained) who had the courage, alone, and in the face of much opposition, to set that *wind a-blowing*; and I added, that before I died I hoped to raise such a *stormy* one as would purify the medical atmosphere of some of its present corruption and foulness! But of that letter my good friend the Editor took no notice whatever; nor was I surprised at it, for the Medical Gazette, as some of you may know, is a mere organ and supporter of the College of Physicians; and so much the slaves of that body are the booksellers who publish it, that when about two years before, I sent them the MSS. of this very *Unity of Disease*, they actually refused to bring it out for me on any terms!—the editor of the Gazette can best tell at whose instigation,—for he is, or was then at least, the examiner of all their medical manuscripts, and therefore perfectly acquainted with that particular secret. Like a good servant, doubtless, he had too much regard for his employers to permit them to usher into the world such a terrible exposure of their professional patrons. Before quitting this matter, I may mention, that I am frequently asked why my writings have never been taken up by the *Lancet*, the *Lancet* which talks so constantly and so grandiloquently of its reforming and liberal politics! I can suggest a reason;—that periodical is now the organ of the Apothecaries. Mr. Wakley, its proprietor, was, in early life, a medical reformer, and much good he certainly at one time did in that character. Now—but I shall say nothing more of him on this occasion except *Cave canem*!

To return to inflammation. Whether the particular condition, so called, be termed erysipeloid, gouty, rheumatic, scrofulous, it is still *remittent*; and if you question the patient, he will almost in every case admit that it was preceded or accompanied by cold or hot fits or both. May not inflammation, then, yield to Bark—to Quinine? The late Dr. Wallace of Dublin maintained the affirm-

ative, dwelling more particularly on its good effects in that disorganizing inflammation of the eye, termed *Iritis*, in which disease he preferred it to all the routine measures, which; *on the strength of a theory*, medical men have from time to time recommended as *antiphlogistic*. During an attack of Ague, he tells us, *Iritis* with inflammatory affection of other parts of the eye, occurred in the person of a patient under his care. "For the former complaint, namely, the intermittent fever, he administered Bark; by the exhibition of which, he was surprised at seeing the *inflammatory affection of the Eye*, as well as the fever, *disappear*." This was the case which first led him to suspect the fallacy of the blood-letting system in inflammation of the Eye. Now I shall tell you what first led me to entertain similar doubts of its efficacy. A medical officer of one of Her Majesty's regiments serving in India, couched a woman for cataract. The next day, the eye having become inflamed, according to received practice he bled the patient; but scarcely had he bound up her arm, when she fell as if she had been shot, and lay to all appearance dead. With the greatest difficulty, he succeeded in recovering her from this state; but it was not until four long hours had passed, that he felt that he could safely leave her with ordinary attendants; for during that greater part of that time, when he ceased to chafe her temples or otherwise call up the attention of the brain by the application of stimulants to the nose, mouth, &c., she relapsed into a death-like swoon. More than once he was even obliged to inflate her lungs to keep her from dying. But, in this case, gentlemen, the blood-letting did not cure the inflammation; for the next day the eye was more painful and inflamed than ever, and the poor woman, after all the blood she had lost—and who will say that she was not bled enough?—did not recover her sight. It is now many years since that case came under my observation, and it made an impression on my mind I shall never forget. Had that woman died, would not everybody have said that the gentleman who had bled her had killed her? and very justly too, though he, good man, only conscientiously put in practice what he had been taught to consider his duty. You see, then, that blood-letting *even to the point of death*, is no cure for inflammation; and that it cannot prevent its development, I shall furnish you with ample evidence before I finish this lecture. Meantime, I will tell you what can do both—Bark and Opium. These are the remedies to give before an operation, and they are also the remedies best adapted for the relief of inflammation after it has come on;—and their

beneficial influence will be more generally certain in the latter case, if you first premise an emetic, and wait till its action has ceased before you administer them.

"The Peruvian Bark," says Heberden, "has been more objected to, than any of these medicines (Bitters) in cases of considerable inflammation, or where a free expectoration is of importance; for it is *supposed* to have, beyond any other stomach-medicine, such a strong bracing quality, as to *tighten the fibres* (!) still more, which were already too much upon the stretch in inflammation, and its astringency has been judged to be the likely means of checking or putting a stop to expectoration." *All this appeared much more plausible when taught in the schools of PHYSIC*, than probable, when I attended to fact and experience. The unquestionable safety and acknowledged use of the Bark, in the *worst stage* of inflammation, when it is tending to a MORTIFICATION, affords a sufficient answer to the first of these objections; and I have several times seen it given plentifully in the confluent small pox, without lessening in any degree the expectoration."

Some time ago, I was called to see a young gentleman, who had a swelling under the arm-pit, extending to the side. The skin was red and hot, and the tumour so painful as to have deprived him of all rest for the three previous nights. Though suppuration appeared to me to have commenced, I at once ordered Quinine, and begged him to poultice the tumour. By these means he was perfectly cured in three days, the swelling having, in that period, completely disappeared. The subject of this case was, in the first instance, attacked with shivering and fever, which had repeatedly recurred, but disappeared under the use of the quinine. Matter, I have no doubt, was absorbed in this instance, but so far from this absorption producing shiverings,—which, according to the doctrine of the schools, it ought to have done,—the very reverse took place.

I shall now give you one of many instances of indubitable and palpable inflammation—if the word have a meaning at all—as a proof of the value of Opium in the treatment of this affection

Case.—An old officer, Major F., 89th foot who had previously lost one eye by acute Ophthalmia, notwithstanding a vigorous *antiplogistic* discipline, had the other attacked in a similar manner with great pain, redness, and throbbing. I found him leaning his head over a chair-back, his face indicative of intense agony. For ten nights, he assured me, he had been unable to tolerate any other position, and it was only towards morning, when overcome by suffering, that he could,

at last, obtain any thing like repose. The pain came on at bed-time in an aggravated degree, and remitted principally in the afternoon. Three grains of opium which I directed him to take half an hour *before* the recurrence of the expected paroxysm, procured him a whole night of profound sleep, and his eye, in the morning, to his astonishment, was free from pain, and only slightly vascular. He had been repeatedly bled, leeches, purged, and blistered, without even temporary benefit—indeed, the gentleman who attended him, in the first place, plumed himself upon the activity of his treatment.

But how, you may ask me, can PLEURISY and PNEUMONIA be cured without Blood-letting? What are Pleurisy and Pneumonia? Any rapid tendency to *atomic* change in the substance of the lungs, from the real pain and presumed increase of temperature at the same time developed, is termed Pneumonia—*vulgo* inflammation of the lungs. A similar tendency to change in the *atomic* relations of the membrane (*pleura*) which covers the outer surface of the lungs, or of that portion of it which is continued over the inner surface of the chest, is called the Pleurisy. Now, authors have thought it a fine thing to be able to tell pleurisy from pneumonia, but the thing is impossible; and what is more, if it were possible, so far as the treatment is concerned, it would not be worth the time you spend in doing it. Such distinctions only lead to interminable disputes, without in the least tending to improvement in practice. This much, however, I do know,—both diseases are developments of intermittent fever, and both may often co-exist at one and the same time. And in the Medical Gazette there is an excellent case of the kind, which, as it in a great measure illustrates the chronothermal doctrine and treatment in both, I shall give to you in the words of its narrator. "The patient's symptoms were difficult respiration, dry cough with stringy expectoration pulse full. The disease commenced with an intense fit of shivering, followed by heat and a severe cough. Every day at noon there was an *exacerbation* of all the symptoms, commencing with very great shivering, cough, and intolerable pain in the chest, a fit of suffocation, and finally perspiration,—at the end of an hour the paroxysm terminated. Ammoniacal mixture was first given, then two grains of Quinine every two hours. The very next day the fit was scarcely perceptible; the day after, there was no fit at all. An observation worthy of remark is, that the symptoms of PLEURO-PNEUMONIA,—which continued throughout in a very slight degree, it is true, in the intervals of the paroxysms—disappeared completely, and in a very short



time, by the effect of the sulphate of quinine."

Who are the persons most subjected to inflammatory disease of the chest? Medical theorists answer, "strong healthy labourers, and people much exposed to the air." How these gentlemen deceive themselves! If I know any thing at all upon any subject, I know that the fact in this case is just the reverse. The subjects of chest-disease in my experience have been almost all persons of a delicate habit, many of them confined to badly ventilated rooms, and the greater number broken down by starvation, blood-letting, or previous disease. Some of you may have heard of M. Louis, of Paris, a physician, who for many years has made chest-disease his study. Speaking of his consumptive patients, who became the subjects of *inflammatory* disease, he has this observation: "As we have already remarked in speaking of *Pneumonia*, the invasion of *Pleurisy* coincides in a large proportion of our patients with the *period of extreme weakness and emaciation*."—Dr. Cowan's translation of Louis.

Now, what is the usual treatment of *Pleurisy* and *Pneumonia*? Does it not almost entirely consist in blood-letting, starving and purging—with blisters and mercury sometimes? But what are the results?—relapse or repetition of the paroxysm from time to time,—long illness,—weakness ever after, and death too often. Even in these cases of extreme emaciation, M. Louis applies leeches! Contrast the case I have just given you from the Medical Gazette, with the case and treatment of an individual, whose omnipotent power of setting a theatre in a roar may be still fresh in the recollection of many of you—the celebrated Joe Grimaldi. The very name excites your smile!—but upon the occasion to which I refer, the poor clown, instead of being in a vein to move your laughter, very much wanted your sympathy. "Monday, the 9th of October," says Mr. Charles Dickens, "was the day fixed for his benefit, but on the preceding Saturday, he was suddenly seized with severe illness, originating in a most distressing impediment in his breathing. Medical assistance was immediately called in, and he was bled until night fainting. This slightly relieved him, but shortly after he had a relapse, [return of the paroxysm?] and four weeks passed before he recovered sufficiently to leave the house. There is no doubt, (continues Mr. Dickens) but that some radical change had occurred in his constitution, for previously he had never been visited with a single day's illness, while after its recurrence, he never had a single day of perfect health." If you

reflect that medical relief was immediately called in, you may be inclined, like myself, to ascribe poor Grimaldi's damaged constitution, not so much to the effect of the original disorder, as to the sanguinary treatment adopted in his case. Whether or not he had the additional medical advantage of being starved at the same time I do not know; but lest it might be inferred that this continued illness was owing to the neglect of this very excellent part of *antiphlogistic* practice, I may just hint that there have been such things as inflammation of the lungs brought on by starvation. Witness the verdict of a coroner's jury, in the case of a pauper, who died not long ago in the White Chapel Work-House. "That the deceased died from inflammation of the lungs, produced by exposure and want." The verdict in question was only in accordance with the evidence of the surgeon of the work-house.

In acute disease of the chest—whether involving the *pleura* simply, the interstitial substance of the lungs, or the *mucous* or *muscular* apparatus of the air-tubes, your first duty is to premise an emetic. So far from acting exclusively on the stomach, medicines of this class have an influence primarily *cerebral*, and they therefore act powerfully upon every member and matter of the body. By emetics you may change the existing relations of the whole corporeal atoms more rapidly and effectually, than by any other agency of equal safety in the *Materia Medica*. Every kind of chest-disease being a mere feature or developement of fever, whatever will relieve the latter will equally relieve the former. The value of emetics in the simpler forms of fever, few will be sufficiently bold to deny; and the quickness with which the same medicines can alter the state of the inflamed part may be actually seen by their effects on the eye, in the inflammatory affections of that organ. You have only to try them in chest-disease to be satisfied of their inestimable value in cases of this kind. Instead, therefore, of talking of the temporary good you have occasionally seen done by the lancet in inflammation of the chest, call to mind the many deaths you have witnessed where it had been most freely used—to say nothing of the long illnesses which have been the lot of such as have escaped the united bad effects of a chest-disease and loss of blood. Whatever salutary influence, as a *present means of relief*, blood-letting may produce, it is infinitely inferior to what you may obtain by emetics—a class of remedies which possess the additional advantage of giving that relief, without depriving the patient of the material of healthy constitutional power. Their influence, moreover, as a pre-

ventive against return of the paroxysm, is very considerable,\* while blood-letting, so far as my experience goes, has only, on the contrary, appeared to render the patient more liable to a recurrence.

Lord Bacon tells us in his Works, that if disciples only knew their own strength, they would soon find out the weakness of their masters. What led him to this conclusion? What but the fact that, with all his ability, even Lord Bacon himself had been duped by his teachers?—and why did Des Cartes say, that no man could possibly pretend to the name of philosopher who had not at least once in his life doubted all he had been previously taught? He too had been hoodwinked by his pretended masters in philosophy. But you, perhaps, will say all this took place in old times—the world is quite changed since then; professors are now the most enlightened and respectable men alive; they go to church, where they are examples of piety; they never were found out in a lie; are not subject to the passions of other men; have no motives of interest or ambition,—in fact, they are all but angels. Now, I only wish you knew the manner in which most of these very respectable persons get their chairs—the tricks, the party work, the subserviency, meanness, and hypocrisy practised by them for that and other ends—and you would not so tamely submit your judgment to their theoretical dreams and delusions. Young men, be MEN,—and instead of taking for gospel the incoherent and inconsistent doctrines of the fallible puppets whom interest or intrigue has stuck up in Academic Halls,—use your own eyes, and exercise your own reason! Here, then, I give you a test by which you may know the best practice in inflammatory diseases of the chest—a test that cannot possibly deceive you. Take a certain number of pleuritic and pneumonic patients—bleed, blister, and physic these after the most orthodox fashion, so that you shall not be able to tell, whether the continued disease be the effect of the primary cause, or the heroic measures by which your patients have been worried during their illness. Take another equal number similarly afflicted, and treat them chrono-thermally,—that is to say premise an emetic, and when, by means of this, you have obtained a remission of the symptoms, endeavour to prolong such period of immunity, by quinine, opium, or hydrocyanic acid, and then compare the results of both modes of practice. If you do not find

an immense saving of suffering and mortality by the latter mode of treatment, I will consent to be stigmatised by you as an impostor and deceiver—a cheat—a quack—a person, in a word, who would rather teach error than vindicate truth. Remember, however, before you begin, that the Chrono-Thermal System professes, as its chief feature of superiority over every other, to make *short work* with disease,—a circumstance not likely to recommend it to those whose emolument, from the manner in which things are now ordered, arises principally from long sickness and much physic!

I am often asked how I treat *Enteritis*,—Inflammation of the Bowels—without the Lancet? Before I give my answer, I generally ask—Can medical men boast of any particular success from depletion in this disease? If so, why have they been always so solicitous to get the system under the influence of calomel,—or why do they prescribe Turpentine in its treatment? Is it not because the nature of the relief afforded by the lancet has either been temporary or delusive, or, what I have myself found it to be, absolutely hurtful in the majority of cases? “The symptoms of *Enteritis*,” says Dr. Parr, “are a *shivering*, with an uneasiness in the bowels, soon increasing to a violent pain,—occasionally at first *remitting*, but soon becoming continual. Generally the whole abdomen is affected at the same time with spasmodic pains, which extend to the loins, apparently owing to flatulency. The pulse is small, frequent, generally soft, but sometimes hard, and at last irregular and intermittent—the extremities are cold—the strength sinks rapidly.” “Perhaps,” he adds, “bleeding is *more seldom necessary*, in this disease than in any other inflammation; for it rapidly tends to mortification, and should it not at once relieve, it soon proves fatal.” In a letter which I received from staff-surgeon Hume, he says: “I am satisfied that *Pneumonia* and *Enteritis*, diseases which are at present the bugbears of the faculty, are indebted for their chief existence to the remedies employed in ordinary ailments, namely, bleeding, and unnecessary purging. I never saw a case of either, (and I have seen many) of which the subject had not been the inmate of an hospital previously, where he had undergone the usual *antiphlogistic* regimen,—or had been otherwise debilitated, as in the case of long residence in a warm climate.” Now, Gentlemen this is the language of an experienced Medical Officer of the Army, one who, having no interested end to serve, and who would not take private practice if offered to him, is at least as worthy of belief as those whose daily bread

\* This statement, when I first published it, was denied by Physicians, but it has been since confirmed by Dr. Seymour, of St. George's Hospital, who recently made some remarks upon the power of Emetics in “altering the Periodicity of Disease.”

depends upon the extent and duration of disease around them. My own practice in *Euteritis* I will illustrate by a case. I was one evening requested by the Dowager Duchess of Roxburgh to see her butler; I found him with severe pain of abdomen, which would not brook the touch, furred tongue, hard pulse, and hot skin; he told me he had shivered repeatedly, that the pain was at first *intermittent*, but at last constant. He had been seen in the morning by a gentleman, who had ordered him Turpentine and Calomel—a proof that he also considered the case as one of inflammation of the bowels. The patient having obtained no relief, I was called in. I gave him an emetic, and went up stairs to await the result. In about twenty minutes I again saw him. The vomit had acted powerfully, and with such relief that he could then turn himself in bed with ease, which he could not before do. I then prescribed prussic acid and quinine. In a few days he was as well as ever. Instead of bringing *theoretic* objections to this method of treating inflammation of the bowels, let practitioners only *put it to the proof*. Is it possible that they can be less successful with the new practice than with the old, under which, when they save a patient in this disease, they are fain to boast of it as a wonder!

I shall now enter at some length upon the subject of

#### BLOOD-LETTING.

While with one class of practitioners, Medicine is reduced to the mere art of purgation, with another class it consists in the systematic abstraction of blood; every means being resorted to in the mode of doing this, from venesection, arteriotomy, and cupping, to the basest application of the leech. In the remarks, Gentlemen, which I am now about to make on the subject, instead of discussing the preferable mode of taking blood away, I shall bring before you some facts and arguments that may convince you of the perfect possibility of dispensing with the practice altogether.

"The imputation of novelty," says Locke, "is a terrible charge amongst those who judge of men's heads as they do of their perukes, by the *fashion*—and can allow none to be right but the received doctrine." Yet, in the words of the same acute writer:—"An error is not the better for being common, nor truth the worse for having lain neglected; and if it were put to the vote any where in the world, I doubt, as things are managed, whether Truth would have the majority; at least while the *authority of men*, and not the *examination of things*, must be its mea-

sure." In the same spirit Lord Byron asks:

"What from this barren being do we reap?  
Our senses narrow, and our reason frail,  
Life short, and TRUTH a gem that loves the deep,  
And all things weighed in *Custom's* falsest scale.  
*Opinion* an omnipotence—whose veil  
Mantles the earth with *darkness*—until right  
And wrong are accidents—and men grow pale  
Lest their own judgments should become too bright,  
And their free thoughts be crimes, and earth  
have too much light.

The operation of blood-letting is so associated in the minds of most men, with the practice of physic, that when a very sensible German physician, some time ago, petitioned the King of Prussia to make the employment of the lancet *penal*, he was laughed at from one end of Europe to the other. This you will not wonder at, if you consider that the multitude always think "*whatever is is right*;" but a little reflection will teach you that there must have been a period in the world's history, when the lancet was unknown as a remedy; and that many centuries necessarily elapsed before it could even be imagined that loss of blood might alleviate or cure disease. Nations, nevertheless, grew and prospered. To what daring innovator the practice of physic owes the *Cures* of the lancet, the annals of the art leave us in ignorance; but this we know, that its introduction could only have been done during the infancy of Medicine; when remedial means were yet few, and the mode of action of remedies totally unknown. It was the invention of an unenlightened, possibly, a sanguinary age; and its continued use says but little for the after-discoveries of ages, or for the boasted progress of medical science. Like every other lucrative branch of human knowledge, the Practice of Medicine at one time was entirely in the hands of the priesthood. Might not blood-letting have been first introduced as a sacrifice or expiation on the part of the patient for his supposed sins against an offended deity?—for that till very lately was the *ecclesiastical* cause of all disease. I am the rather inclined to this idea, from the fact that when one of the kings of Spain made his peace with the Inquisition, after a bitter quarrel with that body, they condemned him as a penance to lose a pound of his blood, which was afterwards burnt in public by the common hangman!

Of what is the body composed? Is it not of Blood, and Blood only? What fills up the excavation of an ulcer or an abscess? What reproduces the bone of the leg or thigh,

after it has been thrown off dead, in nearly all its length? What but the *Living Blood*, under the electrical influence of the brain and nerves! How does the slaughtered animal die? Of loss of blood solely. Is not the blood then, in the impressive language of scripture, "the life of the flesh?" How remarkable, that while the value of the blood to the animal economy should be thus so distinctly and emphatically acknowledged, Blood-letting is not even once alluded to, among the various modes of *cure* mentioned in the sacred volume. We have "balsms," "balsams," "baths," "charms," "physic," "poultices," even,—but loss of blood never! Had it been practised by the Jews, why this omission? Will the men who now so lavishly pour out the Blood, dispute its importance in the animal economy?—will they deny that it forms the basis of the solids,—that when the body has been wasted by long disease, it is by the blood only it can recover its healthy volume and appearance? Has not nature done every thing to preserve to animals of every kind,

"The electric Blood with which their arteries run!"  
BYRON.

She has provided it with strong resilient vessels—vessels which slip from the touch, and never permit their contents to escape, except where their coats have been injured by accident or disease. Misguided by theory, man, presumptuous man, has dared to divide what God, as a part of creation, united; to open what the Eternal, in the wisdom of his omniscience made entire! See then what an *extreme* measure is this! It is on the very face of it a most unnatural proceeding. Yet what proceeding so common, or what so readily submitted to, under the influence of authority and custom? If, in the language of the Chemist Liebig, the blood be indeed "the sum of ALL THE ORGANS that are being formed," how can you withdraw it from one organ without depriving every other of the material of its *healthy* state? Yet enter the crowded hospitals of England—of Europe—and see how mercilessly the lancet, the leech, and the cupping-glass, are employed in the diseases of the poor. Look at the pale and ghastly faces of the inmates. What a contrast to the eager pupils and attendants thronging around their beds—those attendants with bandage and basin, ready at a moment's notice to take from the poor creatures whatever quantity of *life-blood*, solemn Pedantry may prescribe as the infallible means of relieving their sufferings. Do that, I say, and refrain, if you can, from exclaiming with Butcher, "when Poverty is sick, the doctors mangle it!" What are the causes of the

disorders of this class of people? In the majority of cases, defective food, and impure air. By these has their blood been deteriorated—and for what does the (so termed) man of science abstract it? To make room for better? No!—goaded on by the twin-goblins, "congestion" and "inflammation," to deteriorate it still further by starvation and confinement. Gentlemen, these terms play in physic much the same thing as others, equally senselessly misused, play in the common affairs of the world—

Religion, freedom, vengeance, what you will,  
A word's enough to raise mankind to *kill*,  
Some party-phrase by *cunning* caught and spread,  
That GUILT may reign, and WOLVES and worms be fed.  
BYRON.

The first resource of the surgeon is the lancet,—the first thing he thinks of, when called to an accident, is how he can most quickly open the floodgates of the heart, to pour out the stream of an already enfeebled existence. Does a man fall from his horse or a height, is he not instantly bled?—has he been stunned by a blow, is not the lancet in requisition? Nay, has an individual fainted from over-exertion, or exhaustion, is it not a case of FIT—and what so proper as venesection!

You cannot have forgotten the fate of Malibran—the inimitable Malibran—she who so often, by her varied and admirable performances, moved you to tears and smiles by turns. She was playing her part upon the stage—she entered into it with her whole soul, rivetting the audience to the spot by the very intensity of her acting. Just as she had taxed the powers of her too delicate frame to the uttermost—at the very moment she was about to be rewarded by a simultaneous burst of acclamation, she fainted and fell—fell from very weakness. Instantly a medical man leapt upon the stage—to administer a cordial? No—to bleed her—to bleed a weak, worn, and exhausted woman! And the result?—she never rallied from that unfortunate hour. But, Gentlemen, Malibran was not the only intellectual person of the thousands and tens of thousands who have prematurely perished by the lancet. Byron and Scott—those master-spirits of their age—those great men who, like Ariosto and Shakspeare, not only excited the admiration of cotemporary millions, but whose genius must continue, for generations yet unborn, to delight the land that produced them—they too fell victims to the lancet—they too were destroyed by hands which, however friendly and well-intentioned, most undoubtedly dealt them their death-blows. Is not this a sub-

ject for deep reflection? To the cases of these great men we shall recur in the course of this lecture; but for the present, we must turn to other matters—to events that have just passed before our eyes. The affair of Newport, in Wales, is still the topic of the hour. You must therefore remember it to its minutest detail—the attack by the rioters upon the town—the gallant and successful stand made by Captain Gray and his little detachment of the 45th regiment—the prisoners captured, and the investigation which afterwards took place. In the course of that inquiry a prisoner, when under examination, fainted. What was done with him? He was carried out of court and immediately bled! On his return the newspapers tell us, an extraordinary change had come over his countenance. From being a man of robust appearance, he had become so wan and haggard, so altered in every lineament, the spectators could scarcely recognize him as the same prisoner. Yet, strange to say, not one of the many journals that reported this case, introduced a single word in condemnation of the utterly uncalled for measure, which brought the man to such a state;—so much has Custom blunted the sense of the public to this the most dangerous of all medical appliances!

Gentlemen, a coroner's inquest was held upon a person who died suddenly. I shall read to you what followed from the Times newspaper, of the 20th. December, 1839, suppressing, for obvious reasons, the name of the witness. "Mr. ———, surgeon, stated that he was called upon to attend deceased, and found him at the point of death. He attempted to bleed him, but ineffectually, and in less than a minute from witness's arrival, deceased expired. Witness not being able to give any opinion as to the cause of death from the symptoms that then exhibited themselves, he afterwards, with the assistance of Dr. Ridge, 37 Cavendish Square, made a post-mortem examination, and found that a large cavity attached to the large vessel of the heart, containing blood, had burst, and that that was the cause of death." So that while the man was actually dying of inanition from internal bleeding, the surgeon, utterly ignorant, according to his own confession, of the nature of the symptoms, deliberately proceeded to open a vein!—How happens it that the lancet should be so invariably the first resort of Ignorance!

In every case of stun or faint, the employment of this instrument must be a superadded injury;—in all, there is a positive enfeeblement of the whole frame, evidenced by the cold surface and weak or imperceptible pulse; there is an exhaustion, which loss of blood,

so far from relieving, too often converts into a state of utter and hopeless prostration. True, men recover though treated in this manner, but these are not cures,—they are escapes.

How few the diseases which loss of blood may not of itself produce. If it cannot cause the eruptions of small-pox, nor the glandular swellings of plague, it has given rise to disorders more frequently and more immediately fatal than either. What think you of cholera asphyxia—Asiatic cholera? Gentlemen, the symptoms of that disease are the identical symptoms of a person bleeding slowly away from life! The vomiting, the cramps, the sighing, the long gasp for breath—the leaden and livid countenance which the painter gives to the dying in his battle-pieces—these are equally the symptoms of cholera and loss of blood! Among the numerous diseases which it can produce, Darwin says—"a paroxysm of gout is liable to recur on bleeding." John Hunter mentions "lock-jaw and dropsy," among its injurious effects,—Travers, "blindness," and "Palsy,"—Marshall Hall, "Mania,"—Blundell, "dysentery,"—Broussais, "fever and convulsions!" "When an animal loses a considerable quantity of blood," says John Hunter, "the heart increases in its frequency of stroke as also in its violence." Yet these are the indication for which professors tell you to bleed! You must bleed in every inflammation, they tell you. Yet is not inflammation a daily effect of loss of blood! Marendie mentions "pneumonia" as having been produced by it,—completely confirming the evidence of Mr. Hume upon that point. He further tells us that he has witnessed among its effects "the entire train of what people are pleased to call inflammatory phenomena;—and mark," he says, "the extraordinary fact that this inflammation will have been produced by the very agent which is daily used to combat it." What a long dream of false security have mankind been dreaming!—they have laid themselves down on the laps of their medical mentors,—they have slept a long sleep;—while these, like the fabled vampire of the poets, taking advantage of a dark night of barbarism and ignorance, have thought it no sin to rob them of their life's blood during the profoundness of their slumber!

Gentlemen, the long shiver of the severest ague, the burning fever, the fatal lock jaw, the vomiting, cramps, and asphyxia of cholera, the spasm of asthma and epilepsy, the pains of rheumatism, the palpitating and tumultuous heart the most terrible anacholia and madness, dysentery, consumption, every species of palsy, the faint that became death, these—all these—have I traced to loss of blood. Could asenic, could prussic acid, in

their deadliest and most concentrated doses do more? Yet I have heard men object to use the minutest portions of these agents, medicinally,—men who would open a vein, and let the life-blood flow until the patient fell like an ox for the slaughter, death-like, and all but dead, upon the floor! Do these practitioners know the nature of the terrible power they thus fearlessly call to their aid? Can they explain its manner of action even in those cases where they have supposed it to be beneficial? The only information I have been able to extract from them upon this point, has been utterly vague and valueless. Their reasoning, if it could be called reasoning, has been based on a dread of “inflammation” or “congestion.” From the manner in which they discuss the subject, you might believe there was no remedy for either but the lancet. Ask them why they bleed in ague—in syncope—in exhaustion or collapse?—they tell you it is to relieve congestion. After a stun or fall?—it is to prevent inflammation.—Bleeding, in all my experience, I have already stated to you, never either relieved the one, or prevented the other! Gentlemen, did you never see inflammation of a vein AFTER bleeding—inflammation caused by the very act! I have known such inflammation end fatally. Did you never know the wounds made by leech-bites become inflamed, AFTER these reptiles had exhausted the blood of the part to which they were applied! And how came that about? Simply because, however perfectly you exhaust any part of its blood, you do not thereby prevent that part from being again filled with it—or rather, you make it more liable to be so, by weakening the coats of the containing vessels! Hundreds of thousands have recovered from every kind of disease, who never were bled in any manner; and many, too many have died, for whom the operation, in all its modes, had been most scientifically practised! Have I not proved that every remedial agent possesses but one kind of influence, namely, the power of changing temperature? Let the schoolman show me that the lancet possesses any superiority in this respect—any specific influence more advantageous than other less questionable measures; and I shall be the last to repudiate its aid in the practice of my profession. The beneficial influence of blood-letting, where it has been beneficial in disease, relates solely to temperature. To this complexion it comes at last, and to nothing more—the equalization and moderation of temperature. In the congestive and non-congestive stages of fever—the cold—the hot—the sweating—the lancet has had its advocates. Blood-letting, under each of these circumstances, has changed existing temperature. Why, then,

object to its use? For this best of reasons, that we have remedies without number, possessing each an influence equally rapid, and an agency equally curative, without being, like blood-letting, attended with the insuperable disadvantage of abstracting the material of healthy organization. I deny not its power as a remedy in certain cases; but I question its claim to precedence, even in these. Out of upwards of TWELVE THOUSAND CASES of disease that have, within the last few years, been under my treatment, I have not been compelled to use it once. Resorted to, under the most favorable circumstances, its success is any thing but sure, and its failure involves consequences which the untoward administration of other means may not so certainly produce. Have we not seen that all diseases have remissions, and exacerbations—that mania, asthma, apoplexy and inflammation, are all remittent disorders? From the agony or intensity of each of these developements of fever, you may obtain a temporary relief by the use of the lancet; but what has it availed in averting the recurrence of the paroxysm? How often do you find the patient you have bled in the morning ere night with every symptom in aggravation. Again you resort to bleeding, but the relief is as transitory as before. True, you may repeat the operation, and re-repeat it, until you bleed both the blood and the life away. Venesection, then, in some cases, may be a temporary though delusive relief. The general result is depression of vital energy, with diminution of corporeal force!

Dr. Southwood Smith, physician to the London Fever Hospital, has published a book purposely to show the advantages of bleeding in fever. One of his cases is so curiously illustrative of his position, that I shall take the liberty of transcribing it from the *Medical Gazette*, with a running commentary by the Editor of that periodical:—“The case of Dr. Dill demands our most serious attention, and deserves that of our readers. It is introduced as an example of severe cerebral affection, in which case, Dr. S. affirms, ‘the bleeding must be large and early as it is copious.’ ‘I saw him,’ says Dr. Smith, ‘before there was any pain in the head, or even in the back, while he was yet only feeble and chilly. The aspect of his countenance, the state of his pulse, which was slow and labouring, and the answer he returned to two or three questions, satisfied me of the inordinate. I may say the ferocious attack that was at hand—p. 394’

“Whatever may be the opinion of our readers, as to the above signs indicating a ferocious cerebral attack, they will one and all agree with us, that the ferocious attack

was met with a ferocious treatment; for an emetic was given without delay, and 'blood was taken from the arm, to the extent of twenty ounces.' This blood was not inflamed. Severe pains in the limbs and loins, and intense pain in the head, came on during the night—and early in the morning blood was again drawn to the extent of sixteen ounces 'with great diminution, but not entire removal of the pain.' Towards the afternoon he was again bled to sixteen ounces. 'The pain was now quite gone—the blood from both these bleedings intensely inflamed.' [Inflamed, according to Dr. Smith's notions—but mark, in his own words—the first blood drawn was "not inflamed."] Were the lancet a preventive of inflammation, how came the blood to be inflamed AFTER so many bleedings?]

"During the night the pain returned, and in the morning, notwithstanding the eyes were dull and beginning to be suffused, the face blanched, (no wonder!) and the pulse slow and intermittent, and weak, twelve leeches were applied to the temples—and as these did not entirely remove the pain, more blood, to the extent of sixteen ounces, was taken by cupping. The operation afforded great relief—but the following morning, the pain returned, and again was blood abstracted to sixteen ounces. 'Immediate relief followed this second operation; but unfortunately, the pain returned with great violence, towards evening; and it was now impossible to carry the bleeding any further.' Typhoid symptoms now began to show themselves; 'the far on the tongue was becoming brown, and there was already a slight tremor in the hands.' What was to be done? Ice, and evaporating lotions were of no avail;—but happily for Dr. Dill, the affusion of cold water on the head, 'the cold dash,' was thought of and employed—and this being effectually applied, the relief was 'instantaneous and most complete.' So that this case, announced as a severe cerebral affection, and treated in anticipation, by copious blood-letting, BEFORE there was any pain in the head while the patient was yet only feeble and chilly, which grew worse and worse as the blood letting was repeated, until, after the abstraction of NINETEEN OUNCES of blood, the patient had become in a 'state of intense suffering,' and 'imminent danger,' and was relieved at last by the cold dash—this case, we say, is brought forward as a specimen of the extent to which copious blood-letting may sometimes be REQUIRED!! Most sincerely do we congratulate Dr. Dill on his escape, not from a dangerous disease, but from a DANGEROUS REMEDY."—*Medical Gazette.*

Could any case more forcibly exemplify

the utter inefficiency of blood-letting, in almost all its forms, either as a certain remedy, or a preventive of fever? Yet such is the force of custom, prejudice, education, that this case,—and, I have no doubt, thousands like it, so far from opening the eyes of the physician to the London Fever Hospital, only served to confirm him in his error. He had his *methodus medendi*, and he pursued it; and notwithstanding the total inefficiency of his vaunted remedy, he gives the case at length, as a perfect specimen of the most perfect practice—Mark the result of that practice!—but for the "cold dash," the patient must have perished. It is even now a question whether he ever recovered from those repeated blood-lettings,—for he died not many months after. Happy would it have been for mankind, that we had never heard of an Anatomical or "Pathological School,"—happier for Dr. Dill, for to that school, and its pervading error of imputing effect for cause, may we fairly attribute all this sanguinary practice.

Lord Byron called medicine "the destructive art of healing." How truly it proved to be so in his own person, you will see, when I give you the details of his last illness:—"Of all his prejudices," says Mr Moore, "he declared the strongest was that against Bleeding. His mother had obtained from him a promise, never to consent to be bled, and, whatever argument might be produced, his aversion, he said, was stronger than reason. 'Besides, is it not,' he asked, 'asserted by Dr. Reid, in his *Essays*, that less slaughter is effected by the lance, than the lancet—that minute instrument of mighty mischief!' On Mr. Millingen observing that this remark related to the treatment of nervous but not of inflammatory complaints he joined, in an angry tone, 'Who is nervous, if I am not?—and do not those other words of his, apply to my case, where he says, that drawing blood from a nervous patient, is like loosening the cords of a musical instrument, whose tones already fail, for want of a sufficient tension! Even before this illness, you yourself know how weak and irritable I had become; and bleeding, by increasing this state, will inevitably kill me. Do with me what else you like, but bleed me you shall not. I have had several inflammatory fevers in my life, and at an age when more robust and p'ethoric; yet I got through them without bleeding. This time, a'so, will I take my chance.'" After much reasoning, and repeated entreaties, Mr. Millingen at length succeeded in obtaining from him a promise, that should he feel his fever increase at night, he would allow Dr. Bruno to bleed him. "On revisiting the patient

early next morning, Mr. Millengen learned from him that having passed, as he thought, on the whole, a better night, he had not considered it necessary to ask Dr. Bruno to bleed him. What followed, I shall, in justice to Mr. Millengen, give in his own words:—"I thought it my duty now to put aside all consideration of his feelings, and to declare solemnly to him how deeply I lamented to see him trifle thus with his life, and show so little resolution. His pertinacious refusal had already, I said, caused much precious time to be lost; but few hours of hope now remained, and unless he submitted immediately to be bled, we could not answer for the consequences. It was true, he cared not for life, but who could assure him that unless he changed his resolution, the uncontrolled disease might not operate such disorganization in his system, as utterly and forever to deprive him of reason! I had now hit at last upon the sensible chord; and partly annoyed by our importunities, partly persuaded, he cast at us both, the fiercest glance of vexation, and throwing out his arm, said, in the angriest tone, 'Theré you are, I see, a d—d set of butchers,—take away as much blood as you like, but have done with it!' We seized the moment, (adds Mr. Millengen,) and drew about twenty ounces. On coagulating, the blood presented a strong buffy coat; yet the relief obtained did not correspond to the hopes we had formed; and during the night the fever became stronger *than it had been hitherto*, the restlessness and agitation increased, and the patient spoke several times in an incoherent manner." Surely this was sufficient to convince the most school-bound of the worse than inoperative nature of the measure. Far from it. "On the following morning, the 17th April, the bleeding was repeated *twice*, and it was thought right also to apply blisters to the soles of his feet!" Well might Mr. Moore exclaim: "It is painful to dwell on such details." For our present purpose, it will be sufficient to state, that although the "rheumatic symptoms had been completely removed," it was at the expense of the patient's life; his death took place upon the 19th. that is, three days after he was first bled—[*Moore's Life of Byron.*] Now I ask you, what might have been the termination of this case, had an emetic been substituted for the lancet, and had the remission been prolonged by quinine, opium, or arsenic! I solemnly believe Lord Byron would be alive at this moment; nay, not only is it possible, but probable, that a successful result might have ensued, without any treatment at all. When describing the effects of a former fever, Lord Byron himself says: "After a week of half delirium, burn-

ing skin, thirst, hot headache, horrible pulsation, and no sleep, by the blessings of barley water, and *refusing to see my physician*, I recovered." Facts, like these, are indeed, stubborn things!

I have preferred to give these two instances of what I conceive to be decided malpractice, to any of the numerous cases which have come under my own observation, as the first named gentleman was well known to many of the medical profession, while the death-scene of the noble poet, will arrest the attention of all who take an interest in his genius.

In the generality of cases of disease, gentlemen, it matters little what may have been the primary Cause. The disease or effect, under every circumstance, not only involves change of temperature, but produces more or less interruption to the two vital processes Digestion and Respiration. In other words, it impedes *sanguification*, or the necessary reproduction of that Living fluid, which, throughout all the changes of life, is constantly maintaining expenditure. This being in the nature of things one of the first effects of disorder, let us beware how we employ a remedy, which, if it succeed not in restoring healthy temperature, must inevitably hasten the fatal catastrophe—or, in default of that, produce those low chronic fevers, which, under the names of dyspepsia, hypochondria, hysteria, mania, &c., the best devised means too often fail to alleviate, far less to cure. With the free admission, then, that the lancet is capable of giving *temporary* relief to local fulness to blood, and to some of the attendant symptoms, I reject it generally, upon this simple and rational ground that it cannot prevent such fulness from returning—while it requires no ghost from the grave to tell us that its influence upon the general constitution, must, in every such case, be prejudicial. If the source of a man's income is suddenly cut off, and he still continue to spend as before, surely his capital must, as a matter of course, diminish.—Beware then, how under the exact same circumstances of body, you allow a doctor to take away the little capital of blood you possess when disease comes upon you,—remember there is then no income—*all is expenditure*. And I care not whether you take inflammation of any considerable internal organ,—the Brain, Liver, or Heart, or example,—or of any external part, such as the knee, or ankle joint—with the lancet, you can seldom ever do more than give a delusive relief, at the expense of the powers of the constitution. The man of routine, who has not heard my previous lectures, giving up Fever, perhaps, and a few other disorders, which the occasional obstinacy of a refract-



ry patient, contrary to "received doctrine," has taught him, may yield to other means than blood-letting—will ask me what I should do without the lancet in apoplexy? Here the patient having no will of his own, and the prejudices of his friends being all in favour of blood-letting, the school-bound member of the profession has seldom an opportunity of opening his eyes. Mine were opened by observing the want of success attending the sanguinary treatment; in other words, the number of deaths that took place, either in consequence, or in spite of it! Was not that a reason for change of practice? Having in my Military Hospital no prejudices to combat; and observing the flushed and hot state of the patient's forehead and face. I determined to try the cold dash. The result was beyond my best expectations. The first patient was laid out all his length, and cold water poured on his head from a height. After a few ablutions, he staggered to his feet, stared wildly round him, and then walked to the hospital, where a smart purgative completed his cure. While in the army, I had a sufficiently extensive field for my experiments; and I seldom afterwards lost an apoplectic patient.

But, Gentlemen, since I embarked in private practice, I have improved upon my Army plan. With the purgative given after the cold dash, I have generally combined quinine or arsenic—and I have also, upon some occasions, at once prescribed hydrocyanic acid without any purgative at all. This practice I have found highly successful. That Quinine may prevent the apoplectic fit, I have proved to you, by the case given by Dr. Graves. The value of Arsenic in apoplexy has also been acknowledged, even by members of the profession; but whether they have been acquainted with the true principle of its mode of action, in such cases, is another thing. Dr. A. T. Thomson recommends it "in threatened apoplexy, after Cuppings and Purgings, when the strength is diminished and the complexion pale;" that is, you must first break down the whole frame by depletion—you must still further weaken the already weak vessels of the brain, before you take measures to give their coats the degree of strength and stability, necessary to their healthy containing power! Upon what principle would you, Gentlemen, prescribe arsenic in threatened apoplexy? Surely, upon the same principle that you would prescribe it during the remission in ague—to prolong the period of immunity—to avert the paroxysm. Long after the Bark came into fashion for the cure of Ague, practitioners still continued to treat that distemper, in the first instance, by depletion, till the complexion

became pale. Do they treat it so now?—No; they have become wiser!—why then do they go on from day to day, bleeding in threatened apoplexy? In the case given by Dr. Graves, depletion—repeated depletion, did not prevent the recurrence of the apoplectic fit—but quinine was at once successful. Sir Walter Scott had a series of fits of apoplexy. What did the bleeding and starving system avail in his case? It gave him, perhaps, a temporary relief, to leave him at last in a state of irrecoverable prostration. Mr. Lockhart, his biographer, tells us how weak the bleeding always made him. But how could it be otherwise, seeing that I have proved to all but mathematical demonstration, that whatever debilitates the whole body, must still further confirm the original weakly condition of the coats of the blood-vessels, which constitutes the tendency to apoplexy. Had the cold dash been resorted to during the fit, and had quinine, arsenic, or hydrocyanic acid been given during the period of immunity, who knows but the Author of Waverley might still be delighting the world with the wonderful productions of his pen!

Shall I be told there are cases of apoplexy, where the face is pale, and the temperature cold? My answer is—these are not apoplexy, but faint!—cases which the cold dash or a cordial might recover, but which the lancet, in too many instances, has perpetuated to fatality! If the practitioner tells me that the cold dash by no possibility can cure an apoplexy, where a vessel is ruptured with much *effusion* of blood on the brain; my reply is, that in such a case he may bleed all the blood from the body, with the same unsuccessful result! In the case of effusion of blood in an *external* part, from a bruise, for instance, could any repetition of venesection make the *effused blood* re-enter the vessel from which it had escaped? No more could it do so in the brain, or any other part. Why, then, resort to it in this case? If it be said, to stop bleeding, I answer that it has no such power. Who will doubt that Cold has? Surely, if the mere application of a cold key to the back very often stops bleeding from the nose, you can be at no loss to conceive how the far greater shock of the cold dash may stop a bleeding in the brain? When, on the contrary, there is no vascular rupture, but only a tendency to it, the cold dash will not only contract and strengthen the vascular coats so as to prevent them from giving way; but will moreover rouse the patient from his stupor, by the simple shock of its application. But from theory and hypothesis, I appeal to indubitable and demonstrative fact.

Let the older members of the profession seriously reflect upon the ultimate injury



me. Seldom did his pale countenance recover its former healthy character. He became the victim of consumption, dysentery, or dropsy; his constitution was broken by the first depletory measures to which he had been subjected.

Such instances, too numerous to escape my observation, naturally led me to ask—Can this be the proper practice? It was assuredly the practice of others—of all. Could all be wrong? Reflection taught me that men seldom act for themselves; but take, for the most part, a tone or bias from some individual master.

By education most have been misled;

So they believe, because they were so bred.

But, Gentlemen, I had the resolution to think for myself—aye, and to act, and my conviction gained, from much and extensive experience, is, that ALL diseases may not only be successfully treated without loss of blood, but that blood-letting, however put in practice, even where it gives a temporary relief, almost invariably injures the general health of the patient. Englishmen! you have traversed seas, and dared the most dangerous climes to put down the traffic in blood;—are you sure that in your own homes there is no such traffic carried on—no GUINEA TRADE?

In connection with Blood-letting in the treatment of inflammation, we generally find

#### ABSTINENCE OR STARVATION

recommended. Beware of carrying this too far:—for “Abstinence engenders maladies.” So Shakespeare said, and so nature will tell you, in the teeth of all the doctors in Europe! Abstinence, Gentlemen, may produce almost every form of disease which has entered into the consideration of the physician; another proof of the unity of morbid action, whatever be its cause. You remember what I told you of the prisoners of the Penitentiary; but I may as well restate the facts at this lecture. In the words of Dr. Latham, then, “An ox’s head, which weighed eight pounds, was made into soup for one hundred people; which allows one ounce and a quarter of meat to each person. After they had been living on this food for some time they lost their colour, flesh, and strength, and could not do as much work as formerly. At length this simple debility of constitution was succeeded by various forms of disease. They had scurvy, diarrhoea, low Fever, and lastly, diseases of the brain and nervous system.

“The affections,” Dr. Latham continues, “which came on during this faded, wasted, weakened state of body, were headache, vertigo, delirium, convulsions, APOPLEXY, and even mania. When blood-letting was tried (why was it tried?) the patients fainted, after losing five, four, or even fewer ounces of

blood. On examination, after death, there was found *increased vascularity* of the brain, and sometimes fluid between its membranes and its ventricles.” Is not this a proof of what I stated to you in my last lecture, that the tendency to hemorrhagic development does not so much depend upon fulness of blood, as upon weakness of the coats of the containing vessels?—starvation, you see, actually producing this disease—in the Brain at least.

Every tribe of animals conveys its food to its mouth in its own way—but in all the higher animals, man included, the substances composing the food are converted into blood in precisely the same manner. Crushing and comminuting it by their teeth, they all reduce it by the aid of their saliva to a *pulp*, and by the action of their tongue and other muscles convey it in that state to the gullet,—the *Epiglottis*, or valve of the wind-pipe, shutting simultaneously, so as to prevent all intrusion in that quarter—though some of you, when attempting to speak and eat at the same time, may have had the misfortune to let a particle enter the “wrong throat:”—I need say nothing of the misery of that. When the food reaches the stomach, into which it is pushed by the muscular apparatus of the gullet, a new action commences. Pooh, pooh! I hear you say, all this we know already—but, Gentlemen, what *you* know may be news to somebody, and as I see strangers listening with apparent attention, I will proceed as I have begun. Well, then, to continue. Once in the stomach the food becomes mixed with the gastric juice, a secretion peculiar to that organ, and this secretion works so great an alteration upon it, that it is no more the same thing. It is now what medical men term Chyme—but this is not the only change it has to undergo; for scarcely has the chyme left this great receptacle of gluttony, and entered the small intestines, when it receives a supply of another juice from a gland called the Pancreas—and yet another from the ducts of the Liver, a still larger gland; and this under the mysterious name of Bile, some of you may possibly have heard of before! By this last juice it is turned of a white colour, and from Chyme its name becomes Chyle,—why, upon my word, I forget. But as nothing in nature will go on constantly the same without change, the chyle, for very good reasons of its own, must needs separate into two parts—one nutritious, the other the reverse—one portion enters into the formation of every part of the body—the other is excrementitious, and must be expelled from it. For the nutritious portion a million of mouths are ready—ready, like sharks, to make the most of it. These belong to a system of vessels, called from the milky ap-

pearance of their contents, Lacteals—and they pervade the greater part of the entire alimentary canal. A great receptacle, (the Thoracic duct) receives them all, for it is their common point of re-union; and this again under a new name, (the receptaculum Chyli) passing upwards along the front of the spinal column, quietly drops its contents, pulp, chyme, chyle, what you please, into the left subclavian vein, a large blood-vessel leading under the left collar bone to the heart. Here the chyle is no longer chyle—meeting and mixing with the blood, it becomes Blood in fact, to be sent first by the right chamber of the heart through the lungs, and then by the left chamber circulated to all parts of the body. In that now *living* state it successively takes the shape of every organ and atom of the body; again in the shape of the excrementitious secretions, to pass in due time to the earth from which its elements were first derived.

The food of animals supports them only in so far as it offers elements for *assimilation* to the matter of the various organs and tissues composing their frames. While a single secretion still continues to be given off from the body—while the kidneys or bowels, for example, continue to perform their office, however imperfectly,—it must be manifest to you, that without some corresponding dietetic increment, elemental atoms of the animal organism must sooner or later be so far expended as to leave it in a state incompatible with life. How, then, let me ask, can you reconcile Healthy organization with Starvation-practice? How can you expect to find even the appearance of health after having practised the still more barbarous and unnatural proceeding of withdrawing by blood-letting a certain portion of the *sum* of all the organs that are being formed? The *quantity* of food which animals take, diminishes or increases in the same proportion as it contains more or less of the substance which chemists term *azote* or *nitrogen*. This, as you well know, is most abundant in animal food, but all vegetables possess more or less of it. Rice perhaps contains less than any other grain, and that is the reason why the Asiatics can devour such quantities of it at a time, as they are in the habit of doing. You would be quite surprised to see the natives of India at meal-time. Sitting cross-legged on their mats, a great basin of rice before them, with mouth open and head thrown back, they cram down handful after handful, till you wonder how their stomachs can possibly contain the quantity they make disappear so quickly.

The most cursory examination of the human teeth, stripped of every other consideration, should convince every body with the least pretension to brains, that the food of

man was never intended to be *restricted* to vegetables exclusively. True, he can subsist upon bread and water, for a time, without dying, as the records of our prisons and penitentiaries can testify; but that he can maintain a state of health under such circumstances, is as utterly and physically impossible as that the lion and the panther should subsist on the restricted vegetable diet of the elephant. The dental organization of man partakes of the nature of the teeth of both graminivorous and carnivorous animals—his food should, therefore, be a mixture of the elements of the food of both, and with this mixed nourishment, the experience of centuries tells us, he supports life longest. How wretched, on the contrary, is the person doomed, however briefly, to an exclusive diet. Sir Walter Scott thus describes the effect of what he terms “a severe vegetable diet,” upon himself. “I was affected,” he says, “while under its influence, with a *nervousness* which I never felt before nor since—a disposition to start upon slight alarms; a want of decision in feeling and acting, which has not usually been my failing; an acute sensibility to trifling inconveniences, and an unnecessary apprehension of contingent misfortunes, rise to my memory as connected with vegetable diet.” How can a dietetic system, which so shakes the entire frame, by any possibility give strength and stability to the weaker parts of the body,—those parts whose atomic attractions are so feeble, that every breath that blows upon the whole organism, shakes them to pieces? Must it not, in the very nature of things, make the man predisposed to consumption more certainly consumptive,—and so on, throughout the whole catalogue of hereditary disease? That abstinence is proper, in the commencement of most *acute* disorders, nobody will doubt. The fact is proved by the inability of the patient to take his accustomed meal; his stomach then is as unfit to digest or assimilate nutriment, as his limbs are inadequate to locomotion. Both equally require rest. But to starve a patient who is able and willing to eat is downright madness. No animal in existence can preserve its health, when fed on one kind or food exclusively. The dog, when restricted to sugar alone, seldom survives the sixth week,—and the horse, if kept entirely upon potatoes, would waste away day by day, though you were to give him as much of that particular diet as he could devour;—he would die of a slow starvation. How many persons, even in the upper walks of life, are every day starved to death. The apothecary has only with a mysterious shrug to whisper the word “inflammation,” and it is quite astonishing to what miserable fare

people of all conditions will submit. Instead of an exclusive vegetable diet being a cure for all complaints, as your medical wiseacres assure you, I know no complaint except small-pox and the other contagious diseases, that it has not of itself produced. The only thing it is good for, in my view of the matter is to keep the patient to his chamber, and the doctor's carriage at the door. You see what a profitable practice it must be for the apothecary,—and I'll bet you my life the physician who first brought it into fashion made his fortune by it. Not a nurse or nostrum-vender in the kingdom, but would be sure to cry him up to the skies! Not an apothecary from Greta Green to Land's-End, but could tell you of some miracle worked by him; and the world hearing the same thing eternally rung in its ears,—how could it possibly doubt the greatness of “Diana of the Ephesians!”

I am every day asked by my patients what diet they should take. I have the same answer for all—whatever they like best themselves, if they do not find it disagree. Their own experience of what agrees and disagrees with their own particular constitutions, is far better than any theory of yours or mine. Why, bless my life! in many chronic diseases the diet which a patient can take to-day would be rejected with disgust to-morrow; under such circumstances, would you still, according to common medical practice, tell a sick man to go on taking what he himself found worried him to death? Gentlemen, I hope better things of you.

The only general caution you need give your patients on the subject of diet, is moderation; moderation in using the things which they find agree with themselves best. You may direct them to take their food in small quantities at a time, at short intervals, intervals of two or three hours for example, and tell them to take the trouble to masticate it properly before they swallow it, so as not to give a weak stomach, the double work of mastication and digestion,—these processes being, even in health, essentially distinct. Unless properly communicated and mixed with saliva, how can you expect the food to be any thing but a source of inconvenience to persons whom the smallest trifle will frequently discompose? I remember having read an anecdote of the late Mr. Abernethy, which is so apropos to what I have just been telling you, that I do not know that I can better finish what I have to say upon the subject of diet, than by letting you hear it. even at the risk of its proving to some of you a twice-told tale:—An American captain, on being one morning shown into his consulting room, immediately, in Yankee fashion, emptied the contents of his mouth

upon the floor. The man of medicine stated, keeping his hands in his pockets, according to his custom, until the patient should explain. “What shall I do for my dyspepsy?” asked the American captain. “Pay me your fee and I will tell you,” replied the doctor.—The money was produced and this advice given, “instead of squirting your saliva over my carpet, keep it to masticate your food with.” Now, upon my word, he could not have given him better advice.

Gentlemen, I shall conclude this lecture by reading to you a few of my communications I have received from medical men of repute, since I first published my doctrines in 1836. Dr. Foebroke, of Ross began his medical career as the associate of the immortal Jenner; he lived in his house, and materially assisted to propagate his great doctrine of Vaccination. You will therefore fully appreciate the evidence of a gentleman so distinguished in the history of medicine. From a letter which I received from him in January 1840;—I shall read to you a passage or two:—

“In April 1835, our acquaintance and free communication commenced; and though I pricked up my ears, like one thunderstruck, at your wholesale denunciation of blood-letting, and your repeated asseverations, that in a practice embracing the treatment of several thousands of patients per annum, you never employed a lancet or a leech,—your assertions made an impression, though it was slowly and reluctantly received.” That it strengthened by time, Gentlemen, you will see by the next extract.—“Nothing can be more striking than the great disparity between the proportion of persons who were bled in the two first years of my Ross practice, 1834 and 1835, (in which latter year I first became acquainted with your views,) and the three following years, 1836, 1837 and 1838. In the former two years, I bled one in seven, in the fourth only one in twenty-eight—and in the fifth year I bled none! The year 1839 is now concluded, and again in all that time I have not bled a single individual!”

“Your crime is, that you are before the age in which you live. If you had done nothing else but put a bridle upon Blood-letting, you would deserve the eternal gratitude of your race, instead of the calumny and oppression of the two-legged fools—the Yahoos, who persecute their greatest benefactors. But how can you expect to be more fortunate than your predecessors in this respect? The health of Sir Humphrey Davy was affected by the ingratitude of his country. ‘A mind,’ said he, ‘of much sensibility might be disgusted, and one might be induced to say—why should I labor for public ob-

jects only to meet abuse? I am irritated more than I ought to be, but I am getting wiser every day,—recollecting Galileo and the times when philosophers and public benefactors were burnt for their services.—Whence is all this? Pride, poverty, disappointment, difficulty and envy—and ‘envy,’ said Janner to me in his last days, ‘is the curse of this country.’ These are kept up by the canker of party and the taint of corruption.

“One of the greatest obstacles to reform of blood-letting and blistering, will be the prospective loss of guineas, half-guineas, five shillings and half-crowns. I saw a farmer last summer come into a druggist’s shop.—Some one had told him ‘he must be cupped,’ so he drove a bargain, and stepped into a back room. ‘That fool,’ said I, ‘does not want cupping.’ ‘He does not look as if he did,’ said the druggist, ‘but we can’t afford to let him go without.’”

Gentlemen, the next two communications are from an army medical officer, Staff-surgeon Hume, a gentleman who, from the nature of his duties, has the very best opportunity of testing any particular practice—and one who, were he to give a false report, must be at once contradicted by regimental records. His statements may therefore be relied upon with somewhat greater confidence than the reports which annually emanate from the Medical Officers of Civil Hospitals and Dispensaries throughout England. From the tables of Mr. Farr, we learn, that these officers make the deaths at their institutions infinitely less than the average number of deaths of sick and well throughout the country! so that, if their reports be correct, sickness would appear to be actually a protection against death! Mr. Hume first writes from Dover, 6th December, 1838, “My object in writing is to congratulate you on the moral courage you have evinced in your last two works. I have been now nearly thirteen years in the service—mostly in charge of an hospital, and it will be gratifying to you to know that an old fellow-student adopts and carries out your principles in his daily practice. I have not used the lancet these last two years. My cases yield readily to warm baths, cold effusions, emetics and quinine. You may ask me where I have been? Four years in Jamaica, the rest in North America and Home Service. If you had seen Marshall’s Digest of the Annual Reports of the Army Medical Officers since 1817, you might have quoted it as a proof of your startling fact—the Unity of Disease. The more I read your book, the more I am convinced it is based on truth, and consistent equally with common sense and

nature’s laws. However little this age may appreciate your labors and the persecution you are likely to suffer from a certain class of doctors, every liberal mind must do justice to your unwearied zeal. Your holding up to ridicule the most fatal of all medical errors—bleeding a patient into a temporary calm and incurable weakness, ought to stamp you as the benefactor of mankind.”

The same gentleman again writes to me from Naas Barricks, Ireland, 5th December, 1839. “It is now twelve months since I wrote to you, saying that I had not used the lancet for the two previous years;—and I am now more convinced than ever of its utter inutility in the treatment of disease. Every day’s experience confirms me in the truth of your doctrines. During the last year, I have neither bled, leeches, nor cupped in any case—and I have not had a single death of man, woman, or child. The depot was never more healthy, and I attribute this principally to my abstaining, during the last THREE years, from every kind of depletion in the treatment of disease. I am satisfied that Pneumonia and Enteritis. (inflammation of the lungs and bowels) which are at present the bug-bears of the faculty, are indebted for their chief existence to the remedies used for ordinary ailments—namely, bleeding, starvation, and unnecessary purging. I never saw a case of either (and I have seen many) in which the patient had not been the inmate of an hospital previously, where he had undergone the usual antiphlogistic regimen, or had been otherwise debilitated—as in the case of long residence in a warm climate. I am not surprised at the opposition you meet with. It has ever been the lot of those who have done good to humanity to be offered up as sacrifices at the altars of ignorance, prejudice and obstinacy. It is a fact related by Harvey, he could not get a physician above the age of forty to believe in the Circulation of that Blood whose VALUE in the economy you have so forcibly proved. Although I yield to you, as your just due, the origin of the improved principle of treating disease, I take credit to myself for being one of the first to carry it into effect, and I am doubtful whether a person in private practice could ever so far overcome prejudice as to use the cold bath with the confidence I do in every kind of fever. Its power, together with a warm one, is truly wonderful in equalizing the temperature of the body. When I compare the success of my treatment during the last few years, with that of my previous experience, I feel inclined to curse the professor who first taught me to open the vein with a lancet. Yours most truly,

T. D. HUME.

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ARTICLE I.

Definition of Insanity—Nature of the Disease.

By Insanity is generally understood some disorder of the faculties of the mind. This is a correct statement, so far as it goes; but it does not define the disease with sufficient accuracy, as it is applicable to the delirium of fever, inflammation of the brain, and other diseases which are distinct from insanity.

Insanity, says Webster's Dictionary, is "derangement of the intellect." This is not merely too limited a definition, but an incorrect one, for in some varieties of insanity, as Prichard remarks, "the intellectual faculties appear to have sustained little or no injury, while the disorder is manifested principally or alone, in the state of the feelings, temper or habits."

We consider insanity, a chronic disease of the brain, producing either derangement of the intellectual faculties, or prolonged change of the feelings, affections, and habits of an individual.

In all cases it is a disease of the brain, though the disease of this organ may be secondary, and the consequence of a primary disease of the stomach, liver, or some other part of the body: or it may arise from too great exertion and excitement of the mental powers or feelings; but still insanity never results unless the brain itself becomes affected.

In former times, insanity was attributed to the agency of the devil, and the insane were supposed to be possessed by demons.—Something of this opinion is still prevalent, and it appears to have been embraced by our Pilgrim Fathers.

Cotton Mather, in his life of William Thompson, thus remarks:—"Satan, who had been after an extraordinary manner irritated by the evangelic labors of this holy man, obtained the liberty to sift him; and hence, after this worthy man had served the Lord Jesus Christ, in the church of our New English Braintree, he fell into that *Balneum diaboli*, a black melancholy, which for divers years almost wholly disabled him for the exercise of his ministry."

Still we find this leafed and good man saw the connection between the diseased mind and bodily disease, as he thus observes: "There is no experienced minister of the gospel, who hath not in the cases of tempted

souls, often had this experience that the ill cases of their distempered bodies are the frequent occasion and original of their temptations. There are many men, who in the very constitution of their bodies, do afford a bed, wherein busy and bloody devils, have a sort of lodging provided for them. The mass of blood in them, is disordered with some fiery acid, and their brains or bowels have some juices or ferments, or vapors about them, which are most unhappy engines for devils to work upon their souls withal. The vitiated humors, in many persons, yield the steams, whereunto Satan does insinuate himself, till he has gained a sort of possession in them, or at least, an opportunity to shoot into the mind, as many fiery darts, as may cause a sad life unto them; yea 'tis well if self-murder be not the sad end, into which these hurried people are thus precipitated. New England, a country where splenic maladies are prevailing and pernicious, perhaps above any other hath afforded numberless instances of even pious people, who have contracted those melancholy indispositions, which have unhinged them from all service or comfort; yea, not a few persons have been hurried thereby to lay violent hands upon themselves at the last. These are among the unsearchable judgments of God?"

We believe, however, that such opinions are no longer embraced by intelligent persons, who have paid much attention to insanity. By such, insanity is regarded as a disease of the body, and few at the present time, suppose the mind itself is ever diseased. The immaterial and immortal mind is of itself, incapable of disease and decay.—To say otherwise, is to advocate the doctrine of the materialists, that the mind, like our bodily powers, is material, and can change, decay, and die. On this subject, the truth appears to be, that the brain is the instrument which the mind uses in this life, to manifest itself, and like all other parts of our bodies, is liable to disease, and when diseased, is often incapable of manifesting harmoniously and perfectly the powers of the mind.

Insanity then, is the result of diseased brain just as dyspepsia or indigestion is the result of disordered stomach; but it is only one of the results or consequences of a disease of this organ. The brain may be diseased without causing insanity; for although we say, and say truly, that the brain is the organ of the mind, yet certain portions of the brain are not directly concerned in the manifestation of the mental powers, but have other duties to perform. Certain parts of the brain confer on us the pow-

er of voluntary motion, but these portions are distinct from those connected with the mental faculties. Hence we sometimes see though rarely I admit, individuals paralytic, and unable to move, from disease of the brain, whose minds are not at all, or but very little disturbed. In such cases there is some disease of the brain, but of a part not concerned in the manifestation of the mental powers. We recently saw an aged gentleman, who had been for several weeks, paralytic on one side, whose mind was not obviously affected. He died, and on examining his brain, a portion of the interior of one half of the brain was found much diseased, while the outer part was apparently in a healthy state.

From such cases, and numerous other observations, we are quite sure that the outer part of the brain is connected with the mental powers, and the inner portion with voluntary motion. These parts of the brain differ in color and structure. The outer is a greyish red color, and different from every other part of the system, while the inner part is beautifully white and resembles the nerves.

Again the brain appears to be a double organ, or it is divided into halves, or hemispheres of like form and function, and therefore, though one side or one half of the brain may be affected, the powers of the mind may still be manifested by the other.

We may say then, that insanity is an effect of a disease of only a part of the brain—the outer or grey part. In most cases, insanity is the consequence of very slight disease, of a small part of the brain. If it was not so, the disease would soon terminate in death—for severe and extensive disease of the brain soon terminates in death. We see however, numerous instances of insane persons, living many years, and apparently enjoying good health. We have seen several persons who have been deranged 40 and even 50 years, during which time they enjoyed in other respects, good health. On examining the brain after death, in such old cases of insanity, but little disease of this organ is often found, though a little, we believe may always be found; sometimes only an unusual hardness of the outer portion, but in so delicate an organ as the brain this is sufficient to derange its functions, just as a little disorder of the eye or ear, though not sufficient to affect the health, will disorder hearing and vision.

It is as if, in some very complicated and delicate instrument, as a watch for instance, some slight alteration of its machinery, should disturb, but not stop its action.

Thus we occasionally find that violent

mental emotions—a great trial of the affections—suddenly to derange the action of the brain, and cause insanity for life, without materially affecting the system in other respects. Esquirol relates the case of a young lady, who for several years expected to marry a person to whom she was engaged, and much attached. He finally deserted her and married another, on hearing of which she immediately became deranged, and for years remained in this condition, rejecting the attention of all other men, and constantly talking of her former lover, whom she still loved.

In this Asylum is an interesting patient, who became deranged suddenly, three years since, in consequence of the murder of her son. Her whole time and thoughts since that period, have been engrossed in searching and calling for her son, whom she believes to be concealed in the building, or beneath the furniture. Thus she lives in hopes of soon seeing him.

Garrick used to say that he owed his success in acting King Lear, from having seen the case of a worthy man in London, who, when playing with his only child at a window, accidentally let it fall upon the pavement beneath. The poor father remained at the window, screaming with agony, until the neighbors delivered the child to him dead.—He instantly became insane, and from that moment never recovered his understanding, but passed the remainder of his days in going to the window, and there playing in fancy with his child, then dropping it and bursting into tears, and for awhile filling the house with his shrieks, when he would become calm, sit down in a pensive mood, with his eyes fixed for a long time on one object. Garrick was often present at this scene of misery, and “thus it was,” he said, “I learned to imitate madness.”

Sometimes, however, a severe trial of the feelings and affections produces death.

This is not merely the assertion of poets and novelists. Esquirol mentions the case of a young lady of Lyons, in France, who was engaged to be married to a young man of the same place. Circumstances suddenly occurred which determined the parents to prevent their marriage, and the young man was sent away. Immediately on learning this she became deranged. After five days spent in vain efforts to relieve her, the parents, to prevent her death, had the young man recalled, but it was too late—she died in his arms.

In such cases, and we could cite many, death does not occur from apoplexy, nor from the exhaustion following long-continued and great excitement, but from the want



of sleep; the grief is too overwhelming for "poppy or mandragora, or all the drowsy syrups of the world," to medicine to repose.

Such was the sudden insanity and death of Haidee, described by Byron, and so true to nature and so beautifully, that we transcribe it.

\*The last sight which she saw was Juan's gore,  
And he himself o'ermaster'd and cut down;  
His blood was running on the very floor  
Where late he trod her beautiful, her own;  
Thus much she view'd an instant, and no more,—  
Her struggles ceased with one convulsive groan.

They lay she met at state unchanged, though chill,  
With nothing livid, still her lips were red;  
She had no pulse, but death seem'd absent still;  
No hideous sign proclaimed her surely dead.

At last a slave bethought her of a harp;  
The harper came, and tuned his instrument;  
At the first notes, irregular and sharp,  
On him her flashing eyes a moment bent,  
Then to the wall she turned, as if to warp  
Her thoughts from sorrow through her heart re-ent,  
And he began a long, low lullaby song  
Of ancient days, ere tyranny grew strong.

As on her thin, wan fingers beat the wall  
In time to his old tune; he changed the theme,  
And sang of love—the fierce name struck through all  
Her recollection; on her flashed the dream  
Of what she was, and is, if ye could call  
To be so bring: in a gush of stream  
The tears ran h'd forth from her o'erclouded brain,  
Like mountain mists at length dissolved in rain.

Short relief, vain relief!—thought came too quick,  
And whirl'd her brain to madness; she arose  
As one who ne'er had dwelt among the sick,  
And flew at all she met, as on her foes;  
But no one ever heard her speak or shriek.  
Although her paroxysm drew towards its close,  
Her was a frenzy which disdained to rave,  
Even when they smote her, in the hope to save.

Food she refused, and raiment; no pretence  
Avail'd for either: neither change of place,  
Nor time, nor skill, nor remedy, could give her  
Senses to sleep—the power seemed gone forever

Twelve days and nights she wither'd thus; at last,  
Without a groan, or sigh, or glance, to show  
A parting pang, the spirit from her pass'd."

A little injury of the brain—a slight blow on the head, has often caused insanity, and changed the whole moral character—usually for the worse, sometimes for the better. We have known a most exemplary and pious lady—a most excellent wife and mother, whose mind had been highly cultivated—transformed by a little injury of the head, into one of the most violent and vulgar beings we ever saw, and yet the intellectual powers were not very much disturbed. For a considerable time she continued to take good care of her family, so far as related to household duties, but her love of realing, of attending church, and all affection for her family and neighbors was gone, and she became so violent that her friends were obliged to place her in a Lunatic Asylum. The celebrated Dr. Parry refers to a case in which, to use his own words, "an accidental blow

on the head perverted all the best principles of the human mind, and changed a pious Christian to a drunken and abandoned felon"

Such cases teach us to be cautious and tolerant in instances where change of character and misconduct are connected as to time, with injury or disease of the head, or even with general ill health.

Now and then an injury of the head seems to improve the intellect, and even the moral character. Instances of the former are not very uncommon. The disease or injury of the brain appears to give more energy and activity to some of the mental faculties. This we often see in the delirium of fever. The following very curious case was related to Mr. Tuke, of the Retreat for the Insane near York, England:

"A young woman, who was employed as a domestic servant by the father of the relater, when he was a boy, became insane, and at length sunk into a state of perfect idiocy. In this condition she remained for many years, when she was attacked by a typhus fever; and my friend, having then practiced some time, attended her. He was surprised to observe, as the fever advanced, a development of the mental powers. During that period of the fever, when others were delirious, this patient was entirely rational. She recognized, in the face of her medical attendant, the son of her old master, whom she had known so many years before; and she related many circumstances respecting this family, and others, which had happened to herself in earlier days. But, alas! it was only the gleam of reason; as the fever abated, clouds again enveloped the mind; she sunk into her former deplorable state, and remained in it until her death, which happened a few years afterwards."

Numerous cases are on record where a blow on the head by depressing a portion of the skull has caused the loss of speech, memory, and of all the mental faculties for many months; but which were restored on trephining and raising the depressed bone.

As we have said, sometimes the moral character is improved by injury or disease of the head. Dr. Cox, in his *Practical Observations on Insanity*, relates such cases. We sometimes see the same results from severe illness. Most experienced physicians must have noticed striking and permanent changes of character produced by disease. The insanity of some persons consists merely in a little exaltation of some one or more of the mental faculties of self-esteem, love of approbation, cautiousness, benevolence, &c.

A man received a severe wound on the upper part of his head, after which his mind became some affected, especially as related

to his benevolent feelings, which were perpetually active towards man and beast. He was disposed to give away all that he had, and finally was placed in a Lunatic Asylum, in consequence of the trouble which he made in his endeavors to benefit others and relieve suffering. Whenever he saw any cattle in a poor pasture, he would invariably remove them to a better; and whenever he heard of a destructive fire or shipwreck, he would hasten even to a great distance to endeavor to afford relief.

Among the insane in Lunatic Asylums, we sometimes see not only exhibitions of strength, mechanical and musical skill, powers of language, &c., far superior to what the same individuals ever exhibited when sane, but also a remarkable increase and energy of some of the best feelings and impulses of our nature, prompting them to deeds of self-sacrifice and benevolence, which remind us of the somewhat insane but ever memorable act of Grace Darling—

"Whose deeds will live

A theme for angels, when they celebrate  
The high-souled virtue which forgetful earth  
Hath witnessed."

In such instances, fear and every selfish feeling appears to be lost or overcome by the intensity of the benevolent impulse.

From the preceding remarks we see that insanity is often but an effect of a slight injury or disease of a part of the brain, and in many instances only a few of the faculties of the mind are disordered. From this we infer that the brain is not a single organ, but a congeries of organs, as maintained by the illustrious Gall and his celebrated successors Spurzheim and Combe. Thus each mental faculty has an especial organ, and therefore certain faculties may be disordered by disease of the brain, while others are not affected; a fact every day observed in Lunatic Asylums, but which we know not how to explain if we believe the brain to be a single organ.

We very rarely find the whole mind destroyed or disordered in insanity, except in cases of long continuance, or of unusual severity. A majority of patients in Lunatic Asylums have considerable mind left undisturbed, and some of them conduct with propriety, and converse rationally most of the time, and on all but a few subjects.

We have seen an individual who believed that he directed the planets and caused the sun to shine and the rain to descend when he chose, yet he was a man of much intelligence and conversed rationally on other subjects, and was remarkable for gentleness of manner and amiability of disposition.

We could cite very many cases nearly similar, and to those who have frequently visited this Asylum, we can appeal for the verification of the statement—that patients decidedly insane on one or more subjects, still manifest acute and vigorous minds, and appear to be sane on others.

Having seen that insanity consists in the derangement of one or more of the faculties of the mind, produced by disease of only a part of the brain, we conclude there is no one faculty of the human mind but may become disordered. If, therefore, we actually knew what mental faculties mankind possess, we might then know all the various forms of insanity, all the varieties of mental aberration to which these faculties are liable. But we do not know. Philosophers have ever disagreed as to the number of the faculties of the human mind, and even as to what constitutes a faculty.

We shall not however particularise their views, but briefly allude to the constitution of the human mind, appealing to common observation for the correctness of what we assert on this subject.

In contemplating the phenomena of mind, we can not fail to perceive the variety of its faculties, and that there is an obvious general division of them into intellectual and moral, the latter comprehending the propensities and impulses.

These faculties, both the intellectual and moral, are originally possessed by all, and are alike dependent upon a healthy state of the brain for their proper manifestation. In some they are far more active and energetic than in others, owing in most cases we believe to original formation of the brain, and in others to education. That the intellectual faculties can be greatly improved by cultivation, every one knows, and by many, too many we fear, this is regarded the most important and sole object of education,—as if the moral powers, the propensities, and impulses, were not a part of the mind, and not capable of improvement.

But however important the cultivation of the intellect may be, it certainly is not more so than the cultivation and improvement of the moral powers. We do not wish to undervalue the intellect, or discourage efforts for its improvement, but we wish that all might realise the superiority of our moral nature over intellect itself.

The intellectual faculties are but a part of our mental powers, and contribute but little in fact towards forming what we call the character of an individual. We call to mind our acquaintances and notice that their characters are very different, but this difference does not arise from the difference in their in-

tellectual faculties, but in their moral powers. That one man knows more of the Greek language or mathematics, or has more knowledge of commercial or political affairs or of some mechanical art, or has the ability to acquire knowledge of many subjects faster than another, does not cause the difference we perceive in what we denominate the character. The character is determined by the moral faculties or propensities, by the affections, benevolence, love, selfishness, avarice, &c. The difference in the activity and energy of these, create the differences we see in the characters of men; these constitute the man himself, or the *soul* of man, while the intellectual faculties are but instruments to administer to the wants and demands of the propensities.

Without these propensities or moral faculties, the intellectual powers would not be exerted at all, or but feebly. The stimulus or urgency of the impulses of our moral nature, of benevolence, love, avarice, &c., impel men to action—to gratify these the human race have forever toiled.

Now it is to these important faculties, the propensities of our moral nature, that we wish to call particular attention. Not merely to the importance of their early cultivation and improvement, but to the fact that they as often become deranged as the intellectual. They as truly use the brain for manifesting themselves; consequently when certain parts of the brain become diseased, they become deranged, and not unfrequently without the intellectual powers being noticeably disturbed. A man's natural benevolence or propensity to acquire, or to love, may become deranged from disease of the brain as truly as his powers of comparing, reasoning, &c.

Yet evident as this is from Physiology and Pathology, and from daily observation in Lunatic Hospitals, it is a fact, and an alarming fact, that when disease causes derangement of the moral faculties, and changes the character and conduct of an individual, he is not deemed insane, provided the intellectual powers are not obviously disordered.

It may be said that such a person has reason still left to guide him, as is evidenced by his ability to converse rationally on many subjects, and even to reason well against the very crime that he commits. All this may be true, and yet the person may not be accountable, for although reason is given to prevent us from doing evil, it cannot be expected to resist a diseased and excited impulse.

Let not this be applied to crimes committed during voluntary intoxication, for though

when thus intoxicated a man may be momentarily insane, yet it is voluntary insanity produced by gross misconduct, of which no one can avail himself to escape the legal consequences of crime. Still in such cases the crime must be the immediate result of intoxication, and while it lasts, to make a man accountable, as has been decided by Judge Story and other legal authorities. If committed afterwards during delirium tremens induced by intoxication, he must be acquitted on the ground of insanity, as he can not be held accountable for the immorality of the cause of his insanity, a disease which he can not successfully feign or voluntarily induce.

The disbelief in a kind of insanity that does not disturb the intellect, arises perhaps from the common phraseology, that the affections, passions, and moral qualities, have their seat in the heart and not in the brain, and therefore are not likely to be disordered by disease of the latter organ. But in fact, the orderly manifestation of our moral faculties, our affections, and intellectual powers, are alike dependant on the healthy state of the brain. The heart has nothing to do with either.

We wish to repeat, that there is no faculty of the mind but may become deranged by disease of the brain. Disease of one part of this organ may cause the derangement of some of the intellectual faculties, while disease in another part may not disturb the intellect, but derange the moral powers or propensities. Thus we see blows on the head and wounds of the brain, sometimes destroy only one or two of the intellectual faculties such as the memory of words, or the memory of places, and at other times to effect an entire change of the moral character.

But while the injury that affects the intellect is acknowledged to cause insanity, the injury that changes the moral character is not supposed to have this effect. The subject of the former is considered an object of concern and pity, while the latter is considered a depraved and wicked being deserving of punishment. Numerous cases have fallen under our observation, where a great change in the moral character occurred and lasted a year or two, and then the intellect became affected. This change of character was noticed and lamented, but those thus affected were not considered insane until the intellect itself became involved; while in fact they were insane from the first.

We wish all to be assured that a sudden and great change of character, of the temper and disposition, following disease or injury of the head, although the intellect is not disturbed, is an alarming symptom; it is

often the precursor of intellectual derangement, and if not early attended to, is apt to terminate in incurable madness.

Within a few days we have seen two cases of insanity, both said to be quite recent, but on inquiring particularly of their friends we found that they had noticed a striking change of character for several months before they thought of insanity. In one the change was from being naturally very generous and benevolent, to the opposite extreme of selfishness, and as they expressed it, of stinginess. In the other, the change was from great mildness and amiability of disposition, to that of extreme irascibility and moroseness. Now these persons were not deemed insane until their intellects were disturbed; but we regard the previous change of character as truly the consequence of disease of the brain as the disturbance of the intellect, and this is now the opinion of their friends.

Derangement of the intellectual faculties seldom occasions much dispute—every one easily recognizes it—but not so with derangement of the moral powers. Most persons have seen individuals who are crazy, and consider themselves qualified to judge whether a person is deranged or not, yet on inquiry we find that nearly all expect irrational and incoherent talk from those that are deranged, or wild and unnatural looks, or raving and violent conduct. Their opinions respecting insanity are derived from having seen raving maniacs, and not from observation in Lunatic Asylums; for in the latter may be found many whose insanity consists in derangement of the affections and moral powers, and not in disturbance of the intellect.

Owing to such limited and erroneous views respecting insanity, many persons are not disposed to believe in a kind of mental disorder that may impel men to commit crimes, unless such individuals exhibit derangement of the intellect, or conduct in a manner that they have been accustomed to see deranged persons conduct.

But notwithstanding this common opinion regarding insanity, it is a well established truth, that there is a form of insanity, now called by many *moral insanity*, arising from disease of the brain, which may impel men to commit great crimes, while the intellect is not deranged, but overwhelmed and silenced by the domination of a disordered impulse.

Sometimes insanity seems to arise from some defect of the organs of sense, from change in the nerves of sensation. It is said that in those who are troubled with hallucinations of sight or of hearing, some disease of the nerves of the eye or ear is found.

Still, in such cases there must be in addition some defect in the power of comparison, or insanity would not result. Comparison is one of the most important of the faculties of the mind, and the one most liable to be affected in insanity, or in any disease of the brain, as in headache for instance.

Disorder of the nerves of sensation may also lead to insane ideas and conduct. Some have believed themselves converted into inanimate substances. One man thought himself changed into a teapot, another into a barrel which was rolled along the street, and another into a town-pump to which no rest was given day nor night.

Mr. Connolly, in his work on Insanity, tells of a respectable merchant in London who fancied himself metamorphosed into a seven shilling piece, and who took the precaution of going round to those with whom he had dealings, requesting of them as a particular favor that if his wife should present him in payment they would not give change for him.

In all these cases—for they all admit we think, of one explanation—there was some affection of the nerves of sensation, and also some disorder of the faculty of comparison.

In some cases of mental disorder, there seems to be almost complete annihilation of sensation. This is the case with those who believe themselves dead; they feel not, and fully believe that they have ceased to exist, yet such persons will often talk rationally on other subjects. Most of their mental faculties are in perfect condition, and sometimes by exciting some of the most predominating impulses or passions, such persons are cured.

One of the Princes of the Bourbon family of France, imagined himself dead, and refused to eat. To prevent his dying of starvation, two persons were introduced to him, in the character of illustrious dead like himself and they invited him after some conversation respecting the world of shades to dine with another distinguished but deceased person the Marshal Turenne.

The Prince accepted this very polite invitation, and made a very hearty dinner; and every day, while the delusion continued, in order to induce him to eat, it was necessary to invite him to the table of some ghost of high rank and reputation.

Dr. Mead relates, that an *old bell ringer* at Oxford University, imagined himself dead, and ordered the bell to be rung, as was usual on the occurrence of a death at that place. The bell was rung, but in a most awkward and unusual manner; the bell ringer could not bear this, and leaped from his bell, and hastened to the belfry to show how it should

be rung; he then returned to his room that he might die in a proper way, but the exercise and passion proved so beneficial that his delusion was broken up, and he soon recovered.

As I have already mentioned, some persons decidedly insane on some subjects, exhibit greater intellectual power on others during their mental derangement, than when they are sane. The following is an instance.

A general in the French army, who had the entire confidence of Napoleon, and who had been directed by him to superintend some immense military preparations at Boulogne, became much fatigued by his duties, which exposed him most of the day to the hot sun. Suddenly he quitted the work, and accompanied by one of his aids, set off for Paris, announcing on his way that he was the bearer of a treaty of peace with England. He traveled with great rapidity, not allowing himself time to eat, and paid postillions largely to hasten his speed. Arriving at Paris, the public funds rose from this news of the treaty. Not finding Napoleon at the Palace of the Tuilleries, he hastened to St. Cloud, and, in disordered dress, penetrated to the apartment of the Emperor, and announced to him what he alone, of all whom the general had met, knew to be incorrect. In fact, Napoleon was the first to discover his insanity, and committed him immediately to the care of physicians.

The insanity of the general continued through the summer, during which time he wrote comedies and plays which were much admired, and he also conceived or invented an improvement in firearms, and begged to have permission to visit a founder in order to have a model made from drawings he had himself prepared. His physician reluctantly yielded to his request, on his giving his word of honor that he would not go elsewhere. He went and returned, and eight days afterwards went again and found the model completed, and then gave orders for 50,000 models to be made. This order for 50,000 models was the only symptom of insanity that he exhibited during the whole affair. He soon however became worse, then paralytic, and died insane.—But the efforts of his diseased mind have survived him; his writings are still read and admired, and his invention was soon found to be quite an improvement, and has since been adopted in the French armies.

In some cases of insanity, the faculties of the mind are so acute, that it is exceedingly difficult for a stranger to detect the mental aberration. The late Lord Erskine, in his speech in defence of Hadfield, for shooting

at the King at Drury Lane Theatre, in order to demonstrate how cunning and acute in reasoning insane persons frequently are, and consequently how difficult it sometimes is to discover their insanity, referred to the following cases, which we quote in his own words:

"I well remember (indeed I never can forget it,) that since the noble and learned judge has presided in this Court, I examined for the greater part of a day, in this very place, an unfortunate gentleman who had indicted a most affectionate brother, together with the keeper of a mad-house at Hoxton, for having imprisoned him as a lunatic, whilst, according to his evidence, he was in perfect senses. I was, unfortunately, not instructed in what his lunacy consisted, although my instructions left me no doubt of the fact; but, not having the clue, he completely foiled me in every attempt to expose his infirmity. You may believe that I left no means unemployed which long experience dictated, but without the smallest effect. The day was wasted, and the prosecutor, by the most affecting history of unmerited suffering, appeared to the judge and jury, and to a humane English audience, as the victim of the most wanton and barbarous oppression.—At last Dr. Sims came into Court, who had been prevented by business, from an earlier attendance, and whose name, by the bye, I observe to-day in the list of the witnesses for the crown. From Dr. Sims I soon learned that the very man whom I had been above an hour examining, and with every possible effort which counsel are so much in the habit of exerting, believed himself to be the Lord and Saviour of mankind, not merely at the time of his confinement, which was alone necessary for my defence, but during the whole time that he had been triumphing over every attempt to surprise him in the concealment of his disease. I then affected to lament the indecency of my ignorant examination, when he expressed his forgiveness, and said with the utmost gravity and emphasis, in the face of the whole Court, "I AM THE CHRIST," and so the cause ended. Gentlemen, this is not the only instance of the power of concealing this malady; I could consume the day if I were to enumerate them; but there is one so extremely remarkable, that I cannot help stating it.

"Being engaged to attend the assizes at Chester, upon a question of lunacy, and having been told that there had been a memorable case tried before Lord Mansfield in this place, I was anxious to procure a report of it, and from that great man himself (who within these walls, will ever be

reverenced, being then retired in his extreme old age, to his seat near London, in my own neighborhood) I obtained the following account of it. 'A man of the name of Wood,' said Lord Mansfield, 'had indicted Dr. Monro, for keeping him as a prisoner (I believe in the same mad-house at Hoxton) when he was sane. He underwent the most severe examination by the defendant's counsel without exposing his complaint; but Dr. Battye, having come upon the bench by me and having desired me to ask him what was become of the PRINCESS whom he had corresponded with in cherry-juice, he showed in a moment what he was. He answered that there was nothing at all in that, because having been (as every body knew) imprisoned in a high tower, and being debarred the use of ink, he had no other means of correspondence but by writing his letters in cherry-juice, and throwing them into a river which surrounded the tower, where the Princess received them in a boat. There existed, of course, no tower, no imprisonment, no writing in cherry-juice, no river, no boat; but the whole the inveterate phantom of a morbid imagination. I immediately, continued Lord Mansfield, 'directed Dr. Monro to be acquitted; but this man, Wood, being a merchant, in Philpot Lane, and having been carried through the city in his way to the mad-house, he indicted Dr. Monro over again, for the trespass and imprisonment in London, knowing that he had lost his cause by speaking of the Princess at Westminster; and such,' said Lord Mansfield, 'is the extraordinary subtlety and cunning of madmen, that when he was cross-examined on the trial in London, as he had successfully been before, in order to expose his madness, all the ingenuity of the bar, and all the authority of the Court, could not make him say a single syllable upon that topic which had put an end to the indictment before, although he still had the same indelible impression upon his mind, as he signified to those who were near him; but conscious that the delusion had occasioned his defeat at Westminster, he obstinately persisted in holding it back. This evidence at Westminster was then proved against him by the short-hand writer.'"

In a future number we shall resume the subject of this article, and we beg our readers to keep in view the statements advanced in this, as we purpose to refer to them in connection with the Medical Jurisprudence of Insanity, and an explanation of some cases of moral insanity that have much embarrassed both physicians and jurists.

#### DR. STEVENS' ADDRESS,

*At the opening of the Annual Session of the New-York Medical College: Crosby street.*

It is to be regretted that a full and accurate report of this remarkable production has not been laid before the profession and the public. The notices of it which have appeared in the city journals, have been confessedly mere "meagre outlines" of a really rich and elaborate performance. It is, therefore, to the private reports of judicious and intelligent medical gentlemen who heard it delivered, rather than to any other source, that we are indebted for the information which we have received concerning it, and on which we chiefly found our reflections and remarks.

All reports concur in representing that the object and tendency of this Sessional Address, beyond the immediate and temporary occasion which called it forth, were to check the present liberal and humane efforts of many enlightened men to rescue medical knowledge from its inveterate prejudices and trammels, and thus enable it to keep pace with the general intelligence of the age.

Accordingly, the Address proceeded, in the true snuff-colored, old fashioned style, first to claim for medical science, as it now stands, a dignity and maturity rivaling any other; and secondly to deprecate free investigation and progress, under the venerable scare-crow jealousy of "dangerous experiments." The gentleman proceeded to show, says a published report, "that medicine was as much a science as any other known, although not based on fixed principles." How far he succeeded in establishing this amusingly contradictory proposition, we are not publicly informed, but it must evidently have been as difficult an operation as he ever attempted in the whole course of his practice. This done, however, he advanced to his second position, which, according to the same report, was to show that "those who were given to experiments never raised themselves in the profession and were injurious to their patients." And in these two points we have the whole scope, design and intellect of this famous Annual Address.

It becomes, therefore, an important question as to whether the sincerely zealous and talented young men who now throng our medical schools, from all parts of the Union, should be thus misled and retarded in their noble aspirations for true eminence and usefulness in the arduous profession which they have chosen, and in which so awful an amount of responsibility and so vast a field of human interest are necessarily involved. None but bigots will hesitate to admit, that the tendency of such instruction as we have above quoted, is to keep the next generation of medical men at least as ignorant, conceited and mischievous as the present and the past: mere petrifications in the stream of time, while the students of almost every other department of knowledge display a living and athletic career of advancement and renown.

That medicine is not, as Dr. Stevens affirmed, "as much a science as any other known," has been frankly admitted by many men, as distinguished, to say the least, in that profession as himself. Let the ingenious student listen to the opinion of another instructor, the truly eminent Dr. Evans of Edinburgh:—

"How much have we yet to learn, how little do we really know, of the nature and rational treatment, not only of the diseases of the cerebro-spinal system, but of diseases in general! Assuredly, the uncertain and most unsatisfactory art that we call medical science, is no science at all, but a jumble of inconsistent opinions; of conclusions hastily drawn; of facts badly arranged; of observations made with carelessness; of comparisons instituted which are not analogical; of hypotheses which are foolish: and of theories which, if not useless, are dangerous.—This is the reason why we have our homœopaths, and our hydropaths; our mesmerists and our celestialists!"

And as a timely counterpoise to Dr. Stevens' nervous horror of "experiments," injurious at once to practitioner and patient, we would submit the following remarks of the able and honest Dr. G. B. Childs of London.

"The whole science of healing is built upon fortuitous and chance discoveries. Like the alchemists of old, we have discovered a thousand valuable things, where we never thought of looking for them; and while uselessly seeking for talismanic gold, we have lighted on a pearl of great price. Every thing in fact, is presented to us as the result of *experiment*; and, in the treatment of disease, the most valuable remedy can boast of no higher origin than its more humble neighbor.

Dr. Knighton who was at the head of his profession, and physician to George IV—said

"It is somewhat strange that, though in many arts and sciences improvement has advanced in a step of regular progression from the first, in others it has kept no pace with time; and we look back to ancient excellence with wonder not unmixed with awe. Medicine seems to be one of those ill-fated arts whose improvement bears no proportion to its antiquity. This is lamentably true, although Anatomy has been better illustrated, the *Materia Medica* enlarged, and Chemistry better understood."

It would be easy to add the testimony of a great number of distinguished men to the same effect, but it would be useless to do so as the truth of the statements of those we have quoted, is known to every well informed physician. Dr. Stevens, however, steps forth and breasts the whole tide of testimony, and while he admits that medicine is not founded, like all other sciences, upon fixed principles, still obstinately insists that it is "as much a science as any other." Fixed principles being thus unnecessary to medical science, it seems perfectly consonant that he should denounce those "experiments" by which alone fixed principles ever can be, or ever have been established.—We strongly suspect, however, that the Doctor may have other motives of hostility to "experiments" than those which he assigns, for we could, ourselves, refer to some "experiments," of a very singular character which have proved as beneficial to his patients as they may possibly have been injurious to his practice. And there is much less of paradox in this, than in the notion of a science without principles. We have, indeed, no doubt that the "experiments" of

which the following are a few of the results, are among the most objectionable which the Doctor could adduce:—

Many cases of confirmed tubercular consumption, long under the best treatment, known to the anti-experiment, (or anti-injurious-to-patients!) school, and then avowedly abandoned as utterly hopeless, *cured*, within a few months after the "experiments" were tried, directly under anti-experimental observation!

2. Many cases of white-swelling, tubercular disease of the joints—treated and abandoned by science without principles, and rapidly cured by experiments injurious to patients, as above.

3. Violent inflammations of the organs, uniformly reduced in from three to fifteen minutes.

4. The most severe paroxysms of Bilious Fever, with violent pain in the head, back, stomach and intestines, &c., uniformly reduced in from five to ten minutes.

5. Sick head-ache uniformly reduced in from one to ten seconds; and Nervous head-ache in from one to five minutes.

6. Tooth-ache in from one to fifteen seconds.

7. Tic-Douloureux, of the most intolerable severity, in from one to five seconds.

8. Luxation of the hip joint, of four years standing, reduced by three applications of the Rotary Magnetic Machine.

9. *Cum multis aliis*. And we mean by this Latin that Dr. Stevens can have as many more, in plain English, as he could lecture against from this time to the next Annual Session.

#### MARY DENT AND JOHN GARLAND.

SIR JAMES GRAHAM'S "SURGERY."

In a recent number of The Lancet, (July 27, p. 562,) we published a short account, extracted from the Times, of a most extraordinary trial which had taken place on the Norfolk Circuit, that of John Garland, surgeon, accused of feloniously killing Mary Dent. The appeal which we then made to our friends residing in that part of the country, for further particulars, has been responded

to, and we are now able to lay a full and authentic account of this strange affair before our readers. In addition to a medical narrative of the case by Mr. Henry Mitchell, of Addenbrook's Hospital, Cambridge, one of the surgeons who performed the post mortem examination, we also publish a letter, which has since appeared in the "Provincial Medical and Surgical Journal," from Mr. Jones, the surgeon who was first called in by Mr. Garland.

#### Mr. Henry Mitchell's History of the Case.

The name of the unfortunate patient was Mary Dent, wife of John Dent, of Littleport, in the Isle of Ely, labourer; she was twenty-three years of age, of good health, and robust appearance; she had borne five children and had miscarried once; she was married at a very early age, and became a mother when between sixteen and seventeen years old.

On the 22d day of May last, Mary Dent complained of feeling very unwell; she felt great pain, and vomited occasionally, and being apprehensive of miscarriage, sent off, about eleven o'clock at night, for Mr. John Garland, a person of middle age, who has practised as a surgeon and accoucher, at Littleport, ever since 1816.

It appears that on the day in question, the patient had occasion to lift or drag a sack of flour, containing fourteen stone; it also appears that according to her own account, she was at this time about three months advanced in pregnancy, having menstruated for the last time on the 14th of February.

Upon his arrival, Mr. Garland proceeded to examine the patient by passing his hand and arm into the vagina, intending as he himself expressed it, to "bring the child." He shortly afterwards made a second examination, whereupon the patient entreated of him to desist, "for he was pulling her entrails out;" and presently Ann Banyan, the nurse, saw hanging out in the bed "a large quantity of entrails, as many as could lie on a large plate." (I quote her own words as taken down by the coroner.)

When matters had arrived at this crisis, Mr. Garland appeared most anxious for further advice and assistance, and, at his urgent request, a messenger was despatched to Ely, who returned, bringing with him Mr. Jones, of Ely, surgeon.

Upon turning down the bed-clothes, Mr. Jones discovered in the bed a something, which he at first mistook for the umbilical cord, but a more careful examination, convinced him that the protruding mass was small intestine, depending from the vagina.



Upon a minute inspection, he ascertained that the intestine was completely detached from the mesentery, throughout its whole length and that it was extensively lacerated; the *distal* portion being torn completely across, that is, its whole diameter being completely divided, whilst the *proximal* portion was lacerated, so as to be very nearly divided. Under these unfortunate and perplexing circumstances, Mr. Jones was of opinion that any attempt to save the intestine would prove useless; he therefore passed a ligature around the intestine, above the *proximal* laceration, and close to the vagina, and cut off all the intestine below the ligature; the intestine, so cut off, measured nineteen feet six inches. Mr. Jones then took his departure stating his belief that the patient could not survive many hours.

All this occurred between four and seven o'clock on the morning of the 23d of May. Shortly after the departure of Messrs. Jones and Garland, the fœtus was found in the bed; it appeared a fœtus of about three months. About twelve hours after the application of the ligature, the bowel above the ligature became very distended, and ultimately burst. Subsequently, the nurse, Anne Banyard, removed about half-a-yard more of intestine, without any medical man being present; she cut it off, and she did so, "because it became very black and was very offensive."

The poor woman lingered seventeen days, and expired suddenly and at once, whilst attempting to raise herself up in bed, on the 8th day of June. During this period she did not suffer so acutely as might have been imagined; for three or four days the stomach rejected every thing, but latterly it became much less irritable; her skin was cool, her pulse rarely above eighty, her countenance natural, and she complained of no pain, neither was there any appearance of hæmorrhage. She took a little simple sesqui-carbonate of soda as medicine, and weak gruel or chicken-broth as diet.

I was instructed to make a post-mortem examination about forty-eight hours after death. The following is the result of the examination —

A very marked flatness and depression was observable between the two ilia; over the whole abdomen the bodies of the vertebrae could be more distinctly felt than naturally they should be; the external parts of generation and the perineum were very much excoriated. There was nothing else worthy of note about the trunk.

Upon opening the abdomen, the liver was ascertained to be healthy, as also the stomach. The omentum was offensive, black, gangrenous, and adherent to the arch of the

colon, and to the small intestines generally; this adhesion was more marked from the symphysis-pubis to the right than to the left iliac region.

The colon appeared shrunken and contracted, and was so adherent to the omentum throughout the extent of the ascending and transverse portions, that the omentum and colon might be turned back together; the whole of the ascending portion of the colon was in a state of complete gangrene; over the region of the cæcum a small and circumscribed collection of matter was found, and it appeared as if, in this situation, the small intestines had been separated from the large; the descending portion of the colon and the rectum were not in so diseased a condition.

About *two yards* only of small intestines remained in the abdomen, these, towards the lower portion were very gangrenous, and upon tracing them downwards it was discovered that they were very adherent in the right iliac region, and that in this situation they dipped downwards and inwards to the right of the uterus, and became attached, by their lower margin, to the borders of an opening found in the right side of the vagina; the small intestines appeared to terminate in the vagina, for they could not be traced onwards to the large.

The mesentery was gangrenous, and had been torn in two or three places.

In the vagina was found in the upper part and on the right side, a laceration sufficiently large to admit two or three of my fingers; this laceration was found to communicate with, and to lead into, the above-mentioned depending portion of small intestine, so that the fingers could readily be passed from the vagina into the small intestine; the vagina on the left side was healthy and unruptured.

The uterus was normal in size and appearance, and what perhaps is rather singular, did not exhibit any traces of recent impregnation.

The bladder was healthy, so were the lungs, and so was the heart.

#### *Defence by Mr. Garland's Counsel.*

Mr. O'Malley addressed the jury on behalf of the prisoner in a speech of great eloquence and power. He began by adverting to the spirit in which the prosecution had been got up, which he characterized as one of professional jealousy and revenge. An unfortunate interpolation in the evidence of Mr. Stevens, to the effect that he had generally found the prisoner an ignorant man, he denounced in terms of severest and most indignant reprehension. He analyzed with much acumen the evidence of Mr. Jones, and was not less severe upon him than he

had been upon Mr. Stevens. Talk of rashness, forsooth! Why, here was a man who, with three minutes consideration, performed an operation which he confessed destroyed every possible chance of life. Whatever might have been the result before the cutting off the protruding intestine, at any rate, according to the witness's own showing, there was no hope—no chance whatever after that operation. And who was to say what was the state of things when Mr. Jones first examined the woman? He confessed that he knew not what the extraneous substance was when first he saw it; he thought it was the umbilical cord; might not his handling of it have produced the holes and lacerations spoken of? The learned gentleman argued that most likely the rupture in the vagina had been occasioned by the lifting of the flour—that the prisoner, like Mr. Jones, had mistaken the intestine protruding from the aperture for the umbilical cord—and that at best he had been guilty of an error, and that medical men were liable to errors every day of their lives. Hundreds, nay thousands, were annually killed by the errors of medical men, it was impossible it could be otherwise; but they were not to be indicted for manslaughter for mere errors. Mr. O'Malley made a most forcible appeal to the feelings of the jury.

The jury found Mr. Garland GUILTY, and he was sentenced to one month's imprisonment.

#### Académie de Médecine, Paris.—July.

##### CASE OF SUB-PUBIC LITHOTOMY, (HIGH OPERATION.)

M. Segalas presented to the academy two vesical calculi which he had recently extracted from two old men, by the high operation. One of them was of the form of a kidney, of extreme hardness, and weighed 135 grammes (4 oz. 4 dr.); its circumference was nineteen centimetres in one direction and fifteen in the other. The patient who bore it was a priest, residing in the department of the Loire. Its presence had been overlooked by an hospital surgeon who first examined him, but was subsequently discovered by another practitioner, when he was sent to Paris, to M. Segalas. On examining his patient, M. Segalas easily discovered a very hard and voluminous calculus. He has already several times found stones of this description in country priests on whom he has operated, a fact to which he attributes to their being far from surgical assistance, and allowing the stone to acquire a large size before they leave their homes for advice. At the urgent request of the patient, M. Segalas made three attempts at lithotripsy, but not succeeding in

breaking the stone, the pains becoming very violent, and fever setting in, he proposed an operation, which was accepted with resignation, supported with courage, and followed by complete success. The cure was obtained without the slightest accident. After the extraction of the stone, which was easily accomplished, although the patient was very corpulent, a siphon-sound was established, and under its influence the urine escaped nearly always by the ordinary channel.—The wound was completely cicatrised in a month.

The other calculus was not so large, and only weighed 68 grammes. (2 oz. 2 dr.) Its form was that of a full wheel. The patient was an old man, sixty-five years of age, a shoemaker. The sub-pubic operation was also performed, and the stone easily extracted. Lithotripsy had previously been tried once. The siphon-sound was introduced, but occasioned so much irritation that it was withdrawn on the fifth day. Nevertheless, urine only issued from the wound on the twelfth day. The patient was then sounded every two hours; he subsequently sounded himself when he felt the desire, and the cure was completed on the 20th day.

#### EXCISION OF THE SPLEEN.

M. Berthet, of Gray, related a case of excision of the spleen. An individual received, in a quarrel, a cut with a knife in the left side. Eight days after the accident, M. Berthet, on being called in, found a considerable tumour formed by the spleen, which exhaled a strong smell of putrefaction. He excised the tumour, the surface was methodically dressed for some time and healed. The patient lived more than thirteen years afterwards, and his digestions were always accomplished with ease, which seems to prove that the spleen is not more necessary to life in man than in the animals from which it has been excised of late by vivisectioners. This individual died of pneumonia. Only a very small portion of the spleen, as large as a nut, was found; it was applied on the external parietes of the stomach.

#### Academy of Sciences, Paris.—July.

##### PSEUDO-MEMBRANOUS INFLAMMATION OF THE BLADDER PRODUCED BY BLISTERS.

M. Morel-Lavallee stated that although, generally speaking, cantharides applied to the skin exercise no influence over the bladder, they sometimes develop in that organ, owing to individual peculiarity, an inflammation similar to that produced on the skin, and accompanied by the formation of false membranes. The size of the blister appears to

have a considerable influence over the occurrence of these accidents. In the three cases which M. Morel Lavallee gave, the blisters were very large. One had been applied near the bladder on the hypogastric region; the others had been applied at a considerable distance on the head and the chest. The false membranes are sometimes small, thin, with an irregular festooned margin, whilst sometimes they are as large as half a playing card. In the first instance they are of a greyish-red colour, striated with streaks of blood; in the other they are of a dull-white colour on the non-adherent side, rosy on the adherent one. In one case in which M. Fidal de Cassis was able to examine the bladder after death, its internal surface was red and swollen, like the conjunctive in blennorrhagic ophthalmia. The symptoms are those of ordinary cystitis. It is worthy of remark that in the cases observed by M. Morel-Lavallee, the blister had been powdered with camphor. In the treatment of these cases M. Morel advises vesical injections of emollient fluids, along with poultices refreshing drinks, &c., at the same time be takes off the blister.

#### PATHOLOGY.

A CASE OF ACUTE TUBERCULOSIS OF THE MEMBRANES OF THE BRAIN, THE LUNGS, AND LYMPHATIC GLANDS.

Observed by Dr. BRANIC, Assistant Physician to Dr. SKODA, of Vienna.

*From the British Journal of Homoeopathy.*

[We give the full details of this cure, of a pure and very interesting disease, and would wish to direct the attention of practitioners to it; for, from the difficulty of the diagnosis, it is not improbable that it is often confounded with other diseases, which it not unfrequently simulates. At the Homoeopathic Hospital of Vienna, we had an opportunity of observing a case of acute tuberculosis, which so closely resembled the typhus fever of the Continent, that it was impossible to distinguish the difference. Even the most celebrated diagnosticians admit their incompetency to the task. A notice of the disease will be found in a paper on "The Pathology of Typhus," at p. 342 of the Edinburgh Monthly Journal of Medical Science for 1842.]

B. A., aged 28 years, by trade a gunsmith, a native of Hungary, of a muscular and robust frame, a pale complexion, and described to have been previously healthy. For six weeks, the patient complained of severe and constant headache, particularly over the region of the eyebrow, and the forehead, which

deprived him altogether of rest, and rendered him quite unfit for any hard work. Until now he had not sought any medical aid, and on his entering the "General Hospital" here, upon the 2d of October of this year, the symptoms he presented were as follows: The only morbid symptom which the patient complains of, is severe pressive pain in the forehead and in both eyebrows, which is not increased by any amount of pressure on the part, and never varies in degree. There is nothing else of a morbid character discernible; the forehead does not feel unnaturally hot, and nothing abnormal can be detected in the eyes, ears, or face. From the mouth there comes a most offensive smell, the origin of which cannot be discovered; the tongue is covered with a very thick; white, adherent coat; there is loss of appetite and thirst; the chest is normal; the abdomen, in its whole extent, sensitive on strong pressure. The stools present nothing unnatural; the temperature of the skin is not raised; the pulse is slow and regular. The patient feels not so much exhausted as giddy, especially on rising. An acidulated drink was ordered, and no diagnosis was pronounced.

The 4th.—the pain remains the same in every respect; the countenance is somewhat flushed; there have been two stools; the patient feels weak.

The 5th.—No change. A blister was applied behind the ear.

The 9th.—The pain is still terrible; the smell from the mouth continues; there is no appetite. Neither the mental powers, nor the power of voluntary motion are at all affected. Cold embrocations were applied to the brows.

The 11th.—The weakness has increased; the patient cannot sit up in bed. The headache is still most severe, especially in the supraorbital region; there is a slight cough, with a little mucous expectoration.

The 12th.—Still dreadful headache, constipation, dysuria: the pulse more rapid than natural. The patient has several times vomited small quantities of thin greenish-yellow fluid. There is unnatural sensibility of the abdomen; no alvine evacuation, nor any passage of urine.

The 13th.—No more vomiting; the patient lies with his eyes constantly closed; no consciousness of any thing; pressure on the eyebrows and forehead excites no pain. He cannot swallow; and there have been no evacuations.

The 14th.—Hydrocephalic symptoms have developed themselves; the right eyelid perfectly paralyzed, its pupil manifestly dilated; consciousness, sensibility and power of voluntary motion entirely suspended; the mouth is open at its right side; the breathing is

molliusculam, tenuem vidi et modice quasi slow, stentorous, and difficult; no cough. The temperature of the skin fallen; the pulse very rapid; no stool, nor any urine passed. Death ensued on the night of the 14th of October.

**DISSECTION.**—The body was of strong osseous build, and very muscular; the pupil of the right eye dilated; the neck and the limbs rigid; the thorax arched; the skull compact; some coagulated fibrine in the sinuses. The arachnoid vascular; the *pia mater* on the left side, especially along the sinus, and to a much larger extent on the right side, in the temporal region, was permeated (durchwept) by an exudation, partly hæmorrhagic, but more yellow, granulated, tuberculous, around which it was soaked by a greenish yellow serum. The substance of the brain was soft; in the ventricles there was half an ounce of grey turbid serum; the choroid plexus was pale; the *dura mater*, at the base of the skull, was irregularly infiltrated with serum, especially around the decussation and infundibulum.

The neurilema of the optic nerve and of the *motor oculi* was vascular, that of the *motor oculi* was injected, of a dark red colour, at the part between where it leaves the brain, and where it penetrates the skull. The left lung was free, the right one was firmly united at the top to the parietes of the chest; the substance of both did not collapse. Pale, with little blood; at the top of the right upper lobe, there were calcareous tubercles, surrounded by condensed tissue of the lung; at the lower part, as well as at the top of the left upper lobe, groups of grey fresh tubercles, the size of a millet or a hemp seed. The liver was pale, with little blood; at its inferior margin an old acephalocyst, the size of an egg. The mesenteric glands around the pancreas were converted into a cheesy mass, the size of an egg. The spleen and kidneys firm; the bladder distended, and containing more than two pounds of urine.

OSTER. MED. WOCHENSCHRIFT, No 46.

The tuberculous character of this case, could have been determined in a moment by the magnetic symptoms, like every other case of typhus fever.—*Editor.*

**The Researches of M. Jobert (De Delamballe) on the Structure of the Uterus.**

Mr. Jobert, surgeon to the Hospital St. Louis, is an enlightened and conscientious observer, whose labors seldom fail to throw light on the subject which he studies. We extract the subjoined account (condensed) of his researches of the anatomy of the uterus

from M. Malgaigne's "Journal de Chirurgie," one of the best conducted French periodicals of the day,

The uterus is generally considered to be formed of proper tissue, of two membranes, of numerous vessels, and of cellular tissue uniting these elements.

The existence of subperitoneal cellular tissue uniting the abdominal serous membrane to the uterine tissue, is generally admitted. This cellular tissue which is said to entirely surround the uterus, is considered by some authors to present the physical characters of yellow fibrous tissue, and by others to be susceptible of muscular transformation during pregnancy. My researches, says M. Jobert, have shown me that there is no cellular tissue or yellow fibrous tissue underneath the peritoneal covering of the uterus. Cellular tissue, on the contrary, is evident, at all periods of life, round the Fallopian tubes, the round ligaments, the ovaries, and a part of the uterine neck. The peritoneal serous surface is elsewhere joined to the entire extent of the uterine substance by muscular fibres, so adherent that it is difficult, except near the neck, to separate it from them without bringing some of them away. When this separation is effected on the posterior surface of the uterus, the torn fibres present a longitudinal disposition. On the anterior surface, on the contrary, the fibres appear transversal and oblique. At the fundus of the organ their direction varies, and cannot be always ascertained. This union of the peritoneum and of the body of the uterus is also evident in the female of the monkey, in the sow, the ewe, and the mare; in these animals the cellular tissue is abundant round the vagina, and in the large ligaments. The adhesion between the peritoneum and the cornea of the uterus is also effected by muscular fibres.

I think, therefore, that we may establish as a law that the peritoneum is connected with the proper tissue of the uterus, in woman and in animals, by muscular fibres, never by cellular tissue or by yellow fibrous tissue, and that cellular tissue, in the entire animal series, is the means of union between the peritoneum and the neck of the uterus, the vagina, and the large ligaments. I have never found any trace of cellular tissue in the proper substance of the uterus.

Is there a mucous membrane on the internal surface of the uterine cavity? Most of those who have submitted its existence have done so more on the strength of analogy than from anatomical evidence. Rœderer is the only author who really appears to have anatomically seen it. He says "I have seen an internal membrane, rather soft, thin and apparently villous (*membranam internam,*

*villosam*.”) But the most celebrated modern anatomists have sought in vain for it, and if they admit its existence at the end of pregnancy, it is as a newly formed membrane. The numerous experiments which I have performed appear to me to demonstrate its existence. The principal obstacle to its anatomical demonstration is the absence of cellular tissue between the mucous membrane and the proper tissue of the uterus, whence results, as it were, the fusion of the two parts. Nevertheless, a longitudinal or transversal section of the uterus shows a very thin layer, distinct from the proper tissue, the surface of which is remarkable from its polish and its coating of mucous. Maceration renders the presence of this layer still more evident. If the opened uterus is placed in very pure water the villousities of its surface become evident, but disappear after a lengthened maceration. At this period flakes may be raised belonging to the mucous membranes underneath which there appears a rugous uneven surface. In the female of the monkey I have found the uterine mucous membrane still more evident, and by boiling I have been enabled to raise a thin pellicle which appeared to me a delicate epidermis. This membrane contained follicles both in the neck and in the body.

The *lacunæ*, which are few in number on the internal surface of the body of the uterus, and which are rendered visible by maceration become more numerous on the internal surface of the neck, and there form a series of cavities, the extent, direction, number, and diameter of which vary at different periods of life, according to whether the woman has had children, or has suffered from uterine disease. These cavities are, as it were, the rudiments of follicles, and constitute another proof of the existence of the mucous membrane. The younger the subject is, the more numerous are the *lacunæ*. There are scarcely any to be found in women who have had children; these women present uneven prominences which appear to be constituted by the reunion of several of these *lacunæ*, or by the cicatrices which follow their rupture. The *lacunæ* situated near the external orifice of the uterine neck approximate more to the character of sebaceous follicles. They form a small sac, provided with a neck and an orifice which pours out the secreted mucous. When these follicles become obliterated the mucous collecting forms real cysts.

The structure of the substance of the uterus is still a debated point. Some look upon the uterine tissue as a special tissue, without analogy in the economy, others as a tissue of muscular nature, others maintain that it contains fibrine, and can be transformed into a

muscle, but that it belongs to the yellow tissue. The possibility of the transformation of fibrous yellow tissue into muscular tissue is denied by M. Blainville and many others; moreover chemistry shows us that fibrous yellow tissue never contains fibrin, whereas fibrin is always found in the uterus at all periods of life. This fact alone proves the muscular nature of the uterus. M. Caven-ton, at my request, analyzed the uterus of a young girl of seven or eight years of age, and found it completely fibrinous, and absolutely free from gelatin. I, therefore, think I am warranted in stating that the uterus is formed by muscular tissue at every epoch of life, and that the uterine muscular fibres merely become more evident during pregnancy. The diversity of opinion which has hitherto existed is to be attributed to the arrangement of the fibres, to their extreme tenuity, and principally to their intimate connection with each other owing to the complete absence of cellular tissue. As regards the arrangement of the fibres, the greatest anatomists have failed to determine it with precision. Vesalius and Malpighi gave up the attempt. Ruysch describes an orbicular muscle, Hunter, layers crossing each other. Madm. Boivin recognized an anterior and posterior longitudinal layer, passing from the fundus to the neck; anteriorly and posteriorly three layers of transversal fibres, which lose themselves in the Fallopian tubes, the ligaments of the ovaries, and the round ligaments; two circular layers deeply situated, the centre of which correspond with the orifice of the Fallopian tubes; lastly, a thin layer near the internal surface.

I have examined the uterus in the entire animal series with the greatest possible care, and think I am able to assert that it is formed of *one muscle*, the fibres of which, arranged in layers, present the following direction:—

The longitudinal superficial fibres, which may be called median from their position, are seldom seen on the anterior surface, but are constantly met with on the posterior, where they constitute two thin superincumbent layers.

1. Posteriorly, they begin at the fundus of the uterus, and end at the uterine extremity of the vagina, to which they become attached, with the exception of some few that terminate on the neck, above the opening of the vulvo-uterine canal. They adhere by one surface to the peritoneum, by the other to the oblique fibres.

2. The anterior superficial fibres do not pass along the entire extent of the uterine parietes, but cross each other before they arrive at the round ligament of the opposite

side. Some contribute to form it, whereas others pass behind and terminate on the lateral regions, where they cross also those of the posterior region.

3. There are other superficial fibres, only evident during pregnancy, which are destined to the Fallopian tubes and to the ovarian ligaments. Some originate at the fundus of the uterus, unite to those which contribute to form the Fallopian tubes, and pass on to the anterior part of the ovarian ligament. Others, more numerous, originate from the posterior surface of the fundus of the uterus, and pass on to the same ligament. Lastly, a few transversal fibres from the posterior surface form its inferior part. The numerous fibres which pass on to the Fallopian tubes originate at the fundus of the uterus, and form a thick fasciculus, which divides into two secondary fasciculi destined one to the ovarian ligament, the other, more voluminous, to the Fallopian tube. Some fibres separate from the common fasciculus, and lose themselves, in the cellular tissue which separates the Fallopian tubes from the round ligament.

The deep fibres are very visible when the uterus has undergone rather lengthened boiling. They all evidently present a semi-circular direction, are rather oblique, and only differ from those above described by their smallness, and by their belonging exclusively to the body and to the neck of the uterus. They cross each other on the median line anteriorly and posteriorly, as also on the sides, so as to produce a kind of network. Their thickness varies as they approximate the internal surface of the uterus, where they appear to describe circles exterior to the internal membrane. There are annular fibres along the Fallopian tubes, which do not entirely encircle it, and are deep seated. Lastly, the blood-vessels are encircled by fibres, similar to the deep muscular layer which surrounds the intestinal canal.

The uterine neck is formed by fibres which constitute semicircles, and decussate without mingling. This semi-circular arrangement is more evident in women who have had children than in others. Do the fibres of the neck mingle with those of the superior portion of the vagina? It has appeared to me that the vagina attaches itself to the proper substance where the mucous membrane passes from the neck itself to the os tincæ. This insertion terminates abruptly anteriorly; posteriorly, on the contrary, it is continuous in every case with the longitudinal fasciculus. From the above data we may draw the following inferences:—

1. The proper tissue of the uterus is not fibrous yellow tissue, but muscular tissue, and that at all periods of life, and in all animals.

2. In pregnancy the uterus is merely in a state of muscular hypertrophy.

The uterus is formed by one muscle and not by several.

4. There exists an uterine mucous membrane, but without epithelium.

5. The direction of the uterine fibres shows how they act in freeing the uterus from its contents. The longitudinal layer of fibres, which originates at the fundus, and is inserted into the neck and vagina, tends to diminish the length of the uterus; while the semi-circular fibres by their action diminish its cavity in every sense. The longitudinal and annular fibres of the Fallopian tube explain the mode of progression of the product of conception, and those which surround the uterine vessels appear to diminish, by their contraction, the rapidity of the circulation, and to prevent hæmorrhage during parturition.

#### Camphor a Preservative of Ergot of Rye.

To the Editor of THE LANCET.

Sir,—I was not a little surprised to read some remarks by Mr. Rawle, stating that he had discovered camphor to be a preservative of ergot of rye. I can only say that I have been in the habit of using it for the last nine or ten years, but not exactly in the manner described by him. I order the camphor to be mixed with the powdered ergot in the proportion of a grain in every scruple. By this means I think the camphor is more intimately diffused throughout the whole than can possibly take place by the plan proposed by Mr. Rawle. I do not give this either as a new, or, indeed, my own discovery; for I adopted the method by having seen it in the practice of Mr. Spurgin, an old practitioner, also at Saffron Walden, and from whom I have every reason to believe that your correspondent also obtained the same information, he having been engaged in the same gentleman's practice.

If you think the above worthy of notice you will oblige, Sir, yours respectfully,

JOHN M. SIMPSON, M.R.C.S. &c

Staines, August 28, 1844.

#### The Effects of Tartar Emetic on Young Subjects

Mr. Wilton, of Gloucester, records in the *Provincial Journal*, four cases in which extreme prostration and collapse followed the administration of the ordinary doses of tartar emetic to young persons. Two of them were fatal. We alluded, on a former occasion, to several similar instances of the pernicious effects of this remedy, recorded by Mr. Noble, of Manchester. The recollection of those facts is sufficient to place practitioners on their guard when the use of this remedy is required in the cases of infants or young children.

PRACTICAL OBSERVATIONS:

*Affections of the Spinal Marrow: employment of Ranunculus Bulbosus.\**

By FRANCIS BLACK, M. D.

A. R., aged 20, of a bilious temperament, enjoyed good health until he was 16, when he first complained of weakness in the back. About this time, after bathing, he suffered from pain in his back which set in with a slow fever; but he was unable to go about his occupations until the end of 1840. In January 1841, he observed, while bathing his feet in hot water, that he had no sensation in them; at this time the pain in the back had disappeared, and the only thing complained of was loss of sensation; this gradually extended, the weakness increased, and, at last, he was scarcely able to walk.

March 16, the actual cautery was applied for about 9 inches along the spinal column, and after this time he was affected with complete paralysis of the lower extremities. From this period, bleeding, dry cupping, sinapisms, &c. were used, but without benefit.

I saw him first on the 15th February, 1842; he had then been confined to bed for six months. The following was his state:—Paralysis of the lower extremities, hardly any emaciation of the limbs; the flesh seems tolerably firm, the skin is slightly sensible. He is able to flex the left leg a very little, but with great difficulty, and attended with quivering of the muscles. He can scarcely move the right lower extremity.

There is no tender spot along the course of the spine, but there is slight lateral curvature, with acute projection of one of the spines of the dorsal vertebrae; here there is no pain, even upon pressure, but the skin over this place is slightly red.

Bowels costive, requiring constantly aperients. Urine passed freely and easily, although occasionally there is little pain.

Sleeps sound, but dreams a great deal; disposition cheerful.

Cocc. 18-4. ii., [4] m. et. n.  $\bar{a}$ . Up to February 28th, two such doses were administered; the bowels acted four times; no change, except that he feels as if the limbs were beaten, as if after a long walk; sulph. 30-4. ii., [ ] m. et. n. 3. In this way cocculus 18., sil., 18., nux v., 15., and rhua., 6., were given until May, and on the 9th of May there was no change, when he got sil., 18-4. pulv. ii., [6] m. et. n. 3.

May 17.—A day after the first powder, suffered from pain in the back, in the part where there is projection of the vertebral spine; it lasted for twenty-four hours, and was not increased by pressure upon the part.

From this time there was a gradual increase of motion and sensation, Rept. June 1st.—Considerable improvement; he is able now to put one leg over the other, and with his feet to push off the bed clothes; sil., 6-4 [4] m. et. n. . . From June 8th to 20th he received, for other symptoms which had shewn themselves, calc., 18., bell., 6., and sulph., 6. June 25th.—Continued improvement; sulph. On July 3d, the silex was again resumed, and continued until Septem. 23d, with, however, frequent intervals, during which no medicine was given.

September 23d.—Has now for a month been able to move about; walks pretty well. From this time he continued steadily to improve, but, as a precaution, moved about the room in a machine such as children are sometimes put into on first learning to walk. This he soon laid aside, and completely recovered under the daily use of occasional doses of sulph., calc., nux v., sil., and the administration of cold sponging, and latterly the shower bath. Some six months after this, he was again troubled with pain along the spine, and weakness of the limbs, but this soon yielded to the administration of silex. There now remains an acute projection of one of the dorsal spines.

The above case we believe to have been an affection of one or more of the bodies of the dorsal vertebrae of a scrofulous character, and that the paralysis arose either from inflammation or irritation, extending to the spinal column. We believe that the use of the actual cautery added to the already existing evils, by increasing the irritation, and thus rendering the paralysis of the limbs more complete.

The case is interesting, as shewing the beneficial influence of silex, in a disease which, according to one of our best surgical authorities, "proves extremely obstinate or rather always incurable, at least with such few exceptions as hardly deserve to be mentioned." We cannot suppose that the successful termination was attributable to rest, and the horizontal position. *First*, Because these means had been previously tried for a considerable time without any benefit. *Second*, Because the improvement became apparent only after the aggravation caused by the silex; and during the treatment we observed much more evident effects from the silex than from any of the other remedies.—*Third*, Because we have, in several instances, seen similar good effects follow the administration of silex in affections of the spinal cord. We recollect, at present, two cases of children, where the benefit was very marked. The one, a child aged 2 years, of a strumous diathesis, was unable to stand

\* Bulbous Crowfoot.

or walk, the lower extremities were thin and flabby, hanging down as if powerless; no loss of sensation; appetite pretty good, and the evacuations natural and regular.

Silex 18, was administered in solution, at various intervals, for a month; towards the end of the month, the muscles of the lower extremities became firmer, and the child could stand a little; the sil. was continued. In six weeks the child could stand well, and walk a little; and before three months had elapsed, the child could walk perfectly. In the other case, the inability to stand or walk was not so great; this child also perfectly recovered under the use of silex.\*

*Paralysis, principally of the lower extremities.*

M., a middle-aged healthy person, of temperate habits, has suffered for twelve years, from palsy. He attributes it to a fall when hunting, but at no time suffered from pain in the region of the spine; the disease came on gradually, and notwithstanding that every possible measure has been tried, the palsy has not diminished. The following was his state when seen by me in December 10th, 1842.—The patient is well made, and of a healthy appearance; he complains of weakness, especially of the lower extremities, from the hips downwards. Stands with the greatest difficulty, and only by leaning the weight of the body upon the arms. Is able, when setting, to move the legs about but cannot place them firmly upon any thing; for example, if placed upon the fender, he cannot retain them there, they immediately drop down. The lower extremities are colder than other parts of the body, and deficient in sensation. Has complete control over the upper extremities, but deficient sensation in the fingers; feels, on grasping any thing smooth, as if its surface were rough. Bowels kept regular by a lavement of simple water. Urine passed easily.

Very liable to spasms in various parts, especially in the lower extremities.

Has amaurosis of the right eye.

Cocc. 6-4. pul. ii., [4] m. et n. 3.

December 22d.—The sensation is more perfect; feels more power in the lower extremities; suffered a good deal from shooting pains in parts where he had not previously felt them. Cont.

January 7th.—Continued improvement; is able to place his feet upon the fender, and retain them there. Until the 30th, he received two more doses of cocc.; but on the 31st, he retrograded considerably; rhus. [ ] was then administered, but with little good. On the 6th February he got silex [ ], this

was continued until the end of the month, and under its use he was in the same state as on January 30th. During the month of March he received alternate doses of sil. [ ] and cocc. [ ]: by the end of this month he had considerably improved; the gritty feeling had left his fingers, the sensation had returned to his legs; going between two rows of chairs, he could walk backwards and forwards for a distance of 18 yards. *He could see well* with the right eye; the cramps had almost ceased. During April he received sil., and cocc., but principally the latter, and continued daily to gain ground. May the 2d, has been out, and with assistance, and sitting down, has been able to walk a quarter of a mile; and by the end of the month he could walk half a mile, though with difficulty, and always supported, and mount to the top of a flight of long stairs. To the end of June he received nux v., sil., and cocc. [ ] alternately, and continued steadily to improve. In July, however, he lost ground, and though the same remedies were used, as also rhus, oleander, agaricus, and sulphur, he from day to day became worse, without any assignable cause, and by the month of September was nearly in the same state as when I first saw him. The patient then became dispirited, and gave up the treatment.

This liability to relapse we recollect to have observed in two cases, both of them in elderly men, who suffered from palsy, not depending however upon spinal disease, as in the case above detailed, but following an apoplectic attack. Under the use of cocculus, which at first produced sharp shooting pains in various parts of the body where palsied, and where the patient had not suffered previously, they improved considerably in two months, and gave great promise of being cured: but before four months had elapsed, they gradually got worse; the one we lost sight of, the other resisted all the other means employed.\*

Diseases of the spine, when affecting a great portion of the spinal marrow, are extremely unmanageable. We have not, and we have treated several, seen a single case, where the disease had so far advanced as to cause *great general disorder and partial palsy*, yield to treatment.

Nor does the first case we have given form an exception; for, in it, the palsy evidently depended upon the irritation of a diseased vertebra, but the cases, the prognosis of which we state to be unfavorable, are those in which there has been at first acute or chronic inflammation, which has probably

\* These were all cases of tubercular disease of the spine.—Editor.

\* This was a case of tubercular disease of the brain and not of the spine as the Dr. guessed.—Editor.



led either to rammollisement or some other structural change.

This obstinacy is what we might almost have been led to expect, when we consider that Homœopathic practitioners are rarely at present consulted until the poor patient has been bed-ridden for years, and undergone the most violent treatment. The prognosis is also more confirmed when we know, that, though the affection may not have commenced in some organic change, the long-continued disease and treatment will produce it. But, though hitherto unsuccessful, we do not despair of succeeding in recent cases of this disease: and our hopes are principally founded upon the great benefit which follows the administration of our remedies in similar cases, but confined to a smaller portion of the spinal marrow or its coverings. For example, we have seen great good follow the administration of ars., nux v., and lach., in cases of dyspœa, cough, pain in the chest and palpitation, which were distinctly referable to irritation in the upper dorsal portion of the spine; spasms, pain in the bowels, and gastrodynia depending upon the same cause, relieved by nux., v., cocc., and veratr.

The alternate use of the above medicines, together with sil., sulph., calc., and bell., are frequently attended with great relief to the patient. Even in advanced cases, the pains in various parts of the body, the disorder of the stomach, and costiveness, which is a frequent symptom, are frequently relieved by these remedies. The subject of costiveness reminds us of a case of a young lady who had been unable to walk for a long time, owing to a spinal affection; when we saw her she had recovered so as to be able to walk across the room; but it was especially for the excessive costiveness that the aid of Homœopathy was asked. She was in the habit of taking every 4th day, two or three colocynth pills; nothing weaker would act; about an hour after taking these, she became always sick; this increased; and before long she was seized with cramp in the abdomen, and vomiting; towards the morning this lessened, and she had an evacuation; all aperient medicine produced the same symptom; and even strong enemata had no effect. Under the use of nux. v. i. the costiveness was much improved, so that the bowels, with the aid of an enema of simple tepid water, were moved every 4th day. We at first tried the higher dilutions of nux., and then various other medicines, sulph., lach., sil., puls., bry.; but without any effect; but, after nux v. 1. g<sup>tt</sup> [1], there was almost regularly an evacuation. She improved in strength: but of late has discharged from

the bowels a peculiar white tape-like substance, which we at first supposed to be tape-worm. A more minute examination shewed it to be an exudation from the intestines. This exudation has continued for nearly eight months; but Homœopathic treatment was only steadily pursued for about six weeks; the medicines given were sulph., nit., ac., nux v. and merc., but with the exception of the nux., which relieved the costiveness, their administration was attended by no improvement. The patient is again under treatment.\*

**Diseases of the Spine producing various Neuralgic Affections.**

C., aged sixty.—Has since the age of twenty-one suffered from affection of the head and spine—for many years she complained of fatigue and weakness, with tendency to syncope. In an acute affection of the head she lost her sight and smell. After this the eyes inflamed very much, and since then she has been constantly liable to attacks of shooting pain in them. She has great lateral and also antero-posterior curvature. There is a very tender spot over the lower cervical vertebræ, which, upon being pressed, causes violent shooting pains down the scapula, chest, and arms. Complaints of spasmodic sharp pains round the waist and in the abdomen, and also similar pains in the lower extremities, especially at the ankles. The least motion increases the pain—pain worst at night; is unable to walk, and raised with difficulty from her invalid's chair; sleeps very little. Bowels costive; frequent acidity and great flatulence. She had undergone every variety of treatment without benefit. Such was her state in August; cocc.

6-4 ii. [4] m. et n. 3. Cocc. was thus administered alternately with nux v. 18., until Sept. 3d; by this time the bowels had become regular, the flatulence less; she was able to move the body with greater ease. Sept. 7th, continued improvement; sulph.

6-3 ii. [4] m. et n. 3. Sept. 18th, sil. 18., was administered as above, and under the use of this remedy she improved very rapidly; the pain became less frequent; she was able to walk a little; slept better; appetite improved.

From this time until the end of October, she received sil. 18., [ ] calc. 18., [ ] and continued to improve. She was able to walk about with much less pain; and even went out to drive. Up to the present time this patient has continued comparatively very

\*This is a case of tubercular disease of the liver, stomach, intestines, and uterus.—Ed. tor.

free of pain; and when it comes on, cocc., or sil., succeed in relieving it. Occasionally carbo. v. was given to relieve the flatulence, which at night was sometimes excessive.

Miss W., aged 26, has suffered for fifteen years from her present affection, for which numerous remedies have been tried, but without any relief. She was seen by us on January 17th, 1844. She states that the pain commenced gradually, and without any assignable cause. The pain commences in autumn, gets worse during winter and spring, and diminishes during the heat of summer. She complains of frequent attacks of pain between the shoulders, in a space not larger than half-a-crown, over the 8th dorsal vertebra, where there is no tenderness upon pressure. The pain is dull, coming on frequently eight or nine times a-day, but never at night. The pain frequently extends round the waist, when she suffers from cutting pains, as if knives were run into the stomach; these shoot round to the back, and suddenly disappear, when they settle into the dull pain above described. When the pain goes off, she is troubled with yawning. Catamenia regular, and in all other respects quite well. Cocc. 6-4, iii. [6] 8<sup>th</sup> q. q. h.

Jan. 26.—Pain between shoulders much better. Ars. 15-4. Cocc. 6-4. Ars. 6-4. Cocc. 6-4. [4] m. et n. 1.

Feb. 9.—Has been greatly better; for the last ten days has had no pain between the shoulders, and the cutting pains in the abdomen have almost ceased.

Rept. Med. ut Jan. 26th.

Feb. 24.—Is now, and has been for some time, entirely free of pain. The patient, up to the time we write, has continued free of pain.

*Ranunculus bulbosus* we have found useful in three instances of pain depending upon spinal irritation. In one case, the patient, who was under treatment for chronic headaches and abdominal affections, complained of sharp shooting pains round the chest;—in the other, the pain was acute, and felt principally in the shoulder, axilla, and mamma; so acute was it in the breast, that the patient dreaded cancer, for which fear there were no grounds. These two cases we believed to be neuralgia of the intercostals. The third, which was the case of a lady who had suffered from long-existing spinal disease, and complained of sharp gnawing pain over the left side of the chest, as if the skin were torn, with occasionally shooting pain from the spine. In the two first cases, two doses of ran. 6, [ ], removed the pain, and in the third it was also very useful, but the pain returned in a fortnight. She is still un-

der treatment; but, under the use of sil. and cocc. has improved considerably.

As the *ranunculus* is not as yet much used, it may not be uninteresting to give the following case of rheumatism, where it proved useful.

J. S., aged 50, has been several voyages to warm climates; during his last voyage he caught cold, and has for some months suffered from rheumatism. The pains are confined almost entirely to the trunk. He feels as if the abdomen and chest had been bruised; on the least motion the pains become cutting and sharp. Bowels costive; tongue foul.

June 23.—Ran 6-4 ii, [4] m. et n. 3.

July 4.—Pains a good deal better. Rept. med.

July 13.—Pains in abdomen and chest are now gone; complains of pain in the neck and shoulder. Bry.

July 17.—He was better, and again received bry; and on the 20th, from a slight return of the pain round the chest, ran. b. was again administered. After this he underwent treatment for disorder of the stomach.

From the pathogenetic action of the *ranunculi*, we believe that they would frequently be useful in various rheumatic and neuralgic affections, especially of the chest.

The last cases the Doctor calls "Neuralgic Affections," are plain cases of tubercular disease of the organs and muscles, or chronic disease of the organs and rheumatism; and they are now in much the same state they were before the Doctor saw them.

#### Calculus of the Bladder treated by Electricity.

To the Editor of *The Lancet*.

Sir;—A "SUFFERER" imploringly asks in your last number whether you know any thing of a method for the cure of stone by electricity, and seems justly to estimate its importance. For his comfort I beg to inform him that there is such a method, and, I believe, a successful one. The author of it, whom at present I have no authority to name publicly, was so good as to call on me, about a fortnight ago, with a patient, on whom he had successfully operated, in order to show me what had been done. The man was perfectly well after, I think, about two months' treatment. I questioned him as to his previous suffering, and there can be no doubt that he had labored under very aggravated symptoms of stone in the bladder. He had, moreover, been sounded, I was told, at one of the Borough hospitals, by an eminent surgeon, whose opinion was that there was a large calculus. The physician who

brought him to me informed me that it was a very large lithic acid calculus that had been decomposed. I presume that very soon the subject will be brought before the profession and the public.

I am, sir, your obedient servant,

WM. MACLURE.

Harley-street, Aug. 5, 1844.

#### Therapeutical Application of Cold.

To insure good effects from the application of cold, the temperament of the patient should always be considered. In nervous persons, and upon irritable organs, the use of cold should never be carried to the same extent as in opposite states of the system, or in other parts of the body. Two young females, sisters, one of whom was of extreme susceptibility, the other more calm, were attacked at the same time with fever. Ice was applied to the head of both of them. The latter was relieved by the application; the symptoms of the former were, on the contrary, aggravated by it, and the attack soon proved fatal.—*Idem*.

#### On the Causes, Symptoms, and Treatment of Acute Founder in the Horse.

A clever communication on this subject, from the pen of Mr. Gabriel, appears in a late number of the *Veterinarian*. He points out, in an historical sketch how successfully the disease was treated some two hundred years ago, and how, on the other hand, by modern veterinarians it has been deemed incurable. He attributes its occurrence, in a large majority of cases, to over-exertion of the animal, either by long standing, rapidity of travelling, or long journeys. The symptoms are characteristic: in addition to fever there is an extreme reluctance of the animal to rest its weight on the affected fore-feet. In getting up from the ground, or in attempting to move, the hind-feet are made the instrument of progression. The treatment hitherto pursued has been exceedingly varied. We do not profess to be very profound hippopathologists, we must rely to a certain extent, therefore on the statements of the author. He says that modern pathologists pronounce the disease incurable; in his hands that the treatment rarely fails. This consists of a dose of Barbadoes aloes [eight or nine drachms] and then a *seton* through each frog; on the latter he places his chief reliance. Venesection must follow till the pulse is affected, and large tepid bran-poultices are to be applied to the feet. The shoes should not be removed, but the venesection and physic must be repeated if necessary.—

These hints may prove useful to some of our professional readers, whose horses are too liable to a disease amongst the exciting causes of which are to be found rapid travelling and long journeys.

One of the most remarkable substances yet met with in organic chemistry has been obtained by Dr. Blyth, in an investigation, carried on in the Giessen laboratory, upon the styrax liquidus;—before the publication of Dr. Blyth's paper we cannot say whether as a product or educt, nor can we give the composition of the body; but it is in the form of a colorless, transparent and very limpid fluid, with very high refracting powers.—Upon heating this fluid, in a closed vessel, beyond its boiling point, it becomes converted into a solid hard body, retaining its transparency and its refracting power unimpaired, looking like a piece of pure glass. To this substance the term styrol has been applied.

#### DIABETES TREATED BY ALKALIES.

MM. Miale and Contour narrated a case of diabetes mellitus cured by the use of alkalies, and sudorifics. The patient, a man aged forty-three, had been labouring under diabetes for eighteen months, and was in the following state:—Extreme prostration and emaciation, great weakness, appetite good, digestion easy, thirst intense, dryness of the mouth although the patient drank five or six quarts a day. His urine was abundant, and the quantity was always in relation to the fluid he introduced into the economy. It was acid and nearly colourless; density, 1035.; it contained a little more than nine drachms of sugar for each quart. After giving, without any result, the chloride of sodium during fifteen days, the internal administration of alkalies was commenced, as also the use of flannel, of vapour-baths, and of a highly-animalized diet. One drachm of bicarbonate of soda and eighteen grains of calcined magnesia were given daily during eight days. The dose of bicarbonate was then progressively raised to one drachm and a half, to two and a half, and, lastly, to three. The doses of the magnesia remained the same. This treatment lasted a month, and was followed by complete success. The quantity of sugar contained in the urine gradually decreased, and when the fluids of the economy had recovered their alkaline properties, it entirely disappeared. At that time the patient was cured, and eating every day a pound of bread along with a pint of milk. He still, however, continued the use of the alkalies, and it was impossible to say whether the symptoms might not return, were their administration suspended.

## DUODYNAMICS.

Medicines that act upon the different surfaces of the body are either positive like the alkalies, or negative like the acids; that is, they are of opposite dynamic characters. Their combinations also are varied with the predominance of one force or the other; for each and every one of the articles are imbued with two forces; one of which prevails over the other, and determines its character as negative or positive. In some articles the prevalence of one over the other is very great, while in others it is very little, no matter whether they belong to the vegetable, mineral or animal kingdom, or are combinations of the different kingdoms; and we distinguish these different medicines by their effects upon the serous and mucous, or negative and positive surfaces in acute and chronic diseases of these surfaces.

Physicians have been constantly in the habit of prescribing negative and positive medicines indiscriminately in these diseases, without a knowledge of these distinctive dynamic properties, and the result of such practice has been any thing but satisfactory. We have, however, pursued a different course for many years, and the extraordinary confirmation of its correctness in the results obtained from the action of the forces from the Rotary Magnetic Machines has suggested the great importance of a new classification of medicines, and we have consequently commenced the work, as will be seen in the following tabular view in which medicines are classed according to their negative or positive properties.

It contains it will be seen the principal articles used by both the allopathic and homœopathic physicians, and present in one view a list of negative medicines, which are used mostly in diseases of the serous surfaces, and a list of positive medicines, which are prescribed mostly in diseases of the mucous surfaces, or one of which acts at least more directly on the serous, and the other on the mucous surfaces.

| Negative.                  | Positive.                   |
|----------------------------|-----------------------------|
| Acid, Acetic,              | Ammonia Carbonate,          |
| Benzoic,                   | Acetate,                    |
| Muriatic,                  | Muriate,                    |
| Nitric,                    | Antimony, Crude,            |
| Phosphoric,                | " Sulphuret,                |
| Pru. Iod.                  | Assaffetida,                |
| Sulphuric,                 | Balsam Copavia,             |
| Aconite, Monk's-hood,      | " Canada,                   |
| Antimony, Tartarized,      | Bryonia,                    |
| Antimonialis Pulvis,       | Calcarea Carbonica,         |
| Arnica,                    | Carbon Vegetable,           |
| Arsenic,                   | " Animal.                   |
| Aurum, Gold,               | Castor Oil,                 |
| Belladonna, Night-shade,   | Cina Wormseed,              |
| Narya Iodide,              | Camphor                     |
| Ca. omel,                  | Oatechu,                    |
| Cannabis Ind. Hemp,        | Cinnamon,                   |
| Cantharides,               | Cochineal,                  |
| Chamo milla,               | Cocculus Indicus,           |
| China, Cinchonia           | Crocynth, Bil. Cucumbar     |
| Cochicum Mead. Saff.       | Cream of Tartar,            |
| Conium. m. H-mlock         | Oreosote,                   |
| Crocus Sativus Saffron,    | Croton Oil,                 |
| Cuprum Copper,             | Cubeba,                     |
| Acetate,                   | Elaterium, Wild Cucumb'r    |
| Sulphate,                  | Gamboge,                    |
| Digitalis,                 | Graphites, Carburet of Iron |
| Dulcamaria, Bitter-sweet,  | Galls, Nut,                 |
| Emetic Tartar,             | Gum Ammoniac,               |
| Gold, Chloride,            | " Kino,                     |
| Hyosiamus, Henbane,        | Scammony,                   |
| Iodine,                    | Hellebore, White,           |
| Iodine Chloride,           | " Black,                    |
| Iodide Potash,             | Hepar Sulphur,              |
| Mercury Mu. Corrosive or   | Ignatia, St. Ign. Bean,     |
| Mercurius Solubilis,       | Ipecacuanha,                |
| Magn-tism,                 | Iron Carbonate,             |
| Magnetized rings,          | " Subcarbonate,             |
| Mesmerism,                 | " Iodide,                   |
| Morphine,                  | " Muriate,                  |
| Nux Vomica,                | " Sulphate,                 |
| Opium,                     | Jalap,                      |
| Pulsatilla,                | Kino, Gum                   |
| Pulvis Antimonialis,       | Lead Acetate,               |
| " Doveri,                  | Lime, Muriate,              |
| Quinine,                   | " Sulphate or               |
| Ranunculus. B. Crowfoot,   | Hepar Sulphur,              |
| Rhus Vox. Sumach,          | Lycopodium, Club Moss       |
| Secale Cornutum Ergot,     | Lobelia Inflata,            |
| Silicia Silix,             | Mercurius, or               |
| Silver Nitrate,            | Mercury Crude,              |
| Sang. Cana. Bloodroot,     | Magnesia Carbonate,         |
| Sepia Inks juice, C. Fish, | " Sulphate,                 |
| Spongia Tosta,             | " Calcined,                 |
| Stramonium, Thorn Apple    | Petroleum, Tar Barbadoes    |
| in, Muriate,               | Potash Carb. Salts Tartar,  |
|                            | Potash Caustic,             |
|                            | Petroselinum, Parsley,      |
|                            | Phosphorus,                 |
|                            | Rheum, Rhubarb,             |
|                            | Scillas. Squills,           |
|                            | Soda, Carbonate,            |
|                            | " Muriate,                  |
|                            | " Sulphate,                 |
|                            | Sulphur,                    |
|                            | Tartarum, Cream of Tartar   |
|                            | Zinc, Sulphate.             |

CAMPHOR A PRESERVATIVE OF ERGOT OF RYE.  
To the Editor of THE LANCET.

Sir,—In the *LANCET* of to-day, is a notice of Mr. Rawle, surgeon, of Saffron Walden, concerning the preservative power which camphor exerts upon ergot of rye. I have been in the habit, sir, of using this preservative for the last six years, and have done so in consequence of having read the following passage in a paper of Dr. Bright's, published in No. 141 of the "*Edinburgh Medical and Surgical Journal*:" "Camphor if intermixed with even-powdered ergot, completely prevents the formation of animalculæ," &c.

August 17, 1844.

AN OLD OBERSTEIGIAN.

**Effects of Magnetising upon the Magnetiser.**

*Rheumatism—Dizziness—Cold feet and hands—Neuralgia—Tic Douloureux—Hahnemann and Homœopathic remedies.*

We probably receive, on an average, fifty shocks a day in magnetising our patients, either from accidentally touching the unprotected parts of both buttons, or from touching the patient with one finger and a button with the other, and were at first much alarmed at the consequences that might result from it. We have been, however, not only happily disappointed in our expectations of injury, but have found it a great benefit to us. It has removed every vestige of chronic rheumatism with which we have been much affected during the last fourteen years.

We never had so much elasticity in our body and limbs, and never had so much strength; we never walked with so much ease as we now do; and besides, we frequently, even after having gone through great labor during the day, feel so much elasticity and buoyancy that it is rather difficult to sit or stand still, from a strong inclination to be moving, jumping, or dancing; these sensations are in fact sometimes so strong as to require great efforts to repress them.

Persons affected with rheumatism, and especially those in the decline of life, are more or less subject to turns of dizziness, which sometimes compel them to sit or lie down suddenly, to prevent them from falling, and we had been much affected in this way. But these premonitory symptoms of palsy have entirely disappeared with those of rheumatism; and we have removed these symptoms in many other cases, by magnetising the brain—a practice much more simple and effectual than the old routine practice of the schools.

Those who are affected with rheumatism are very subject to colds, and to cold feet and hands. A great number of the cases of headache, are those of rheumatism affecting the muscles of the head, and the membranes of the brain; and the muscles of the face are affected with rheumatism under the names of Neuralgia and Tic-Douloureux; and those

of the heart under the name of hypertrophy of the heart.\* Many of the cases of vacillating pains about the chest—of the front, right, and left side, along the pectoral and intercostal muscles, are cases of rheumatism, often mistaken for disease of the lungs. These cases are all distinguished in an instant by the pain produced by pressing with the thumb and finger on the intervertebral spaces of the middle and back part of the neck, the intensity of which increases with the intensity of the disease; and physicians, on commencing the practice of the magnetic symptoms, are often surprised to find the great number of cases of rheumatism—of tubercular disease of the muscles, as well as of the organs.

Hahnemann committed a great error in mistaking tubercula of the organs and muscles for Psora or Itch, as every physician knows who practices these symptoms; and in searching for remedies for this imaginary affection, or "*anti-psorics*," justly subjected himself and his followers, or homœopaths, to the imputation of chasing a phantom.

These remedies, like those of the Allopathists, have no effect in chronic diseases of the organs and limbs, but that of palliating urgent symptoms in the periods of excitement, which uniformly follow those of repose. They NEVER cure the disease, and have little or no effect upon those who are not very susceptible to mesmeric or magnetic influence.† Homœopathic remedies are, however, generally very efficient in acute diseases, and are useful as palliatives in those that are chronic.

The negative and positive surfaces of the facia of the muscles are both equally affected in acute rheumatism, and the affected limb or limbs are consequently paralyzed; and in chronic rheumatism the positive surface of the facia in which the motor nerves terminate, is more or less affected, and the motion

\* In magnetising for headache, the negative button should be placed over the point where the pain is most intense, as in other cases.

† The great number of cases we have examined with the magnetic symptoms during the last seven years, after they had been a long time under the treatment of the homœopaths of this city, has left no doubt upon this subject.

of the limb or limbs more or less impeded, and hence the necessity of using positive as well as negative medicines, or combinations of positive and negative medicines, in many cases of this disease. The uncertainty in regard to the extension of the disease in the different surfaces, relatively to each other, necessarily makes the true remedy for any given case uncertain, so that it may be necessary, in some cases, to try one, two, three or more, before we find the right one. Medicines of any kind in this disease, are, however, only palliative; they rarely cure it permanently.

### MESMERISM.

Rome, N. Y. Dec. 3, 1844.

DR. SHERWOOD,

Dear Sir:—As you are the publisher of an independent medical journal, permit me briefly to relate a case or two, of the cure of disease by mesmerism.

Not long since I was called to see Mrs. M—, who was laboring under a severe attack of Inflammatory Rheumatism. She had called her physician the day before, who had bled her largely, blistered the shoulder (this and the elbow being the parts affected) and given a cathartic. Her suffering was intolerable. Every thing that had been done only increased her difficulty. I at first refused to prescribe for her in the absence of her physician. Of this she would hear nothing, but in her acute sufferings implored that I would try magnetism. At that time I did not believe it to be of any avail, but to gratify her I made the effort, and to my utter astonishment found that her sufferings began to abate, and in less than forty minutes she was perfectly easy, the arm, that was before immovable and suspended on pillows, became flexible and the shoulder could be rotated, and moved in any and every direction.

At the time I entered the room her sufferings more resembled those of a woman in the last stage of labor than any thing to which I can compare them. Now behold the change! In less than one hour she may be said to have been cured; for her pain never returned, and as soon as her blister healed she was attending to her domestic duties!

Another case has since occurred under my observation, even more unaccountable than

the one above related. A young man was suffering under partial paralysis of the right side, so much so that he could not close the eye of that side, nor thrust out his tongue, which, was turned sideways: there was moreover, great loss of sensation and motion of the whole of that side. At the suggestion of Professor Grimes, the young man being easily magnetised, I put him into the mesmeric sleep; and then, in that situation, told him that my object in mesmerising him at that time was to *entirely remove all his paralysis*. I assured him that a pass from my hand over the affected part would restore lost motion; and that as soon as this was done he would perfectly close his eye, thrust out his tongue straight, and have all his natural motions perfectly restored. In short, that he would, by this, be entirely cured.—After repeating these assurances and making a few passes over the side affected, I awoke him.

I then told him in a grave and confident manner that my object in putting him to sleep was to cure his palsy, and that *I had done it*. “Now,” said I “you can thrust out your tongue straight; you can close your eye, and do all other acts with that side that you ever did.” He then made the effort to close the eye, and thrust out the tongue, and to my utter astonishment every effort was successful. In short he was well; and from that day to this, nothing of his former difficulty has returned.

I know that for a man to relate circumstances like the above, is as much as his reputation for truth is worth; but I only state what I do know, and testify what I have seen. Below I give you the names of both of the above persons; one of whom is now a resident of your city.

Yours Respectfully,

J. V. COBB. M. D.

### Effects of the Rotary Magnetic Machine.

St. Andrews, 18th Nov., 1844.

DEAR SIR:

In fulfilment of my promise to report to you the case of Comp. *Bronchitis*, I alluded to when I saw you last, I must apologise for its not being as free and concise as could be wished; as in the pressure of professional business, it only received a notice among a variety of other cases.

Mrs. H—, of Orange Co. N. Y., of middle age, bilious temperament and leucophlegmatic habits, last winter, suffered from

a severe and protracted attack of inflammation of the bronchial avenues, ending in effusion of the chest, (the sequel of a tedious labor, with profuse uterine hemorrhage,) from which, however, she recovered tolerable well, and so continued until August past; at which time pains of an erratic character appeared about the shoulders and right side; soon followed by tenderness in the left pectoral region, and some quickness of breathing, loss of strength, appetite, and a dry hacking cough, which annoyed her constantly—the dyspnoea now so great, that it was impossible to take the least exercise; and at one time absolutely threatened suffocation.—*Blisters, expectorants, alteratives, &c., &c.*, I used for some time with little or no benefit; at length, I caused the use of the R. M. Machine, and in exploring the chest found *Tubercula of the lower and middle lobes of the left lung, with chronic inflammation of the Bronchia*; (pulse at this time very quick and full.)

The instrument was now used daily for three weeks, with the use of Naptha as an expectorant; and a comp. C. gold pill night and morning as a deobstruent, (if you like the term.) In conjunction and for some time subsequent to the discontinuance of the use of the Machine, rapid improvement followed from the first week—cough lessened—appetite returned, &c., &c., and at present is in the enjoyment of very good health, attending to her domestic duties, (the widowed mother of six interesting children.) It may not be improper for me to state that in March last she lost her husband with tubercular consumption, and she had come to the deliberate conclusion that no better fate awaited her; considering the disease as contracted from care and attention given to her husband, and by strong entreaties and to gratify friends, was she alone prevailed on to accept of relief.

A PHYSICIAN OF ORANGE CO.

#### MAGNETIC SLEEP.

A much greater number of persons can be put into the magnetic or mesmeric sleep under the combined influence of the rotary magnetic machine and the magnetiser, than by the common method, or that of the magnetiser alone. We have put persons into that state by the influence of the machine alone.

In the combined operation we place the positive button in the left hand of the person to be magnetised, and take the negative but-

ton in our left hand, and then take with the other hand the right hand of the same person, under the most moderate power of the instrument.

The patient is then requested to look steadily at some small object, as the armature of the instrument, as long as the eyes can be kept open, and then to close them and go to sleep, or into the mesmeric state.

This manner of magnetising, like every other, should be practised, under the most favorable circumstances, as regards time, place and seclusion, and should be repeated every day at the same hour, until the object is effected.

When persons or patients have passed into the mesmeric state, they should be treated in the most mild and respectful manner, and if they show symptoms of restlessness, a few passes should be made from the head, along the arms to the feet, which will quiet them, and they may then be allowed to remain in that state a few minutes or one or more hours, according to the judgment of the magnetiser, when they may be aroused in a moment, by reversing the action of the machine, or by the reversed passes, or passes with the back of the hands over the face at right angles with the median line.

Patients are sometimes clairvoyant the first time they are mesmerised, but not generally so; they will, however, tell the number of times it will be necessary to mesmerise them before they will become clairvoyant. They advance in *light* and knowledge by *degrees* in the mesmeric or somnient state. There are six of these degrees, and six sub-degrees or steps in each degree, thus making thirty-six; and the clearness and extent of their vision, as well as of their intuitive knowledge, increases as they advance in the different degrees. There are, it appears, very few who advance higher than the third degree, or eighteen steps. A few are raised as high as the fifth degree, but these are the bounds it seems they cannot or do not pass with impunity.

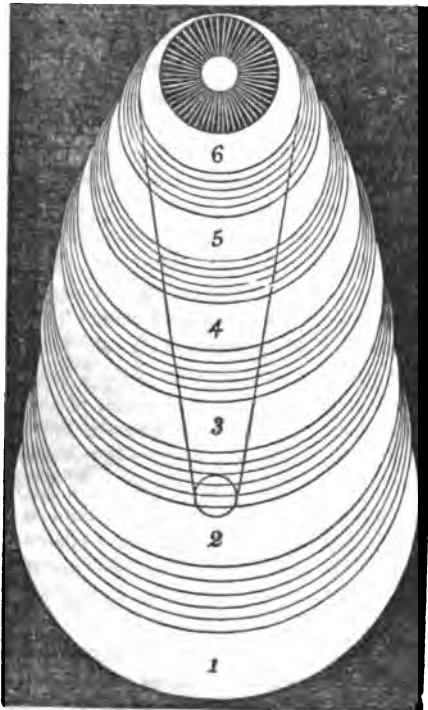
These recognized degrees are described as circles of light in the form of a cone, with steps or degrees of less light in spiral circles

between the greater degrees of light in perfect circles—the spiral being continuous, and terminating in a disc of the most intense light in the top of the cone, as represented in the engraving below.

The light is represented as radiating from the disc at the top, to the bottom of the cone, and the intensity of the light is minimum in the first degree at the base, and increasing in each degree as they rise to the sixth, where it is at its maximum.

A reversed interior arrangement or inverted cone, is also described by clairvoyants, corresponding with that in the circumference, as seen by its outlines in the engraving—the great degrees of both being interspersed with rooms or apartments of light, which are probably reflections connected with the phrenological organs.

The first great degree of light forming the base of the cone first described, surrounds the base of the brain, while the sixth degree is mounted on its summit.



Clairvoyants have the power or faculty of increasing the diameter of the great degrees or circles of light, to an unlimited extent, for the purpose of encompassing objects situated at great distances, and enabling them to see and describe with great accuracy through the surrounding Magnetic medium, especially in the intense light of the higher degrees.

The light is very dim in the first degree, less so in the second, and at a medium in the third; in which degree clairvoyants see and describe very well under favourable circumstances, but are otherwise subject to great errors in their descriptions, as well as in the first and second degrees.

In raising clairvoyants to the higher degrees, magnetisers should proceed with great caution. They should first inquire about their knowledge of the degrees in the somnient state, and then of the degree they are in. If they are in one of the lower degrees, the magnetiser may then inquire whether he can raise them to the next degree. If the answer is in the affirmative, he may proceed to raise them by the exercise of his will; but if it is in the negative, the clairvoyants will, on inquiry, tell him how many times it will be necessary to magnetise them, before he can raise them to the next degree. We have great doubts of the propriety of any attempt to raise them higher than the fifth degree, even with the most perfect preparations for it; because in the present state of our knowledge they cannot be raised to the sixth degree without great danger, indeed, without the peril of their lives; and there is no real necessity for it, as the light is intense enough in the fifth degree, and there are also sights enough that may be seen in that degree to satisfy the cravings of the most marvellous.

The phenomena of the degrees in the labyrinth we have described, as seen in the somnient state, and about which there appears to be no reasonable doubt, are one of the most extraordinary that was ever presented to the human mind; yet it is a perfectly simple, and beautiful magnetic arrangement, resulting from the operation of magnetising, or of giving a new and systematic magnetic



form to the brain—of adding an artificial to natural organization, in which the organization of the great pole in the centre of the brain (2) is reflected upon its surface, and from thence into infinite space.

The poles of all the other organs are organized in a similar manner as seen in the somnient state; that is, they are organized with circles at right angles with their radiations, like those seen on the summit of the labyrinth, and some clairvoyants see through those of the stomach. Besides the concurrent testimony of clairvoyants on the organization of magnetic poles, it is found on a comparison of our previous knowledge on this subject, that their descriptions agree exactly, as far as our knowledge extends. We were well acquainted with the radiations, with the circles at right angles with them—with their light, and with their spiral circles and inverted cones; and could not, therefore, fail to recognize in these descriptions, a magnetic organization.

Those who are unaccustomed to magnetic phenomena, however, find great difficulty in reconciling with their preconceived notions, the possibility of persons being able to see, and thereby distinguish, objects through any other medium than that of external light, and by means of the ordinary functions of vision.

The idea of any light, except that which comes from external objects seems to be regarded as unphilosophical, if not assumptive of the supernatural, although an easy and palpable demonstration of the fact is, at all times, within the reach of the most sceptical and supercilious. Let the doubter and sneerer simply close his eyes, so as to exclude all external light, retiring, if he please, into a perfectly dark room where not a ray exists, and on pressing his fingers on his eye-balls, he will see, without that mechanism of the eye which is essential to external vision, several distinct and concentric rings of light, around a central point of still greater brilliancy. And though he be afflicted with blindness towards external things, this power of internal vision will be in nowise impaired. The light thus seen is magnetic, being elicited from the two poles of opposite denominations, which belong to the crystal-

line lens, and is doubtless of the same character as that which is affirmed by clairvoyants to exist in the brain, the heart, the cervical glands, the kidneys and other organs, and by which, in fact, they are enabled to trace the whole magnetic organization of the human system. With the intense luminosity of the magnetic forces when in atmospheric combustion, every one is familiar; and we have now furnished an example, at least equally familiar, in which this luminosity is independent of atmosphere as it is distinct from every other kind of light. In short, every one can see for himself precisely the same kind of light that is beheld by clairvoyants in the mesmeric state.

#### ANIMAL MAGNETISM.

**SURGICAL OPERATION UNDER THE INFLUENCE OF MAGNETISM.**—The editor of the *Cleveland Plain Dealer*, states that he witnessed on the 25th inst. a most difficult surgical operation, performed by Professor Ackley, assisted by Professors Delamater, Kirtland, and others before a class of students at the Cleveland Medical College. The patient was a Dr. Shriever, from Columbiana county, Ohio, quite an elderly man. It was an operation for tumor, situated under the lower jaw and partly in the neck, near the right ear. In reference to the proceedings of the operator, the *Plain Dealer* has the following statement:

"We happened in just as the Professor was putting knife to the skin. He made two or three frightful gashes, seemingly cutting the throat, and not a muscle of the old man was observed to move. We were astonished, and we think the whole medical class, and even the faculty were not less so than ourself. The secret was, the patient was in a magnetic sleep. This fact of course was known by the professors, but not by the spectators generally. These stood, by the bleeding patient (not sufferer) the magnetiser, who, with the magic of Mesmer, had thrown his subject into pleasant dreams; and now while the knife of the bold surgeon was dashing away at his vitals, and dripping with gore at his throat, he could say to the trembling nerves, "be still," and all was quiet! What a triumph of mind over matter was there! The will of the magnetiser striking dumb even the living being and making even his body the insensible subject of dissection! No agonizing groans were

heard, as is usual from the conscious patient to alarm and terrify the operator; but he went quietly on, without haste, and consequently with better effect. It lasted some fifteen minutes, during which time there were frequent consultations among the professors, as it proved to be a malignant case. It caused a frightful wound and a profusion of blood. The patient was removed to another room, still unconscious of pain and the operation; and when we left he was assuring the magnetiser that he felt quite happy.

The following article, from the Newburgh Gazette may be given in proof of the practical application of Animal Magnetism in many important and painful operations.

MR. ADAMS.

**Beneficial effects of Animal Magnetism.**

A correspondent has furnished us with the following interesting statement touching the beneficial effects of Animal Magnetism. The operation alluded to was performed on Wednesday last, by Dr. Grant, at the house of David Cromwell, near Canterbury, in the presence of several persons, among whom were Drs. Blackman and Phinney, of Newburgh, who are ready to vouch for the truth of the facts as stated by our correspondent. The following is his statement.

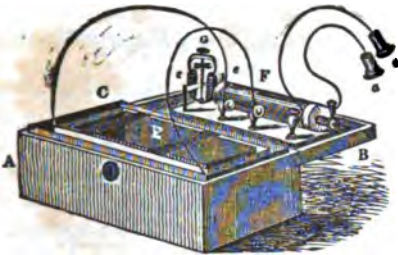
"The patient, a female 18 years of age, was subjected to the usual mesmeric 'passes' by Mr. Adams for about ten minutes, when she appeared to be in a deep sleep. Dr. Grant then proceeded to cut around the gums of two of the molar teeth on the lower jaw, and to extract them with the forceps. During the whole of this proceeding, the patient manifested not the slightest evidence of pain. She was allowed to remain undisturbed for several minutes, when Dr. G. incised the gums around two of the molar teeth of the upper jaw. During the extraction of the third tooth, which from several causes, was attended with considerable difficulty, there was a slight contraction of the limbs, but not the least disturbance of the muscles of the face. The expression of the countenance remained unaltered. Dr. Grant then extracted the fourth and last tooth, which had large fangs, whilst the patient remained as before, to all appearance, insensible. In a few minutes Mr. Adams restored her to her natural condition, and she appeared to be totally unaware of the whole transaction."

We may add, the patient has suffered not the slightest pain or inconvenience from the operation since it was performed.—

**Mesmerism in London.**

The London papers by the Britannia state that Miss Martineau, the well-known authoress has been highly benefited of late by mesmerism. I have been told of a letter from her to a friend in this country, in which she abundantly confirms the report. She had been given over by her physicians, who had told her that medicine could afford her no relief. She had been confined for many months to her chamber, which as she says, she never expected to quit, "unless in her coffin." She had been unable during that time to procure even an hours sleep, except through the aid of laudanum. The consequence was, that both her mental and physical powers were fast yielding to a painful, and, as it was believed, utterly incurable disease. At length it occurred to her to try mesmerism. The experiment was made and it was successful. Although not thrown by it into the state of trance of which we hear such wonders, a gentle and refreshing sleep was induced, which lasted twelve hours. On its termination her physicians declared that such had been the change in her whole nervous system, that they ventured to entertain hopes of a cure. The mesmeric process was continued at various intervals; and now the distinguished patient has so far recovered that, from not being able to walk across her room, she can, in her own language, "walk three miles at a time with a relish." "I cannot be thankful enough," she says, "for such a resurrection." Miss Martineau, as all who know her will admit, is not a person of a fanciful or imaginative temperament. Her case will probably induce many to regard with more respect and attention a science, the believers in which, although Cuvier and La Place may be found among the number, are often classed with Mormons, Millerites, and other fanatics. The following intimation, from the London Literary Gazette, of the present condition of this science in London, is perfectly applicable at this moment to New-York: "Mesmerism, which has rapidly assumed a vigorous vitality, and the reality and utility of which have, despite the shallow wit of unphilosophical critics, been maintained by a number of cautious and practical men, is for the moment retarded in its progress by public exhibitors of its often painful phenomena; and hurried, on the other hand, to a maturity that has no real foundation by enthusiastic followers, whose intellects have apparently never been trained to the severity of scientific investigation." This is a brief but sensible view of the whole matter.—*N. Y. Corres. of the Nat. Intelligencer. Dec. 17th, 1844.*

**The Rotary Magnetic Machine, and the Duodynamic Treatment of Diseases.**

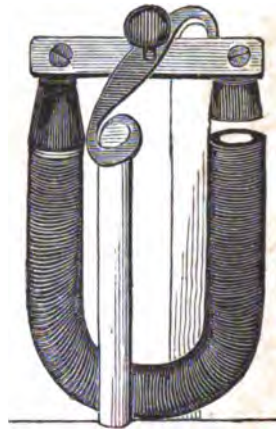


We gave a full description of the Savage Rotary Magnetic Machine, represented in the above engraving, in the last, or October, number of this Journal, with its great superiority over the old shocking-machines, or those that were made for giving shocks instead of a continuous motion. Many physicians, who were using the old machines, have become so well satisfied of the great advantages of the Savage instrument as to lay aside the former and purchase the latter.

It was the great importance of having an instrument as perfect as possible for magnetizing, that induced us to direct the manufacture of the Savage Rotary Magnetic Machines, in which no expense has been spared to make them superior to all others; and the sale of more than 200 of them to physicians during the last six months, shows how much they are appreciated by those of the profession who have obtained a knowledge of them in so short a period.

Notwithstanding, however, the great superiority of these instruments, practice has shown that the silver conductor to the shaft of the armature, in consequence of the great velocity of the latter, will wear off in five or six months, if the machine be kept in constant motion every day, when it becomes necessary to replace them; and as a goldsmith or other mechanic may not always be at hand to replace them, or the armature, if it should require repair, we have directed our

attention to a substitute for both, and have at last, succeeded in our object. We have substituted a spring as seen in the following figure, which vibrates so fast as to make the motions of the forces continuous.



A piece of brass is turned in a conical form, and a round hole turned out of the bottom for the top of the magnet to enter the eighth of an inch where it is soldered. A screw hole is then made on the top of the cone, and a piece of watch spring fastened on to it with a screw as seen in the figure. A piece of iron is turned in a conical form, and a hole drilled into the top of it, and fastened with a screw to the opposite end of the spring as seen in the figure. A hole is first drilled through the middle of the spring and a silver plate of a fourth of an inch square, placed on the top of the spring, and riveted to it, for the brass screw, in the cap of brass that crosses the spring, to rest upon. The brass cap is soldered on to, and supported by, two strong brass pillars, which are secured in a steady position by brass nuts screwed on to the bottom of the pillars under the foundation board. The end of the copper wire that has been first wound around the U magnet, is then soldered to the brass nut that holds the magnet in its place—the other arrangements of the copper wires being the same as in the Savage instruments—connecting the wire which conducts the force from the zinc with the brass pillar on the

same side. The brass screw which rests on the spring, should have a rounded point, and on setting the machine in motion should be screwed down to a point where the spring vibrates in the most steady manner. It makes a steady and not unpleasant humming sound, with variations more or less regular.

The only difference in the motions of the forces from these machines is the variations in the intensity of the vibrating instruments from the variations in the motions of the forces from the battery, which is not observed in the rotary, in consequence of the great momentum acquired by the velocity of its armature. These variations are very frequent and often very great; requiring great caution in the use of it, especially in magnetising the brain, heart, or stomach.

We have been thus particular in our description of the vibrating machine, for the purpose of enabling those who have the *Savage Rotary Machines* to change them into this form if they should choose to do so, when it should become necessary to make the repairs we have mentioned, as the change can be easily made by any goldsmith, and with a trifling expense, as they have the magnet and brass cap, &c., for the purpose.

The power of these instruments is fully equal to that of the Rotary instruments, and they are made of the same sizes. They have both more power, and are *much* more portable than any others made in this country.

We shall continue to forward these machines to any part of the Union, the Canadas or the West Indies, according to order, at the low prices of 15, 18 and 20 dollars, according to the size and style in which they are finished; the vibrating being from 15 to 18, and the rotary from 15 to 20 dollars, including the buttons and manual for magnetising. Besides the improvement in the instruments, we have directed our attention to improvements in the batteries connected with them, but they have not resulted in any practical importance. The size of the batteries can be much reduced, but it involves the necessity of the use of strong acids, as the sulphuric and nitric, the fumes of which are always annoying, and even dangerous. There are besides other obvious objections to

their general use, such as the danger in carrying these acids every day from place to place, which is entirely obviated by the use of the sulphate of copper in the common batteries.

### *Effects of the Rotary Magnetic Machine.*

In our notice of the effects of the rotary magnetic machine in the last number of this Journal, we mentioned a severe case of bilious fever, in which we reduced the pain in the head, back, stomach, intestines, and the paroxysms of fever, with the machine, in the most prompt manner, and we have been much pleased to learn from physicians of this city, and from the country that they have uniformly obtained the same and very similar results from the action of the machine in the same disease.

There is now, as we have before suggested very little doubt that the machine will reduce yellow fever in the same prompt manner, for although the globules of the blood are found to be more or less broken down in this disease, or *demagnetised*, there is now no doubt that the machine, besides restoring lost motion in the membranes, magnetises the blood in the strongest manner, as well as every other part of the system. We besides suggested in the second, third, and fourth numbers of this Journal, the probability of the great importance of these machines in the treatment of tubercular consumption, and the results of a year's trial, of the instruments, in a great number of cases, has shown that we were not mistaken in the signs upon which these suggestions were founded; for more than *one hundred and fifty cases* of both sexes, and in every stage of the disease, have been magnetised in our rooms during this period, and of this number nine only have died, and of the few of the above number we are now magnetising not more than two will be lost. These results are so extraordinary as hardly to admit of belief among those who know little or nothing of the effects of these machines. They will very naturally suspect that there must be some mistake in regard to the diagnosis or genuineness of the cases; yet there is no-

thing more certain, than that they were all true cases of tubercular consumption; for the manner of our diagnosis does not admit of a mistake in any case. There was not among these a solitary case of chronic bronchitis; for we distinguish these cases with the same certainty we do the above cases, and reduce them with the aid of the machines in about the same proportion to the number of cases. Other physicians of this city have obtained with the instruments similar results in such cases.

The reader, we hope, is now prepared for what has appeared to us more extraordinary results from the action of these machines, one of which at least we are sure we could not have believed without ocular demonstration, and that is a case of luxation inwards of the right hip joint, set on the third trial by the action of the machine *alone*. The hip had been out of joint three or four years, and the leg fully an inch and a half shorter than that on the opposite side.

In this case the positive button of one of our largest machines was placed in the groin while the negative one was moved over and around the hip or gluteal muscles, when the head of the femur went into its place with a loud snapping sound. Such is the power and such are the astonishing effects of the machine.

Among other interesting effects of the machines not before noticed in this work, is the case of two large carbuncles over the right side of the lumbar vertebrae of a gentleman aged 70 years, which were reduced by the usual means with the aid of the action of the machine. The age and feeble state of the patient's health, with the large and extensive swelling around the carbuncles indicated a fatal case. The swelling, with the livid and scarlet color of the skin was, however, reduced in the most marked manner by every application of the instrument, and the disease subdued in a few days.

Bed-sores, gleet, gonorrhœas, and chancre are now also subdued with great facility by physicians of this city with the action of the machine.

#### MAGNETIC SURVEY.

In the *Montreal Herald* we find the following interesting letter on a recent magnetic survey:

"As a brief notice of the route pursued by Lieut. Lefroy, in his late scientific exhibition to the far North West, together with one or two novel facts, brought to light by him while engaged in that quarter, may not be uninteresting to some of your readers, I shall make no apology for requesting the favor of you to give the following outline of them a place in your valuable columns. But, before proceeding farther, it may not be unnecessary to premise, that the Royal Society having determined on making a number of magnetic observations, in various parts of the globe, selected Mr. Lefroy for that service, as he had already proved himself eminently qualified for it, by discharging so successfully the duties which devolved upon him on a similar mission to St. Helena, where an observatory, of which he was placed in charge, was established for the like scientific purpose. Lieut. Lefroy, with his assistant, left Montreal, on the 1st of May, 1843, and followed the usual canoe route to the interior, in the prosecution of the objects of his mission, he visited York Factory in Hudson's Bay, Norway House, Red River Settlement, Cumberland House, Isle à la Crosse, the great Methew Portage, so graphically described both by Sir John Franklin and Sir George Beck, and reached Lake Athabasca in the following September. Having remained at the latter station for the space of five months, he sat out on the ice for Mackenzie's River, on which he travelled to the verge of the Arctic Circle. Retracing his steps to Lake Athabasca, he descended the Peace River to Dunvegan, whence he crossed overland to Edmonton on the Saskatchewan, which river he descended, and traversed the north west end of Lake Winnipeg to Norway House, where he arrived in the early part of September last. The necessary arrangement for his journey to Canada being completed, he embarked at this place in a canoe manned by six men, and after a tedious and boisterous passage in his frail bark, reached Penetanguishene on the 14th of last month, having been absent about twenty months, and having thus completed a chain of magnetical observations, which includes many miles of country, and which will add materially to our knowledge of a very important and interesting branch of the *Physique du Globe*. Conformably to his instructions, Mr. Lefroy devoted a portion of every day to magnetical observations, having for their object to ascertain upon a great number of

determinate stations, the physical facts as to the present distribution of the earth's magnetism over this portion of the earth's surface, and more particularly, the region of the greatest magnetic energy or intensity; since it is a curious fact, that this region, the pole or focus of greatest attraction, is far from coinciding with the pole of vertical dip, discovered in 1831, by Commander (now Sir James) Ross; and appears, we understand, to exist somewhere in the neighborhood of the Lake of the Woods. The winter of 1843 and 1844 was comparatively mild, the severe cold weather lasting but a short period; its lowest degree at Lake Athabasca was 46 degrees below Zero, Fahrenheit. Here a small observatory was erected, and many curious and interesting facts, relative to the influence of the aurora upon magnetic needles were displayed, and these observations we are informed, throw light upon that beautiful and little understood phenomenon, and its close connection with the agency which produces the effect of terrestrial magnetism.—*N. Y. Herald, Dec. 16.*

#### MR. SUNDERLAND.

The experiments performed by this gentleman at his last two lectures in this city, were so very extraordinary, so every way unlike any thing we ever heard of before, and so very like the tales of the fairies, or the wonders of the Arabian Nights, that we frankly confess our inability to believe what we saw with our own eyes, but for our knowledge of the lecturer, and those of our citizens upon whom the experiments were performed.

Mr. Sunderland had, previously, informed his audience, that, on Friday evening he would give a novel exhibition of that power which he denominates Pathetism, by causing a number of the audience to fall into a state of somnambulism, before he, Mr. S. came into the Hall. Accordingly, the place was well filled with an anxious multitude, some time before half past six, waiting to witness results performed on the human mind so strange and unaccountable. And sure enough, some considerable time before Mr. S. came in, one after another was seen to arise, and slowly approach the platform, and two gentlemen and one lady were seated upon it, besides a number of other cases, of persons in whom the sleep was equally profound, but who did not leave their seats in the audience till some minutes after Mr. S. had arrived.

On Saturday evening, Mr. S. reversed somewhat the order of proceeding, by actually inducing some eight or ten cases of som-

nambulism even before the persons on whom the influence was exerted, had reached the Hall! The lecturer arrived a few minutes after six, and took his seat on the platform as usual; and such was the great desire of the large audience who had assembled to witness the approach of the *sleep-walkers*, that considerable commotion ensued. At about half-past six, a young lady was seen entering the Hall with her eyes fast closed, the hands extended; and with a slow and somewhat unnatural step, she approached the place where Mr. S. was standing, and was seated upon the platform. Next came a gentleman, Mr. R., and then another, Mr. D., with the eyes closed, somewhat awkwardly making their way up the aisle to the lecturer, who seated them upon the platform. Soon after, there came two more ladies, until there were eight seated upon the rostrum, with as many more asleep, promiscuously seated in the audience.

After the statement of a few facts, showing the utter falsity of the old theories known under the terms of "Mesmerism," or "Neurology," and, proving that these results were not produced by any fluid magnetic or nervous, he proceeded to the development of a series of most curious and extraordinary phenomena. The patients were first thrown into a state of ecstasy, and with their hands clasped and elevated as in a state of devotion, they manifested in their countenances and conversation, a state of mental tranquility almost superhuman. While in this state, Mr. Sunderland drew from them some pieces of music which were most beautifully performed. Next they were transferred into what they conceived to be enravishing fields of fruit and flowers, and now commenced a most diverting scene, for each patient made motions as if actually gathering flowers, grapes from vines, and peaches from the trees, which they seemed to taste and eat with the greatest imaginable delight.

"Come," said the lecturer, "go with me in another direction," when, in a few moments, they began to describe every variety of wild animals. Among them was discovered an elephant, and a ride on his back having been proposed, they went through with the motions of mounting for that purpose. The expressions of fear, the agitation and tossing about seemed reality to the life; till, in a few minutes, as if the huge animal had actually stumbled and fallen, and the patients were thrown upon the floor, with cries of fear, and complaints of broken bones which it took the operator sometime to restore.

Other interesting results followed, which were highly gratifying to the audience, espe-

cially in view of the facts referred to by Mr. S., that neither of these patients had ever been manipulated in the usual way, the sleep having been induced for the first time by his new process of operating, and they had never been operated upon together, in that manner before. And what was still more interesting to the audience, and those who wished to understand the practical benefits of Pathetism, Mr. S. pointed out a number of them who had been most remarkably relieved or cured of some nervous or chronic disease. One, a Mr. A., had been cured of St. Vitus' dance. Mr. H. had been cured of nervous sick-headache; and a third was a case of amaurosis. The lady had been almost blind, and utterly unable to see, or read without glasses; but since she first attended these lectures, she has thrown aside her specs, and has been able to see as well as ever before; and the lecturer pleasantly remarked, that, had he only been known, heretofore, as a good Catholic, or Mormon, cures like those he had performed in these and many other similar cases, might have passed for miracles, and entitled him to a place among the "Saints" of the Polish Calander, or made him the successful rival of the Mormon Prophet.

Providence Gazette.

—Dec. 17.

#### Pretended Discoveries in Animal Magnetism.

Duly impressed with the deep and extended interest which the subject of Animal Magnetism has created in the public mind, and the ardent curiosity and attention which every new fact connected with it is sure to command, several writers have flattered themselves that it is only necessary to advance a claim, however shallow and assumptive, to some peculiar originality in the science, in order to become distinguished as immense magnetical philosophers. Accordingly we have a Dr. James Braid of Manchester in England, discovering that Animal Magnetism ought no longer to be known under that name, but be called Hypnotism, or Hypnotism; and he therefore introduces new terms for all the principles and processes involved. Thus a person can be no more magnetised, but must be hypnotised, &c., and he then favors us with the whole under the general denomination of *Neurypnology*! This philosopher's production appeared in London in 1843, in 12mo.

The Rev. La Roy Sunderland discovered, in this country, and nearly contemporaneously with Mr. Braid, that Animal Magnetism should be called *Pathetism*, because, as he supposes, it depends altogether upon sympathy. The word sympathy, however, not being fine enough for such a discovery, and as it might induce a number of common people to inquire into the causes and laws of sympathy, he discards it for the word *Pathetism*, which of course stops all further investigation, and leaves every body perfectly satisfied. He consequently uses the word *Pathetising* for *Magnetising*, &c., and his work was published in New York in 1843, in 12mo.

Next, and quite recently, we have Professor J. Stanley Grimes, coming out in a volume of 350 pages, to show that Animal Magnetism should be re-baptized, and ever known hereafter, under the name of *Etherology*, *Etherium*, or *Etheropathy*, but which of these three terms he decidedly prefers he leaves rather dubious, so much so indeed, that it would not surprise us to see some other new philosopher reject them altogether for one of his own invention or sponsorship. Prof. Grimes's *Etherology* has been published in this city within a few weeks, and bears the confidently anticipatory date of 1845.

Of the character and capacity of this work as a philosophical treatise, a pretty adequate idea may be formed from the following brief specimen which constitutes the author's first grand postulate, and to which he is so much attached that he copies it on his title-page:

"All the known phenomena of the Universe may be referred to three general principles, viz: *matter*, *motion*, and *consciousness*. Everything that we know is a modification of one or all of these three."

Previous philosophers had held the doctrine that *motion* (for instance) was an *effect* of forces, instead of being a primary principle, and that the forms and modifications of matter were results of the motion thus produced. But n'importe.

The only other highly original feature of this production that particularly strikes us

is to be found under the title of "Credensiveness" a new term, we presume, for the old phrenological organ of marvellousness. In connection with this new piece of nomenclature, the author expatiates with no little complacency upon the extraordinary efficacy of ASSERTION, as a branch of Animal Magnetism—we beg his pardon—Etherology; and his whole work may be adopted as an evidence of his unbounded confidence in this potent agency. In fact, he wields it like the rod of Aaron through his whole controversy with other magicians, and causes it to swallow up the whole of theirs with the utmost facility. With this weapon only he defeats Buchanan, Caldwell, Braid, Sunderland, Fowler, Elliotson, and all others while he remains invincible.

We have no doubt that each and all of these writers upon Animal Magnetism whom we have here mentioned have many merits, both as writers and investigators, and are entitled to the regard of all lovers of science for the zeal and diligence with which they have pursued their labors. We merely protest against their childish exploits in setting up ideal distinctions where there are no real differences, as if they felt that this was the only way of becoming distinguished above other men from whom they do not otherwise differ.

#### *Colon Strangulated by the Meso-colon.*

By Gilman Davis, M. D., Portland, Me.

*Communicated for the Boston Medical and Surgical Journal.*

On the 13th Oct. 1843, was called to Anson Robinson, Esq. *æt.* 26, merchant. I found him complaining of violent pain, not constant, but paroxysmal, and referred to the epigastrium. There was no tenderness on pressure over any portion of the abdominal surface, no thirst, and the pulse not accelerated; the bowels constipated, and had been so for some time. The most remarkable symptom was a tonic rigidity of the abdominal muscles. On applying the hand to the abdomen, the muscles were felt to be literally as firm as board, in a perfect tonic spasm, and yielding to no pressure. Colocynth, calomel hyoscyamus were given internally, conjoined with morphia and re-

peated injections. After three days the symptoms yielded, but there was pain, and rigidity of the recti and other muscles remaining for several days. The relief began as soon as an evacuation from the bowels was produced.

On the evening of the 5th of May, 1844, I was again called to see Mr. Robinson.—He had enjoyed moderate health in the interval since I had last attended him, but had been troubled by constipated bowels. During the latter part of the time, he was observed to place his hand frequently during the day, on the hypogastrium, as if in pain, and during the last week had repeatedly said to a member of the family, that he could obtain no evacuation from his bowels. There was a very small discharge, however, two days previous to my visit. I found him complaining of great pain, as in the previous attack, but with much less of the muscular rigidity; the pain, as before, coming on in paroxysms. There was now superadded to the previous symptoms, constant vomiting, the smallest quantity of food being instantly rejected, and the effort of vomiting increasing the pain. There was no thirst, no pain caused by the firmest pressure on the epigastrium or other parts of the abdomen, and the pulse not perceptibly accelerated. His pain he referred to the epigastrium, placing his hand directly below the sternum, and repeatedly said there "was a stoppage there," and that "he should feel better if he could only have an evacuation from his bowels." There was no appearance of hernia. There was a remarkable restlessness and nervous agitation, as much as I ever before saw.

The same medicines were given as before—calomel, colocynth, hyoscyamus, morphia, and injections. Between 11 and 12 o'clock that night, there was a slight alvine evacuation, but it afforded no relief. Hot fomentations with hops enclosed in flannel bags were kept constantly applied. The morphia afforded slight temporary relief. There was no vomiting of feculent matter at any time.

He remained in this state Monday and Tuesday, during which I visited him four times a day. On Tuesday night, at 11 o'clock, I visited him, and the symptoms had not changed; still no tenderness and no apparent acceleration of the pulse, though I examined carefully and often, and with surprise. It was evident there was some internal strangulation, and that it must end fatally. On Wednesday, at my morning visit, I found a great change—a Hippocratic face, the pain much less, and the pulse between 130 and 140, and so feeble as to yield to the slightest pressure. He was also



thirsty now, but the smallest quantity of fluid was rejected generally, though he had swallowed and retained a very little broth. There was extreme restlessness and jactitation, the patient going repeatedly from one room and one bed to another.

He remained in this state till evening: the extremities then became cold, but he lingered till the next day (Thursday) and died at 12 o'clock, noon. For hours before death the limbs were icy cold, and no pulse, and the most incessant restlessness, the poor sufferer rising up in bed with a look of indescribable anguish, and then falling back faint and apparently dying. I remained with him from Wednesday noon through the night, and until his death, with the exception of an hour and a half on Thursday, when I was obliged to leave him.

On the following morning I opened the body. The stomach was empty, with considerable ecchymosis; the gall-bladder fully distended with dark bile; the intestines filled with gas, and a little fluid fecal matter. In the hypogastrium appeared a large knuckle of intestine, of a deep port-wine color. I removed the whole with great care, and found this knuckle to be composed of thirteen inches of the colon, strangulated in an aperture of the meso-colon, the aperture being about the size of an American quarter of a dollar. From the strangulated part of the colon to its termination in the anus, it measured four feet, I need not add that the portion included in the aperture was in a complete state of mortification. The aperture was round and with even edges, with no appearance that could lead to any reasonable conjecture as to its formation; nor could I learn that the patient had ever had any severe fall or blow upon the abdomen.

I know of no similar case. In the two cases recorded by Sir Astley Cooper of mesenteric and meso-colic hernia, in the last edition of his work on Hernia, the bowel was contained in a sac formed by the intestine protruding itself through one layer of the peritoneum forming the mesentery, separating the two layers, and remaining enclosed between them. In this case the aperture was through the entire thickness of the meso-colon, and through this thirteen inches of the colon had passed and become strangulated.

#### Organ of Calculation.

Vermont has furnished two or three boys, within the last twenty five years, whose sagacity for arithmetical pursuits was of an extraordinary character. The autobiography of the far-famed Zera Colburn is familiar to the public. After having positively aston-

ished the mathematicians, both here and in Europe, with the rapidity, accuracy and mystery with which he conducted the most elaborate arithmetical calculations, all at once, equally to the surprise of himself as well as every body else, he actually lost the faculty of doing wonders in figures. No effort on his part was successful in recovering a power that made his name ring over the world as an eighth wonder.

Another calculating boy, by the name of Safford, now only eight years of age, says the Vermont Journal, has been discovered in Vermont, who will give the product of four figures by four, performing the operation mentally nearly as quick as one can do it with pen and paper. He has also multiplied five places of figures by five, which was the extent of Zera Colburn's power in his best days. He will extract the square and cube roots of numbers extending to nine or ten places, performing the operation quite rapidly in his head. The division of numbers into their factors is a favorite amusement with him. Give him the age of a person, and he will give the number of seconds correctly.

How can the doctrines of the phrenologist be called in question, with such sustaining proofs of their truth, as are presented in this and many other analogous cases?—*Boston Medical and Surgical Journal.*

#### Value of Homœopathic Practice.

In the Circuit Court of this city Dr. F. Vanderberg brought an action against T. E. Beckman, to recover \$427 for two professional visits from New-York to Hudson, and nine visits from Rhinebeck to Hudson, to attend Miss Elizabeth Beckman, ill with consumption, who died in Dec., 1842. "Dr. V.'s treatment was of the homœopathic description, and it is contended, in defence to the charge, that such is a species of quackery, and unskilful: also that the charge is too high. In relation to the homœopathic treatment, several eminent physicians, viz: Drs. Buel, Frasy, Manly, Stevens, Greenough, Cheesman and Beck, declared their belief that the system is a species of quackery. One of the gentlemen said it was an attempt to cure one disease by creating another of the same kind. Dr. Manly said his opinion of it could be stated in a few words. It is delusion on the part of the public and knavery on the part of the practitioner.—These gentlemen stated that they had not examined the theory, as they thought it too absurd to give it attention. On the other hand, Drs. Cooke, McVickar, Curtis and Peck, stated that they had fully examined the

theory, and were decidedly in its favor. Its principle is to treat 'like with like.' That is, to administer heat for a fever, &c. while the allopathic, or old system, was the reverse. It was shown that the young lady whom Dr. V. was called upon to attend was seized with a vomiting of blood. Dr. Cooke was her physician, and the services of Dr. V. were requested by her father, knowing that his mode of treatment was on the principle of homœopathy. She was taken afterwards with a second attack of vomiting blood, and Dr. V. again sent for, though he stated to her father from the first, it is said, that he could do her no good. It was remarked by the physician who gave testimony, that consumption, when once seated, can never be cured, although life may be prolonged by care and medicine. It was shown that Dr. V's practice, under the old system, was large."

The court charged that Dr. V. having shown himself a regularly licensed physician, he is entitled to pay for his services, unless it can be shown by defendant that he exhibited ignorance or want of skill. On that point, and also as to the compensation asked for, the Jury must decide from the evidence. Verdict for plaintiff, \$325.

#### Decomposition of Tincture of Opium by Ammonia.

It is of great importance for prescribers to remember that the addition of ammonia either as carbonate or spiritus ammon. aromaticus, to mixtures containing tincture of opium or any salt of morphia, will after some time, say twenty-four hours, precipitate the morphia in a crystalline form; so that if a mixture is made a day or two before it is taken, the patient may get several doses of morphia concentrated in the last portion left in the bottle, and fatal consequences may be produced. The presence of alcohol will prevent the precipitation.—*Chemical Gazette.*

#### Medical Miscellany.

There was some alarm in regard to the appearance of small-pox, lately, both at Hanover N. H., and near New Preston, Conn.—The Visiting Physician of the Michigan Penitentiary, located at Jackson, receives of the State seventy-five cents for each visit, and one dollar when he prescribes for two patients. Yellow fever was raging fearfully, at the last accounts, at Metamorae, Texas.

The American Consul and many others had died with it. From fifteen to twenty cases of small-pox recently occurred among the paupers in the Almshouse in Saratoga Co. N. Y. Two of them only proved fatal.

J. J. Paulding, M. D. will sail from Boston soon, destined for the foreign missionary service in Asia. There are sixty students at the Botanico-medical Institution, at Cincinnati. Dr. Hill, of the chair of Anatomy, is represented to be an admirable instructor. A pamphlet has appeared in that city, upon human magnetism, by Henry F. Smith.—There is a class of ninety students now attending lectures at Dartmouth College. The school is well sustained. At Willoughby University, there are now attending the medical lectures, 120 students. The institution is very prosperous, and the faculty, to a man, are exerting themselves to educate their classes in the best manner. There are nearly nine hundred students attending lectures at the two medical schools in Philadelphia.—*Boston Medical and Surgical Journal.*

There are about 500 students, attending the Medical Schools in New York.—*Ed.*

#### The Local Pathology of Neuralgia

Has been explained by Dr. Black upon anatomical principles. He very justly observes that the nerves, which are usually the seat of neuralgic pains, are those which take their exit from the interior of the body through canals in bone or unyielding tendinous structure. He adds to this, the anatomical fact, that each nervous twig is accompanied by a branch of an artery and a vein. It may easily, therefore, be conceived that those nerves, which are contained in rigid canals, must be subjected to injurious pressure whenever their accompanying vessels are unusually distended with blood. Upon this pressure, according to Dr. Wallis, depends the neuralgic paroxysm. The explanation is ingenious, and is, I think, borne out by the consideration both of the exciting causes and the effects of treatment.—*Dr. Kinking in Provencial Journal.*

Motion along the nerves ceases in such cases, and violent pain is the consequence, as in cases of pleurisy, and as the pain ceases instantaneously on the application of the forces from the Rotary Magnetic Machine, there can be no doubt but it is the consequence of restoring lost motion.—*Ed.*

#### The Symptoms of Abscess of the Prostate Gland. Diagnosis from Gonorrhœa.

The following remarks by Professor Colles, deserve to be remembered:

"Abscess of the prostate often begins with symptoms closely resembling gonorrhœa inflammatory fever, more or less well-marked usually precedes both, there is the same heat and pain in making water; and the pain in

micturition is often referred to the same spot in both; there is a discharge from the urethra scarcely purulent perhaps at first, but soon becoming so: but while, in clap, the discharge increases with an uniform progression, in the prostatic disease it will often be observed to be very trifling suppose to-day, profuse to-morrow, again diminished considerably on the next, and so on; even this, however, is not so constant as to be relied on for a distinguishing mark of the nature of the case. There will be often felt a pain or uneasiness in the region of the gland, increased during the passage of hardened stools, irritability of the bladder, or retention of urine."—*Medical Press*.

#### THE CURABILITY OF HYDROPHOBIA.

Mr. Hawkins makes the following remarks in a very interesting lecture on the subject of hydrophobia. We fear that those anticipations are very far from being realised.

"At the same time that a cure of hydrophobia is possible is rendered not unlikely by the fact that rabies is sometimes cured, or recovered from, in dogs, of which there seems no doubt, from the experience of Mr. Youatt and others who have attended to the subject—so, also, it is, perhaps, sometimes in the human subject; at least more than one instance has been recorded in which several persons at once, in the same family or neighbourhood, have been bitten by the same animal, of whom one has died, and of the others some one or more have suffered from an indisposition. This indisposition may have been essentially hydrophobia, though without coming to its usual stage. At any rate, I am convinced that in such a line of investigation alone is any cure to be anticipated."—*Medical Gazette*.

#### On the Efficacy of Large Doses of Calomel in Typhus.

By J. BURGESS, Esq., M.R.C.S.

If you think proper to insert the inclosed communication, which appeared in a provincial journal in 1842, it will show that the use of calomel in typhus, proclaimed as a new opinion in a contemporary periodical, which came accidentally under my notice, has been anticipated by me, as therein recorded, and practised in the manner described, with the most unflinching success more than twenty years since.

#### CALOMEL.

The popular character of calomel as a medicine may be some apology for trespassing upon your space with the following observa-

tions, since medicines of common and general use, like diet, clothing, nursing, and exercise, appeal to the welfare of all classes, and claim a popular discussion.

An interesting article in the Times, on "The Climate of the Western Coast of Africa," which appeared on the 12th ult., induced the following remarks:—

Calomel, although a specific remedy in many diseases, is capricious and uncertain in its action, which is frequently the result of an empiricism in its use, even by those of whom better things ought to be expected.

One of the most familiar circumstances attending its use, when continued in small doses, is salivation, and swelling of the soft parts of the palate, mouth, and gums, which occur more or less certainly and speedily in different constitutions.

This is so common a tendency that it is frequently considered by the practitioner inseparable from its remedial powers, a conclusion which leads to much error in the treatment of diseases.

In those cases in which this test of a curative mercurial influence is wanted to establish its permanency and safety, the object is to know how to arrive at it, in a degree sufficiently small and mild, and which is one of the desiderata of medical practice.

There is a wide range of diseases in the treatment of which its remedial powers depend in no degree whatever on these circumstances, but, on the contrary, are impeded and frustrated by them, and yet, in its use, the practitioner has difficulty to divest himself of the prejudice of a necessity for its affecting the mouth and gums.

It is necessary to continue its influence on the vascular and absorbent systems for a lengthened period to develop some of its powers; and it may be difficult under some circumstances and constitutions to avoid this dilemma; but if mercurial salivation was to be considered in the light of a false practice, and its avoidance a test of a successful one, supposing the cure to be obtained in the one instance without mischief or injury to the constitution, so likely to result from salivation, the triumph of calomel in the treatment of disease would become established, and this valuable remedy would be henceforth relieved from the ban under which it is placed.

In those cases in which small doses of calomel are required to be administered most often there exist counteracting circumstances to prevent or mitigate its irritating tendencies.

In children, in whom small doses of calomel are most often indicated, a condition of the intestinal canal presents, to remove which no other remedy than calomel will prevail,

it being loaded with a slimy and mucous secretion, (*excretion*) protecting its surfaces from the agency of remedies, which, in no other cases and without such protection, would be irritating and preternaturally active.

It is the peculiar remedy of infants and children; but the greatest triumph of calomel, even in the cure of infantile diseases, is in the administration of large doses, which act upon the overloaded absorbent system, invigorating it, and restoring the patient to health.

Its merit as a remedial agent does not consist in its irritant qualities, but in its sedative ones; and the first invariably developed by a timid and fearful exhibition of it in small doses, whilst its sedative and more valuable qualities result from large doses.

Thirty, or sixty grains of calomel, administered in typhus, act like a charm upon the unconscious and comatose patient, and produce what every other remedy fails to do, a profound and natural sleep, from which he awakens to consciousness and comparative comfort, with a soft and relaxed skin, a free and tranquil pulse, and a tendency to general perspiration; the bowels become washed with secretions, (*excretions*), and saline purgatives being resorted to, after the benefit of sleep has been obtained, make them patent; and little more is left to remove the most formidable attacks of this epidemic, but to repeat the remedy and aid its influence by cold affusions over the surface of the body.

The agency of calomel in yellow fever, and the other formidable endemics of tropical climates, which *cæteris paribus*, are within the same denomination and class of morbid actions, only influenced by temperature, is of a similar character, and totally independent of its irritant agency, or of any effect it produces upon the mouth and gums, which is a regular and course test of its influence.

The most successful sedatives we possess, next to blood-letting to syncope, are calomel, in large doses; laudanum, in large doses (particularly when administered after depletion and blood-letting); oxymuriate of mercury, combined with tincture of foxglove, in small doses; and these, next to the lancet, are the most successful means to combat acute disease, and are divested of the objections to blood-letting, of leaving a permanent and organic debility, forbidding in many instances its use; or as an evil scarcely less than the disease, and which objection also exists against tartar emetic, which remotely debilitates the nervous and absorbent sys-

tems, and impairs the vital powers. I am, Sir, your most obedient servant,

JOSHUA BURGESS.

*London Lancet.*

We have pursued the course suggested in the above article in the use of calomel more than twenty years, and we have no doubt of its correctness. In epidemics we have been constantly in the habit of giving tea-spoonful doses of calomel to adults, and when attacked with the disease, we have taken table-spoonful doses, with the happiest effects—eschewing small doses in acute, and its use in chronic diseases.—Ed.

#### Spontaneous Cure of Cataract.

A stone-breaker had suffered from cataract from his youth. Whilst pursuing his occupation, he was struck by a splinter in the affected eye, and this gave rise to inflammation. He consulted a medical man, who with a view of examining the eye, dropped into it a solution of belladonna. The pupil became largely dilated, and at the same time the opaque lens fell into the anterior chamber, vision being immediately restored.—*Edinburgh Monthly Journal.*

#### PLANE TRIGONOMETRY.

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|     |    |    |                                   |                      |                  |       |
|-----|----|----|-----------------------------------|----------------------|------------------|-------|
| 23  | 27 | 33 | Obliquity Ecliptic, Jan. 1, 1845. |                      |                  |       |
| 101 | 17 | 46 | West Longitude Magnetic pole in   |                      |                  |       |
|     |    |    | [arctic circle.                   |                      |                  |       |
| 96  | 30 | 56 | West                              | do                   | line no va.      | do do |
| 83  | 29 | 04 | East                              | do                   | do               | do do |
| 158 | 38 | 32 | East                              | do                   | Magnetic pole in |       |
|     |    |    | [antarctic circle.                |                      |                  |       |
| 153 | 51 | 42 | East                              | do                   | line no. va.     | do do |
| 21  | 21 | 28 | West                              | do                   | do               | do do |
| 32  | 26 |    | An rate of motion of line no. va. |                      |                  |       |
| 4   | 18 |    | Minimum daily va. of needle       |                      |                  |       |
| 6   | 27 | 33 | Maximum                           | do                   | do               | do    |
| 8   | 03 |    | Mean annual rate of declination   |                      |                  |       |
| 6   | 41 | 04 | West dec.                         | City Hall, New-York. |                  |       |

Dec. increasing—mean heat is increasing.

Dec. decreasing—mean heat is decreasing.

*Errata.*—On page 45, in Column of Positive Forces, in 46th line from the top of page—for Sulphate read Sulphuret.

# THE DISSECTOR.

Vol. II.

NEW-YORK, APRIL, 1845.

No. II.

## FALLACIES OF THE FACULTY.

*Lectures Delivered at the Egyptian Hall, Picadilly, London. 1840.*

By S. DIXON, M. D.

### LECTURE V.

MEDICAL DOCTRINES, OLD AND NEW—GOUT

—RHEUMATISM—CUTANEOUS DISEASE—

SMALL POX—PLAGUE—YELLOW FEVER—

DYSENTERY—DROPSY—CHOLERA.

GENTLEMEN,

When a young man has run the usual course of study at a university, he thinks he has learned everything worth knowing. But herein he grievously mistakes; for if we may trust Lord Bacon who had no interest in the matter, rather than the Professors who have, we shall find that "in the UNIVERSITIES all things are found *opposite* to the advancement of the sciences; for the readings and exercises are here so managed, that it cannot easily come into any one's mind to think of things out of the common road; or if here and there one should venture to use a liberty of judging, he can only impose the task upon himself without obtaining assistance from his fellows; and if he could dispense with this, he will still find his industry and resolution a great hindrance to his fortune. For the studies of men in such places are confined and pinned down to the writings of certain authors; from which, if any man happens to differ, he is presently represented as a disturber and innovator."

Gentlemen, in this passage you at once see the reason why Medicine has progressed so little from the time of Hippocrates to the present. Every person who has in any way improved the practice of physic has had to repent it. Harvey lost his business by discovering the circulation of the blood; Lady

Mary Montague suffered in her reputation for introducing the small-pox inoculation; and Jenner for a long period of his life was victimized for the still greater improvement of the Vaccine. His moral character was for years at the mercy of the most venal and corrupt members of the profession. "Such," in the words of Milton, "are the errors, such the fruits of misspending our prime youth at schools and universities, as we do, either in learning mere words, or such things chiefly as were better unlearned." So far as they relate to Medicine, the doctrines of the schools have been a succession of the grossest absurdities. Let us briefly review a few of the most prominent.

For several ages the state of the BLOOD was held to be the cause of all disease—no matter how the disorder originated. Had you a shivering fit from exposure to cold or damp, the "Blood" required to be instantly purified,—a fever from a bruise or fall, the only thought was how to sweeten "the Blood;" nay, were you poisoned by hemlock or henbane, "the blood" or its blackness was the cause of all your sufferings—and the chief anxiety was how to get rid of it. It never occurred to the physicians of that day that the blood was an indispensable part of the economy, or that "black blood" was better than no blood at all,—so on they bled and continued to bleed while a drop would flow from the veins. When their patients died, it was all owing to the accursed "black blood" that still remained in the system! How to get the whole out, was the great subject of scholastic disputation, and treatises innumerable were written to prove that it might be done. In progress of time, another doctrine arose, namely, that all diseases first originate in the *Solids*, and many were the partizans that took it up; so that for several centuries the fluidists and solidists divided the schools, and, like Guelph and Ghibelline, ranged themselves under their respective leaders. What medi-

cal man is ignorant of the wars they waged, the ink they shed, and the eloquence they wasted upon the still unsettled point whether the solids or the fluids ought to bear the blame of first imparting disease to the constitution!

But to turn from these to the doctrines of more modern schools. The chief feature in the professional notions of the day, is the assumption that all diseases may be traced to the "inflammation" or other theoretical state of a given portion of the body, one School taking one organ—another, another; but why should I say ORGAN? seeing there are professors who exclusively patronize a given tissue, and others a given SECRETION even;—which *One* thing, after they have wrapped it round in mummery and mysticism, they gravely proceed to magnify into the very Daniel O'Connell of every corporeal disturbance! Exposure to cold and heat, the mid-night revel, and the oft-repeated debauch—any, or all of these may have injured your constitution. This, of course, you already know and feel; so you wish to have the sense of your physician upon it. And what does he do? Why, he takes you by the hand, counts, or affects to count, your pulse, looks at your tongue perhaps, and then, with a seriousness becoming the occasion, he tells you, your "*Stomach* is wrong;"—and so far, so true, as your own want of appetite and sensation of nausea abundantly testify. But as if this were not enough, and more than enough, he must proceed to tell you the *cause* of your disease; and what does he say that was? Being a "*stomach doctor*," of course he says, "*the stomach*" again. "*The stomach*," he tells you, is the cause of all;—your headache, tremor, and blue devils, all proceed from "*the stomach*!" But herein, if I mistake not, the doctor falls into the same error as the man who, on seeing a house in ruins, should point to one of the broken bricks, and saddle it with the whole amount of mischief; when, in reality, it was only one of many coincident effects produced by agency from without, such as accident, time, or tempest.

For a considerable space, the Stomach held undisputed sway in the medical schools,—John Hunter having contributed much to bring it into fashion. His pupil Abernethy afterwards coupled the whole alimentary canal with it, under the name of the "*digestive organs*;" and for a time nobody dared to dispute his dictum that derangement of the digestive organs is the cause of all disease. Some other partialist would have it, however, that "*the Liver*" is the great source of all ailments—and a very convenient substitute this organ became, for not

only did it save the physician the trouble of thinking, but the patient, by constantly directing his mind to it, very soon found out that the liver was the only organ of the body worth a moment's cogitation. Oh! "*the liver*" has put a great many fees into the pockets of the faculty, and might continue to do so still, but for Laennec's invention, the stethoscope.—Adieu, then, to the liver, and adieu to the stomach and digestive organs! for, from the moment people heard of this instrument, the *Heart* and *Lungs* eclipsed them all. We have no liver and digestive organs in these days,—we have only "*the heart*" and "*lungs*;" and these, as the world wags, are always in such a state—in such a deplorable condition of disease and danger, that Heaven only knows for what end they were given us, unless it be that our bodies were

——intended

For nothing but to be mended!

—in other words, were expressly created for the benefit of the next-door neighbor the apothecary! Never was there such a catalogue of disease as these organs have entailed upon us;—but the curious thing is, that nobody knew it until Laennec made the discovery by means of the stethoscope. Since then, leech, lancet, cupping-glass, and purge have followed each other with unexampled rapidity; but whether the "*fits*" and "*sudden seizures*," which now-a-days carry off so much mortality, be the effect of these very safe and gentle remedies, or of the "*Heart-disease*," under which the doctors, in their innocence, are pleased to class them, I leave to persons of common sense and common discrimination to decide. One thing is certain, physicians have made a great professional stride since the days of Molière—for whereas in his time the only organ they ever thought or theorized about was the lungs; now, thanks to the stethoscope, they have got the heart, with its valvular and vascular apparatus, to the bargain. So much for organs, Gentlemen;—let us now speak of tissues. To be chronologically correct, we must first take the "*Skin*"—for of skin, and nothing but skin, our bodies at one time would appear to have been entirely constructed. The skin was the medical rage and the doctors were very certain they had made a great discovery, when they turned their attention to it. Derangement of the skin explained every thing in existence, and many other things besides; whatever your sufferings, the answer was always the same, "*The skin, Sir, the skin*!"—The skin solved every possible difficulty, and if patients were pleased, why undeceive them? Sick men do not reason—

you must therefore treat them like children; and he who can best impose upon their credulity is sure to become the popular physician. The skin, however, had a pretty long run; but, like its predecessors, it was destined to fall in its turn—to be supplanted by another tissue, “the *Mucous Membrane*.”—In the hands of Broussais the mucous membrane first rose to eminence. Bustling, active, ready, he first pushed it into notice; and so skilled was he in all the arts of scholastic juggling, that not only did he parry every blow aimed against his favorite theme by the skin supporters, but he at last obtained for it so great an influence in the sick-room, that no patient of importance could be put to death legitimately till he had first been called in to prescribe something for the “mucous membrane.” Broussais thus became the French medical dictator, and the “mucous membrane” the French ruling doctrine. Carried by his numerous partizans and disciples into every commune in France, the “mucous membrane” at last found its way into England, where it was taken up by the late Dr. Armstrong—and an excellent stepping-stone it proved to him in practice. Every body came to hear what he had to say of the “mucous membrane.” You could not have an ache in your back, or a cramp in your leg, but the “mucous membrane” was at fault; nay, had you a pimple on your nose, or a pain in your great toe, it was still the “mucous membrane!” Nor is this doctrine even now quite exploded. How many of the various secretions have run this gauntlet of accusation, it would be unprofitable to do more than allude to. The Perspiration was at one time much in vogue, and “checked perspiration” the reply to every inquiry—our grandmothers use the phrase occasionally still; though some of them betray a leaning to the system of the Water-doctors, a class of persons who only needed to inspect your urine to find out a cure for your complaint. Many curious stories come to my mind in connection with this;—but the subject is too grave to be trifled with—let us therefore pass from that to “the *Bile*”—the mysterious cause of so much offending. How many difficulties has not this secretion mastered? How many has it not made where none existed before? You derange every organ and function of your frame by intemperance—“the bile,” not the wine, is the criminal! You have headache from hard study, it is still “the bile;”—the palpable and obvious agencies going for nothing, while one of many effects produced by a common cause, is absurdly singled out as the father and mother of the whole!

I have still to notice another school of physicians, who ring the same changes upon a word, which having no very definite signification itself, may therefore signify anything they have a mind, without in the least committing them in the opinion of the public. Rheumatism, Gout, Scrofula, Scurvy—what is the meaning of these terms? They are synonymous simply, having all a common import, fluidity or humor. In Rheumatism, we have merely a derivation from the Greek verb, (*Rheo*, I flow,) and Shakspeare used it in its proper sense when he said,

Trust not these cunning waters of his eyes,  
For villainy is not without such *Rh-rum*.

Then, as regards Gout, what is it but a corruption of the French word *goutte*, a “drop.” And this perhaps some of you may think not so bad a name for a class of symptoms which frequently proceed from “a drop too much”—but that is not what doctors mean by the term. Gout with them is merely a fanciful “humor.” Scrofula in Latin, and Scurvy in Saxon, have the same signification, namely, a “dry humor.” Only think of dry humidity, Gentlemen,—and the confusion of tongues during the building of Babel, will readily occur to you as a type of the language in which medicine is even now taught in most of our schools! Some German physicians of the present day tell us that scrofula has taken the place of scurvy in the European constitution. But this is only one of the many modes in which professors play at “hide and seek” with words. The Diseases Continental doctors formerly termed Scurvy, they now term Scrofula, and Heaven only knows what the doctors of after times will call the same corporeal variations before the world comes to an end! So much, Gentlemen, for the “Humoral school”—a school that impressed upon its disciples a doctrine of purgation scarcely less fatal than the sanguinary practice of the present pathologists. In fact it is the identical system of “Morrison, the hygeist,” and all those quacks, who, by their determined perseverance in purging away a fancied “impurity of the blood,” have too often purged away the flesh and the lives of their credulous victims. Do people at this time of day require to be told that you may purge a healthy man to death!—that by any class of purgatives, whether vegetable or mineral, you may so disturb every action of the body—may so alter every corporeal structure and secretion, that no one shall be of natural consistence or appearance! By the eternal use or rather abuse of any purgative you please, in a previously healthy body, you may so change the alvine secretions, that they shall take the form of any “impurity.”

you fancy—and for this impurity of your own creation you may, day by day, and week by week, purge and purge till you have brought your patient to the state of inanition which constitutes, as I shall in the course of this lecture explain to you, the disease termed “Ship Scurvy.” See, then, the effect of that humoral doctrine! But even this kind of folly appeared too simple to some teachers, and these taxed their invention to make nonsense compound. Who has not heard of Rheumatic Gout?—and who will be so bold as to deny its existence? Yet, what is it but a self evident absurdity! Its literal meaning is “fluid fluidity.” You might as well call an injury from fire, “a igneous burn!” Gentlemen, does such jargon convey to your minds the most distant idea of the true motions which take place in the body in the course of any one disease? How then can you wonder at men of observation laughing at the whole medical profession? It is only a fool or a physician who could be duped for a moment by such puerility; and Lord Stowell was right when he hinted a man might be both at forty.—“When youth made me sanguine,” says Horace Walpole, “I hoped mankind might be set right. Now that I am very old, I sit down with this lazy maxim, that unless one could cure men of being fools, it is to no purpose to cure them of any folly, as it is only making room for some other.” This I believe was said in regard to religious doctrines—but that it applies equally well to medical doctrines, may be seen from a statement of Sir William Temple:—“In the course of my life,” he says, “I have often pleased or entertained myself, with observing the various and fantastical changes generally complained of, and the remedies in common vogue, which were like birds of passage, very much seen or heard of at one season, and disappeared at another, and commonly succeeded by some of a very different kind.—When I was very young, nothing was so much feared or talked of as rickets among children, and consumptions among young people of both sexes. After these the spleen came into play, and grew a formal disease. Then the scurvy, which was the general complaint, and both were thought to appear in many various guises. After these and for a time, nothing was so much talked of as the ferment of the blood, which passed for the cause of all sorts of ailments, that neither physicians nor patients knew well what to make of; and to all these succeeded vapors, which serve the same turn, and furnish occasion of complaint among persons whose bodies or minds ail something but they know not what; and among the

Chinese, would pass for mists of the mind or fumes of the brain, rather than indispositions of any other parts. Yet these employ our physicians more than other diseases, who are fain to humor such patients in their fancies of being ill, and to prescribe some remedies, for fear of losing their practice to others that pretend more skill in finding out the cause of diseases or care in advising remedies, which neither they nor their patients find any effect of, besides some gains to one and amusement to the other. As Diseases have changed vogue, so have Remedies, in my time and observation. I remember at one time the taking of tobacco: at another, the drinking of warm beer, proved universal remedies—then swallowing of pebble stones in imitation of falconers curing hawks. One doctor pretended to help all Heats and Fevers by drinking as much spring water as the patient could bear; [Priessnitz’s plan:] at another time swallowing up a spoonfull of powder of sea biscuit after meals, was infallible for all indigestion, and so preventing diseases. Then coffee and tea began their successive reigns. The infusion of powder of steel has had its turn; and certain drops of several names and compositions. But none that I find have established their authority, either long, or generally, by any constant and sensible successes, but have rather passed like a mode which every one is apt to follow, and finds the most convenient or graceful while it lasts, and begins to dislike in both these respects when it goes out of fashion. Thus men are apt to play with their healths and their lives as they do with their clothes; which may be the better excused, since both are so transitory, so subject to be spoiled with common use, to be torn by accidents, and at last to be so worn out.—Yet the usual practice of physic among us runs still the same course, and turns in a manner wholly upon evacuation either by blood-letting, vomits, or some sorts of purgation; though it be not often agreed among physicians in what cases or what degrees any of these are necessary, nor among other men whether any of these are necessary or no. Montaigne questions whether purging ever be so, and from many ingenious reasons. The Chinese NEVER let Blood.”

Gentlemen, you now see the correctness of a remark of the late Dr. Gregory, that medical doctrines are little better than “Stark staring absurdities.” And God forgive me for saying it, but their authors, for the most part have been very nearly allied to those charlatans and impostors, who

—wrap nonsense round

In pomp and darkness, till it seems profound;



Play on the hopes, the terrors of Mankind  
 With changeful skill; \* \* \*  
 While Reason, like a grave-faced mummy,  
 stands  
 With her arms swathed in hieroglyphic  
 bands.

MOORE.

As for the Schools, at this very moment, the whole regime of medical teaching is a system of humbug, collusion, and trick—embracing intrigue and fraud of every kind, with the necessary machinery of Periodical Journals, and Reviews, by which the masters are enabled to keep down truth, and mystify and delude the student and country practitioner at their pleasure. In physic, now as formerly, the very clever world

—bows the knee to Baal,  
 And hurling lawful GENIUS from his  
 throne,  
 Erects a shrine and IDOL of its own,—  
 Some leaden Calf—

who by virtue of his puppet position, maintains a reputation and a rule in matters medical, to which neither his merits nor his learning in the very least entitle him;—nevertheless he reigns the Esculapius of the day, and it is only in the next age that,

—the vulgar stare,  
 When the swollen bubble bursts and all is  
 air!

But Gentlemen, what do the faculty of our own time mean by the term

GOUT?

What do they mean by it? You may ask them that indeed. Crabbe, who studied physic, but left the profession in early life to take orders, when describing some of the doctors of his day, among other things, tells us,

One to the Gout contracts ALL human  
 pain,  
 He views it raging on the frantic brain,  
 Finds it in fevers all his efforts mar,  
 And sees it lurking in the cold catarrh.

Gout, then, may be any thing you please; for according to received opinion, this offspring of Nox and Erebus, this vox et preterea nihil, takes shapes as many and Protean as there have been authors to treat of it—This much I may venture to tell you, that nothing will so soon help a man to a chariot as to write a book with Gout for its title—for being supposed to be a disease peculiar to aristocracy, every upstart is fain to affect it.—You cannot please a mushroom squire, or a retired shopkeeper better, than by telling him his disease is "Gout"—"Gout suppressed"—"Gout retrocedent"—"Gout in this place, or "Gout" in that! And what is Gout?—

—Of all our vanities the mostliest—  
 The merest word that ever fooled the ear,  
 From out the schoolman's jargon!—

BYRON.

In sober seriousness, is there such a disorder as Gout? Gentlemen, as a "counter to reckon by," you may use the word; having first so far made yourselves acquainted with its real meaning that nobody shall persuade you that it is in itself anything but a piece of hypothetical gibberish, invented by men who knew as little of Disease and its nature as the tyros they pretend to illuminate. When a Lady or Gentleman of a certain age complains to you of a painful swelling in some of the small joints of the hand or foot, you may say, if you please, that such patient has got the Gout. If the same kind of swelling should appear in the knee or hip-joint, or take the shape of an enlarged gland or a rubicund nose, you must then change your phrase; and you may easily exhaust a volume in pointing out the differences betwixt them. But as neither this kind of disquisition, nor the baptizing your patient's disease by one name or another, can in the very least help you to cure it, I may just as well explain to you that this swelling, like every other malady incident to man, is not only a development of constitutional disease, but comes on in fits or paroxysms. Now, Gentlemen, you will find this fit in one case perfectly periodic and regular in its recurrence; in another less determinate as to the time of its approach. The result of repeated paroxysms, as in other diseases where great heat and swelling take place, must be a tendency to decomposition, and in this instance, the product for the most part is a deposit of chalky or earthy matter. In that case nobody will dispute the name you have given to the disorder; but should the result of the decomposing action by purulent matter or ichor, instead of chalk or earth,—which neither you nor anybody else can know beforehand,—you must not be astonished if a rival practitioner be called in to give the disease another soubriquet,—to christen it anew by some other phonic combination full as indefinite as the first, and which may thus serve you both to dispute about very prettily from one end of the year to the other, without either of you becoming a whit the wiser! You see, then, that the only difference betwixt what is called "Gout," and what is called "Inflammation," is, that the result of the morbid action in the former case, is earthy instead of purulent deposit a solid instead of a fluid product. Now, this difference may be accounted for, partly by hereditary predisposition, and partly by the age of the respective subjects of each. Young plants contain

more sap than old ones; the diseases of both must therefore in some points vary; for though in the blood of the old or middle-aged man we find the same elemental principles as that of infancy and youth, from these being in different proportions, the results of decomposition must *mutatis mutandis*, be different. What are the CAUSES of Gout? One writer says one thing; another, another. Dr. Holland, Physician Extraordinary to the Queen, is among the latest who has written upon the subject, and he says the cause is "a morbid ingredient in the blood;"—nay, he says, "it cannot be denied." Still, not only do I presume to dispute the dictum, but I challenge him to bring forward a title of proof in support of it. His whole doctrine of Gout, I apprehend, is a fallacy; for if you enquire, the patient will tell you that he took too much Wine the night before his first fit; or that he had got Wet; or had been exposed to the East Wind; or had been vexed by some domestic matter. From which you see, the causes of Gout are any thing and every thing that may set up any other disease,—Small-pox and the other Contagious Fevers of course excepted. A paroxysm of Gout has been actually brought on by Loss of Blood and also by a purge, for which statement, if you will not believe me, you may take the authority of Parr and Darwin. What, then, is the remedy? If you ask me for a Specific, I must again remind you there is no such thing in physic; and what is more, the man who understands his profession would never dream of seeking a specific for any disorder whatever. No, the remedies for Gout are the same as cure other diseases; namely, attention to temperature during the Fit, and the exhibition of the chrono-thermal or ague medicines during the Remission;—for we have seen that, like the ague, it is a periodic disorder, and such is the description of it given by Sydenham, who was half his life a martyr to it;—to say nothing of Dr. Samuel Johnson's explanation in his dictionary. That it comes on like the ague with cold shiverings, the experience of almost every case will tell you; but as your minds may be too much occupied with school theories to mark that fact for yourselves, I will give it to you in black and white in the words of Darwin. Speaking of some cases of the disease, he says: "The patients after a few days, were both of them affected with cold fits like ague-fits, and their feet became affected with Gout." To meet it in a proper manner you must treat the disease purely as an ague. With quinine, arsenic, opium, and colchicum, I have cured it scores of times, and truth obliges me to say I have in some cases failed with all. Now

what can I say more of any other disease? Every day you hear people talk of the "principle" of a thing, but really without knowing what they are talking about. The true meaning of the word principle is UNITY—something simple or single to which you may specially refer in the midst of an apparently conflicting variety. That a perfect unity of type pervades all the variations of disease is indisputable, and of the correctness of a unity or principle to guide your treatment there is as little doubt. What, then, are all your school-divisions but "flocci, nauci, nihili, pili!" I shall now give you a case or two which may perhaps suffice to show you my treatment of Gout.

Case 1,—Colonel D—, aged 60, had a fit of Gout which came on every night, and for which leeches and purgation had been ineffectually prescribed, before I was called in. I ordered a combination of quinine and colchicum, but as this did not stop the fit, I changed it for arsenic, after taking which the patient had no return.

Case 2.—Captain M—, aged 56, had a fit of Gout which recurred every night during his sleep. I prescribed arsenic without effect; I then gave him quinine, which acted like magic. The same gentleman, twelve months after, had a recurrence, but was much disappointed, on resuming the quinine to obtain no relief. I then prescribed arsenic, which, though it failed the year before, this time perfectly succeeded!—a lesson to such as would vaunt any remedy as a specific for any disease.

The influence of the Passions in causing or curing gout is well known. One of many cases so cured comes just at this moment to my mind. A clergyman was laid up with a severe attack of the Gout—his wife having heard of the effects of Surprise in cases of the kind, dressed up a large hare in baby-clothes, and brought it to his bed-side, telling him how fearfully changed their child had become. The old gentleman eyed the animal with a look of terror, sprung out of bed, and complained of his foot no more!

Now, Gentlemen, as gout, like Ague, is a remittent disease, and curable in the same manner,—whether by mental or physical agency,—what right have we to assume that its cause is a "morbid ingredient in the blood," any more than the cause of ague is? Still, we shall suppose for a moment that it is the effect of a 'morbid ingredient in the blood,' what, then, let me ask, is this morbid ingredient doing all the time of remission? Does it sleep or wake during this interval of immunity?—and how comes it that arsenic, quinine, and colchicum so often neutralise its effects—while purgation and blood-letting

in too many instances, produce a recurrence? In a word, is not this "morbid ingredient in the blood" a mere crotchet of Dr. Holland's brain—a goblin—a phantom—that, like other goblins and phantoms, disappears the moment the daylight comes in?

Having stated my reasons for dissenting from Dr. Holland's hypothetic view of the cause of gout, it may not be out of place here to request your attention to some points of infinitely greater importance, upon which that physician and myself, by some curious fatality, maintain a remarkable COINCIDENCE of opinion. I quote the following passages from his *Medical Notes and Reflections*.

"Has sufficient weight been assigned in our pathological reasonings to that principle which associates together so many facts in the history of disease, namely, the tendency, in various morbid actions, to distinct intermission of longer or shorter duration, and more or less perfect in kind?" "The subjection of so many diseased actions to this common law, establishes relations which could not have been learned from other sources, and which have much value even in the details of practice."

Again he says, "It will probably be one of the most certain results of future research, to associate together, by the connexion of causes of common kind, diseases now regarded as wholly distinct in their nature, and arranged as such in our systems of nosology. This remark applies very widely throughout all the genera of disease." "We can scarcely touch upon this subject of Fever (particularly that which our present knowledge obliges us to consider as of idiopathic kind,) without finding in it a Bond with which to associate together numerous forms of disease but withal a knot so intricate, that no research has hitherto succeeded in unravelling it."

Now, what does Idiopathic mean? It means peculiar or primary—in opposition to symptomatic disease, or disease of long standing. The profession, then, according to Dr. Holland, and he is right, have been perfectly in the dark in regard to the beginning of any disease. The "knot" they have for so many centuries been trying to unravel, I hope he, they, and every body else will now consider as completely untied, but not, as I shall in a few minutes prove, in consequence of Dr. Holland's prediction.

When speaking of the Influenza and other Epidemics, Dr. Holland says: "I may briefly notice the singular analogy to the milder forms of Typhus and Intermittent Fever which these epidemics have occasionally presented." Why he puts Typhus before Intermittent fever, I know not; but this I do

know, that except where badly treated, the Influenza seldom takes the typhoid shape. However, Dr. Holland admits he has prescribed Bark in the Influenza with very great advantage.

On the subject of Temperature, the same physician thus speaks: "The patient may almost always choose a temperature for himself, and inconvenience in most cases, positive harm in many, will be the effect of opposing that which he desires, his feelings here is rarely that of theory, though too often contradicted by what is merely such. It represents in him a definite state of the body, in which the alteration of temperature desired is that best adapted for relief, and the test of its fitness usually found in the advantage resulting from the change. This rule may be taken as applicable to all fevers, even to those of the exanthematous kind." By which term medical men understand small-pox, chicken-pox, measles, and scarlet-fever. Some include the plague.

Dr. Holland asks: "Is not depletion by blood-letting still too general and indiscriminate in affections of the Brain, and especially in the different forms of Paralysis? I believe that the soundest medical experience will warrant this opinion. The vague conception that all these disorders depend upon some inflammation or pressure which is needful to remove, too much pervades and directs the practice in them, and if the seizure be one of sudden kind, this method of treatment is often pursued with an urgent and dangerous activity." "Theory might suggest that in some of these various cases, the loss of blood would lead to mischief. Experience undoubtedly proves it, and there is cause to believe that this mischief, though abated of late years, is still neither infrequent, nor small in amount." It is now the fashion of the Eminent and their herd of followers to say, "Oh, there has certainly been too much bleeding," and "Oh, we don't bleed as we used to do;" but it is not so convenient for them to tell who opened their eyes to their errors.

Now, Gentlemen, if any of you be disposed to question by whose influence this abatement of mischief was principally brought about, I may suggest that, from numerous letters I have received from medical men, long before Dr. Holland's volume first appeared, my writings must at least have contributed to it. Dr. Holland's work, from which I quote, was published by Messrs. Longman and Co. in 1839. Mark that date, and mark also, if you please, that it was in the year 1836, three years before, that the same Publishers brought out the *Fallacy of the Art of Physic as taught in the Schools*, wherein I stated:—

1. "We hope to prove even to demonstration, that Fever, remittent or intermittent, comprehends every shape and shade which Disorder can assume."

2. "That many cases of Disorder have been observed to partake of the nature of Remittent Fever, and to derive benefit from the modes of treatment adapted to that periodic distemper, we are sufficiently aware. But we have yet to learn that any author, ancient or modern, has detected that type, and advocated that treatment in every shade and variety of disease."

3. "That attention to Temperature is the end to all medicine."

4. "That Blood-letting might be advantageously dispensed with in all diseases, even in Apoplexy."

Gentlemen, some of you may have read an anecdote of Dennis the Critic. Having invented a new mode of producing theatrical thunder, he submitted his discovery to the managers; but their high mightiness only affected to laugh at it. Some weeks afterwards, he went to see a play, in which there was a thunder scene. "Now thought Dennis, is my turn, now can I afford to laugh at their thunder as much as they laughed at mine;" but judge his surprise when, instead of farcical squall he expected, his ears were saluted with a thunder as terrible and as true as the "hurly-burly" of his own invention. Perceiving, in an instant, the trick that had been played him, he cried aloud. "By G—! that's my thunder!" This or something like this, always excepting the irreverent adjuration, was the sentiment that escaped me when I first perused the passages I have read to you from the Medical Notes and Reflections. "These are my doctrines," I said; "aye, the identical doctrines which Dr. James Johnson, physician-extraordinary to the King deceased, two years before, stigmatized as a Pyrexia-mania, or Fever-madness. How will he receive them now, now that they are patronized a second hand by an F.R.S. and a physician extraordinary to the Queen that reigns?" That was my exclamation, and how did he receive them, Gentlemen? Oh! he praised Dr. Holland to the skies; said he was this, and said he was that; and concluded by telling us that "it is impossible to lay down his book without an acquiescence in the decision of the public, which has placed him in the first rank among the practical physicians of the capital; adding, moreover, that "his bearing towards his brethren is fair and open, and his candid mind, instructed by liberal reading and polished by society, is willing to allow their need of merit to all." But not a syllable did Dr. James Johnson

say in condemnation of Dr. Holland's prophecy, that "Fever" would one day be found to be "the Bond with which to associate together numerous forms of disease;" nor did he remind him that when that prophecy was actually fulfilled by me to the letter years before Dr. Holland took the trouble to make it, he, Dr. James Johnson ridiculed it as a Fever-madness! Gentlemen, if, in the course of his "liberal reading," the Author of the Medical Notes and Reflections never saw the Fallacy of the Art of Physic as taught in the Schools! Nor the Review of it by his patron Dr. Johnson; Nor Dr. Conolly's equally honest criticism of it! Nor the controversy in the *Lancet*, to which the former gave rise! Nor heard in "society" the remarks made by the laughter-loving part of the profession, when that controversy was concluded! Nor met with the Unity of Disease! Nor the many Reviews that were written upon it!! You must acknowledge the coincidence to be curious, startling!!! And, further, you must admit that this coincidence affords another of many proofs of the truth of a discovery, which, when Dr. Holland, with the candor, I am willing, in common with Dr. Johnson, to allow him, takes into account dates, facts and other similar trifles, I hope he will, in return, permit me now, henceforth and forever, to call MINE! Meantime, I have much pleasure in availing myself of the testimony of a physician so eminent, in favor of its "value, even in the details of practice."

[Shortly after the above observations made their appearance in print, Dr. Holland addressed to me a letter in "explanation." The correspondence which followed I am not quite at liberty to give, as the Doctor expressed a wish that his communications should be kept private. This much I may, however, state, that though couched in very polite, very diplomatic language, the explanation afforded by his letters did not appear to me to be any explanation at all. His observation might apply to this, that, or the other, or anything else! How green Dr. Holland must have thought me when he imagined he would tie up my hand with his "private" letters. But seriously, if he intended to do more than shuffle me out of my discoveries, why did he send a "private" answer to my published charge, or insinuation, if he like it better. The concluding paragraph of his last letter is so adroitly worded, that with, or without his leave I must quote it. "It gives me pleasure to know that you find anything of truth or useful suggestion in what I have published. And I shall be gratified by any opportunity

which may hereafter occur of talking with you on these subjects, of common interest to us, out of print, [no dobut! Ever, my dear Sir, yours faithfully, H. HOLLAND." Now I should like to know which is the "suggester" here, I who first published the discovery, or Dr. Holland, who three years afterwards printed it in a phraseology only slightly altered? "New truths of a higher order," says an enlightened physiologist, "and of which the connection is not seen with common and hackneyed doctrines, are scouted by all, and especially sneered at, denied, and abused by the base creatures who have just sense enough to see there really is something in them, who have just ambition enough to make them hate one who appears to know more than they do,—and who have just cuncedure, the doctrines at first denied are subsening or skill enough to bias minds yet weaker than their own. To crown suitably such proquently pilfered with all the little art of which such minds are capable." Alexander Walker on the Nervous System, "to which is prefixed some account of his earlier discoveries, of which the more recent doctrine of Bell, Magendie, &c., is shown to be at once a plagiarism, an inversion, and a blunder."]

From this digression I now turn to

#### RHEUMATISM.

Like Gout, the word Rheumatism conveys nothing beyond the expression of the false theory, which first gave rise to it. But as we are compelled, by long custom, to retain this among other equally unmeaning terms, I may tell you, that the profession of the present day class under it numerous affections of the great joints, particularly such as have come on suddenly, and are attended with much pain and swelling. You will find that these, in every case, have been ushered in by fever fits. The young and middle aged are more liable to rheumatism than the extreme old. Like the gout, it is a remittent disorder, and Dr. Haygarth, long ago, wrote a work illustrative of the value of Bark in its treatment. My own practice is to premise an emetic; this I follow up with a combination of quinine and colchicum. If that mode of treatment fail, I have recourse to opium, arsenic, guaiac, mercury, silver, turpentine, copaiba, arnica montana, aconite or sulphur,—or combinations of them—all of which remedies have succeeded and failed in ague as well as in Rheumatism. In most instances of acute rheumatism, the first combination will be found to answer perfectly; though, in cases of long standing, you may have to run from one medicine and combination of medicine to another, before being able to bring about this desirable termina-

tion;—and it is my duty to confess to you, that in some cases, particularly where either much depletion, or much mercury, or both have been employed—as I grieve to say, they too often are in the primary treatment—you may fail with every means you may devise.

Under the head of Rheumatism, medical men also include certain muscular pains, which occur in various parts of the body, but which are unattended by any apparent morbid structural development. With nitrate of silver and prussic acid, I have often cured these pains; and with the cold plunge bath, I have sometimes succeeded after every other means had failed. Of my mode of treating acute Rheumatism, I will give you two examples.

Case 1.—A young man, aged 25, had been suffering severely from Rheumatism for four or five days before I saw him. At this time, the joints of his wrists and ankles were much swelled and exquisitely painful; his heart labored, and was in such pain as to impede his breathing; his tongue was foul and furred, and he had been occasionally delirious. I ordered an emetic, which was some time in operating, but when it did, the relief was signal. I followed this up with pills containing a combination of quinine, blue pill, and colchicum, and in two days he was sitting up with scarcely any swelling remaining in the affected joints; in two days more he had no complaint.—Not a drop of blood was taken in this case.

Case 2.—A gentleman aged thirty, after exposure to wet and cold, had a shivering fit with fever, in the course of which almost every joint in his body became swollen and very painful. He was bled, leeches, blistered, and took mercury to no purpose, before I was called in. I ordered him a combination of quinine, colchicum, and opium, which agreed so well with him, that in three days I found him free from every symptom but weakness, which I presume was as much the effect of the former sanguinary treatment, as of the disease; at any rate, he had certainly suffered very severely. But, Gentlemen, like every other disease incident to man, Rheumatism may not only be cured without loss of blood, but without any physic at all; and in evidence of this, I will read to you an extract from the writings of Sydenham; "As to the cure of Rheumatism" he says "I have often been troubled, as well as you, that it could not be performed without the loss of a great deal of blood, upon which account the patient is not only much weakened for a time, but if he be of a weakly constitution, he is most commonly rendered more obnoxious to other diseases

for some years, when, afterwards, the matter that causes the Rheumatism [Sydenham, like Hippocrates, was a disciple of the Humoral School] falls upon the lungs, the latent indisposition in the blood being put into motion by taking cold, or upon some slight occasion. For these reasons, I endeavor to try for some other method different from Bleeding, so often repeated, to cure this disease; therefore, well considering that this disease proceeded from an inflammation, which is manifest from other phenomena, but especially from the color of the Blood, which was exactly like that of Pleuritis. I thought it was probable that this disease might be as well cured by ordering a simple cooling, and moderately nourishing diet; as by bleeding repeated, and those inconveniences might be avoided which accompanied the other method; and I found that a whey diet, used instead of Bleeding, did the business. After last summer, my neighbor Matthews, the apothecary, an honest and ingenious man, sent for me; he was miserably afflicted with a Rheumatism, accompanied with the following symptoms. He was first lame in the hip for two days, afterwards he had a dull pain upon his lungs, and a difficulty of breathing, which also went off in two days time, [both remittent,] after which his head began to pain him violently, and presently the hip of the right side which was first seized; and afterwards, according to the usual course of the disease, almost all the joints, both of the arms and legs, were afflicted by turns. He being of a weak and dry habit of body, I was afraid that by taking away much blood his strength before but infirm, would be wholly vanquished, especially the summer being so far spent, it was to be feared winter would come before he could recover his strength, weakened by frequent bleeding, and therefore I ordered that he should feed on nothing but whey for four days. Afterwards, I allowed him, besides the whey, white bread instead of a dinner, namely, once a day, till he was quite well. He, being contented with this thin diet, continued the use of it for eighteen days; only I at last indulged him in bread at supper too; he daily drank eighteen pints of whey, made at home, where-with he was sufficiently nourished. After these days, when the symptoms did no more vex him, and when he walked abroad, I permitted him to eat flesh, namely of boiled chickens, and other things of easy digestion; but every fourth day he was dieted with whey, till at length he was quite well; the inconveniences mentioned above being quite remedied by this method, with which he was grievously afflicted ten years before, bleed-

ing being then used by my order for his cure, and often repeated. If any one shall condemn this method because it is plain and artificial, I would have such a one know that only weak people despise things for their being simple and plain; and that I am ready to serve the public, though I lose my reputation by it. And I will say that I do not at all question, were it not for common prejudice, that the said method might be accommodated to other diseases, the names whereof I conceal at present, and that it would be more beneficial to the sick than the common pomp of Remedies that are used for people when they are just dying, as if they were to be sacrificed like beasts."—But

#### THE STONE.

You will doubtless, Gentlemen, ask me whether or not I look upon that also as an effect of intermittent fever? To this question I have only to say, that Stone must be admitted to be a result of morbid urinary secretion. Can any secretion become morbid without the previous occurrence of constitutional (in other words intermittent febrile,) change? Certainly not; then; without such change, how could stone become developed at all?—moreover, are there not times of the day, when the subject of it is better and worse, and this not altogether to be referred to the period of micturition. A "fit of the stone" is as common an expression as a fit of the ague. Drs. Prout and Roget, who have paid much attention to calculary diseases, state, that while medicines styled lithon- triptics exert but little influence in such cases, tonics have almost universally ameliorated the condition of the patient;— and what are the medicines usually termed tonics, but the remedies for ague?

Whether Gout and Rheumatism be remittent diseases or not, or whether they be remarkable for the changes of temperature and action, termed fever, nobody but such as prefer books of nosology to the book of nature and common sense, would be so ignorant as to question. Whether they be varieties of the same disease is another thing; but this I know, they are both first-cousins to ague, and by treating them as such, the practitioner may save himself a world of trouble, and the patient a world of pain, which neither might escape, in adopting the doctrine of the "pathologists," that these are inflammatory diseases, and only to be subdued by leech, lancet, and mercury to salivation. Gentlemen, laugh at the pathologists, and laugh too at their disputations, which, being all about nonsense, can never possibly come to a satisfactory conclusion.

The calculary (gritty) or stony concretions which are occasionally deposited in the different joints during Gout, suggested to medical men, even at an early period, the analogy subsisting betwixt that disease and stone. During constitutional disorders, calculus may be developed in any tissue or structure of the body. Salivary concretions are common; pulmonary calculi I have seen in two instances: in one case they were expected by a consumptive female who died; in the other, by a gentleman whose lungs being otherwise organically uninjured recovered his health completely by attending to the temperature of his chest, and by the occasional use of hydrocyanic acid and quinine, which I prescribed for him. This patient had previously consulted two of the best employed medical men in London, one a physician, the other a surgeon, neither of whom held out a hope for him but in a warm climate. Dr. Chalmers and Sir B. Brodie, for these were the practitioners the patient previously consulted, showed in this instance, at least, their good opinion of attention to temperature. How often the liver, gall bladder, and kidney are the seat of stone, I need not tell you. Taking place in the course of an artery, calculus is erroneously termed ossification. I wonder it never occurred to authors to call it the gout! seeing that there is at least, this resemblance betwixt them, that both generally become developed after middle age has marked the subjects of them with her seal.

There are not wanting authors who have traced an analogy betwixt Rheumatism and

#### CUTANEOUS DISEASE—OR

Disease of the skin—and as all disorders are cousins-german to ague, we must give them full credit for their powers of observation—stating, at the same time, our readiness to help them out to a still more comprehensive view of the relationship which subsists betwixt all “the various genera of disease.”

What a fine thing to be able to master the cloud of ridiculous distinctions and definitions by which Drs. Willan and Bateman have contrived to disguise the whole subject of Cutaneous Disorder;—to distinguish, for example, psoriasis from lepra—erythema from erysipelas, diseases only differing from each other in being acute or chronic, or from being more or less extensively developed; all, too, depending upon the same constitutional unity and integrity of state—all more or less amenable to identical agency! Most truly, then, has my Lord Bacon remarked, “Divisions only give us the husks and out-

er parts of a science, while they allow the juice and kernel to escape in the splitting.” What! I shall be asked, is Erysipelas or Rose nothing more than a result of ague—Erysipelas, for which, according to Mr. Lawrence, we must make incisions in the skin, at least a foot long—gashes not quite so short, but quite as deep as sabre wounds! Hear what Sir James Mackenzie says when describing his own case; and the accuracy of his description will scarcely be questioned, if it be remembered that previously to entering upon his legal career, Sir James had not only studied but taken his degree in physic:—“We had an unusually cheerful day,” he says “but just as I was going to bed I was attacked by a fit of shivering, which in the morning was followed by a high fever, and in two days by an erysipelas in the face. The disease went through its course mildly, but it is liable to such sudden turns, (fits;) that one is always within six hours of death.” For the value of quinine or bark in this disease I could cite many authorities, but the candor of Mr. Travers entitles his evidence to a preference. At a meeting of the Medico Chirurgical Society, he is reported to have stated that in “a great many instances (of Erysipelas) he had found the most decided benefit from the use of Bark and other tonics, and which, at the commencement of the disease, he had often seen highly useful in the practice of others, even in cases where he would have employed the antiphlogistic treatment, if the patients had fallen into his own hands.—*Lancet*.”

Every medical man of experience knows that Erysipelas is very often epidemic; in other words, it prevails at a particular time to a greater or less extent among a particular people or class of people. Wherefore it seems to depend upon a peculiar constitution of atmosphere; for during the time it is prevalent in camps or cities, the slightest scratch on the skin will set it up. I have known it follow the application of a blister to the chest, and I remember, when in Edinburgh Castle with the Royals, I was obliged to tell the officer commanding the troops a little of my mind upon the subject of corporeal punishment: one poor fellow had just escaped with his life from the Erysipelas brought on by a flogging. But even at periods when the disease is not epidemic, it may be produced by any one of the thousand things that daily occur in life. Cold and wet are frequent causes; and there are individuals who cannot take mercury in any shape or dose without being liable to an attack of it—nevertheless, I have myself cured many cases with mercury. The best practice, however, is to treat it like other acute

fevers. Begin with emetics and follow them up with arsenic or quinine; this practice will apply to all acute diseases of the skin, by whatever names they may be known or distinguished.

What are the causes of cutaneous disease generally? Every thing that can set up Fever;—and what agent in nature, when abused, may not do that? Cutaneous disease may be produced by mechanical injury even—a blow, or a fall, for example. A friend of mine, who hunts a great deal, has had several falls from his horse, and on each occasion the accident was followed by an eruption all over his skin. I have known eruptions to be a constant effect of the introduction of a bougie into the urethra of a particular individual. What will the gentlemen of the Humoral school say to this? for you know the partizans of that school trace all such diseases to a “morbid ingredient in the blood,” and they look upon eruptions as an effort of nature to expel the “peccant humor.” Be careful, they tell you not to drive it in! Now, what is an eruption but the effect of a tendency to decomposition of the matter entering into a detached portion of the cuticular tissue, so as to produce an arrangement and motion of the atoms composing it different from their motion and arrangement in health? Such caution, therefore, amounts exactly to this: be careful that you do nothing that shall make these cuticular atoms resume their respective places and motions in the economy, so as to resemble the healthy skin! See, then, to what a ridiculous pass the humoral doctrine leads us! When that doctrine was more prevalent than it is at present, cutaneous diseases were very generally classed under the head of “Scurvy;” or Scorbutic; whoever had eruptions on his skin of a chronic character, was said to have the scurvy. Now, if this phrase had been used simply as a sign or “counter to reckon by,” no great harm could have ensued; but like “scrofula,” and the “gout” “Scurvy” in process of time came to perform the part, not of a sign merely, but of a corporeal something—an indefinite entity or essence,—or any thing but a real sense, which, like a will-o-the-wisp, played its “fantastic tricks” now in this part of the body, now in that. Some wise professor made his pupils suppose that he had detected it in the Blood even; and from that moment not only did people believe that Scurvy was a specific disease, but the whole faculty were anxious to discover a specific remedy for it. A specific for what, Gentlemen? for an “airy nothing,” that only existed in the theoretic visions of their own most mystified brains.

You may stare as you please—but this, after all, is the truth. What, then, you will demand, is the disease which doctors call “ship-scurvy!” Now to this most reasonable question, I will endeavor to reply in a reasonable manner. Having been myself for months at sea without landing or seeing land, my evidence may be just as good as that of others who have handled the subject before me. During long and harassing voyages, what from being forced by foul weather to sleep under closed and consequently unventilated decks—what from being obliged to watch and work hard upon a short allowance of food and water—together with the anxiety and depression of spirits produced by “hope deferred,” the men gradually begin to show signs of a constitutional “break up.” You will find them with faces pale and bloated;—their skins rough, rugged, and exhibiting petechiae and haemorrhagic ulcers; their gums weak, spongy, and bleeding; their hair harsh, dry and falling away, and their bowels subject to fluxes; a low fever wastes them day by day and night by night, and they become at last so ill as to faint from the least exertion. This is Ship Scurvy,—not depending upon a something noxious in the blood, but upon a positive want of something essential to its healthy reproduction. And how, think you, is this disease to be cured? By wholesome food and pure air, you will naturally reply. No such thing, Gentlemen; nothing so simple would do for scientific people. It can only be cured by Lemon Juice! Lemon Juice, according to the greatest medical professors is not only a preventive of the bad effects of starvation—but a substitute for pure air and proper food in the cure of diseases produced by a deprivation of both! Now, it is a curious fact in the history of ship scurvy, that just about the time that lemon juice came into fashion as a cure for it, great improvements began to be made in navigation, as also in ship building, and in the ventilating and victualling of fleets; voyages that formerly took up a year, can now be completed in a month or two, and the natural good effects of all this upon the habits and constitution of the seamen are up to this moment, very modestly claimed by the doctors as the result of their employment of lemon juice. And not only are there fools in the world, but philosophers also, who daily echo this trumpery story!

There is not a disorder of the skin, however named, that I have not myself cured with QUININE,—and I have met with examples of every kind of skin disease, that have baffled me with every thing I could



think of. I may here, nevertheless, state in regard to cutaneous disease generally, that I have not very often been at a loss, while I had at my disposal quinine, arsenic, oxymercurate of mercury, hydriodate of potash, creosote, iron, and lead. In a very obstinate case of scalded head, the subject of which was a young artist of talent, a combination of belladonna and stramonium effected a complete cure in about a fortnight. The disease, in this instance, had been upwards of twelve months standing, and had resisted the prescriptions of some of the ablest men of Dublin and London. Baths, of which I shall afterwards speak, I have also found of great service in diseases of the skin—and what, Gentlemen, do all these remedies come to at last, but to thermal change?

In the great majority of instances, then, the local disorder from which physicians now almost invariably name disease, and to which they almost invariably confine their attention, is only one of the many features of universal disturbance. So far from being the causes of such disturbance, the local tendencies to disorganization are merely hereditary or accidental developments occurring in its course—developments expressive, for the most part, of the weak points of individual constitution—though sometimes determined by climate or other speciality of cause. In England, for example, the viscera of the chest are the organs which chiefly suffer, while in the East and West Indies, the liver and other contents of the abdomen become more frequently implicated. Remittent fever, I need not say, is the parent of both.

Injuries, passions, poisons, then, are each capable of producing the same constitutional disturbance with every kind and degree of organic change to which the subjects of them may, by original weakness of configuration, be predisposed. To use a homely phrase—"when the whole house shakes, the worst built room suffers most,"—and this, of course, differs with every house. A blow on the head, nay, an injury to so minute a member as the finger, may produce a general febrile disorder, ending in abscess of the lungs or liver, according to the predisposition of the patient. Even in the course of the Contagious or Pustular Fevers, we daily find all kinds of organic change developed—change which no man in his senses would place in the light of a Cause of those fevers. Among the organic and other disturbances induced by the

#### SMALL-POX FEVER

or VARIOLA, as it is called by the profession, I have noticed sore throat, deafness, dropsy,

consumption, glandular swellings, rheumatism, and palsy, just as I have seen the same localisms developed in the course of a common remittent fever,—such sequelæ depending, of course, upon the original predisposition of the patient to the development of this or that complaint by any agency capable of injuring the general constitution. And how should it be otherwise, when we come to reflect that the Small-Pox Fever, like every other fever, consists in a succession of paroxysms so exactly resembling ague, that, before the appearance of the eruption, it cannot possibly be distinguished from it! Nor, so far as individual treatment is concerned, does that matter a straw, for however perfectly specific the cause of the disorder undoubtedly is, the disease itself admits of no specific mode of treatment. To shorten the cold stage, you may resort to the nearest cordial you can get. During the hot, keep the patient as cool as possible, or endeavor to break it by an emetic, which, in nine times out of ten, you may easily do; and when that and the sweating stage are ended, endeavor to prolong the interval of remission by opium, hydrocyanic acid, or quinine. That I believe comprehends nearly the whole duty of the physician in this, as in every other acute disorder. By a reverse course, the most perfectly curable case of small-pox may be very speedily rendered malignant. During the spring of 1824, a great many instances of the disease occurred in Edinburgh, and I remember two cases which, from the difference of the practice employed, and from the difference of the results, made a strong impression upon my mind. The first case was treated by the late Dr. Mackintosh by repeated bleeding and purgation; in consequence of which the patient became delirious, and the pustules were rendered confluent. The subject of the second case was myself; having frequently visited the former gentleman during his illness, I may fairly presume I took the infection from him. But the treatment in my own instance, was restricted to an occasional antimonial, and an opiate about seven in the evening, which had the effect of either entirely preventing the anticipated paroxysm, or of rendering it so trifling as to pass without observation. On two occasions it was neglected, and a night of fever and restlessness was each time the result. I was out of the house in ten days, and, as you see, I have not a perceptible mark on my countenance, while the other gentleman was confined to his room for more than a month, barely escaping with his life, and when he made his appearance in the streets,

his face was so disfigured by scars, that his most intimate friends did not know him when he addressed them. During the autumn and winter of 1825, while I attended the Parisian Hospitals, the small-pox was raging fearfully in France. But so unsuccessful was the treatment employed, bleeding, leeching, and purgation, that the dissecting-rooms of Paris were literally crowded with the bodies of the people who had died of the disease. Some of these bodies bore the mark of vaccination on their arms. But what is Vaccination? Vaccination is only the artificial introduction into the human system of an animal poison; and it was first practised by Dr. Jenner of Berkley, in Gloucestershire. Now Jenner was a man of great observation, great penetration—a man upon whom facts were never lost, not a mere collector of facts, not one of those poor creatures who cry “facts, facts, give me facts, I never think;”—men who might as wittily cry “Bricks, bricks, give me bricks, I never Build!” Of quite a different stamp was Dr. Jenner. Practising his profession, chiefly at first among the poor of his native country, from them he learned that the people connected with dairies had their hands very often attacked with an eruptive disease, which they traced to a similar eruption on the teats of the cows they milked, and their general belief was that such as had this eruption could not take the small-pox. All through Gloucestershire this fact was known to the peasantry, but the wise doctors only looked upon it as a popular superstition. Not so Jenner,—who set about an investigation, and he discovered it to be the truth; and, in spite of the greatest opposition from men of his own profession, and others whom they secretly influenced, he finally succeeded in establishing the practice of vaccination, so called from *vacca*, the Latin for cow. Jenner, then, was the first who artificially introduced cow-pox as a preventative of small-pox; and that it is indeed a preventative you will have no difficulty in believing, if you choose to recall to memory the number of persons whose faces were fretted and seamed by the small-pox in your younger days, and the few instances of a similar kind you meet with in these times, since vaccination has been practised. Do you doubt the preventive effect of Small-pox against a recurrence of small-pox? No more can you doubt the effect of vaccination—for though small-pox does occasionally attack individuals who have previously undergone vaccination, so also does it recur occasionally in persons who bear the indelible marks of having previously suffered

from small-pox itself. What is the Vaccine disease but a modification of the small-pox? It is small-pox in a milder form, a fact which Jenner suspected, and which Mr. Ceely of Aylesbury has recently proved by a very simple experiment. He first inoculated a cow with the matter of a Small-pox pustule. From the new pustules which were in due time produced in that animal, he took matter and inserted it into the arm of a child. The vaccine or cow-pox pustule was the result!—and these experiments he has several times repeated with the same success, in the presence of many medical men,—so that the cause of small-pox in man (whatever its real nature be) becomes so altered in its vaccine or Cow modification, as to constitute a most valuable preventative against the severer form. What is the nature of the specific agent which produces and reproduces, through such an infinity of individuals, an effect so generally specific? Can it be, as Linnaeus thought, of an animalculine character? or, is it at all analogous to the influence produced by the magnet on iron? which metal, you all know, may, from the contact of a magnet, become itself magnetic. These are the most probable relations in which the subject may be viewed—if, indeed, it have not some analogy to the continuation and reproduction of all animal life.

There are a few questions, connected with this subject, which I confess myself unable to answer. Perhaps the ingenuity of some of you may solve them for me.

1. Why is Small-pox, when directly inoculated, more generally mild than when taken casually by infection?

2. Why, after Vaccination, have we, in the majority of cases, only one pustule instead of many, as in cases of the small-pox?

3. Why is the Cow-pox not infectious, like Small-pox—seeing that it is a mere modification of identical agency? The cow-pox, so far as we know, can only be communicated by direct inoculation.

4. Has the protection which the Cow-pox and the Small-pox afford to the constitution against recurrence, any analogy to agricultural exhaustion—to the impossibility to obtain more than a given number of successive crops of a particular herbage, from a particular soil, in a given period of years?

But the small-pox fever is not the only fever which once having attacked an individual during his life, for the most part renders him unsusceptible of recurrence;—all the truly contagious fevers have this effect—Chicken pox, Measels, Scarlet-fever, Hooping-cough, seldom affect the constitution above once in life—though sometimes, like

Small-pox, they make their appearance twice and even three times in individuals. By some authors, the Chicken pox has been supposed to be a modification of Small-pox—an opinion to which I myself lean—for when we consider how remarkably small-pox becomes modified after vaccine transmission, we can scarcely doubt that it may admit of still further modifications, by passing through the bodies of other animals besides the cow. This much is certain, that every one of the contagious diseases has the most perfect analogy to the ague—seeing that all have remissions and exacerbations of fever more or less perfect in kind, and that all are more or less amenable to the chrono-thermal remedies—not one of which remedies, however, possess such specific influence over them, as to be exclusively relied upon in the treatment of any case. Is not this the best of all proofs that there is no Specific in physis? If in a most decidedly specific disease we have no specific remedial agency, how can we possibly expect to find such for any one of the great family of disorders which may be produced by anything and everything that can derange the general health? Yet Dr. Holland hopes that medical men may one day find a specific for Gout, and another for Consumption—diseases which may be produced and cured by any agency that can alter the moving powers of particular individuals!

Is the

#### PLAGUE

an intermittent fever?—The case of Corporal Farrel, as detailed by Dr. Calvert, [*Medico-Chirurgical Transactions*] will be a sufficient answer to the question:—"This man had been standing in the sea on the 10th of November, upwards of an hour, to wash and purify his clothes, according to an order to that effect. On coming out of the water he was seized with violent shivering and headache, succeeded by heat of skin, and afterwards by sweating, which alleviated the distressing symptoms. On the following day the paroxysm was repeated. He was permitted to remain in the barracks from a belief that his complaint was intermittent fever. The next day his fever returned as usual, but it now declared itself to be the PLAGUE by a bubo (glandular swelling) arising in the groin, while the seat of the pain seemed to be suddenly transferred from the head to that part. The paroxysm was again followed by intermission or remission. But the next morning, while dressing himself to go to the lazaret, he dropped down and expired."

Disputes still exist as to whether Plague be contagious or not. On whichever side truth lies, there can be no difficulty as to the

proper treatment. The indications, in Plague as in simple intermittent fever, or the Small-pox, are to regulate the temperature in the cold and hot stages, by the means already pointed out, and to prolong the remission by quinine, opium, arsenic, &c., according to particular constitutions. Treated in this manner, the disease could not by any possibility be more fatal than we are told it is under the present routine of practice. "In all our cases," says Dr. Madden, "we did as all other practitioners did,—we continued to bleed, and the patients continued to DIE!"—[*Madden's Constantinople.*]

From the same candid author, I find that the

#### YELLOW FEVER

of the West Indies, is not less remarkable for its periodic remissions and exacerbations than for the shiverings and alternations of temperature characteristic of every other disorder. The yellow appearance of the patient, like the milder jaundice of our own climate, is a mere effect of spasm of the gall ducts. Jaundice, then, is a symptom, not a disease; it is the result of spasm developed in the course of a febrile paroxysm. People will say, "You would not give Quinine or Bark in jaundice." But wherefore not? seeing I could muster a good half-hundred instances where I myself have cured the disease by one or the other. Dr. Madden details a case of yellow fever cured by Quinine, a case in which he says, "had the gentleman been bled, after the fashion of the country, I think in all probability he would have died; or had he survived, that he would have had left a debilitated constitution and a dropsical diathesis to encounter in his convalescence."

Previous to my embarkation for the East Indies, where it was my chance to serve five years as a medical officer of the army, I read Dr. James Johnson's work on the "Diseases of Tropical Climates." Impressed when a boy with his pretty style, I put his sanguinary treatment and his twenty-grain doses of calomel to the test. But so far from confirming his assertions, my own after-experience led me to adopt conclusions much the same as Dr. Madden. Capt. Owen of the Royal Navy, too, who could neither have a theory to support nor any interested end to serve one way or the other, details at great length the mortality which took place among his people while employed in surveying the African coast. "It may, in fact, be questioned," says this intelligent navigator, "whether our very severe losses were not, in some measure, attributable to European medical practice, Bleeding and Calomel being decidedly the most deadly enemies in a tropical climate.—

During the whole time of the prevalence of the fever, we had not one instance of perfect recovery after a liberal application of the lancet or of this medicine." Captain Owen farther states, that he himself recovered without either bleeding or calomel, while the ship-doctor fell a martyr to his medical faith,—he bled himself, took calomel, and died! [The above remarks were first printed in 1840.—Two years afterwards, 12th November 1842, extracts from the Report of the Select Committee on the Western coast of Africa, appeared in the Times newspaper, wherein, among other things, is the following: "The bleeding system has fortunately gone out of fashion, and the frightful mortality that attended its practice, is now no longer known on board our ships." Dr. James Johnson, are you satisfied!]

But the Eastern practitioner will tell me possibly, that

#### DYSENTERY

cannot be safely treated in any other fashion. Is he sure he knows exactly what is meant by the word Dysentery? I shall say nothing of its etymology but rather give you the symptoms included by Sydenham under the name. "The patient," he tells us, "is attacked with a chilliness and shaking, which is immediately succeeded by a heat of the whole body. Soon after this gripes and stools follow." What then, Gentlemen, is this dysentery but an ague, with increase of secretion from one surface instead of another—from the mucous surface of the bowels instead of the skin, and the skin remember is only a continuation of the mucous membrane of the bowels. Now, Dr. Cumming, late of the East India Company's medical service, informs us, that while ascending the Nile in 1836, he was attacked with dysentery. After suffering for a week with "intervals of remission," he fairly gave himself up, and so did his attendants, for he had nothing in the shape of medicine with him. As a forlorn hope, however, he ordered his guide to sponge him with warm water. And this simple remedy [attention to temperature,] with fomentation of the abdomen, was the only treatment employed. He took a little wine and water, which remained upon his stomach; he then became drowsy, slept for a short time, felt his skin less hot and burning, and, in brief, began to recover, and that rapidly. In about a week afterwards, he writes in his journal: "My recovery is almost complete, and the rapidity of my convalescence leads me to contrast my late attack with a precisely similar one which I had at Cawnpore in the autumn of 1829. On that occasion I was largely bled

at the arm, had *fifty* leeches applied to the abdomen, and during the first four days of the disease, in addition to extensive mercurial frictions, I swallowed *two hundred and sixteen grains* of calomel. True, I recovered; or rather I did not die! whether in consequence, or in spite of the above heroic treatment, I will not venture to say. My face was swollen to an enormous size, every tooth was loose in my jaws, and for six or eight weeks I could eat no solid food; my constitution received a shock from which it never fairly recovered, and I was obliged to come to Europe on furlough. On the present occasion, fortunately for me, the vis medicatrix nature was my sole physician, [he forgot the sponging part!] and I am now almost as well as before the attack commenced. British medical practice, in my humble opinion, deals too much in heroics."

That opinion, Gentlemen, I hope, is now yours also—it has many years been mine. Such a case, from such a quarter, must doubtless be more than sufficient to warn you against the sanguinary and mercurial practice introduced into the East by the influence of Dr. James Johnson's *Work on the Diseases of India*. What an idea, first to break down by the lancet and mercury to salivation the attractive power of every atom of the body, in the expectation of thereby strengthening its weakest parts! Does this savour of mania, or does it not? and that too, as I hinted before, madness of rather a homicidal kind?

#### DROPSY.

How can there be a morbid superabundance of any secretion without a corresponding change of temperature? He who will rigidly scrutinize this disease shall find that the same shiverings and fever which precede the sweat of ague, usher in the tumid abdomen and swollen legs of Dropsy. Dropsy, then, may be termed an Ague with inward sweat. That it is a remittent disease may be seen by the palpable diminution of the swelling on particular days; to say nothing of the hopes both of the patient and physician on such days being excited by general improvement throughout. How should the disease be treated? Not, according to modern practice, by diuretics and sudorifics solely; but by a combination and alternation of these remedies with the medicines of acknowledged efficacy in that most perfect type of all disease, the ague. Of cases successfully treated by me in this manner, I could give you hundreds—but to what purpose? The recital would only comprehend the symptoms of ague with increase of the natural secretions of the vari-

ous cavities even to effusion, (or cellular substance) instead of perspiration by the skin; and the remedies, as you may guess, quinine, opium, arsenic, hydrocyanic acid, combined or alternated with creosote, squill, ipecacuanha, colchicum, mercury, &c. What other proofs do you want of the unity of all disease? The Paymaster-Sergeant of the Royals had dropsy, which, notwithstanding the usual treatment by diuretics, purgatives, &c., was daily getting worse, when Dr. Stephenson, of the 13th Dragoons, suggested the application of poultices of *lichen vulgaris* to the loins. From that day the amendment was rapid, and the patient subsequently got well. Now, Gentlemen, everybody believed that there must have been some magical virtue in the lichen. But Mr. Brady, the surgeon of the regiment, thinking that the plant had less to do with the cure than the heat which, in the form of a poultice, it produced, determined to try poultices made with *rice* in a case exactly similar. The result was the same—a cure; proving how right he was in his conjecture. Since I have entered into private practice, I have repeatedly applied poultices to the loins with advantage, and have also, with the assistance of plasters of pitch, galbanum, &c., succeeded in curing cases of dropsy, that resisted every kind of internal remedy.

#### CHOLERA,—

the scourge of nations—will cholera be found to partake of the same universal type of disease, the *ague*? You will be the best judges, Gentlemen, when I draw my parallel. While in India I had ample opportunities for ascertaining its nature. Tremulous and spasmodic action belong equally to *ague* and to cholera; vomiting or nausea characterises both. The *ague* patient has sometimes diarrhoea or looseness; oppression at the chest, and coldness of the whole body are the primary symptoms of each. The increased flow of pale urine, so often remarked in *ague*, is an occasional symptom of epidemic cholera. In more than one instance of cholera, which came under my observation while serving in the East, that secretion passed involuntarily from the patient a short time before death. Suppression of urine, so common in the late epidemic, was a frequent symptom of the Walcheren *ague*. When there is no hot fit or reaction, death is usually preceded by a sleepy stupor in both. You have *ague*, too, with hot skin and bounding pulse, a state analogous to the milder forms of cholera, in which you remark the same phenomena. When not fatal, cholera, like *ague*, has a hot and sweating stage. Moreover, when *ague* terminates life

by a single paroxysm, you find the same appearances after death in the bodies of both. Lastly, phrensy, disease of the lungs, liver, and spleen, with dysentery and dropsy, to say nothing of epilepsy and apoplexy, have been the occasional sequelæ of each. Cholera, then, is an extreme of the cold stage of *ague*.

What are the remedies most beneficial in Cholera? Attention to temperature comprehends every thing that has either failed or succeeded. Were I myself to become the subject of it, I should feel inclined to trust more to a bottle of brandy than to any thing contained in the *Materia Medica*. While serving in the East Indies I saw many hundred cases of the disorder, but I never could convince myself of the superiority of any one kind of *medical* treatment over another. In my Work upon the Diseases of India, I have proved that death, in the great majority of instances of cholera, takes place from a palsy of the pneumo-gastric nerves,—those nerves that influence the functions of the lungs and stomach. If you divide these nerves in the dog, you have the essential symptoms of Cholera, viz., loss of voice, vomiting, and difficult breathing always,—cramps and flatulence frequently; and the animal seldom survives the third day. On dissection, you find the vessels of the head, lungs, and intestines, filled with black blood. That is exactly what you find on opening the bodies of persons who have died of cholera. Shortly after my return from India, Dr. Wilson Philip read a paper at the Westminster Medical Society, in which he took the very same view of Cholera, but wherein he forgot to say that his views of the disease had been every one of them anticipated in my Remarks upon it, published in the *Lancet* some months before I quitted India.

#### Poisoning by Arsenic.

M. Grimaud, a chemist at Poitiers, has proposed a mode of rendering poisoning by arsenic more difficult. He recommends that this article shall be sold only when mixed with a certain quantity of sulphate of iron and cyanure of potash. About one per cent. of each substance would, he alleges, be sufficient. The arsenic, thus qualified, shews itself either by colour or smell, when used in the various aliments fit for man. Thus, arsenic prepared this way, and thrown into warm meat soup, gives immediately a green bronze colour; into hot milk, an opal; into red wine, a violet; into bread, a deep blue; and so on for 20 mixture, on which M. Grimaud has made experiments.—*Galignani's Messenger*.

MISS MARTINEAU'S LETTERS ON  
MESMERISM.

## LETTER I.

Tynemouth, Nov. 12.

It is important to society to know whether Mesmerism is true. The revival of its pretensions from age to age makes the negative of this question appear so improbable, and the affirmative involves anticipations so vast, that no testimony of a conscientious witness can be unworthy of attention. I am now capable of affording testimony: and all personal considerations must give way before the social duty of imparting the facts of which I am possessed.

For some years before June last, I was in the class of believers upon testimony. I had witnessed no mesmeric facts whatever; but I could not doubt the existence of many which were related to me without distrusting either the understanding, or the integrity, of some of the wisest and best people I knew. Nor did I find it possible to resist the evidence of books, of details of many cases of protracted bodily and mental effects. Nor, if it had been possible, could I have thought it desirable or philosophical to set up my negative ignorance of the functions of the nerves and the powers of the mind, against the positive evidence of observers and recorders of new phenomena. People do not, or ought not, to reach my years without learning that the strangeness and absolute novelty of facts attested by more than one mind is rather a presumption of their truth than the contrary, as there would be something more familiar in any devices or conceptions of men; that our researches into the powers of nature, of human nature with the rest, have as yet gone such a little way that many discoveries are yet to be looked for; and that, while we have hardly recovered from the surprise of the new lights thrown upon the functions and texture of the human frame by Harvey, Bell, and others, it is too soon to decide that there shall be no more as wonderful, and presumptuous in the extreme to predetermine what they shall or shall not be.

Such was the state of my mind on the subject of Mesmerism six years ago, when I related a series of facts, on the testimony of five persons whom I could trust, to one whose intellect I was accustomed to look up to, though I had had occasion to see that great discoveries were received or rejected by him on other grounds than the evidence on which their pretensions rested. He threw himself back in his chair when I began my story, exclaiming, "Is it possible that you

are bit by that nonsense?" On my declaring the amount of testimony on which I believed what I was telling, he declared, as he frequently did afterwards, that if he saw the incidents himself, he would not believe them; he would sooner think himself and the whole company mad than admit them. This declaration did me good; though of course, it gave me concern. It showed me that I must keep my mind free, and must observe and decide independently, as there could be neither help nor hindrance from minds self-exiled in this way from the region of evidence. From that time till June last, I was, as I have said, a believer in Mesmerism on testimony.

The reason why I did not qualify myself for belief or disbelief on evidence was a substantial one. From the early summer of 1839, I was, till this autumn, a prisoner from illness. My recovery now, by means of mesmeric treatment alone, has given me the most thorough knowledge possible that Mesmerism is true.

This is not the place in which to give any details of disease. It will be sufficient to explain briefly, in order to render my story intelligible, that the internal disease, under which I have suffered, appears to have been coming on for many years; that after warnings of failing health, which I carelessly overlooked, I broke down, while travelling abroad, in June, 1839; that I sank lower and lower for three years after my return, and remained nearly stationary for two more preceding last June. During these five years, I never felt wholly at ease for one single hour. I seldom had severe pain; but never entire comfort. A besetting sickness, almost disabling me from taking food for two years, brought me very low; and, together with other evils, it confined me to a condition of almost entire stillness—to a life passed between my bed and my sofa. It was not till after many attempts at gentle exercise that my friends agreed with me that the cost was too great for any advantage gained; and at length it was clear that even going down one flight of stairs was imprudent. From that time I lay still; and by means of this undisturbed quiet, and such an increase of opiates as kept down my most urgent discomforts, I passed the last two years with less suffering than the three preceding. There was, however, no favorable change in the disease. Every thing was done for me that the best medical skill and science could suggest, and the most indefatigable humanity and family affection devise: but nothing could avail beyond mere alleviation. My dependence upon opiates was desperate. My kind and vigilant medical friend—the most

sanguine man I know, and the most bent upon keeping his patients hopeful—avowed to me last Christmas, and twice afterwards, that he found himself compelled to give up all hope of affecting the disease—of doing more than keeping me up, in collateral respects, to the highest practicable point. This was no surprise to me; for when any specific medicine is taken for above two years without affecting the disease, there is no more ground for hope in reason than in feeling. In June last, I suffered more than usual, and new measures of alleviation were resorted to. As to all the essential points of the disease, I was never lower than immediately before I made trial of Mesmerism.

If, at any time during my illness, I had been asked with serious purpose, whether I believed there was no resource for me, I should have replied that Mesmerism might perhaps give me partial relief.

After my medical friend's avowal of his hopelessness, however, I felt myself not only at liberty, but in duty bound, to try, if possible, the only remaining resource for alleviation. I felt then, and I feel now, that through all mortification of old prejudices, and all springing up of new, nobody in the world would undertake to say I was wrong in seeking every recovery by any harmless means, when every other hope was given up by all: and it was not recovery that was in my thoughts, but only solace. It never presented itself to me as possible that disease so long and deeply fixed could be removed; and I was perfectly sincere in saying that the utmost I looked for was release from my miserable dependence on opiates. Deep as are my obligations to my faithful and skilful medical friend, for a long course of humane effort on his part, no one kindness of his has touched me so sensibly as the grace with which he met my desire to try a means of which he had no knowledge or opinion, and himself brought over the Mesmerist under whom the first trial of my susceptibility was made.

Last winter, I wrote to two friends in London, telling them of my desire to try Mesmerism, and entreating them to be on the watch to let me know if any one came this way of whose aid I might avail myself.—They watched for me, and one made it a business to gain all the information she could on my behalf; but nothing was actually done, or seemed likely to be done, when in June a sudden opening for the experiment was made, without any effort of my own, and on the 22nd I found myself, for the first time, under the hands of a Mesmerist.

It all came about easily and naturally at last. Mr. Spencer T. Hall being at New-

castle lecturing, my medical friend went out of curiosity, was impressed by what he saw and came to me very full of the subject. I told him what was in my mind; and I have said above with what a grace he met my wishes, and immediately set about gratifying them.

At the end of four months I was, as far as my own feelings could be any warrant, quite well. My mesmerist and I are not so precipitate as to conclude my disease yet extirpated, and my health established beyond all danger of relapse; because time only can prove such facts. We have not yet discontinued the mesmeric treatment, and I have not re-entered upon the hurry and bustle of the world; the case is thus not complete enough for a professional statement. But, as I am aware of no ailment, and am restored to the full enjoyment of active days and nights of rest, to the full use of my powers of body and mind, and as many invalids, still languishing in such illness as I have recovered from, are looking to me for guidance in the pursuit of health by the same means, I think it right not to delay giving a precise statement of my own mesmeric experience, and of my observation of some different manifestations in the instance of another patient in the same house.

On Saturday, June 22nd, Mr. Spencer Hall and my medical friend came, as arranged, at my worst hour of the day, between the expiration of one opiate and the taking of another. By an accident the gentlemen were rather in a hurry—a circumstance unfavorable to a first experiment. But result enough was obtained to encourage a further trial, though it was of a nature entirely unanticipated by me. I had no other idea than that I should either drop asleep or feel nothing. I did not drop asleep, and I did feel something very strange.

Various passes were tried by Mr. Hall; the first of those that appeared effectual, and the most so for some time after, were passes over the head, made from behind—passes from the forehead to the back of the head and a little way down the spine. A very short time after these were tried, and twenty minutes from the beginning of the seance, I became sensible of an extraordinary appearance, most unexpected, and wholly unlike anything I had ever conceived of. Something seemed to diffuse itself through the atmosphere—not like smoke, nor steam, nor haze—but most like a clear twilight, closing in from the windows and down from the ceiling, and in which one object after another melted away, till scarcely anything was left visible before my wide opened eyes. First, the outlines of all objects were blurred; then

a bust, standing on a pedestal in a strong light, melted quite away; then the opposite bust, then the table with its gay cover, then the floor, and the ceiling, till one small picture, high up on the opposite wall, only remained visible—like a patch of phosphoric light. I feared to move my eyes, lest the singular appearance should vanish; and I cried out, “O! deepen it! deepen it!” supposing this the precursor of the sleep.—It could not be deepened, however; and when I glanced aside from the luminous point, I found that I need not fear the return of objects to their ordinary appearance while the passes were continued. The busts reappeared, ghost-like, in the dim atmosphere, like faint shadows, except that their outlines, and the parts in the highest relief, burned with the same phosphoric light. The features of one, an Isis with bent head, seemed to be illumined by a fire on the floor, though this bust has its back to the windows. Wherever I glanced, all outlines were dressed in this beautiful light: and so they have been at every seance, without exception, to this day; though the appearance has rather given away to drowsiness since I left off opiates entirely. This appearance continued during the remaining twenty minutes before the gentlemen were obliged to leave me.—The other effects produced were, first, heat, oppression and sickness, and, for a few hours after, disordered stomach: followed, in the course of the evening, by a feeling of lightness and relief, in which I thought I could hardly be mistaken. On occasions of a perfectly new experience, however, scepticism and self distrust are very strong. I was aware of this beforehand, and also, of course of the common sneer—that Mesmeric effects are “all imagination.” When the singular appearances presented themselves, I thought to myself,—“Now, shall I ever believe that this was all fancy? When it is gone, and when people laugh, shall I ever doubt having seen what is now as distinct to my waking eyes as the rolling waves of yonder sea, or the faces round my sofa?” I did a little doubt it in the course of the evening: I had some misgivings even so soon as that; and yet more the next morning, when it appeared like a dream.

Great was the comfort, therefore, of recognizing the appearances on the second afternoon. “Now,” thought I, “can I again doubt?” I did, more faintly; but, before a week was over, I was certain of the fidelity of my own senses in regard to this, and more.

There was no other agreeable experience on this second afternoon. Mr. Hall was exhausted and unwell, from having mesmerized many patients; and I was more oppres-

sed and disordered than on the preceding day, and the disorder continued for a longer time: but again, towards night, I felt refreshed and relieved. How much of my ease was to be attributed to Mesmerism, and how much to my accustomed opiate, there was no saying, in the then uncertain state of my mind.

The next day, however, left no doubt. Mr. Hall was prevented by illness from coming over, too late to let me know. Unwilling to take my opiate while in expectation of his arrival, and too wretched to do without some resource, I rang for my maid, and asked whether she had any objection to attempt what she saw Mr. Hall do the day before. With the greatest alacrity she complied. Within one minute the twilight and phosphoric lights appeared; and in two or three more, a delicious sensation of ease spread through me,—a cool comfort, before which all pain and disease gave way, oozing out, as it were, at the soles of my feet. During that hour, and almost the whole evening, I could no more help exclaiming with pleasure than a person in torture crying out with pain. I became hungry, and ate with relish, for the first time for five years. There was no heat, oppression, or sickness during the seance, nor any disorder afterwards.—During the whole evening, instead of the lazy hot ease of opiates, under which pain is felt to lie in wait, I experienced something of the indescribable sensation of health, which I had quite lost and forgotten. I walked about my rooms, and was gay and talkative. Something of this relief remained till the next morning; and then there was no re-action. I was no worse than usual; and perhaps rather better.

Nothing is to me more unquestionable and more striking about this influence than the absence of all re-action. Its highest exhilaration is followed, not by depression or exhaustion, but by a further renovation. From the first hour to the present, I have never fallen back a single step. Every point gained has been steadily held. Improved composure of nerve and spirits has followed upon every mesmeric exhilaration. I have been spared all the weaknesses of convalescence, and have been carried through all the usually formidable enterprises of return from deep disease to health with a steadiness and tranquility astonishing to all witnesses. At this time, before venturing to speak of my health as established, I believe myself more firm in nerve, more calm and steady in mind and spirits, than at any time of my life before. So much, in consideration of the natural and common fear of the mesmeric influence as pernicious excitement—as a kind of intoxication.



When Mr. Hall saw how congenial was the influence of this new Mesmerist, he advised our going on by ourselves, which we did until the 6th of September.

I owe much to Mr. Hall for his disinterested zeal and kindness. He did for me all he could; and it was much to make a beginning, and put us in the way of proceeding.

## LETTER II.

I next procured, for guidance, Deleuze's 'Instruction Pratique, sur le Magnetisme Animal.' Out of this I directed my maid: and for some weeks we went on pretty well. Finding my appetite and digestion sufficiently improved, I left off tonics, and also the medicine which I had taken for two years and four months, in obedience to my doctor's hope of affecting the disease,—though the eminent physician who saw me before that time declared that he had "tried it in an infinite number of such cases, and never knew it avail." I never felt the want of these medicines, nor others which I afterwards discontinued. From the first week in August, I took no medicines but opiates; and these I was gradually reducing. These particulars are mentioned to show how early in the experiment Mesmerism became my sole reliance.

On four days, scattered through six weeks, our *seance* was prevented by visitors, or other accidents. On these four days, the old distress and pain recurred; but never on the days when I was mesmerized.

From the middle of August (after I had discontinued all medicines but opiates,) the departure of the worst pains and oppressions of my disease made me suspect that the complaint itself,—the incurable, hopeless disease of so many years,—was reached; and now I first began to glance towards the thought of recovery. In two or three weeks more, it became certain that I was not deceived; and the radical amendment has since gone on, without intermission.

Another thing, however, was also becoming clear: that more aid was necessary. My maid did for me whatever, under my own instruction, good-will and affection could do. But the patience and strenuous purpose required in a case of such long and deep seated disease can only be looked for in an educated person, so familiar with the practice of Mesmerism as to be able to keep a steady eye on the end, through all delays and doubtful incidents. And it is also important, if not necessary, that the predominance of will should be in the Mesmerist, not the patient.

The offices of an untrained servant may avail perfectly in a short case,—for the removal of sudden pain, or a brief illness; but, from the subordination being in the wrong party, we found ourselves coming to a stand.

The difficulty was abolished by the kindness and sagacity of Mr. Atkinson, who had been my adviser throughout. He explained my position to a friend of his—a lady, the widow of a clergyman, deeply and practically interested in Mesmerism—possessed of great Mesmeric power, and of those high qualities of mind and heart which fortify and sanctify its influence. In pure zeal and benevolence, this lady came to me, and has been with me ever since. When I found myself able to repose on the knowledge and power (mental and moral) of my Mesmerist, the last impediments to my progress were cleared away, and I improved accordingly.

A few days after the arrival of my kind Mesmerist, I had my foot on the grass for the first time for four years and a half. I went down to the little garden under my windows. I never before was in the open air, after an illness of merely a week or two, without feeling more or less overpowered; but now, under the open sky, after four years and a half spent between bed and a sofa, I felt no faintness, exhaustion, or nervousness of any kind. I was somewhat haunted a day or two by the stalks of the grass, which I had not seen growing for so long (for, well supplied as I had been with flowers, rich and rare, I had seen no grass, except from my windows;) but at the time I was as self-possessed as any walker in the place. In a day or two, I walked round the garden, then down the lane, then to the haven, and so on, till now, in two months, five miles are no fatigue to me. At first, the evidences of the extent of the disease were so clear as to make me think that I had never before fully understood how ill I had been. They disappeared one by one; and now I feel nothing of them.

The same fortifying influence carried me through the greatest effort of all,—the final severance from opiates. What that struggle is, can be conceived only by those who have experienced, or watched it with solicitude in a case of desperate dependence on them for years. No previous reduction can bridge over the chasm which separates an opiated from the natural state. I see in my own experience a consoling promise for the diseased, and also for the intemperate, who may desire to regain a natural condition, but might fail through bodily suffering. Where the mesmeric sleep can be induced, the transition may be made comparatively easy. It

appears, however, that opiates are a great hindrance to the production of the sleep; but even so, the mesmeric influence is an inestimable help, as I can testify. I gave all my opiates to my Mesmerist, desiring her not to let me have any on any entreaty; and during the day I scarcely felt the want of them. Her mesmerizing kept me up; and, much more, it intercepted the distress,—obviated the accumulation of miseries under which the unaided sufferer is apt to sink. It enabled me to encounter every night afresh,—acting as it does in cases of insanity, where it is all-important to suspend the irritation—to banish the haunting idea. What further aid I derived in this last struggle from Mesmerism in another form, I shall mention when I detail the other case with which my own became implicated, and in which, to myself at least, the interest of my own has completely merged.

It will be supposed that during the whole experiment, I longed to enjoy the mesmeric sleep, and was on the watch for some of the wonders which I knew to be common. The sleep never came, and except the great marvel of restored health, I have experienced less of the wonders than I have observed in another. Some curious particulars are, however, worth noting.

The first very striking circumstance to me, a novice, though familiar enough to be practised, was the power of my Mesmerist's volitions, without any co-operation on my part. One very warm morning in August, when every body else was oppressed with heat, I was shivering a little under the mesmeric influence of my maid,—the influence, in those days, causing the sensation of cold currents running through me from head to foot.—“This cold will not do for you ma'am,” said M. “O!” said I, “it is fresh, and I do not mind it:” and immediately my mind went off to something else. In a few minutes, I was surprised by a feeling as of warm water tickling through the channels of the late cold.—In reply to my observation, that I was warm now, M. said, “Yes, ma'am, that is what I am doing. By inquiry and observation, it became clear to me, that her influence was, generally speaking, composing, just in proportion to her power of willing that it should be so. When I afterwards saw, in the case I shall relate, how the volition of the Mesmerist caused immediate waking from the deepest sleep, and a supposition that the same glass of water was now wine—now porter, &c., I became too much familiarized with the effect to be as much astonished as many of my readers will doubtless be.

Another striking incident occurred in one of the earliest of my walks. My Mesmerist

and I had reached a headland nearly half a mile from home, and were resting there, when she proposed to mesmerize me a little—partly to refresh me for our return, and partly to see whether any effect would be produced in a new place, and while a fresh breeze was blowing. She merely laid her hand on my forehead, and in a minute or two the usual appearances came, assuming a strange air of novelty from the scene in which I was. After the blurring of the outlines, which made all objects more dim than the dull gray day had already made them, the phosphoric lights appeared, glorifying every rock and headland, the horizon, and all the vessels in sight. One of the dirtiest and meanest of the steam tugs in the port was passing at the time, and it was all dressed in heavenly radiance—the last object that any imagination would select as an element of a vision. Then, and often before and since, did it occur to me that if I had been a pious and very ignorant Catholic, I could not have escaped the persuasion that I had seen heavenly visions. Every glorified object before my open eyes would have been a revelation; and my Mesmerist, with the white halo round her head, and the illuminated profile, would have been a saint or an angel.

Sometimes the induced darkening has been so great, that I have seriously inquired whether the lamp was not out, when a few movements of the head convinced me that it was burning as brightly as ever. As the muscular power oozes away under the mesmeric influence, a strange inexplicable feeling ensues of the frame becoming transparent and ductile. My head has often appeared to be drawn out, to change its form, according to the traction of my Mesmerist, and an indescribable and exceedingly agreeable sensation of transparency and lightness, through a part or the whole of the frame, has followed. Then begins the moaning, of which so much has been made, as an indication of pain. I have often moaned, and much oftener have been disposed to do so, when the sensations have been the most tranquil and agreeable. At such times, my Mesmerist has struggled not to disturb me by a laugh, when I have murmured, with a serious tone, “Here are my hands, but they have no arms to them:” “O dear! what shall I do? here is none of me left?” the intellect and moral powers being all the while at their strongest. Between this condition and the mesmeric sleep there is a state, transient and rare, of which I have had experience, but of which I intend to give no account. A somnambule calls it a glimmering of the lights of somnambulism and clairvoyance. To me there appears nothing like glimmering

in it. The ideas that I have snatched from it, and now retain, are, of all ideas which ever visited me, the most lucid, and impressive. It may be well that they are incommunicable—partly from their nature and relations, and partly from their unfitness for translation into mere words. I will only say that the condition is one of “no nervous excitement,” as far as experience and outward indications can be taken as a test. Such a state of repose, of calm translucent intellectuality, I had never conceived of; and no reaction followed, no excitement but that which is natural to every one who finds himself in possession of a great new idea.

Before leaving the narrative of my own case for that of another, widely different, I put in a claim for my experiment being considered rational. It surely was so, not only on account of my previous knowledge of facts, and of my hopelessness from any other resource, but on grounds which other sufferers may share with me;—on the ground that though the science of medicine may be exhausted in any particular case, it does not follow that curative means are exhausted;—on the ground of the ignorance of all men of the nature and extent of the reparative power which lies under our hand, and which is vaguely indicated by the term “Nature;”—on the ground of the ignorance of all men regarding the very structure, and much more, the functions of the nervous system;—and on the broad ultimate ground of our total ignorance of the principal of life,—of what it is, and where it resides, and whether it can be reached, and in any way beneficially affected by a voluntary application of human energy.

It seemed to me rational to seek a way to refreshment first, and then to health, amidst this wilderness of ignorances, rather than to lie perishing in their depths. The event seems to prove it so. The story appears to me to speak for itself. If it does not assert itself to all,—if any should, as is common in cases of restoration by Mesmerism,—try to account for the result by any means but those which are obvious, supposing a host of moral impossibilities rather than admit a plain new fact, I have no concern with such objectors or objections.

In a case of blindness cured, once upon a time, and cavilled at and denied, from hostility to the means, an answer was given which we are wont to consider sufficiently satisfactory: “One thing I know, that whereas I was blind, now I see.” Those who could dispute the fact after this must be left to their doubts. They could, it is true, cast out their restored brother; but they could not impair his joy in his new blessing, nor despoil him of his far higher privileges of belief in an allegiance to

his benefactor. Thus, whenever, under the Providence which leads on our race to knowledge and power, any new blessing of healing arises, it is little to one who enjoys it what disputes are caused among observers. To him, the privilege is clear and substantial.—Physically, having been diseased, he is now well. Intellectually, having been blind, he now sees.

For the wisest this is enough. And for those of a somewhat lower order, who have a restless craving for human sympathy in their recovered relish of life, there is almost a certainty that somewhere near them there exist hearts susceptible of simple faith in the unexplored powers of nature, and minds capable of an ingenuous recognition of plain facts, though they be new, and must wait for a theoretical solution.

### LETTER III.

Tynemouth, Nov. 20, 1844.

When I entered upon my lodgings here, nearly five years ago, I was waited upon by my landlady's niece, a girl of fourteen. From that time to this, she has been under my eye; and now, at the age of nineteen, she has all the ingenuousness and conscientiousness that won my respect at first, with an increased intelligence and activity of affections. I am aware that personal confidence, such as I feel for this girl, cannot be transferred to any other mind by testimony. Still, the testimony of an inmate of the same house for so many years, as to essential points of character, must have some weight: and therefore I preface my story with it. I would add that no wonders of Mesmerism could be greater than that a person of such character, age, and position should be able, for a long succession of weeks, to do and say things, every evening, unlike her ordinary sayings and doings, to tell things out of the scope of her ordinary knowledge, and to command her countenance and demeanor, so that no fear, no mirth, no anger, no doubt, should ever once make her move a muscle, or change colour, or swerve for one instant from the consistency of her assertions and denials on matters of fact or opinion. I am certain that it is not in human nature to keep up for seven weeks, without slip or trip, a series of deceptions so multifarious; and I should say so of a perfect stranger, as confidently as I say it of this girl, whom I know to be incapable of deception, as much from the character of her intellect as of her *morale*. When it is seen, as it will be, that she has also told incidents which it is impossible she could have known by ordinary means, every person who really wishes

to study such a case, will think the present as worthy of attention as any that can be met with, though it offers no array of strange tricks, and few extreme marvels.

My Mesmerist and I were taken by surprise by the occurrence of this case. My friend's maid told her, on the 1st of October, that J. (our subject) had been suffering so much the day before, from pain in the head and inflamed eye, that she (the maid) had mesmerised her; that J. had gone off into the deep sleep in five minutes, and had slept for twenty minutes, when her aunt, in alarm had desired that she should be awakened. J. found herself not only relieved from pain, but able to eat and sleep, and to set about her business the next day with a relish and vigour quite unusual. My friend saw at once what an opportunity might here offer for improving the girl's infirm health, and for obtaining light as to the state and management of my case, then advancing well, but still a subject of anxiety.

J. had for six years been subject to frequent severe pain in the left temple, and perpetually recurring inflammation of the eyes, with much disorder besides. She is active and stirring in her habits, patient and cheerful in illness, and disposed to make the least, rather than the most, of her complaints. She had, during these six years, been under the care of several doctors, and was at one time a patient at the Eye Infirmary at Newcastle; and the severe treatment she has undergone is melancholy to think of, when most of it appears to have been almost or entirely in vain. She herself assigns, in the trance, a structural defect as the cause of her ailments, which will prevent their ever being entirely removed: but from the beginning of the mesmeric treatment, her health and looks have so greatly improved, that her acquaintance in the neighborhood stop her to ask how it is that her appearance is so amended. There was in her case certainly no "imagination" to begin with; for she was wholly ignorant of Mesmerism, and had no more conception of the phenomena she was about to manifest than she has consciousness of them at this moment.

This unconsciousness we have guarded with the utmost care. We immediately resolved that, if possible, there should be one case of which no one could honestly say that the sleeping and waking states of mind were mixed. Our object has been, thus far, completely attained—one harmless exception only having occurred. This was when, speaking of the nature and destiny of man, an idea which she had "heard in church" intruded itself among some otherwise derived, and troubled her by the admixture. On

that occasion, she remarked afterwards, that she had been dreaming, and, she thought, talking of the soul and the day of judgment. This is the only instance of her retaining any trace of anything being said or done in the trance. Her surprise on two or three occasions, at finding herself, on awakening, in a different chair from the one she went to sleep in, must shew her that she has walked, but we have every evidence from her reception of what we say to her, and from her ignorance of things of which she had previously informed us, that the time of her mesmeric sleep is afterwards an absolute blank to her. I asked her one evening lately, when she was in the deep sleep, what she would think of my publishing an account of her experience with my own,—whether she should be vexed by it. She replied that she should like it very much; she hoped some body would let her know of it, and show it to her,—for though she remembered when asleep everything she had thought when asleep before, she could not keep any of it till she awoke. It was all regularly "blown away." But if it was printed, she should know; and she should like that.

To preserve the unconsciousness as long as possible, we have admitted no person whatever at our sésances, from the first day till now, who could speak to her on the subject. We shut out our maids at once; and we two have been the constant witnesses, with a visitor now and then, to the number of about twelve in the whole.

It is a memorable moment when one first hears the monosyllable, which tells that the true mesmeric trance has begun. "Are you asleep?" "Yes." It is crossing the threshold of a new region of observation of human nature. Then it goes on.—"How long shall you sleep?" "Half an hour."—"Shall you wake of yourself, or shall I wake you?" "I shall wake of myself."—And so she did to a second,—no clock or watch being near, but the watch in my hand. For some weeks she could always see the time, and foretell her own waking; but of late, in manifesting some new capabilities, she has lost much of this.

Nothing can induce her to say a word on a matter she is not perfectly sure of. She solemnly shakes her head, saying, "I won't guess: it won't do to guess." And sometimes, appealingly, "I would tell you if I could." "I'll try to see." "I'll do all I can," &c. When sure of her point, nothing can move her from her declarations. Night after night, week after week, she sticks to her decisions, strangely enough sometimes, as it appears to us: but we are not aware of

her ever yet having been mistaken on any point on which she has declared herself. We ascribe this to our having carefully kept apart the waking and sleeping ideas; for it is rare to find somnambules whose declarations can be at all confidently relied on. If any waking consciousness is mixed up with their sleeping faculties, they are apt to guess—to amuse their fancy, and to say anything that they think will best please their Mesmerist. J.'s strict and uncompromising truthfulness forms a striking contrast with the vagaries of hackneyed, and otherwise mismanaged somnambules.

It soon became evident that one of her strongest powers was the discernment of disease, its condition and remedies. She cleared up her own case first, prescribing for herself very fluently. It was curious to see, on her waking, the deference and obedience with which she received from us the prescriptions with which she herself had just furnished us. They succeeded and so did similar efforts on my behalf. I cannot here detail the wonderful accuracy with which she related, without any possible knowledge of my life ten and twenty years ago, the circumstances of the origin and progress of my ill-health, of the unavailing use of medical treatment for five years, and the operation of Mesmerism upon it of late. One little fact will serve our present purpose better. Soon after she was first mesmerized, I was undergoing my final severance from opiates—a serious matter to one who had depended so long and so desperately upon them. As I have said, I got through the day pretty well; but the nights were intolerable, from pain and nervous irritations, which made it impossible to rest for two minutes together. After four such nights, I believe my Mesmerist's fortitude and my own would have given out together, and we should have brought the laudanum bottle to light again, but for the bright idea, "let us ask J!" She said at once what my sufferings had been, and declared that I should sleep more and more by degrees, if I took—(what was as contrary to her own ordinary ideas of what is right and rational as to mine)—ale at dinner, and half a wine-glass full of brandy in water at night. I refused the prescription till reminded—"Remember she has never been wrong." I obeyed; the fact being kept secret between us two, in order to try, every evening, J.'s knowledge and opinion. She always spoke and advised, in a confident familiarity with incidents known only to us two, and carried me steadily through the struggle. I lost my miseries, and recovered my sleep, night by night, till, at the end of the week, I was quite well, without stimulant or sedative. Nothing can be

more remote from J.'s ordinary knowledge and thought than the structure of the human body, and the remedies for disease; and, though I was well aware how common the exercise of this kind of insight is in somnambules—how it is used abroad as an auxiliary to medical treatment—I was not the less surprised by the readiness and peremptoriness with which a person, in J.'s position, declared, and gave directions about things which she is wholly ignorant of an hour after, and was, during the whole of her life before.

Monday, October 14th, J. did not come up as usual to our seance. There was affliction in the house-hold. An aunt of J.'s, Mrs. A., a good woman I have long known, lives in a cottage at the bottom of our garden. Mrs. A.'s son, J.'s cousin, was one of the crew of a vessel which was this evening reported to have been wrecked near Hull. This was all that was known, except that the owner was gone to Hull to see about it. J. was about to walk to Shields with a companion to inquire, but the night was so tempestuous, and it was so evident that no news could be obtained, that she was persuaded not to go. But she was too much disturbed to think of being mesmerized. Next morning there was no news. All day there were flying reports,—that all hands were lost—that all were saved—but nothing like what afterwards proved to be the truth. In the afternoon (no tidings having arrived) we went for a long drive, and took J. with us. She was with us, in another direction, till tea-time; and then, on our return, there were still no tidings; but Mrs. A. was gone to Shields to inquire, and if letters had come, she would bring the news in the evening. J. went out on an errand, while we were at tea,—no person in the place having then any means of knowing about the wreck; and on her return, she came straight up to us for her seance. Two gentlemen were with us that evening, one from America, the other from the neighbourhood. I may say here, that we note down at the moment what J. says; and that on this evening there was the additional security of my American friend repeating to me, on the instant, (on account of my deafness,) every word as it fell.

J. was presently asleep, and her Mesmerist, knowing the advantage of introducing subjects on which the mind had previously been excited, and how the inspiration follows the course of the affections, asked, as soon as the sleep was deep enough,

"Can you tell us about the wreck?"

J. tranquilly replied,

"Oh! yes, they're all safe; but the ship is all to pieces."

"Were they saved in their boat?"

"No, that's all to pieces."

"How then?"

"A queer boat took them off; not their boat."

"Are you sure they are all safe?"

"Yes; all that were on board; but there was a boy killed. But I don't think it is my cousin."

"At the time of the wreck?"

"No, before the storm."

"How did it happen?"

"By a fall."

"Down the hatchways, or how?"

"No, he fell through the rigging, from the mast."

She presently observed, "My aunt is below, telling them all about it, and I shall hear it when I go down."

My rooms being a selection from two houses, this "below" meant two stories lower in the next house.

She continued talking of other things for an hour longer, and before she awoke, the gentlemen were gone. After inquiring whether she was refreshed by her sleep, and whether she had dreamed, ("No,") we desired her to let us know if she heard news of the wreck; and she promised, in all simplicity, that she would. In another quarter of an hour, up she came, all animation, to tell us that her cousin and all the crew were safe, her aunt having returned from Shields with the news. The wreck had occurred between Elsinore and Gottenberg, and the crew had been taken off by a fishing-boat, after two days spent on the wreck, their own boat having gone to pieces. She was turning away to leave the room, when she was asked,—

"So all are saved—all who left the port?"

"No, ma'am," said she, "all who were on board at the time: but they had had an accident;—a boy fell from the mast, and was killed on the deck."

Besides having no doubt of the rectitude of the girl, we knew that she had not seen her aunt,—the only person from whom tidings could have been obtained. But, to make all sure, I made an errand to the cottage the next morning, well knowing that the relieved mother would pour out her whole tale. My friend and I encouraged her; and she told us how she got the news, and when she brought it to Tynemouth,—just as we knew before. "How glad they must have been to see you 'at ours'!" said I.

"O yes, ma'ma," and she declared my landlady's delight.

"And J.," said I.

"Ma'am, I did not see J.," said she, simply and rapidly, in her eagerness to tell. Then, presently,— "They told me, ma'ma, that J. was up stairs with you."

Two evenings afterwards, J. was asked, when in the sleep, whether she knew what she related to us by seeing her aunt telling the people below? to which she replied, "No; I saw the place and the people themselves,—like a vision."

Such was her own idea, whatever may be the conjectures of others.

#### LETTER IV.

Tynemouth, Nov. 24, 1844.

I have too little knowledge of Mesmerism to be aware whether the more important powers of somnambulism and clairvoyance abide long in, or can be long exercised by, any individual. I have heard of several cases where the lucidity was lost after a rather short exercise; but in those cases there was room for a supposition of mismanagement. The temptation is strong to overwork a somnambule; and especially when the faculty of insight relates to diseases, and sufferers are languishing on every side. The temptation is also strong to prescribe the conditions,—to settle what the somnambule shall or shall not see or do, in order to convince oneself or somebody else, or to gratify some desire for information on a particular subject. It is hard to say who was most to blame with regard to Alexis,—the exhibitor who exposed him to the hardship of unphilosophical requirements, or the visitors who knew so little how to conduct an inquiry into the powers of Nature, as to prescribe what her manifestations should be. The "failures," in such cases, go for nothing, in the presence of one new manifestation. They merely indicate that there is no reply to impertinent questions. The successes and failures together teach that the business of inquirers is to wait upon Nature, to take what she gives, and make the best they can of it, and not disown her because they cannot get from her what they have predetermined. Strongly as I was impressed by this, when reading about Alexis, from week to week last spring, I still needed a lesson myself,—a rebuke or two such as our somnambule has more than once given us here. As soon as her power of indicating and prescribing for disease was quite clear to us, we were naturally anxious to obtain replies to a few questions of practical importance. We expressed, I hope, no impatience at the often repeated "I'll try to see: but I can't make it out yet." "I shall not get a sight of that again till Thursday." "It's all gone:—it's all dark,—and I shall see no more to-night." We reminded each other of the beauty and value of her truthfulness, from which she could not be turned aside, by any pressure of our eagerness.

But one evening out came an expression, which procured us a reproof which will not be lost upon us. She was very happy in the enjoyment of some of her favorite objects, crying out "Here come the lights! This is a beautiful light! It is the quiet, steady, silent light!" And then she described other kinds, and lastly one leaping up behind the steady light, and shining like the rays of the sun before the sun itself is visible. When this rapture had gone on some time, she was asked "What is the use of these lights, if they show us nothing of what we want?" In a tone of gentle remonstrance, she said earnestly, "Ah!—but you must have patience!"

And patience comes with experience. We soon find that such extraordinary things drop out when least expected, and all attempts to govern or lead the results and the power are so vain, that we learn to wait, and be thankful for what comes.

The first desire of every witness is to make out what the power of the Mesmerist is, and how it acts. J seems to wish to discover these points; and she also struggles to convey what she knows upon them. She frequently uses the act of mesmerizing another person as soon as the sleep becomes deep; and if not deep enough to please her, she mesmerizes herself,—using manipulations which she can never have witnessed. Being asked about the nature of the best mesmeric efforts, she replied that every power of body and mind is used, more or less, in the operation; but that the main thing is to desire strongly the effect to be produced. The patient should do the same.

"People may be cured who do not believe in the influence; but much more easily if they do."

"What is the influence?"

"It is something which the Mesmerizer throws from him; but I cannot say what."

And this was all that evening; for she observed, (truly), "It is a few minutes past the half hour; but I'll just sleep a few minutes longer."

"Shall I wake you then?"

"No, thank you; I'll wake myself." And she woke up accordingly, in four minutes more. Another evening, "Do the minds of the Mesmerist and the patient become one?"

"Sometimes, but not often."

"Is it then that they taste, feel, &c., the same things at the same moment?"

"Yes."

"Will our minds become one?"

"I think not."

"What are your chief powers?"

"I like to look up, and see spiritual things. I can see diseases; and I like to see visions."

When asked repeatedly whether she could read with her eyes shut, see things behind her, &c., she has always replied that she does not like that sort of thing, and will not do it;—she likes "higher things." And when asked how she sees them—

"I see them, not like dreams in common sleep,—but things out of other worlds;—not the things themselves, but impressions of them. They come through my brain."

"Mesmerism composes the mind, and separates it from the common things of every day."

"Will it hurt your Mesmerist?"

"It is good for her. It exercises some powers of body and mind, which would otherwise lie dormant. It gives her mind occupation, and leads her to search into things."

"Can the mind hear otherwise than by the ear?"

"Not naturally; but a deaf person can hear the Mesmerist, when in the sleep;—not any body else, however."

"How is it that you can see without your eyes?"

"Ah! that is a curious thing. I have not found it out yet."—Again when she said her time was up, but she would sleep ten minutes longer.

"Shall I leave you, and mesmerize Miss M.?"

"No: I should jump about and follow you. I feel so queer when you go away; The influence goes all away.—It does so when you talk with another."

"What is the influence," &c. &c. as before.

"I have seen as many places since I was mesmerized; but they all go away when I wake. They are like a vision,—not a common dream."

"How do you see these? Does the influence separate soul and body?"

"No: it sets the body to rest; exalts and elevates the thinking powers."

When marking, from her attitude and expression of countenance, the eagerness of her mind, and vividness of her feelings, and when listening to the lively or solemn tones of her voice, I have often longed that she had a more copious vocabulary. Much has probably been lost under the words "queer," "beautiful," "something," "a thing," &c., which would have been clearly conveyed by an educated person. Yet some of her terms have surprised us, from their unsuitableness to her ordinary language; and particularly her understanding and use of some few, now almost appropriated by Mesmerism. On one of the earliest days of her sleep, before we learned her mesmeric powers and habits, she was asked one evening, after a good deal of questioning,

"Does it tire you to be asked questions?"

"No."

"Will it spoil your lucidity?"

"No."—Whereat I made a dumb sign to ask her what "lucidity" meant.

"Brightness," she instantly answered.

In the course of the day, her Mesmerist asked her carelessly, as if for present convenience, if she could tell her the meaning of the word "lucidity."

J. looked surprised, and said, "I am sure, ma'am, I don't know. I don't think I ever heard the word."

When asleep the next day, she was again asked,

Does it hurt your lucidity to be asked many questions?"

"When not very deep in sleep, it does."

"What is lucidity?"

"Brightness, clearness, light shining through. I told you that yesterday."

"Have you looked for the word since?"

"No: and I shall not know it when I am awake."

It struck us that we would try, another evening, whether her Mesmerist's will could affect her taste. In her absence, we agreed that the water should be silently willed to be sherry next night. To make the experiment as clear as possible, the water was first offered to her, and a little of it drank as water. Then the rest was, while still in her hands, silently willed to be sherry; she drank it off, —half a tumbler full—declared it very good; but, presently, that it made her tipsy. What was it? "Wine—white wine." And she became exceedingly merry and voluble, but refused to rise from her chair, or dance any more, or go down stairs, for she could not walk steady, and should fall and spoil her face, and moreover frighten them all below. I afterwards asked her Mesmerist to let it be porter the next night. J. knew nothing of porter, it seems, but called her refreshment "a nasty sort of beer." Of late she has ceased to know and tell the time,—"can't see the clock-face," as she declares. The greatest aptitude at present seems to be for being affected by metals, and for the singular muscular rigidity producible in the mesmeric sleep.

When her arms or hands are locked in this rigidity, no force used by any gentleman who has seen the case can separate them; and in her waking state she has certainly no such muscular force as could resist what has been ineffectually used in her sleeping state. The rigid limbs then appear like logs of wood, which might be broken, but not bent; but a breath from her Mesmerist on what is called by some phrenologists the muscular organ, causes her muscles to relax, the fin-

gers to unclove, and the limbs to fall into the attitude of sleep. During these changes, the placid sleeping face seems not to belong to the owner of the distorted and rigid limbs, till these last slide into their natural positions, and restore the apparent harmony.

Not less curious is it to see her inextricable gripe of the steel snuffers, or the poker, detached by a silent touch of the steel with gold. When no force can wrench or draw the snuffers from her grasp, a gold pencil-case or a sovereign stealthily made to touch the point of the snuffers, causes the fingers to unclasp and the hands to fall. We have often put a gold watch into her hands, and when the gripe is firm, her mesmerist winds the gold chain round something of steel. In a minute or less occurs the relaxation of the fingers, and the watch is dropped into the hand held beneath. While grasping these metals she sometimes complains that they have burnt her.

## LETTER VII.

Tynemouth, Nov. 28, 1844.

Many persons suppose that when the truth, use, and beauty of Mesmerism are established, all is settled; that no further ground remains for a rejection of it. My own late experience, and my observation of what is passing abroad, convince me that this is a mistake. I know that there are many who admit the truth and function of Mesmerism, who yet discountenance it. I know that the repudiation of it is far more extensive than the denial. It gives me pain to hear this fact made the occasion of contemptuous remark, as it is too often by such as know Mesmerism to be true. The repudiation I speak of proceeds from minds of a high order; and their superstition (if superstition it be) should be encountered with better weapons than the arrogant compassion which I have heard expressed.

I own I have less sympathy with those who throw down their facts before the world, and then despise all who will not be in haste to take them up, than with some I know of, who would seriously rather suffer to any extent, than have recourse to relief which they believe unauthorized; who would rather that a mystery remained sacred than have it divulged for their own benefit; who tell me to my face that they would rather see me sent back to my couch of pain than witness any tampering with the hidden things of Providence. There is a sublime rectitude of sentiment here, which commands and wins one's reverence and sympathy; and if the facts of the history and condition of



Mesmerism would bear out the sentiment, no one would more cordially respond to it than I—no one would have been more scrupulous about procuring recovery by such means—no one would have recoiled with more fear and disgust from the work of making known what I have experienced and learned. But I am persuaded that a knowledge of existing facts clears up the duty of the case, so as to prove that the sentiment must, while preserving all its veneration and tenderness, take a new direction, for the honor of God and the safety of man.

Granting to all who wish that the powers and practice of Mesmerism (for which a better name is sadly wanted) are as old as man and society; that from age to age there have been endowments and functions sacred from popular use, and therefore committed by providential authority to the hands of a sacred class; that the existence of mysteries ever has been, and probably must ever be, essential to the spiritual welfare of man; that there should ever be a powerful sentiment of sanctity investing the subject of the ulterior powers of immortal beings in their mortal state; that it is extremely awful to witness, and much more to elicit, hidden faculties, and to penetrate by their agency in to regions of knowledge otherwise unattainable;—admitting all these things, still the facts of the present condition of Mesmerism in this country, and on two continents, leave to those who know them, no doubt of the folly and sin of turning away from the study of the subject. It is no matter of choice whether the subject shall remain sacred—a deposit of mystery in the hands of the Church—as it was in the Middle Ages, and as the Pope and many Protestants would have it still. The Pope has issued an edict against the study and practice of Mesmerism in his dominions; and there are some members of the Church of England who would have the same suppression attempted by means of ecclesiastical and civil law at home. But for this it is too late; the knowledge and practice are all abroad in society; and they are no more to be reclaimed than the waters, when out in floods, can be gathered back into reservoirs. The only effect of such prohibitions would be to deter from the study of Mesmerism, the very class who should assume its administration, and to drive disease, compassion, and curiosity into holes and corners to practice as a sin what is now done openly and guiltlessly, however recklessly, through an ignorance for which the educated are responsible. The time past for facts of natural philosophy to be held at discretion by priesthoods; for any facts which concern all human beings to be a de-

posit in the hands of any social class. Instead of re-enacting the scenes of old—setting up temples with secret chambers, oracles, and miraculous ministrations—instead of reviving the factitious sin and cruel penalties of witchcraft, (all forms assumed by mesmeric powers and faculties in different times), instead of exhibiting false mysteries in an age of investigation, it is clearly our business to strip false mysteries of their falseness, in order to secure due reverence to the true, of which there will ever be no lack. Mystery can never fail while man is finite: his highest faculties of faith will, through all time and all eternity, find ample exercise in waiting on truths above his ken: there will ever be in advance of the human soul, a region “dark through excess of light;” while all labor spent on surrounding clear facts with artificial mystery is just so much profane effort spent in drawing minds away from the genuine objects of faith. And look at the consequences! Because philosophers will not study the facts of that mental rapport which takes place in Mesmerism, whereby the mind of the ignorant often gives out in echo the knowledge of the informed, we have claims of inspiration springing up right and left. Because medical men will not study the facts of the mesmeric trance, nor ascertain the extreme of its singularities, we have tales of Estaticas, and of sane men going into the Tyrol and elsewhere to contemplate, as a sign from heaven, what their physicians ought to be able to report of at home as natural phenomena easily producible in certain states of disease. Because physiologists and mental philosophers will not attend to facts from whose vastness they pusillanimously shrink, the infinitely delicate mechanism and organization of brain, nerves and mind are thrown as a toy into the hands of children and other ignorant persons, and of the base. What, again, can follow from this but the deeceration, in the eyes of the many, of things which ought to command their reverence? What becomes of really divine inspiration when the commonest people find they can elicit marvels of prevision and insight? What becomes of the veneration for religious contemplation when Estaticas are found to be at the command of very unhallowed—wholly unauthorized hands? What becomes of the respect in which the medical profession ought to be held; when the friends of the sick and suffering, with their feelings all alive, see the doctors' skill and science overborne and set aside by means at the command of an ignorant neighbor—means which are all ease and pleasantness? How can the profession hold its dominion over minds, however

backed by law and the opinion of the educated, when the vulgar see and know that limbs are removed without pain, in opposition to the will of the doctors, and in spite of their denial of the facts? What avails the decision of a whole College of Surgeons that such a thing could not be, when a whole town full of people know that it was? Which must succumb, the learned body or the fact? Thus are objects of reverence desecrated, not sanctified, by attempted restriction of truth, or of research into it.—Thus are human passions and human destinies committed to reckless hands, for sport or abuse. No wonder if somnambules are made into fortune-tellers—no wonder if they are made into prophets of fear, malice and revenge, by reflecting in their somnambulism the fear, malice, and revenge of their questioners; no wonder if they are made even ministers of death, by being led from sick-bed to sick-bed in the dim and dreary alleys of our towns, to declare which of the sick will recover, and which will die! Does any one suppose that powers so popular, and now so diffused, can be interdicted by law—such oracles silenced by the reserve of the squeamish—such appeals to human passions hushed—in an age of universal communication, by the choice of a class or two to be themselves dumb? No: this is not the way. It is terribly late to be setting about choosing a way, but something must be done; and that something is clearly for those whose studies and art relate to the human frame to take up, earnestly and avowedly, the investigation of this weighty matter; to take its practice into their own hands, in virtue of the irresistible claim of qualification. When they become the wisest and most skilful in the administration of Mesmerism, others, even the most reckless vulgar, will no more think of interfering than they now do of using the lancet, or operating on the eye. Here, as elsewhere, knowledge is power. The greater knowledge will ever insure the superior power. At present, the knowledge of Mesmerism, superficial and scanty as it is, is out of the professional pale. When it is excelled by that which issues from within the professional pale, the remedial and authoritative power will reside where it ought: and not till then. These are the chief considerations which have caused me to put forth these letters in this place;—an act which may seem rash to all who are unaware of the extent of the popular knowledge and practice of Mesmerism. The *Athenæum*\* is not likely to reach the ignorant classes of our

towns; and if it did, the cases I have related would be less striking to them than numbers they have learned by the means of itinerant Mesmerists. The *Athenæum* does reach large numbers of educated and professional men; and I trust some of them may possibly be aroused to consideration of the part it behoves them to take.

As for the frequent objection brought against inquiry into Mesmerism, that there should be no countenance of an influence which gives human beings such power over one another, I really think a moment's reflection, and a very slight knowledge of Mesmerism would supply both the answers which the objection requires. First, it is too late, as I have said above; the power is abroad, and ought to be guided and controlled. Next, this is but one addition to the powers we have over one another already; and a far more slow and difficult one than many which are safely enough possessed. Every apothecary's shop is full of deadly drugs—every workshop is full of deadly weapons—wherever we go, there are plenty of people who could knock us down, rob, and murder us; wherever we live there are plenty of people who could defame and ruin us. Why do they not? Because moral considerations deter them. Then bring the same moral considerations to bear on the subject of Mesmerism. If the fear is of laying victims prostrate in trance, and exercising spells over them, the answer is, that this is done with infinitely greater ease and certainty by drugs than it can ever be by Mesmerism; by drugs which are to be had in every street. And as sensible people do not let narcotic drugs lie about in their houses, within reach of the ignorant and mischievous, so would they see that Mesmerism was not practised without witnesses and proper superintendence. It is a mistake, too, to suppose that Mesmerism can be used at will to strike down victims, helpless and unconscious, as laudanum does, except in cases of excessive susceptibility from disease; cases which are of course under proper ward. The concurrence of two parties is needful in the first place, which is not the case in the administration of narcotics; and then the practice is very uncertain in its results on most single occasions; and again, in the majority of instances; it appears that the intellectual and moral powers are more, and not less vigorous than in the ordinary state. As far as I have any means of judging, the highest faculties are seen in their utmost perfection during the mesmeric sleep; the innocent are stronger in their rectitude than ever, rebuking levity, reproving falsehood and flattery, and indignantly refusing to tell secrets, or say or do any thing they ought not; while

\* The Letters were first published in London, in the "*Athenæum*," a Journal of English and Foreign Literature and the Fine Arts."

the more faulty confess their sins, and grieve over and ask pardon for their offences. The volitions of the Mesmerist may actuate the movements of the patient's limbs, and suggest the material of his ideas; but they seem unable to touch his *morale*. In this state the *morale* appears supreme, as it is rarely found in the ordinary condition. If this view is mistaken, if it is founded on too small a collection of facts, let it be brought to the test and corrected. Let the truth be ascertained and established; for it cannot be extinguished, and it is too important to be neglected.

And now one word of respectful and sympathizing accost unto those reverent and humble spirits who painfully question men's right to exercise faculties whose scope is a new region of insight and foresight. They ask whether to use these faculties be not to encroach upon holy ground, to trespass on the precincts of the future and higher life. May I inquire of these in reply, what they conceive to be the divinely appointed boundary of our knowledge and our powers? Can they establish, or indicate, any other boundary than the limit of the knowledge and powers themselves? Has not the attempt to do so failed from age to age? Is it not the most remarkable feature of the progress of Time that, in handing over the future into the past, he transmutes its material, incessantly, and without pause, converting what truth was mysterious, fearful, impious to glance at, into that which is safe, beautiful and beneficent to contemplate and use,—a clearly consecrated gift from the Father of all to the children who seek the light of his countenance. Where is his pleasure to be ascertained but in the ascertainment of what he gives and permits, in the proof and verification of what powers he has bestowed on us, and what knowledge he has placed within our reach? While regarding with shame all pride of intellect, and with fear the presumption of ignorance I deeply feel that the truest humility is evinced by those who most simply accept and use the talents placed in their hands; and that the most child-like dependence upon their Creator appears in those who fearlessly apply the knowledge he discloses to the furtherance of that great consecrated object the welfare of the family of man.

HARRIET MARTINEAU.

These letters of Miss Martineau are hard pills for the "old ladies in breeches" to swallow and it is amusing to see the wry faces they make in contemplation of the dire necessity which awaits them. The Editor of the London *Lancet* has had the ludicrous vanity to

express his astonishment at the time Miss Martineau in resorting to the reagency of mesmerism, after he forsooth exposed what he arrogantly assumed its "arrant, trickery and scandal." It appears, however, that this vaunted exposure was not very satisfactory even to the rable sisterhood in inexpressibles, which he has latterly identified himself and it is perfectly evident to every discerning reader of his flippant and inconsequent remarks upon this case, that he has not superciliously dismissed it without investigation, but is blankly ignorant of the subject of which he coolly usurps the piracy. But even this conduct is tolerable perhaps only laughable, when compared with the outrageous brutality of the exposure upon Miss Martineau, committed by Robert Hull, of Norwich, in England, that distinguished lady resides. It is indelicate, both in expression and all for reprint in this work, and is only equalled by the meanest blackguards. Yet this coarse and unmanly piece of obscenity, together with the *Lancet's* artful contemptuousness, with a few garbled extracts from Miss Martineau's letters, is only selected and hashed up by the *Boston Medical Journal*, for the benefit of its readers the musty fraternity in this country to which we have referred. [*Editor Dissector.*]

**The Presence of Animalculæ in the Stomach.**

Dr. Goodfellow relates, in the *American Gazette*, a case of fever in which he discovered a great number of animalculæ in the contents of the stomach and in the blood. The following is a condensation of his remarks:—

"On examining the fluid ejected from the stomach during life, and on the day following that on which the vomiting commenced by the aid of the microscope, myriads of animalculæ were observed in very great motion. These minute organisms appeared to vary in length from 1-5000th to 1-3000th of an inch, and their diameter (I am convinced was the same throughout their length) from about 1-40,000th to 1-2000th of an inch. Nothing was observed by which I could distinguish them from the tail, although sometimes or tremity appeared certainly larger than

other; close observation enabled me to discover that this appearance was owing to one extremity being a little out of focus; when the whole of one animalcule was in focus, no difference could be detected. Their movements, when active, closely resembled those of the small naiades so frequently seen in river water after rain, but when they became sluggish from the inclosure of the animalcula between slips of glass for several hours, they resembled those of the larvæ of the common meat fly, *musca vomitoria*. The fluid ejected after every attack of vomiting was found to contain the animalcula in as large numbers as when it was first examined; they were also found in the sanguineous exudation from the lining membrane of the mouth and nostrils. The vomited matters also contained a considerable quantity of altered blood corpuscles, epithelial cells, and a small quantity of mucus, but no trace of bilious admixture. Similar animalculæ were observed in blood taken from the capillaries of the skin, but in such small numbers that they escaped my notice for several examinations. Repeated observation, however, ultimately convinced me of their existence in the blood taken from the capillaries during life. At the autopsy, forty-eight hours P. M., they were still seen in large numbers in the contents of the stomach, and in the blood taken from both sides of the heart, and the aorta, carotid, venæ cavæ, pulmonary artery and veins, brachial artery and veins, and the femoral artery and vein. They were also found, during life, in the fæces, but here they were never seen to exercise any movement.—None could be detected in the gall-bladder or biliary ducts, in the pancreatic fluid, in the urine, or in the frothy mucus in the large bronchial tubes.

Dr. Goodfellow expresses his ignorance of the manner in which those animals got into the blood-vessels. He does not believe that they were introduced into the blood from the stomach, but rather that they passed, and they could do this readily, owing to their minute size, from the blood-vessels into the stomach.—*London Lancet*.

#### Means of Arresting Hemorrhage from Leech Bites.

The "Journal de Chirurgie" contains the details of an interesting case, narrated by Dr. Bordes, in which the twisted suture was successfully used to arrest hemorrhage from leech bites. The operation is a trifling one, and, it appears, always successful, and consequently deserves to be better known. M.

Bordes was called one evening to attend a young English lady, twenty-two years of age, who had had forty leeches applied to the abdomen at seven o'clock in the morning. Seven or eight of the leech bites were bleeding in the same manner as if veins had been opened with the lancet. She had lost all consciousness. Compression was impossible, and cauterization was not likely to succeed with so abundant a flow of blood. M. Bordes, recollecting the manner in which veterinary surgeons close the vein after bleeding horses, resolved to try the effect of the twisted suture. Pinching the skin at the orifice of the wound he passed a small needle through it, and then tied a thread around. The slight operation was repeated for each orifice, and effectually arrested the bleeding. It was only the following day that the lady recovered her senses, and the convalescence lasted three months. M. Bordes has since frequently resorted to this plan, and always with success.

#### On the consequences of Insects or Foreign Bodies gaining admission into the auditory passages, and on the best modes of extracting them.

By W. WRIGHT, Esq., London.

The case mentioned by Mr. Hatfield, in THE LANCET for April 13th, quoted by Sir B. Brodie, of a child in whose ear there was a pea, the attempts to remove which caused death, is by no means a singular unfortunate instance, and probably had not those attempts been made so injudiciously, the case would not have terminated fatally. I had under my care, in 1818, a young gentleman who had had a pea in his auditory passage four years and a half, which I extracted without pain. I gave the particulars of the treatment in several medical journals: he is now alive, and filling a responsible station abroad.

The case of the boy who died, after suffering great agony, through injury inflicted by the endeavors to extract the head of a nail from his left ear, which was not found during his life, or after the most rigid post-mortem examination, is interesting. In that instance, an efficient examination before the cutting and laceration began, would have probably saved the poor boy's life.

A girl who died at London hospital, from the operations for extracting a pebble from her ear, was destroyed by gross ignorance.—I have pebbles, and even a small shell, which I removed from the ears of patients without pain or inconvenience. It is not necessary to mention more of those cases which have

terminated fatally through the *maladroit* endeavors of well-intentioned but incompetent men. The proper method of examining the auditory passage is so little known, that I cannot but commiserate the poor patients who are the subjects of examination by funnel-shaped spring forceps, as suggested by Kramer, and with equal stolidity imitated by other writers, some of whom give plates of this most absurd contrivance; whereas nothing is more simple or easy to the patient or practitioner than the examination of the ear, or the extraction of any substance from it. The syringe, however, is not always to be depended upon, even in the hands of the most competent operators: hence I use small steel hooks, with the handles marked, and these being passed down flatwise beyond the substance, and then turned, never fail of success; of course I have them of all sizes and shapes.

It is very injudicious to endeavor to remove any large live insect, because its struggles are so violent as to affect the brain, through the fibres of the portio dura becoming excited, and communicating that excitement to the base of the nerve. Want of attention to this caused the death of a boy in the Bristol Infirmary, several years ago; whereas had the ear been filled with oil, the insect would have been killed, and might easily have been removed. In the case of a man in Ireland, who had a horse-leech in his ear, and died an hour and a half after it was extracted, such a termination might have been prevented by either injecting salt and water, or sprinkling salt, into the ear.—*Lancet*.

Physiological and Pathological Researches on Tuberculosis.

BY H. LEBERT, M. D.

(*Muller's Archives*, Nos. 2 and 3, 1844.)

SUMMARY.

1. The pathological peculiarities of tubercle are exhibited in its microscopical structure.

2. The constant elements of tubercle are, molecular granules, an adhesive hyaline mass, and peculiar tubercle cells, from 0.05 to 0.01 of a millimetre in diameter—of irregular form, containing no nucleus but molecular granules.—Water, æther, and weak acid, scarcely change them. Concentrated alkalies, liq. ammonia, dissolve them completely.

3. The dimensions of tubercle cells undergo many variations, which depend rather

upon the different organs than upon differences of age. They are most easily recognised in crude yellow tubercle.

4. Tubercle corpuscles consist of cells having a very low power of development.

5. The opinion that tubercular substance is a modification of pus is contradicted in the most positive manner by the microscope.

6. Tubercle corpuscles are distinguished from undeveloped pus globules, by the spherical form and greater diameter of the latter. Cancer cells are clearly distinguished by their being two to four times as large, and consisting of a cell wall, and a large clear nucleus, often containing nucleoli.

7. When tubercle softens, the adhesive matter becomes fluid, and the corpuscles rounded; their opposition to each other is destroyed, they become distended, and hence appear larger. This, however, is not the result of growth, but the beginning of decay.

8. The pus which surrounds softened tubercle never originates in the tubercle itself, but is formed directly in the surrounding parts.

9. The microscope can determine whether we have to do with softened tubercle, with purulent matter, or whether there be a mixture of both.

10. Pus appears to destroy quickly tubercle corpuscles, and thus to make their individuality undistinguishable.

11. When the irregular outline and close apposition of tubercle cells, in their first stage of development, present the second stage of separation from each other, distention and roundness, then the third stage of disintegration commences. The corpuscles are broken up into a granular, half-fluid mass, and lose their individuality.

12. Tubercle becoming hard and calcareous (*état cretace*) is a natural process of cure. The peculiar elements of tubercle disappear, and become in part absorbed. In their place, small mineral granules, and sometimes crystals of cholesterine, are deposited. The deposition of lime is generally accompanied by an increase of pigment. According to the chemical analysis of M. T. Boudet, there exist, as principal elements, chlorate of sodium and sulphate of soda; salts of lime only in small quantity.

13. Among the occasional elements of tubercle may be mentioned melanosis, which is the most frequent; further, fat, filaments, dark olive-colored globules, and crystals. Sometimes we find mixed with tubercle, but in no way belonging to its substance, the products of inflammation, serum, pus, and the elements of epithelium in various forms.

14. The seat of tubercle in the lungs is generally the elastic cellular tissue. Yet it

is also found in the air vesicles, and in the bronchial capillaries.

15. The tissue of the lung surrounding tubercle may be sound, but is mostly in a state of congestion or inflammation. The last is either globular, or spread over a large portion of a lobe.

16. The pus found surrounding tubercle is often not the result of grey hepatization, but comes from the mucous membrane of the small, partly destroyed and open bronchi, in the substance of the lung.

17. The pneumonia surrounding tubercles has nothing specific; there is found in it the same elements of the exudation as in ordinary pneumonia—viz. aggregate globules, fat vesicles, pus corpuscles, &c. Tubercle corpuscles are not generally found among the products of exudation.

18. Sometimes there is found surrounding tubercle a peculiar form of chronic inflammation, with yellowish hepatization, and increased consistence of the tissue. The vesicles of the lung, small bronchi, and parenchyma, are partly filled with coagulated fibrin, and a formation of new fibrous filaments, partly with aggregate and pus corpuscles, and in the centre of the chronic slightly vascular hepatization there is found a highly vascular acute lobular pneumonia.

19. The degree of consistence of acute or chronically inflamed lungs depends upon the amount they contain of fibrin, fluid blastema, and corpuscles. Much fibrin, with a small quantity of blastema and corpuscles, produce induration; much fluid blastema, with a small number of corpuscles, cause softening. An equal proportion of these different elements produces a medium degree of hardness.

20. Lungs rendered compact from the pressure of a pleuritic effusion often exhibit throughout no appearance of inflammation.

21. The grey semi-transparent granulations of the tissue of lung are also a true form of tubercle. Their color and transparency are partly dependent on the apposition of the tubercle corpuscles to each other, throughout the intact fibres of the lung, partly on the existence of a large quantity of adhesive material.

22. The grey granulation is not always the commencement of the formation of yellow tubercle; the last is often primarily developed as such.

23. The vascular network found surrounding the grey granulations is neither a proof of inflammation nor of a new formation, but rather results from the pressure on many capillaries, occasioned by the tubercular deposition, and the consequent distention of the remaining capillaries, which are reduced in number.

24. The opinion that grey granulations may be the result of inflammation is opposed by positive observation.

25. The process of ulceration is throughout different from that of suppuration. Thus we find on the mucous membrane of the bronchi, suppuration without ulceration, and on the intestinal mucous membrane, ulcers without suppuration. The last cause of ulceration is from inflammation by parasitic deposition, sometimes from causes unknown to us, producing obliteration in a certain number of capillary vessels.

26. The tubercular ulcer of the lung is not physiologically different from the tubercular ulcer of the intestines or of the skin.

27. In tuberculosis a general ulcerative diathesis is found to take place even in organs where tubercles appear very seldom. This is clearly established by the excellent labors of Louis.

28. The internal fluid layer of the contents of a cavernous ulcer of the lung, contains—*a*, tubercular substance, seldom intact, the corpuscles for the most part in a state of distention, or broken down into granules; *b*, pus corpuscles sometimes in small quantity; *c*, “puridea” corpuscles; *d*, aggregate corpuscles; *e*, purulent mucus; *f*, blood corpuscles; *g*, filaments of the lung; *h*, black pigment; *i*, epithelium; *k*, sometimes crystals; and *l*, adipose tissue.

29. Amongst this thick fluid are generally found pseudo-membranes, consisting of coagulated pus elements inclosing fibrin.

30. Among the pseudo-membranes covering the diseased tissue of the lung is found a true pus membrane, consisting of filaments inclosing small corpuscles. It generally becomes partly destroyed by a new irruption of tubercle occurring in the same.

31. This membrane is a natural effort towards cure, isolating the ulcerous tissue of the lung, and thus favoring its cicatrization.

32. Between the pus membrane and the tissue of the lung is often found newly-formed filamentous tissue.

33. Surrounding the cavernous ulcer is generally found a deposition of recent crude tubercle.

34. The healing of caverns takes place,—*a*, from isolation, by means of the pus membrane, and shrinking of the cavern; *b*, by deposition of fibrin, which fills up the cavern, grows to its walls, and so forms a fibrous cicatrix; *c*, by mineral deposition in the cavity, and formation of a filamentous tissue around the same.

35. There are no peculiar mucous bodies; what has been described as such are nothing but pus corpuscles secreted from diseased

membranes. Pus tests are thus henceforth useless.

36. In the sputa of phthisical individuals the following elements are found—*a*, mucus; *b*, pus corpuscles, existing in large quantity—they are sometimes found in a shrunken state, and may easily induce error; *c*, epithelium in its various forms; *d*, granular substance in great quantity, probably consisting of broken down tubercle corpuscles; *e*, small yellow shreds, pieces of pseudo-membrane; *f*, filaments of the lung; *g*, fat vesicles; *h*, blood corpuscles, sometimes combined with coagulated fibrin; *i*, aggregate corpuscles; *k*, small infusoria, vibrios, but this seldom, and only accidentally.

37. The peculiar tubercle cells are not commonly found in the expectoration of phthisis. There are also no constant means of distinguishing the sputum of phthisis pulmonalis from that of other diseases.

38. Filaments of the lung in sputum indicate an ulcerous cavity. Their presence, however, is rather exceptionable than otherwise.

39. The greatest portion of the sputa in phthisis does not come from caverns, but is secreted from the bronchi.

40. The copious mucus and purulent secretion of the bronchi, so frequent in phthisis pulmonalis, is one of the ways nature adopts in order to prevent the great destruction of the circulation which would necessarily result from the complete imperviousness of one portion of the capillary system, and distention of the rest.

41. A portion of the broken down tubercle of the ulcerous cavity mixes itself with the expectoration; another portion is re-absorbed.

42. The law announced by Louis, that after the age of 15 years the lungs contain tubercles, when they are found in other organs, is throughout correct. It may, however, be so far modified, that if very extensive tubercular deposition has occurred anywhere in an organ—as, for instance, in the liver, the kidneys, or the peritoneum,—the lungs often contain very little.

43. In childhood, tubercles are more frequent in the membranes of the brain, the glandular system, and the peritoneum, than in adults.

44. The thickening of the pleura in tuberculosis of the lung, not only originates in inflammation, but also in increased nutrition, from its greater vascularity, dependent on the diminution of blood in the lungs. Thus a supplementary organ for the circulation of the lung is produced, and at the same time, from its growth to the thoracic walls, the

anastomosis with the great circulation is increased.

[Nothing can be more erroneous than this old astrological theory, which imputes the thickening of the pleura in tuberculosis of the lungs to inflammation. *Ed. Dis.*]

45. It results from embryological and pathological researches, that neither around the tubercle, nor in the pseudo-membrane of the pleura, are new vessels formed independent of the general circulation. New vessels in diseases are rather formed centrifugally from the general circulation.

46. The apparent transformation of the pseudo-membrane into cartilaginous substance consists only in the filaments being pressed together, without the formation of the peculiar cartilage elements. In the same manner the so-called ossification of the pseudo-membrane only consists in the deposition of an amorphous mineral formation.

47. The three principal forms of glandular tubercles are those of the more superficial—the bronchial and mesenteric glands: the last have a very slight tendency to soften.

48. The tubercular matter in the glands is throughout the same as that in other organs.

49. The existence of a sensible scrofulous matter we cannot admit; what has been considered as such is either the result of common inflammation or of suppuration—certainly under the influence of cachectic elements, but without a peculiar material or tubercular deposition accompanying the inflammation or suppuration.

50. Tuberculosis in the osseous system is a much more rare disease than is generally supposed at present. There is frequently found here a difficulty in determining between concrete pus and tubercular matter. In doubtful cases, the microscope can alone determine the diagnosis.

51. True scrofulous diseases, which are mostly distinguished by inflammatory and suppurative eliminations, are to be separated, on the one hand, from tuberculous diseases, and on the other, from idiopathic chronic inflammations of the eye, skin, glands, bones, joints, &c. The last category is often confounded with scrofula in children.

52. In a word, the positive diagnosis and abstract separation of scrofula are most urgent desiderata in modern medicine.

[The magnetic symptoms always give a positive diagnosis, but no abstract separation of scrofula. There are no such distinctions in nature or in fact. Compelled at last to acknowledge that the common cases of

chronic disease of the organs and limbs, or of the serous membranes and tissues, called chronic inflammations, are cases of scrofula, an attempt is made to set up distinctions where there are no real differences. All the cases of scrofula, in all its forms, and in all ages and conditions, are distinguished in an instant by the same symptoms, and are constantly cured by the same remedies, and these facts, which are now known to hundreds of physicians in this country, are fatal to the assumptions on which these distinctions are founded. *Ed. Dis.*]

53. The grey granulations of the membranes of the brain—viz. of the pia mater, exhibit clearly between the filaments of the serous membrane depositions of tubercle corpuscles. They present themselves, besides, frequently in the brain, together with yellow milary tubercle; with tuberculous infiltration, as well as with large tubercles.

54. In the liver, tubercles are often found in very considerable masses, and even with true caverns. These cases are easily confounded with cancer. In like manner, the change into softening and breaking down of certain cerebriform tumours of the liver often present a similar appearance to tuberculous depositions.

55. Besides the fatty depositions in the liver, fatty degeneration of the heart is sometimes present in phthisis; also a tendency to internal depositions of fat, whilst, for the most part, it disappears from the external parts.

56. The kidneys also may be almost entirely filled with tuberculous degeneration. In these cases fewer tubercles are found in the lungs.

57. In tubercles of the peritoneum there are found, together with tubercle corpuscles, several filaments of the serous membrane. Peritoneal tubercles have little tendency to softening. They are mostly accompanied by a considerable pigmentary deposition.

58. Tuberculosis of the peritoneum produces sometimes perforation of the intestine, which is generally fatal; but in very rare cases, life is maintained by the formation of an artificial anus.

59. The consistence of crude tubercle in the intestines is usually less thick than it is in other organs. No pus is found upon tuberculous intestinal ulcers.

60. The microscopic elements of tubercular ulcers of the intestines, besides broken down tubercle cells, are cylinder epithelium,

broken down granular mucous membrane, and the filaments and bundles of the muscular coat. The young epithelial cells are not to be confounded with pus corpuscles.

61. On the diseased mucous membrane of phthisis are occasionally found polypi, melanotic and tubercular excrescences.

62. In extremely rare cases, tubercles are found deposited between the coats of arteries, an exceedingly important fact for (in favor of) the excretion of tubercle from the blood.

63. Tubercles are also found in the pericardium and heart. An extensive adherence often thus takes place, and a vascular anastomosis of the branches of the coronary artery with those on the surface of the lungs, a remarkable communication between the vessels of the larger and smaller circulations.

64. Tubercles in the cavity of the chest, as well as of the abdomen, can open themselves externally, and thus form fistulæ of the lungs and of the intestines.

65. Tubercles and cancer do not exclude one another, or even interfere with their separate march. Both morbid processes can at the same time run through their stages of development in the same person.

[We have investigated long since and very thoroughly the subject of cancer connected with scrofula with the magnetic symptoms, dissections and the microscope, and have little doubt but there will hereafter be found a fallacy in those investigations, which will be fatal to the distinctions that are here attempted to be established. It is only in the second stage of tubercular disease of a gland, a membrane or tissue that cancerous degeneration is developed, and then only when every other contiguous membrane, fibre, tissue or substance becomes equally involved in the disease, and this condition appears to be always necessary to the true cancerous formation.

We will not affect to conceal the fact that we republish the above comprehensive summary of elaborate researches on Tubercular disease, with a degree of satisfaction partaking of a sense of personal triumph. It is now many years since we advanced the self-same doctrines of the all-pervading character of Tuberculosis, in calm and confident independence of the ignorant sneers and arrogant denunciations of a large portion of



the profession. To scoff them as "visionary theories" and "arrant quackery," was, even within a recent period, deemed almost essential to professional respectability among those who condescended to advert to them, or in whose hearing they were mentioned. It was of no consequence that we had traced and demonstrated them in the most "regular" and legitimate manner, and by a process of induction as severe and scrutinizing as is ever adopted in any scientific investigation; it was a matter of no weight with these inflated scorners that we had verified and matured these doctrines by the ocular evidence of many continuous dissections, and by the results of experience in a long, extensive, and laborious practice, both in town and country. All this was of no value with such opponents, first, because they had not made these discoveries themselves; secondly, because they were new; and, thirdly, because they had not received the approving stamp of foreign authority. Now, however, that our original views, publications and practice upon these subjects, and our most novel and even startling propositions, have been confirmed by such men as Lugol, Louis, Lisfranc, and others of the eminent Parisian schools; now that our long-proclaimed doctrine that the ganglia of the posterior spinal nerves are connected with the ganglia of the great sympathetic nerve; and as the latter are connected with the organs, so external pressure on the former would indicate the seat of disease in those organs—now that this connection has received full and irresistible confirmation by the dissections and microscopic determinations of Volkmann and Bidder, the German anatomists, behold! our lofty medical savans stroke their chins, knit their brows, and look as sage and as comical as the carved heads of their canes. With what grotesque caprice of physiognomy they will peruse the above synopsis of Tuberculosis, by Lebert, from *Muller's Archives*, it is rather difficult to imagine; and it is to be regretted that it cannot be caught by the Daguerreotype process, for the embellishment of the medical journals of the schools. [Ed. Dis.]

On the cure of Deafness by puncturing the membrana tympani.

Sir Astley Cooper wrote a memoir on this subject in the "Philosophical Transactions," and shewed that the cases likely to be relieved by the practice were those in which the Eustachian tube was permanently closed, or when blood had been extravasated behind the membrane. To those cases other pathologists have added "a morbidly thickened and cartilaginous condition of the membrana tympani" itself. In the last number of the *Northern Journal*, we find an interesting communication on the results of the operation, by Dr. Mercer. This gentleman has performed it in several cases. He gives a table, which includes fifteen. Of these, six were performed for chronic thickening of the membrane, and the remaining nine for obstruction of the Eustachian tube. One case alone, and that of the latter affection, succeeded in the restoration of hearing. The operator then agrees with Itard in saying that "nothing is more rare than the cure of deafness by perforation of the membrana tympani." He then details at length the history of an instance of idiopathic hæmorrhage into the cavity of the tympanum. In this case, deafness, which was complete, was removed by the operation. As the example is an instructive one, we shall allow the author to describe the local appearances, the mode of operating, and the instrument:—

"The membrana tympani, instead of its normal, transparent gray appearance, had a dull brown colour, and was slightly congested at the margin; the vertical line, indicating the handle of the malleus, was lost in the surrounding colour, and the membrane, instead of presenting its concave appearance, seemed pushed outwards into the meatus. On touching it with a probe it was almost insensible, and pressure against it produced an elastic pitting. The head was carefully supported with the left ear turned up, and the auricle drawn towards the vertex. The speculum being introduced as far as the second curve of the meatus, and then expanded with a clear and steady light, the anterior and inferior part of the membrane was perforated, and a small portion of it removed by an instrument, which consists of a fine but strong steel needle, two inches and a half long, and the handle of an octagonal form, one and a half inch in length. The cutting or drill head is spear-shaped, one sixth of an inch long, and one-eighth in breadth at the shoulders, where the edges are turned over. The point and edges are very sharp. Each of these edges is hook-

shaped; one turned forwards and the other backwards; and when thus viewed longitudinally at their broadest part, they resemble the italic letter *f*. On being brought in contact with the membrana tympani, the handle is made to rotate between the thumb and fore-finger, and this being communicated to the cutting point, it perforates the membrane similar to a drill, at the same time that the averted edges are causing a considerable loss in its substance."

The subsequent treatment consisted chiefly in injections of warm water, and inflating the cavity with air, through the Eustachian tube. Dr. Mercer observed that the average time for reproduction of the membrane, when allowed to take place, was about four days.—*London Lancet*.

#### The Scalp Issue in Cerebral Diseases.

Instead of the long and frightful incision made through the scalp for the purpose of establishing this issue in chronic cerebral disease, Dr. James Johnson has adopted with success "a more simple and less painful practice."

"It consists merely in drawing a line of the *kali purum* along the course of the sagittal suture—poulticing till the slough clears away—and then inserting a few threads of silk or cotton daily, imbued with the *ceratum lyttæ*. A purulent drain is thus established with very little trouble, and with great benefit in obstinate cerebral affections."—*Medico-Chir. Review*.

#### Statistics of Obstetric Practice.

In the last number of the *Dublin Journal* we find a communication from Professor Murphy, which contains several points deserving attention. We shall refer to them in the order of their occurrence.

1. *Menstruation*.—Dr Murphy has ascertained the age at which this function commenced in 559 individuals. This inquiry has been already pursued in 450 instances by Mr. Robertson, and in 1160 by Dr. Lee. A total of 2169 cases shews,

"That there is a great variety in the age at which the catamenia first appears; 9 years [14 cases,] and 23 years [1,] seem to be the extremes; the most frequent period of its occurrence is between the ages of 12 and 18; and of those recorded, it commenced, in the greatest number of instances [417,] at 15."

The interval of the catamenial function was recorded in 591 cases by the author, and by Mr. Robertson in 100. In 557 of those cases the interval was found to be 28 days; in 105 it was 21 days; and in the remaining 29 it was irregular, varying from 14 days to

42. It should be observed, that Dr. Murphy's inquiries were addressed to pregnant females, in whom probably the menstrual period would be found to have been more regular than in the same number of females taken indiscriminately.

2. *Pregnancy*.—Its duration was made by the author the principal subject of inquiry; some curious and useful facts are the result. The number of cases in which accurate information was procured was 186; in each the catamenial period was noticed; and

"To prevent error arising from uncertainty as to the exact date of conception, this interval was deducted from the whole number of days of pregnancy; thus, 328—28 would make the duration of pregnancy 300 days."

The results thus ascertained establish 301 days as the average limit of gestation. To this there are, however, three remarkable exceptions. In the first a fully developed child was borne after an interval of 261 days. The evidence of this instance (an unmarried female, stating herself to be pregnant after one connexion) is not to be wholly relied on. In two other cases the duration of pregnancy extended to 342 and 352 days, or deducting the menstrual period to 324 and 314 days respectively. The histories of those cases given in detail are such as to lead to the conclusion that pregnancy may be prolonged to this extended period—a fact of great importance to the medical jurist. The relation of pregnancy to previous menstruation is referred to, and some exceptional cases are recorded. Thus in one instance pregnancy occurred without previous menstruation; in another menstruation ceased on marriage, and in a few cases periodic discharges resembling the catamenia were present during pregnancy.—*Dublin Journal*.

#### The Administration of Medicines in a State of Fluidity.

"It has been found that fifteen grains of sulphate of quinine exhibited in infusion of senna, are more efficacious, as a tonic, notwithstanding the aperient quality of the reliefs, than twenty-four grains of quinine taken in pills. M. Pannezza accounts for this difference by supposing that the senna, by augmenting the peristaltic action of the alimentary tube, and increasing the secretions of the bowels, excites the production of a fluid well adapted for perfectly dissolving the quinine, and in that state it is applied to a much greater surface of absorption than if it passed along the canal in the form of pills."—*Medico Chir. Review, from Medical Examiner*.

## On the Method of taking Plaster Casts.

We have frequently heard medical men express their regret at not knowing how to take plaster casts of various objects in which they felt interested. The method is sufficiently simple, as shown by the following directions, given by Mr. Butler, in the "*Zoist*," and copied into the "*Phrenological Journal*." Referring more particularly to casts of the head taken during life, they are equally applicable under all other circumstances.

"In taking casts of the head from life, precaution is necessary, to prevent adhesion of the plaster; for this purpose a lather of soap and water is employed, of a consistency similar to that used in shaving, or even stronger. With this the hair must be saturated and combed or brushed down close to the head, after which the soap and water is again applied abundantly to the smoothed surface, and, sometimes, if any doubt exist of perfect security against adhesion, the lather may be applied even a third time.

"In mixing the plaster, let a basin be nearly filled with water, and the plaster carefully and gradually but quickly scattered in with the hand until it rise to the surface, when it may be stirred with a common iron spoon. Care is necessary, in doing this, to prevent the formation of lumps.

"It will be understood that the mould must be removed from the head in sections. The simplest form of division is in two parts; the line of separation running from the throat to the back of the head, so dividing the whole into two equal portions. For this purpose, and before the application of the plaster, a thin string is passed over the face, dividing it down the centre of the nose, and again passing over the head down to the nape of the neck. This string should be arranged before the plaster is laid on. Divide the plaster into two portions; one of which place in any earthen vessel approaching in shape the back of the head, and sufficiently large to admit of immersion for the greater facility of applying the plaster. The person should be in a recumbent position, and the back of the head immersed in the vessel provided for the purpose, while the other portion is to be gently but quickly laved over the face, previously moistened with a little sweet oil. The eyebrows it will be necessary to moisten with soap lather, as also the whiskers and the eyelashes with a little oil. The whole of the head is thus covered, the nostrils of course being left open; it would, however, be advisable that novices should place quills just within the nostrils, to avoid inconvenience. The mould should be consolidated by the

repeated addition of plaster, until it is of the thickness of about half an inch, when it may be divided by drawing up the string; this must be done before the plaster acquires too great a degree of induration; then the mould may be removed without difficulty.

"The greatest care must be observed in casting the ears; in order to prevent the plaster from adhering internally or even externally. Let the whole of the crevices be well stopped with a mixture composed of soap and oil, of about the consistency of thick paste; and it may be well to observe to the inexperienced operator, that should any of the plaster form internally, it would be productive of, at least, extreme inconvenience.

"To take casts from the mould.—Immediately after the removal of the mould, tie it together and saturate it with water by steeping it during three or four minutes; and before the moisture has disappeared from the surface, pour in at the opening at the throat a quantity of plaster of the same consistency as before, and this, by turning the mould around, must be made to flow into every part of it. The plaster will be thus added until the cast be of the thickness of about half an inch. When this substance has been thus acquired, let the whole stand for a few hours, after which the mould may be removed from the cast by the careful use of a mallet and chisel.

"The multiplication of casts.—Dry the original casts thoroughly; then with a brush and some boiled oil go over the surface two or three times, after which the cast must stand a day or two, to allow it to dry, when it will be in a fit condition for the formation of the mould. For ordinary purposes the mould may be made in three pieces, of which the back of the head as far as the ears, but not including them, constitutes one, and the face, equally divided as before, affords the other two, an ear of course attaching to each. This operation is performed piecemeal. The part receiving the plaster must first be thinly coated with a mixture of oil and grease, (hog-lard or tallow,) to prevent adhesion. When the piece is of the necessary thickness, remove it, and trim the edges with a sharp knife, after which replace it on the cast, and having greased the edges, proceed to the formation of another portion, which of course will adapt itself to the edge already prepared. When the mould is made, put it together, dry it perfectly, then oil it in the manner before described with reference to the cast, and in the course of two or three days it will be in a fit state for casting, taking care to coat it with oil and grease before taking each cast."—*Lancet*.

ON THE TREATMENT OF FEMORAL  
HERNIA.

By J. SEBASTIAN WILKINSON, Esq., Surgeon, London.

THE following case of femoral hernia occurred to me in the course of my practice some years ago; and having met with similar cases since, in the treatment of which I have been equally successful, I beg the favour of its insertion in the widely-circulated journal, *THE LANCET*.

Mrs. W——, aged forty, affected with femoral hernia, applied to me in the early part of the spring of 1833, to know if I could afford her any relief, as her case was pronounced irreducible and incurable. The subject is her own history of the case:—

"The swelling in the groin first appeared in the year 1823. It could then be easily returned into the abdomen. I thought nothing of it, and neglected to apply a truss. About four years before I applied for medical advice, I could not return the swelling. It was occasionally painful, especially when the bowels were confined. About three months before I consulted you, I became alarmed, owing to the increased size of the tumour, and the pain I experienced in walking. I was obliged to be particular in my diet, and keep the bowels always relaxed. I then lived as cook and housekeeper in a family residing at Newport Pagnell, who called in their family surgeon. He said he could do nothing for me, but sent me to London to Mr., now Sir Benjamin Brodie. This gentleman examined me, and said it was quite irreducible and incurable, and that my life would be endangered by any blow upon the part, or from inflammation arising from walking. He, however, considered it advisable to wear a piece of thick leather, beat out in the form of a cup, over the tumour, to be confined by a strap round the lower part of the body."

When I saw the patient, the tumour was as big as a large walnut, doubled over Poupart's ligament; moveable, but confined at the femoral ring. It consisted of intestine and omentum, and quite irreducible. Having observed in the dissecting-room, subjects with old hernia, with both abdominal and crural rings of a large size, I considered it feasible that dilatation might gradually be accomplished in an inverse direction.

The patient being very fat, I first reduced her in substance by bleeding twice a week, to eight, and afterwards to five ounces; low diet, consisting of broth and gruel, with warm baths, three times a-week, and occasional doses of castor oil. When the skin had become flabby, and her size reduced, I

used daily manipulations, pressing the tumour downwards and then upwards. In this way I proceeded for nearly six months, and at last succeeded in returning the rupture. I tied my silk handkerchief in a large knot, which I placed in the groin of the patient, and confined the ends on the opposite side of the pelvis, thus affording a temporary truss. I put her into a coach and sent her to Mr. Brodie, who returned me the following note:—

"MY DEAR SIR,—There appears to be nothing left but the sac, and probably a small portion of adhering omentum. There can be no objection to the patient wearing one of Salmon and Ody's trusses.

"J. S. Wilkinson, Esq."

Mrs. W—— soon afterwards got married, and is now living in good health, with her husband, who is a farmer in Herefordshire.—*London Lancet*.

## Medical Memoranda.

*Quinine in Ague.*—Dr. Stratton thinks a single large dose in the interval, cures more rapidly than repeated small doses.

*Treatment of Neuralgia.*—Dr. Jacques, of Antwerp, recommends inoculation, by means of a vaccinating lancet, with a solution of sulphate of morphia.

M. Lafargue recommends inoculation in the same way, with a solution of veratria; and M. Roclaute, a Dutch physician, gives nuxvomica, in doses of from three to ten grains in the twenty-four hours.

*Succinate of Ammonia in Delirium Tremens.*—M. Scharn has seen the most furious delirium overcome as by enchantment, and the disease removed in a few hours, by the use of this remedy alone.

*Arsenic in Peritoneal Dropsy.*—Dr. Debavay has treated a case successfully. One-twentieth of a grain was given twice a day. The improvement was notable in six weeks, and in six months all symptoms had ceased, and the catamenia, which had been suppressed, was restored.

*Mustard in the Convulsions of Children.*—Dr. Triplu was led to the employment of this remedy as an emetic, and finding it arrest in a few minutes an attack of convulsions that had lasted five hours, he has employed it in three other cases with complete success.

*Prophylactic Remedy against Ptyalism.*—Dr. Schoepf recommends the following tooth-powder during the administration of mercury, to prevent salivation. Dried alum, powdered, ʒij.; powder of cinchona, ʒi; to be used by means of a soft brush, morning and evening.—*Northern Journal of Medicine*.

**POLYPUS OF THE WOMB.**

BY M. LISFRANC, PARIS.

[In an able notice of Lisfranc's clinical surgery in the British and Foreign Medical Review, we find some excellent and practical remarks on this subject. A polypus descending from the womb is said to be insensible, whilst an inverted uterus is very sensible. If, however, a polypus descend with a covering from the inner surface of the womb, it is evident that its sensibility will be more or less retained.]

In partial inversion of the uterus, M. Lisfranc thinks favorably of the mode of examination proposed by M. Malgaigne, which we shall describe. In this affection the bladder and a portion of the intestines are lodged in the concavity formed by the depression of the fundus of the uterus; if, then, a curved catheter is passed into the bladder with its concavity downwards, and the beak of the instrument is directed to the most depending part of the bladder, its extremity will be readily felt by the finger in the vagina, if the case is one of inversion, unless, indeed, the intestines have become adherent to the womb in such a way as to prevent the catheter penetrating into the depression formed by the inverted organ, a circumstance of very rare occurrence. But M. Lisfranc thinks that the best way of discriminating between polypus and inversion of the uterus, is by a mode of examination similar to that above recommended, in the case of an intra-uterine polypus or of a commencing inversion. If we seize and depress the tumor with two fingers passed into the vagina, and then introduce the index-finger of the other hand into the rectum, no tumor can be felt through the gut above the one which is grasped in the vagina, if the case is one of inverted uterus. But if, on the contrary, we feel through the rectum, a second tumor similar in shape to the uterus, above the vaginal tumor, then this latter tumor is a polypus. In one instance, indeed, M. Lisfranc was misled by this mode of examination; he diagnosed inversion of the uterus, but the patient having died, a small fibrous tumor was discovered implanted on the uterus, which was flattened and reduced to the tenth part of its natural size. It appears that attempts have been made to defraud the author of the honor due to this suggestion, as he subsequently "begs leave to thank the authors who have appropriated his ideas, or with characteristic candor cited them as dating from the eleventh century." It is not stated who are the delinquents here alluded to, and we are not able to supply the omission.

M. Lisfranc has on several occasions removed by *enucleation* both polypi and fibrous

tumors which were not pedunculated, whether situated completely within the cavity of the uterus, or having partly (or in the case of polypi entirely) made their way into the vagina. To use his own words, he "dwells on this important point of practice which he believes to be new." We need not occupy space in showing that the practice is not new, but as we believe M. Lisfranc has adopted it with more boldness than his predecessors, and under circumstances in which it was not previously applied, we shall give a summary of a few of the cases by which he illustrates this practice.

In one case having drawn a fibrous polypus almost entirely through the vulva, he perceived that its envelope, which consisted of a thin layer of the tissue of the uterus, was lacerated, and passing the index-finger through the rent, enucleated the tumor with the greatest facility. In another case enucleation was effected almost accidentally: M. Lisfranc, while examining a polypus, found the envelope give way beneath the nail of the index-finger, and by an easy manipulation enucleated the tumor in a few seconds. On examining the uterus immediately afterwards, he found that the part of that organ to which the polypus had been attached, had singularly contracted, that the depression caused by the tumor had diminished greatly in depth, and at least two-thirds in breadth, it seemed to be diminishing while the finger was in contact with it, and in ten hours the uterus had regained its natural size, and the cervix would not admit the finger. We mention these latter facts, as we conceive they have an important bearing on the question of hemorrhage after excision of polypi. M. Lisfranc has also frequently enucleated with the nail of the index-finger, small cellulo-vascular polypi occupying the neck of the womb. In a case where a fibrous tumor as large as the clenched hand projected into the vagina, its envelope was lacerated with the nails, and the contained tumor turned out. But enucleation must generally be preceded by an exploratory incision; and by this combination of means, M. Lisfranc has removed fibrous tumors while still completely included within the cavity of the uterus. A lady was reduced almost to extremity, by protracted uterine hemorrhage caused by a fibrous tumor, which could be felt through the dilated cervix uteri. The neck of the uterus was seized with Museaux's hook, depressed almost to the vulva, and a more perfect examination being then practicable, the tumor was found to extend from the middle of the body of the uterus almost to its lower extremity, and to be lodged in its posterior wall, from which it was commencing to disengage itself. With a straight, blunt-

pointed bistoury passed along the forefinger, a vertical incision was slowly and cautiously made over the tumor until the finger was enabled to be insinuated beneath the envelope and complete the enucleation, which was not accomplished without some difficulty. Occasionally enucleation may be more easily achieved by substituting a spatula for the finger. If it is necessary to enlarge the incision in order to effect the removal of the tumor, a grooved director will often guide the knife more conveniently and safely than the finger. In some cases where the cervix uteri was insufficiently dilated, M. Lisfranc divided it anteriorly. Whenever the peduncle of a polypus is very broad, we should incise the envelope, and endeavor to enucleate the tumor, in this, however, we cannot always succeed. If the tumor is removed, the envelope sometimes contracts and cicatrizes, sometimes sloughs in whole or in part.

[The removal of polypi by *ligature*, M. Lisfranc condemns in common with most French surgeons.]

#### Symptoms and Pathological Appearances in a Case of Spinal Meningitis.

The following case, from the *Guy's Hospital Reports*, affords a good illustration of this rare form of disease:—

"T. M.—, aged nineteen, of small, but well-formed frame, of temperate and regular habits, generally having good health, until eighteen months before his death, when he was treated in Guy's Hospital for pleurisy; this was followed by scarlatina; from both he recovered; but he subsequently complained of wandering pains in the *neck* and *loins*, and general *malaise*. Three months before his last admission, he had erysipelas of the face, and was confined to his bed for a few days, but perfectly recovered in about a month, at the expiration of which period he became an out-patient, the pains continuing in the *back*, *neck*, and *loins*, and being regarded and treated as rheumatism, without relief. On the Friday before admission, the pains became very much aggravated in the *neck*, *back*, and *loins*, causing him to scream violently, with great restlessness, alarm, and dread, if any one approached to touch any part of his body. These symptoms were more severe on Saturday; and on the following morning, May 7, he was admitted, with symptoms of fever, and complained of the *pains* in the *neck*, and *loins*, which were less severe; had great disinclination to turn in bed; and, on being raised, maintained almost a tetanic rigidity of the *muscles of the neck*, but these symptoms were not very marked

until two or three days afterwards. On the Wednesday, he lost the use of his arms for a time, and then the pains left him, but became again severe with the return of motion. On Thursday, convulsions came on; he had foaming at the mouth; the features were distorted; the hands were clenched, and he was insensible: the tonic rigidity of the neck continued. He had frequent recurrence of the convulsive attacks during the next day, when he died, trismus having been present during the two hours preceding his death.

"*Sectio Cadaveris*.—The skin, generally, and conjunctivæ, were slightly jaundiced. On opening the head, the veins and sinuses were seen large and congested; and on dividing the spinal cord, just below the medulla oblongata, some puriform-looking fluid exuded from, apparently, the centre of the cord, the cut surface of which was looser in texture than natural.

"The spinal canal being opened from behind, there was some light *ecchymosis* between the *muscles*, and extravasation of blood, with effusion of lymph, between the vertebrae and dura-mater: an effusion of lymph, and some puriform albuminous matter, were also seen between the arachnoid surfaces, and beneath the arachnoid itself, rendering these membranes slightly adherent and opaque. This opacity was seen especially in some spots, and evidently of *no very recent character*. These appearances were most observed at the *fourth* and *fifth* cervical vertebrae.

"The surface of the liver was rather pale; the edge rather rounded; and some yellowish spots, of the size of half-a-crown, surrounded by an areola of darker vascularity, were observed: these extended to the depth of half an inch. On incision, the structure was yellowish, with an occasional mottling of florid red. The lobules were universally of a pale-yellow colour; and in those parts which were of a brighter red hue, the interlobular fissures were the seat of florid vascularity. The organ was lacerated and tore with a granular appearance. This was regarded as an inflammatory condition of the liver.

"The peritoneal surface of the bladder was corrugated, thickened, and the seat of *ecchymosis*, which was also observed internally, in the submucous tissue."—[Lancet.

The above is a plain case of *serosis* or tubercular disease of the liver, bladder and muscles, extending to the membranes of the brain and spinal cord, as every physician who practices the magnetic symptoms would have known without a post mortem examination.

[Ed. Dis.

### A SUBSTITUTE FOR WOOD ENGRAVING.

By RICHARD LEWIS REAN, Esq., M.R.C.S., London.

HAVING been engaged lately in some photogenic experiments, I tried the following method of engraving, which, although not of use in photography, appears to be an excellent substitute for wood engraving, as it takes so little time, (two or three hours,) and only costs a few pence; those who can draw a little may avail themselves of it, and I have no doubt, surgeons and others publishing would find it of great service, as the trouble and expense are so light.

I take a piece of black glass, or glass with a black ground behind; melt common wax, so that there may be a coat about the thickness of a sixpence; when this is cool, rub it over with a preparation of salad oil and white lead, mixed into an ointment; this is to give a white ground for etching upon. Trace the drawing so as to leave a red outline on the ground; proceed to etch with needles, (taking care to make the grooves perpendicularly through the wax;) when this is done, lay some water gently over the wax, and if there are any minute globules of air sticking to it, they are to be removed by gently heating with a lamp, great care being taken not to melt the wax; sprinkle some of the finest sulphate of lime, (plaster of Paris,) which is best got at the casting shops; let it combine with the water, and set. When this is done, it should be made of a convenient thickness, by adding more to the back of it; now dry, and deepen the broad lights in the same manner as a wood engraver's block; boil in glue, which will sink into the substance of the plaster, and enable it to bear pressure in printing. After this, proofs must be taken, and gradual improvements made.—*London Lancet*.

### Reciprocal influence of the Nervous and Sanguiferous Systems.

The bloodvessel and the nervous fibre are the first parts which receive life, and the last which lose it. Anatomy shows that they are always associated together in the cellular substance, which serves as a bond of union between them. Physiology displays them invariably acting in unison—and Pathology finds them very generally acting one upon the other. Let us cite a few examples in illustration of these propositions:—

A young girl, returning home one morning, was insulted by a soldier, who clasped her round the waist. She chanced to have the catamenia upon her at the time; the secretion was at once checked, and did not again return.

The mother of one of the young soldiers in the army of Italy, 1798, was told of the death of her son: she started up for a second, and the menstrual discharge ceased that very moment.

These are instances of the action of the nervous on the sanguiferous system: the following exhibit the action of the sanguiferous on the nervous.

A young Creole girl, of an hysterical constitution, was seized with spasm of the throat, which for two days prevented her from swallowing anything. She was bled; and from the moment that the blood began to flow, the spasm gave way, and she could swallow with ease.

A plethoric woman is advanced beyond the middle of pregnancy without having quickened; draw a few drops of blood from her, and the first movements of the fœtus will probably be felt forthwith.—*Medico Chirur. Review*.

### PRESTAT'S ADHESIVE PLASTER.

The following composition is said never to crack, and not to inflame the skin:—Empl. Diachyl. Gum., 400 grs., Purified Rosin, 50 grs., Tereb. Venet., 38 grs., are mixed together at a gentle heat, and then 12 grs., of Gum Mastic, and 12 grs. of Gum Ammoniac incorporated, and the mass spread on linen. In winter it is advisable to add 10 grs. more turpentine, and 12 grs. of Ol. Amygdal.—*Lancet*.

### SCROFULA,

BY M. LUGOL, PARIS.

M. Lugol looks upon scrofula as an hereditary cachexia of the entire system with the intimate nature of which we are wholly unacquainted, but the manifestations of which may be followed from birth in the diseases of every tissue and of every organ. The maximum of the scrofulous diathesis is the production of tubercle, which may be generated in any region of the economy. The tubercle in M. Lugol's eyes is an organised abnormal formation, endowed with a life and nutrition of its own, and passing through the various phases of its existence like all other abnormal tissues. The development of tubercle takes place in different parts of the human economy at different periods of life, owing to various modifications of local vitality. Accompanying the production of tubercle, anteriorly or posteriorly to it, various forms of disease occur in the different tissues of persons laboring under the cachexia. These various morbid

forms are all manifestations of the scrofulous diathesis. Thus, the mucous and cutaneous surface, the bones, cellular tissue, joints, &c., are attacked with chronic inflammations, viz. ophthalmia, coryza, catarrh, diarrhoea, &c.; lupus, acne, pustular and papular eruptions; osteitis, caries, necrosis; white swellings, cold abscesses, &c. These constitute the *cortège* of the scrofulous cachexia. These are the diseases which, more or less developed, accompany the martyr of scrofula from his birth to his grave, rendering manifest to the medical observer the cachexia under which he labours, even in the absence of tubercular formations.

The characters of hereditary scrofula in a family are the existence of the scrofulous complexion among its members—the great mortality which is observed in such families more especially during infancy. These two characters may be studied—in the family itself, in the different branches which originate from the same stock, in the children of different marriages. With reference to parents who procreate scrofulous children, their giving birth to such children may be owing to their original health, in which case either they are scrofulous or affected with pulmonary tubercles; have been scrofulous during their infancy, and have ceased to appear so; have brothers and sisters who are scrofulous;—or it may be owing to an acquired state of health. Thus, syphilitic parents, parents who have given themselves up with excess to venereal pleasures; who are too young or too old; whose age is disproportionate; who are suffering from epilepsy, paralysis, or insanity, all give birth to scrofulous children; also the father whose strength is disproportioned to that of the mother. In some instances the disease is evidently transmitted by heredity without the original or acquired health of the parents being such as at first to explain the circumstances. Parents may only show symptoms of scrofula after the birth of scrofulous children. Hereditary scrofula never skips a generation.\* The hereditary causes of scrofula may be united, in variable number, in the same individual. Marriage is the most ordinary cause of the propagation of scrofulous diseases. Scrofula is very frequent among foundlings and orphans.—The seeds of scrofulous disease may be transmitted by the nurse to her nursing.

Scrofulous families says Lugol, may be recognized by the general impression of debility which all the children present; their state of health being at the most negative, and always exclusive of the attributes of health and strength, and of good organiza-

tion. Their physical forms are devoid of harmony; there is no proportion between the limbs and the trunk; the former are badly attached to a body too long or too short. The development of the similar regions of the trunk is unequal, often giving rise to deformity. The size of scrofulous children is generally short, although sometimes they grow to an extreme height. The mouth is small, and the teeth are black, and soon decay. The spongy tissue of the bones is hypertrophied, so that the joints are disproportionately large. The spine and bones of the pelvis often give way more or less.—The digestive functions are frequently in a continued state of atony, of inertia: such children have no appetite, and do not take enough food to support the economy; others present a voracious appetite, by which, however, they do not seem to profit. The face is pale, the breath fœtid. Constipation alternates with diarrhoea, in which latter case a considerable portion of the food passes through the intestinal canal only partly digested. The skin and cellular tissue is extremely emaciated, or in a peculiar state of unhealthy, hardened hypertrophy. It is often dry, and covered with papulæ of lichen, or prurigo. Children who present these characteristics are generally idle, apathetic, and have no inclination whatever for exercise. Menstruation is very late with girls, and the age of puberty with both sexes is retarded. Writers on scrofula have generally considered a certain degree of *embonpoint* and freshness of complexion to be peculiar to scrofulous constitutions, especially with women. This peculiar kind of beauty is certainly observed, but much less frequently than is generally supposed, and generally co-exists with some scrofulous symptom which reveals its nature, such as a too-dilated pupil; slight epiphora; habitual coryza; obstinate chilblains; a small mouth, of an ogee form; teeth too long and too close, often black and carious; too short and thick a neck; habitual leucorrhœa; dysmenorrhœa; anorexia; frequent sore throats, &c. This state of freshness and fulness seldom lasts long; it disappears early in life, leaving behind a wrinkled skin, which disfigures women who ought still to be in the bloom of youth.

Parents who are not themselves scrofulous, may, under certain circumstances, procreate scrofulous children. The abuse of venereal excitement will lead to this result; and instances of this kind are frequently seen in the higher walks of life. Early marriages are followed by the generation of scrofulous children. A man ought to be five-and-twenty before he marries; before

\* Here Lugol is mistaken. [Ed. Dis.]



that period his organization is seldom sufficiently manured to enable him to procreate healthy children. This law holds good throughout nature. The first year or two a fruit-tree bears, the fruit is small in size, indifferent in quality. Such marriages are principally seen in the lowest and in the highest classes of society. Scrofulous children are still more frequently the result of late marriages. If either of the parents has arrived at the time of life when the system begins to decay, their children are generally scrofulous. At the age of forty-five the procreative faculty begins to decline in man. For a few years, however, he is still able to procreate healthy children, but after fifty-two they seldom present the conditions of health. Thus, when a healthy man, advanced in life, marries, his first children are healthy, but they deteriorate as they increase in number. The same remark applies to women. As they approach the critical age their powers of reproduction diminish, and after forty their children are often scrofulous. Disproportion between the ages of the parent is a cause of scrofula among children. The wife ought to be a few years younger than the husband; if she is older the children are generally scrofulous. A man whose bodily strength is not that of his sex, especially if it is much less than that of his wife, will generally have scrofulous children; consequently the popular opinion that the children of a weak scrofulous man married to a strong robust woman will be healthy, is a fallacy. Diseases of the brain appear to modify the reproductive powers.—Those who are laboring under insanity, paralysis, or epilepsy, generally procreate scrofulous children.

Scrofula may be inoculated by suckling—a fact which has been remarked by various authors. Nurses, however, should only be made responsible for scrofula occurring in children whom they suckle, when, on the one hand, it is quite evident that no traces of that disease exists in the child's family, and when, on the other, the diseases can be traced clearly to the nurse. When the constitution of a child is contaminated from this source, its health will form a striking contrast with that of the other members of the family. As a necessary consequence of the above fact, scrofulous mothers ought never to suckle their own children.—*Lancet*.

CLAIRVOYANCE.

DEAR SIR—There is in this place a Clairvoyant, Jackson Davis, whose wonderful powers have for a long time astonished many

of our citizens. This young man is eighteen years of age, is uneducated, and has resided here for the last six years, and is very generally known.

What is perfectly astonishing is, when in the Clairvoyant state, he is complete master of the general sciences, such as physiology, pathology, anatomy, geology, hydrology, phrenology, astronomy, medicine, &c. He is conversant with all these sciences—distinctly points out their fundamental truths, and exposes their incidental errors. He has spoken also in as many different languages, and, whilst in that state is able and willing to give instruction on any subject which will be of benefit to mankind. He has already explained many phenomena in nature which the learned have been unable to fathom, such as for instance the cause of the *variation of the Magnetic Needle*.

Of late, he has given us four lectures on Animal Magnetism. The theory of Magnetism, as given in these lectures, is entirely new, and beautiful beyond description. He shows in a clear and lucid manner that Mesmerism is a science, and that all its phenomena are accounted for on natural principles, thus removing all the mystery in which the subject has been shrouded, and completely reversing all former theories which have been put forth—and he has given Mesmerism a new name, expressive of this fact, that of "*Clairmative-ness*."

Within the last twelve months, this young man has examined and prescribed for upwards of one hundred persons, and has restored them to health.

The names of these persons can be given if called for. Among the number, I will mention Dr. Charles Thatcher, an eminent physician of this town. This gentleman, for four years past, was afflicted with ulceration of the bowels, in consequence of which he was obliged to give up the practice of medicine. He is now restored to health.

This young man has often astonished and confounded me by revealing to me my own thoughts when I have been sitting beside him, in the trance state. And he has frequently done the same with others, in the presence of many witnesses.

He is still engaged in giving us lectures on various subjects, and these lectures in due time will be given to the public.

By giving the above a place in your paper, you will much oblige myself and many of your readers in this vicinity.

GIBSON SMITH,

Pastor of the First Universalist Society.  
*Poughkeepsie, Feb. 16, 1845.*

[*N. Y. Tribune.*]

**Bursal Swelling of the Wrist and Palm of the Hand.**

BY JAMES SYME, ESQ.

There are few subjects of surgical practice that have occasioned more trouble and disappointment than morbid distension of the bursa, which accompanies the flexor tendons of the fore-arm, in their course under the annular ligament of the wrist, towards the fingers. The resistance of the ligament prevents any enlargement of the bursa where lying under it; but the wrist and palm become distended, so as to occasion an unseemly swelling, and weakness of the hand. The fluid effused into the cavity is generally associated with numerous small cartilaginous-looking bodies, of a lozenge or lenticular figure.

In treating this form of ganglion, the means generally employed prove very unavailing. Punctures either heal without producing any improvement, or remain open, so as to occasion obstinate sinuses. Incisions of larger extent, caustics, and setons, have all been carefully employed with very uncertain benefit, and frequently great suffering; indeed I have known the continued irritation so induced prove fatal. As the treatment of similar derangements in other parts of the body is not attended with such troublesome consequences, the question naturally presents itself, what local peculiarity is concerned in causing the obstinacy of this particular case? The reply suggested by what has fallen within my observation is, that the constriction caused by the annular ligament produces the effect in question, by preventing the portion of bursal sac corresponding to it and the subjacent tendons from undergoing the healing process. Impressed with this conviction, I tried the following experiment, the complete success of which encourages me to hope that the method pursued will be found to afford an effectual remedy for a complaint which has hitherto proved so troublesome.

Janet Preston, aged 20, was admitted on the 13th of February, complaining of pain and weakness in her left hand. The wrist and palm of the hand were much swelled, but not discoloured, and pressure on these parts caused distinct fluctuation, with the jarring sensation that characterizes effusion into the bursal sheaths. She stated that pain had been first felt about two years before, and that for the last twelve months she had had hardly any use of the hand, in consequence of the swelling, and weakness attending it. I made a free incision from the wrist into the palm of the hand, dividing the annular ligament. This gave vent to a quantity of glai-

ry fluid, with many small flat cartilaginous-looking bodies, and exposed to view the flexor tendons, separated and surrounded by thickened bursal membrane. The cavity was filled with dry lint, supported by a bandage moderately compressing the hand and wrist. In the subsequent treatment care was taken to prevent protrusion of the tendons, by drawing the edges of the wound together, and applying a compress over the seat of the annular ligament. Not the slightest disagreeable symptom followed the operation, and three days after it the patient was able to sew, which she had been prevented from doing for many months previously. In the course of a few weeks the wound healed, and the limb was in every respect perfectly sound.—*Lond. and Ed. M. J. of M. S., Od., 1844, p. 825.*

**Caoutchouc as a Remedy for Toothache.**

Caoutchouc, becoming very smooth and viscous by the action of fire, has been proposed by Dr Roliffs as an excellent remedy for filling hollow teeth, and alleviating the toothache proceeding from that defect. A piece of caoutchouc is to be put on a wire, then melted at the flame of a candle and pressed, while warm, into the hollow tooth, and the pain will disappear instantly. The cavity of the tooth should first be cleaned out with a piece of cotton. In consequence of the viscosity and adhesiveness of the caoutchouc, the air is completely prevented from coming in contact with the denuded nerve, and thus the cause of the toothache is destroyed.—*Medical Times.*

**An Extraordinary Fact.**

A case has been communicated to the Liverpool Pathological Society by Dr. Gill, of an altogether extraordinary kind. A man by the name of McIvor was dying, and the nurse who was tending him made the following statement:

"Nov. 16th, 11 P. M.—Nurse observed a 'red-hot coal-like streak on M.'s mouth, and (playing) on his right cheek and top lip,' as he lay in the insensibility of approaching dissolution. This flame lasted for about twenty minutes—i. e. until death.

"The impression on the mind of the nurse was, that he was insensible during the whole of this luminous combustion of his breath. He lay with his eyes open, on his back. The 'flame was red, just like red-hot coal-fire,' to which the nurse and the other man (McIvor) both compared it. Nurse pointed to the centre of the clear fire then burning in the ward when these notes were taken; it was 'not blue,' it was persistent with the breath of ex-

piration, ('when he breathed out,' and not *lambent*, 'not flickering, coming and going.') There was in the room a common 'raked' fire in the fireplace at the one end, close to which the nurse stood, and a gas jet burning low, (very low) suspended from a rafter in the middle of the room, and about twelve feet from the dying man's bed. M. had not been taking any phosphoric medicine at all, or any alcoholic stimulant during that day, or for six weeks previous, though he bore the character of being a drunkard. Nurse and Melvor were both terrified so much, that they dared not stir from their places until the flames had ceased."

#### General Laws Regulating the Displacement of Fractures.

M. Ed. Lacroix has published an interesting and philosophical paper on this subject, to which we beg to direct the particular attention of our surgical readers. His general conclusion is, that "the displacements of bones occur in angles which have the same sines directed in the same planes and in the same sense as the natural curves of the bones implicated."

**Clavicle.**—Displacement variable according to the point broken; forwards when the two external thirds are broken off from the inner thirds; backwards when the two inner thirds are severed from the outer third; upwards so as to form an angle with its apex superior, where the seat of fracture is the middle of the bone. When the clavicle is broken in two places, one towards the sternal, the other towards the acromial extremity, the natural curves of the bone are replaced by two angular knees, one of which corresponds to each of the solutions of continuity.

**Humerus.**—Displacement generally outwards, so as to form an angle the apex of which is external when the shaft of the bone is broken, not outwards and upwards as is commonly said by writers; the inferior portion of the bone is most apt to get in front of the superior. In fractures of the inferior extremity the displacement is mostly forwards, and there is generally an increase of concavity inwards, of convexity outwards; the inferior portion is also very apt to rotate outwards and inwards.

**Forearm.**—Tendency to displacement, outwards and backwards, when both bones give way in the middle. The ulna alone fractured in its upper portion, the tendency is to displacement backwards and outwards; in its lower portion, to displacement forwards and inwards. The radius having given way singly in its upper third, the tendency to displacement is inwards, to the formation of an

angle, the apex of which looks inwards; the bone having yielded in the middle, the angle of displacement will regard backwards; and having failed in its lower third, the angle will turn inwards and backwards.

**Femur.**—Wherever seat of the fracture, the extremity of the superior portion of the bone tends to get in front of the inferior, and to form an angle projecting outwards.

**Tibia.**—When the bone is broken in its lower moiety, there is a general tendency to rotation, in which the inner malleolus becomes more anterior; and to the formation of an angle, the apex of which looks backwards.

**Fibula.**—Constant tendency to form an angle whose apex regards inwards, and more or less backwards.

**Tibia and Fibula.**—General tendency to the formation of an angle, with its apex turned posteriorly and internally. Less disposition to rotation than when either of the bones is broken singly.

But we must refer to the original and very ingenious paper of M. Lacroix for other and more particular information, in *Annales de la Chirurgie Française*, &c., Mars, 1844.

[*Medical Gazette*.]

#### Varicocele Treated by Compression.

Mr. Curling publishes some cases of this kind to show the value of compression at the external ring in curing the enlarged veins. The cure seems to depend not so much on the pressure as on the removal of the hydrostatic pressure of the blood in the dilated veins by means of the presence of the moc-main truss. In one case "there was a large bunch of dilated veins above and behind the left testis. There was a dull aching pain, which became worse towards evening."—The moc-main lever truss was applied day and night, so as to compress the spermatic veins at the external abdominal ring. This ended in a complete cure. Another case of the same kind is related, which was equally benefitted by the compression.—*Lancet*.

#### Inoculation with *Strychnia* in Amaurosis.

BY DR. VERLEGH.

The subject was a lady, twenty-seven years of age, of nervous temperament, affected with incomplete amaurosis of the left eye, and commencement of the same disease in the right one. The disease was of three months' standing, and of rheumatic origin; after two months' fruitless efforts, Dr. Verlegh tried inoculation with the sulphate of strychnia in the neighborhood of the orbit. A grain of the salt was dissolved in two drops of water; the first day twelve inocula-

tions were performed, six above the eye in the course of the supra-orbital nerve, six under, and on the side of the nose where the ethmoidal filaments and nasal branch terminate, and whence arise the filaments which go to the iris. There was no effect that day; but next day some slight tremors occurred in the neighborhood of the inoculated spots. After two days rest the inoculations were repeated and the number of punctures increased to eighteen. The patient now became sensible of a slight haziness. After five successive inoculations, carried to the length of thirty punctures, she commenced to distinguish objects; after the eighth, vision was completely restored; the contraction of the pupil gradually increased, and the other symptoms diminished after five grains of the sulphate had been used; during the same time inoculations were had recourse to in the neighborhood of the right eye; after the lapse of two months the patient continued perfectly restored; and this the author conceived sufficiently long to warrant him in considering the cure as permanent.—*Gazetta Medica de Milano*.

#### *The Styptic Power of Ergot.*

[Mr. Liston, in his lectures on surgery, relates the following case to show the efficacy of this medicine as a styptic.]

Mr. Wright, of Nottingham, an excellent surgeon, told me of a case in which a strong decoction of the herb proved immediately efficacious in a case of very profuse and alarming bleeding. The case was a very odd one. A man in the country had been suspected of unfaithfulness to his wife, and she caught him at last in the embraces of another woman. She was in a great rage, snatched up his fowling-piece, which he had put down in the room, loaded, and when he had got fairly upon his legs, she presented it at him, and blew away one side of his face. He went on recovering very well, for a time, from this dreadful and dangerous wound, but one day very profuse hemorrhage took place. The wound was so extensive that it was impossible to say where the blood came from; it was doubtful whether even the ligature of one carotid would suffice. Knowing the powerful astringent effects of the ergot, Mr. W. begged of Dr. Sibson, the intelligent and active resident medical officer, to have a decoction of the remedy injected into the wound, and amongst the ethmoid cells, and some dossils of lint, soaked in the decoction applied to the wound. It had the effect of instantly stopping the bleeding; a clot was formed, there was no recurrence of it, and the case did very well. The oil of ergot is as I have said, reputed to be very effectual as

a styptic, and I shall certainly use it on the first favourable opportunity that presents itself.—*Lancet*, Aug. 31, 1844, p. 691.

#### **EXTIRPATION OF THE MAMMA OF A FEMALE IN THE MESMERIC SLEEP, WITHOUT ANY EVIDENCE OF SENSIBILITY DURING THE OPERATION. By L. A. Dugas, M. D. Professor of Physiology in the Medical College of Georgia.**

On the 3d of January, 1845, Mrs. Clark (wife of Mr. Jesse Clark, of Columbia county, Georgia,) came to this city for the purpose of getting me to remove a scirrhous tumor off her right mamma, which had been gradually increasing for the last three years, and which had now attained the size of a turkey's egg. The tumor had never caused any pain of consequence, was not adherent to the skin, nor did it implicate any of the axillary glands.—Mrs. C. is about 47 years of age, has never borne a child, and her health, though by no means robust, was pretty good, and had not been impaired by the evolution of the tumor. The operation having been determined upon for the following day, Mrs. C. remarked to me that she had been advised by Mr. Kenrick to be mesmerized, but as she knew nothing about it, she would like to have my advice, and would abide by it. To which I replied that there were several well authenticated cases on record, in which surgical operations had been performed under mesmeric influence, without the consciousness of the patient; that I would be happy to test the subject in her case, and that I would endeavor to mesmerize her, instead of operating as had been proposed on the day following.

On the 4th of January, at 11 o'clock, A. M. I called on Mrs. C. and was informed that on the preceding evening she had been put to sleep by Mr. B. F. Kenrick, at whose house she resided. I then mesmerized her myself, and induced sleep, in about fifteen minutes. Finding my patient susceptible to the mesmeric influence, and reflecting that it would not be convenient for the same person to maintain this influence and to perform a surgical operation at the same time, I requested Mr. Kenrick to mesmerize Mrs. C. morning and evening, at stated hours, until insensibility could be induced. This was regularly done, with gradually increasing effect, when, on the evening of the 6th of January, sleep was induced in five minutes, and the prick of a pin was attended with no manifestation of pain. The sittings were continued, and the patient's insensibility daily tested by myself and others in various ways. On the 9th of January I invited Professor Ford to be present, and, after pricking and pinching strongly

the patient without evidence of pain, the mesmerizer was requested to leave the room, when we exposed the breast, handled it roughly in examining the tumor, and re-adjusted the dress, without the consciousness of the patient. We then held to her nostrils a vial of strong spirits of hartshorn, which she breathed freely for a minute or two, without the least indication of sensation, unless the fact that she swallowed once be regarded as such, instead of a mere reflex action. On the 11th of January, in presence of Professors Ford and Means, in addition to the usual tests, I made, with my pocket-knife, an incision about two inches in length, and half an inch in depth, into the patient's leg, without indication of sensation.

Fully satisfied now of our power to induce total insensibility, I determined to operate on her the next day at noon, but carefully concealed any such design from the patient and her friends, who did not expect its performance until several days later.

On the 12th of January, at twenty minutes past 11, A. M., Mrs. C. was put to sleep in forty-five seconds, without touch or pass of any kind, the facility with which the mesmeric influence was produced having gradually increased at each sitting. At 12 o'clock, in presence of Profs. Ford, Means, Gavin and Newton, and Dr. Halser, the patient being in a profound sleep, I prepared her dress for the operation, and requested my professional brethren to note her pulse, respiration, complexion, countenance, &c. before, during, and after the amputation, in order to detect any evidence of pain or modification of the functions. As Mr. Kenrick had never witnessed a surgical operation, he feared he might lose his self-possession, and requested to be blindfolded; which was done. He now seated himself on the couch near the patient, and held her hand in his during the operation. This was accomplished by two elliptical incisions about eight inches in length, comprehending between them the nipple and a considerable portion of skin, after which the integuments were dissected up in the usual manner, and the entire mamma removed. It weighed sixteen ounces. The wound was then left open about three quarters of an hour, in order to secure the bleeding vessels, six of which were ligated. The ordinary dressing was applied, and all appearances of blood carefully removed, so that they might not be seen by the patient when aroused.—The amount of hemorrhage was rather more than is usual in such cases.

During the operation, the patient gave no indication whatever of sensibility, nor was any of the functions observed by those present modified in the least degree. She remained

in the same sound and quiet sleep as before the use of the knife. Subsequently the pectoral muscle, which had been laid bare, was twice or thrice seen to contract when touched with the sponge in removing the blood. About fifteen minutes after the operation, a tremulous action was perceived in her lower jaw, which was instantaneously arrested by the application of the mesmerizer's hand to the patient's head. This phenomenon recurred in about ten minutes after, and was again in the same manner quieted. Professor Ford, who counted the pulse and respiration, states that before any preparation was made for the operation, the pulse was ninety-six, and the respiration sixteen per minute; that after moving the patient to arrange her dress for the operation, and just before this was commenced the pulse was ninety-eight, and the respiration seventeen; that immediately after the detachment of the breast, the pulse was ninety-six, respiration not counted; and that after final adjustment of the bandages and dress, which required the patient to be raised and moved about, the pulse was ninety-eight and the respiration sixteen. All present concur in stating that neither the placid countenance of the patient, nor the peculiar natural blush of the cheeks, experienced any change whatever during the whole process; that she continued in the same profound and quiet sleep, in which she was before the operation, (with the exceptions above noted,) and that, had they not been aware of what was being done, they would not have suspected it from any indications furnished by the patient's condition.

The patient having been permitted to sleep on about half an hour after the final arrangement of her dress, the mesmerizer made passes over the seat of the operation, in order to lessen its sensibility, and aroused her in the usual manner, when she engaged in cheerful conversation with Mr. Kenrick and myself, as though she had no suspicion of what had taken place. I then introduced to her the gentlemen who had placed themselves so as not to be seen by her on awakening, and observed, that I had invited them to come in during her sleep, in order that we might fully test her insensibility, preparatory to the operation. After a few minutes of conversation, I asked her when she would like to have the operation performed? to which she replied, the sooner the better, as she was anxious to get home. I added, "Do you really think that I could remove your entire breast, when asleep, without your knowledge?" Answer. "Why, doctor, the fact is, that from the various experiments I am told you have made on me, I really do not know what to think of it. "Well, madam, suppose I were to perform the operation one of these days, and

to inform you of it when you would awake. would you believe me; and could you control your feelings, on finding that it had been done?" Answer. "I could not suppose that you would deceive me, and of course I would be very glad, but would try not to give way to my feelings." "Have you perceived since your arrival here, or do you now perceive, any change in the ordinary sensations of the affected breast?" "No, sir; it feels about as it has done for some time back." About a quarter of an hour having elapsed since she woke, I then told her that, as we found her in a proper state for the operation. I had performed it, and that the breast was now removed. She expressed her incredulity—said I was certainly jesting, as it was impossible that it could have been done without her knowing it at the time, or feeling any thing of it now. She became convinced only on carrying her hand to the part, and finding that the breast was no longer there. She remained apparently unmoved for a few moments, when her friends approaching to congratulate her, her face became flushed, and she wept unaffectedly for some time. The wound healed by the first intention.

In laying the above narrative before the profession, it is due to the cause of truth to state, that it has been submitted to all the physicians present at the operation, and that I am authorized by them to say that it accords in every particular with their own observations so far as they were present. I should also add that, having no other object in view than the establishment of the fact that a surgical operation may be performed under such circumstances, without the consciousness of the patient, I have designedly avoided any mention of the various and interesting mesmeric phenomena manifested prior and subsequently to the operation.

AUGUSTA, Ga., Feb. 1st, 1845.

[Southern Med. and Sur. Jour.]

#### MAGNETIC SLEEP.

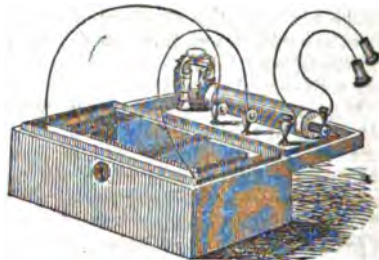
(Continued from Page 45.)

The internal organization of the pole in the centre of the brain, as disclosed in the somniscient state, is a subject of great interest; for the interior inverted cone, described by clairvoyants, is the magnetic miniature germ of the form of the brain. The heart, lungs, stomach, and other organs, as well as the limbs, have magnetic miniature germs of their organizations, which are varied, according to the variations in the forms of the organs and limbs, as seen by clairvoyants. These organizations are also seen to be connected together by magnetic axes and interlacings, irrespective of the organization of the nervous system, and constitute a perfect mag-

netic, spiritual, or immaterial form, corresponding with that which is material. They are purely spiritual forms, connected with, or inclosed in, those that are material, and according to the concurrent testimony of clairvoyants, these spiritual forms are raised in all the beauty of their earthly tenements.

The germs with which the human system was formed and perpetuated, are, therefore, magnetic or immaterial forms, inclosed in those that are material; and according to the same concurrent testimony, the entire animal and vegetable kingdoms were formed, and perpetuated in the same manner. Hence we infer a corresponding cosmogony of the solar system, and of the stars in the heavens.

#### VIBRATING MAGNETIC MACHINE.



We have substituted a spring, as seen in the above figure, which vibrates so fast as to make the motion of the forces continuous. The power of the instrument is also greatly increased, and, with the continuous motion of the forces, makes them greatly superior to the rotaries, or any other instruments for magnetizing. We have also made other important improvements connected with these machines, in which no expense has been spared to render them every thing that could be desired for the purpose for which they are intended.

The construction of these machines is so simple as to make any instructions for running them apparently unnecessary. We may, however, observe that the solution of sulphate of copper, with which the instrument is run, should be a saturated solution, or as strong as it can be made, and should be poured into and nearly fill the space surrounding the zinc: when, on adjusting the conducting wires from the battery to the instrument, as seen in the above engraving, the armature or spring will commence vibrating, if the screw presses moderately upon it.

If the pressure, however, is very strong, strike the spring downwards with the end of the finger, when it will vibrate unless the screw presses too hard.

A very little attention to the effect of the

screw upon the action of the spring, will enable any person to understand it, and to see that the intensity of the forces from the machines may be varied by the screw as well as by the piston.

### CASES.

#### CHRONIC MUCOSIS\* OF THE LUNGS.

##### *Chronic Bronchitis.*

Mr. J. G. of Sixth Avenue, New York, aged 40 years. Called to see him Nov. 17th 1844, and found him in the last part of the last stages of chronic mucosis of the lungs. He had severe hemorrhage from the lungs about three months before, about a year after the disease commenced, and was now raising large quantities of matter—was emaciated, had night sweats and sleepless nights—was sinking fast under the ordinary treatment, and in this state abandoned by his family physician as a hopeless case.

There was no pain or tenderness produced by pressure on the ganglions of the spinal nerves connected with the lungs or any other organ.

We now magnetized his lungs in the most thorough manner, and directed Mrs. G. to repeat the operation morning and evening, and give him a pill of the following prescription, morning, noon and night.

Hard Bal. Copa and Cubebs, - - 3 iiss  
Ext. Hyos. - - - - - 3 ss  
Make one hundred pills.

We also directed the use of Port wine or strong beer morning and evening, and brandy at dinner, with the most nourishing diet. Mrs. G., after having recovered from her frightful apprehensions of a return of the hemorrhage, from the gormandizing beverage we had prescribed, promised a faithful adherence to our advice, and afterwards called upon us once a week with buoyant spirits to advise us of the favorable progress of the case.

At the end of four weeks a messenger called to inform us that "a gentleman whom we had cured of consumption" had that day "examined Mr. G. and found he had tubercles in his lungs, and required the gold pills."† I had, however, no hesitation in declaring my belief that the gentleman was mistaken, but promised to call and see the patient, when, on applying pressure upon the ganglions of the spinal nerves connected with the lungs, we found them very sensitive, and consequently that tubercles had formed in his lungs, as they frequently do in the last stage of mucosis. His cough and expectoration had, however, been gradually decreasing—his night sweats had disappeared, and he had gained flesh and strength.

We now added to our prescription in this case the magnetized gold pill morning and evening, and in five weeks from this time his cough and expectoration ceased, and he is now, Feb. 20th, attending to his daily routine of business.

We have selected this case for notice from among many others, to show the effect of the treatment in chronic mucosis, and also as an example of the development and treatment of tubercles in the last stage of the disease.

#### CHRONIC SEROSIS\* OF THE UTERUS, STOMACH; AND LIVER.

##### *Tubercula; Chlorosis; Green Sickness; Pallidus Morbus.*

Miss J. S. of Newark, N. J., aged 22 years. On an examination of this young lady in June, 1844, there was found great sensibility to pressure on the ganglions of the spinal nerves connected with the heart, stomach, liver, and uterus, and it was two years since her health began to decline, and a year and a half since the last recurrence of the catamenia. She was greatly emaciated—her skin perfectly blanched—was very feeble, and in the last part of the last stage of the disease. She had been a long time under the ordinary routine of treatment of the schools, but the disease continued to make progress.

The gold pills were now prescribed, with the action of the Rotary Magnetic machine, and we magnetized the diseased organs from one to three times a week. It was, however, five or six weeks before the disease began to give way, when she began to gain strength, and to show some color in her skin.† Her appetite began to increase, and she now began to gain a little flesh, and more color in the skin. In about four months her breasts began to expand, and in about six months the catamenia appeared, after an absence of more than two years, and her health was soon re-established. As a matter of curiosity, we have since looked into a number of recent medical works of high reputation, to see the notions of the writers on the subject of the fatal disease called *Chlorosis*, with which our patient was affected; and we have no hesitation in saying that none of them knew a word of the true cause of the phenomena presented in such cases, or of the proper treatment of the disease.

#### CHRONIC SEROSIS OF THE ABDOMEN.

##### *Ascitis Dropsy.*

In the last stage of chronic disease of the organs, their serous surfaces excrete an albuminous serum, which accumulates in the

\* Chronic diseases of the mucous membranes.

† We did not learn the name of the gentleman.

\* Chronic disease of the serous membranes.

† This young lady required constantly two of the gold pills a day to keep her from sinking.

cavity of the abdomen, and distends it. Serum is also excreted by the serous surfaces of the fascia of the muscles, when the feet, ankles, and legs, begin to swell, and sometimes, with the abdomen, become very large.

We commenced magnetizing a perfectly hopeless case of this kind about seven weeks since, of a lady aged 40 years, and the results have been such as to leave little doubt that the forces from the magnetic machines will be found greatly superior to any other remedy in such cases. It was a case of serous disease, and very great enlargement of the left kidney.

We placed the negative button over the ganglion of the spinal nerve connected with the organ, and moved the other, repeatedly, all over the abdomen, under the full power of the instrument. We then placed the positive button over the ganglions of the spinal nerves connected with the stomach, and repeated, with the negative button, the operation over the abdomen, and then magnetized the feet and legs in the usual manner, under the full power of the instrument.

We repeated this operation nearly every day, with a daily progress of improvement, without any other aid than that of Homœopathic medicines, and the swellings have now nearly disappeared, and the lady's general health and strength greatly improved.

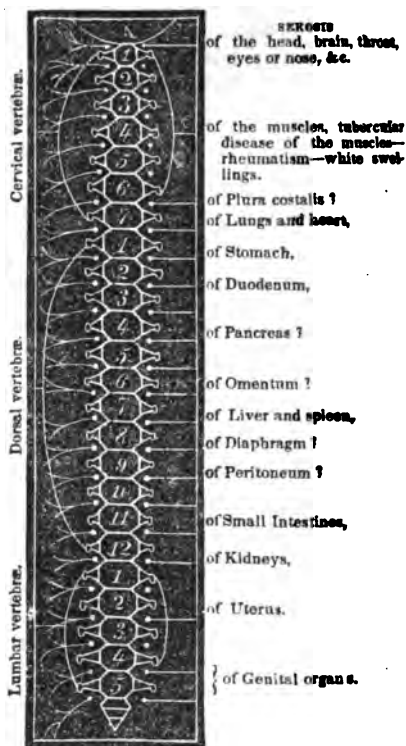
On reading over this case, I find I have described it so as to make it appear not more than about half as bad as it really was, or would have appeared had it been described by her family physician, who prescribed the medicine required during the time we were magnetizing her.—[*Sherwood's Manual for Magnetizing*, fifth edition.

#### ANATOMY AND PHYSIOLOGY.

It is now more than thirty years since we ascertained by the magnetic symptoms, and by post-mortem examinations, that there was a direct connexion between the ganglions of the spinal nerves, and the serous surfaces of the organs, as well as with the muscles.—These ganglions were thus found to be connected with the different organs, and with the muscles, in the order described in diagram A.

The intermediate ganglions are no doubt connected with the different viscera, and a physician of this city has, at our request, directed his attention to this subject. He has been trying to determine these connections by the action of the magnetic machines, and the result thus far makes the probable connections as marked with interrogation points.

When the doctor found tenderness on applying pressure over the ganglions, thus



marked, he placed the positive button over the ganglion thus indicated; and then passed the negative button over the entire surface of the chest and abdomen, under a moderate power of the instrument, by which sensations, more or less painful, were produced on different parts of these surfaces, and which induced him to locate the connexions as above described.

No opportunity has, however, occurred to test their correctness by post-mortem examinations, and we would now suggest to physicians who are practising the magnetic symptoms, and using the magnetic machines, the importance of these scientific investigations, and of ascertaining, and publishing, as soon as possible, the true connections of these ganglions with the viscera.

The connections of the spinal nerves between the 3d and 4th, 5th and 6th, and 10th and 11th dorsal, should also be ascertained, as well as the connection of the lumbar vertebrae in males, corresponding with those that are connected with the uterus in females.

This is a fine field for investigation and for distinction, and we hope that the enterprising young men of the profession will not fail to enter upon it.—[*lb.*



Letter to the Editor from J. D. Friend, M. D.  
 Middletown, N. Y., March 6, 1845.

DR. SHERWOOD—*Dear Sir*:—I am much gratified with the Magnetic Machine. I consider it, from the opportunities I have had of testing its virtues, an *invaluable* assistant to the practitioner: and these opportunities have not been few; for I have used it, during the last two months, in more than thirty cases; and in each instance the effect has been more or less salutary. In the first case which I used it, I was astonished at the *immediate* relief it afforded the patient. This was a case of Tic Douloureux, and abscess of the Alveolar process. The patient was a lady nearly sixty years of age, and had been afflicted for more than six years. The pain was so severe that I was assured by her relatives she had not for three months previous to my being called, slept *five minutes* during the night. After the first application she rested well and sent for me early to repeat the operation. The result is that she is nearly as well as she ever was, with every prospect of her complete restoration. In cases of Rheumatism, Head-ache, Bronchitis, and Prolapsus Uteri, I can confidently recommend the Machine as a remedial agent which will not disappoint the practitioner. I may mention, in closing this brief communication, that a severe case of *colic* which came under my observation was completely cured in less than ten minutes by the application of the machine.

I have been very much amused at the reports which have been circulated in reference to the supernatural effects which have been attributed to this beautiful piece of mechanism, which is rather a matter of surprise since there is such a wonderful propensity in the human mind to reject everything which does not come recommended for its antiquity; and it can be for this reason and for no other that mankind have adhered with such pertinacity to the absurdities and contradictions and barbarisms of a false school of medicine; and it is a fact that the inquirer after truth who endeavours to arrive at *practical* knowledge by an examination and study of the countless volumes which have been issued by as many ambitious aspirants, must of necessity become lost and bewildered in the search, without having the satisfaction of knowing that he has, by concurrent testimony, established in his mind *one important principle*—one universally acknowledged opinion!

Knowledge and science are ever progressive; and he who with a self-satisfied and egotistical air laughs at the pretensions of any fresh discovery, without previously in-

vestigating its merits, may aptly be compared to the snail, which inhabiting its own narrow shell, thinks the whole universe lies within the scope of its limited vision. He who will not read and compare and investigate must remain in ignorance; and while it is the duty of every man to deal justly with every subject that may be presented to his mind, he acts unwisely when he *takes that for granted*, which the testimony of centuries even has stamped with the seal of approval. *For the reason*, simply, that a certain dogma comes down to us dressed up in the habiliments of age, and loaded with the "dust and cobwebs of time" is no *real* evidence of its correctness. DOWT, IGNORANCE AND STUPIDITY have ever been at work, rearing boundaries and barriers to the advancement of the human intellect: and they have been arrested most arduously by our "Medical professors" and the host of "blind leaders of the blind." In the study of medicine we have taken too much for granted. And we have found it easier to follow than to lead. The *ipse dixit* of the celebrated Doctor such-an-one has been received with all the meekness and servility of an urchin in the school room. The scientific conclusions of the learned Sir John Somebody, have placed the capstone upon a given science: and sacrilegious are the hands that dare attempt to hurl it from so proud an eminence or carry the structure to a more grand and dazzling height.

The "science of medicine," if it could be embodied, would be found to have upon its huge trunk ten thousand wounds and bruises and putrifying sores that can never be "bound up or mollified with ointment."

But, thanks to the "dawning intelligence" of the age, men are beginning to break away from the restraints of the schools, and are weighing and investigating for themselves. They are beginning to discover the absurdities and gilded ignorance of those schools, and to follow more closely the dictates and teachings of plain experience and nature.

Yours, truly,

John Wesley and Electricity.

The individual whose name stands at the head of this article was one of the most remarkable men of the past century. For depth of scholarship, consistent piety, abundance of labors, and a rich harvest of success, he has been excelled, or even equalled, by few men since the days of the apostle Paul. The general wisdom of his plans and arrangements is manifest from the fact that more than a million of his followers are found in this country, and nearly that many more in Great

Britain and Ireland, whose consistent piety is read and known of all men. He died at the advanced age of 88; and although not a day was given to repose, nor an hour to unnecessary leisure, for 70 years he did not lose a night's sleep, and such was his capability to endure fatigue, that in his eighty-fifth year, he speaks of that day as a day of leisure, in which he preached only twice. It was the misfortune of this distinguished man, quite early in his public life, to be the subject of a severe pulmonary affection, bringing him almost to death's door. This fact, in connexion with many others which came under his observation, induced him to pay particular attention to the economy of nature and the laws of life. His work entitled, "*Primitive Physic*," or "*An easy and natural method of curing most diseases*," reached its twenty-third edition before his death in March, 1791. It is not my intention to notice at length more than one of the remarkably simple and therefore efficient remedies there suggested for the relief of human suffering;—one only shall claim our attention: it is *Electricity as a remedial agent*. It was soon after the very interesting experiments of Drs. Franklin, Lovett, Hoadly, and others, were published, that Mr. Wesley collected together the sum of what had been written on this subject, and published it with this title: "*Desideratum: or Electricity made plain and useful. By a lover of mankind and common sense.*" His opinion of its efficacy is thus expressed:

"Indeed there cannot be in nature any such thing as an absolute panacea—a medicine that will cure every disease incident to the human body. If there could, Electricity would bid fairer to do it than any thing in the world; as it takes place in such a vast number of disorders, some of them so widely different from the others."

On the 26th of February, 1753, there is the following statement in his journal. "I advised one who had been troubled many years with a stubborn paralytic disorder, to try a new remedy. Accordingly she was electrified, and found immediate help. By the same means I have known two persons cured of an inveterate pain in the stomach; and another of a pain in his side, which he had had ever since he was a child. Nevertheless who can wonder that many gentlemen of the faculty, as well as their good friends the apothecaries, decry a medicine so shockingly cheap and easy." In perfect accordance with this, on the 9th Nov. 1756, I find the following: "Having procured an apparatus on purpose, I ordered several persons to be electrified, who were ill of various disorders; some of whom found an immedi-

ate, some a gradual cure. From this time I appointed, first, some hours in every week, and afterwards, an hour in every day, wherein any that desired it might try the virtue of this surprising medicine. Two or three years alter, our patients were so numerous that we were obliged to divide them. So part were electrified in Southwark, part at the Foundry, others near St. Paul's, and the rest near the seven dials. The same method we have taken ever since; and to this day, white hundreds, perhaps thousands, have received unspeakable good, I have not known one man, woman, or child who has received any hurt thereby: so that when I hear any talk of the danger of being electrified, (especially if they are medical men who talk so,) I cannot but impute it to a great want either of sense or honesty."

As the work to which I have alluded is entirely out of print, I beg leave to make the following quotations from its preface:

"And yet there is something peculiarly unaccountable with regard to its operation. In some cases where there was no hope of help, it will succeed beyond all expectation; in others where we had the greatest hope, it will have no effect at all. Again, in some experiments, it helps at the very first, and promises a speedy cure; but presently the good effect ceases, and the patient is as he was before. On the contrary, in others it has no effect at first; it does no good; perhaps seems to do hurt. Yet all this time it is striking at the root of the disorder, which in a while it totally removes. Frequent instances of the former we have in paralytic, of the latter in rheumatic cases.

"But still one may, upon the whole, pronounce it the *Desideratum*. The general and rarely failing remedy in nervous cases of every kind (palsies excepted) as well as in many others. Perhaps if the nerves are really perforated (as is now generally supposed) the electric ether is the only fluid in the universe which is fine enough to move through them. And what if the nervous juice itself be a fluid of this kind? If so, it is no wonder that it has always eluded the search of the most accurate naturalists.

"Be this as it may, Mr. Lovett is of opinion, 'the electrical method of treating disorders cannot be expected to arrive at any considerable degree of perfection, till administered and applied by the gentlemen of the faculty.' Nay, then *quanta de spe decidi?* All my hopes are at an end. For when will it be administered and applied by them? truly *ad Gracis Calendis*. [Never.]

"Therefore, without waiting for what probably never will be, and what indeed we have no reason to expect, let men of sense

do the best they can for themselves, as well as for their poor, sick, helpless neighbors. How many may they relieve from racking pain or pining sickness, by this unexpensive and speedy remedy! restoring them to ease, health, strength, generally in a few minutes, frequently in a moment! And if a few of these lovers of mankind, who have some little knowledge of the animal economy would only be diligent in making experiments, and setting down the more remarkable of them, in order to communicate them one to another, that each might profit by the others' labor, I doubt not but more nervous disorders would be cured in one year, by this single remedy, than the whole English MATERIA MEDICA will cure by the end of the century."

The above testimony is valuable not only because of the source from whence it comes, but because it is confirmed by recent experiments, and is entirely disinterested: as such it is commended to the attention of the public.

Newark, N. J., March 1, 1845.

Dr. SHERWOOD:

Sir—For more than a year past, I have been in the constant use, in my practice, of the Electro-Magnetic Machine, and I must acknowledge it has more than met my expectations in its effects. It exerts a most surprising influence in reducing inflammations, soreness and pains. It seems to exhilarate the nerves, excite the absorbents, dissolve and remove obstructions in many instances in an extraordinary manner.

I applied it to an elderly gentleman who had a large tumor on the lower point of the sternum, of some thirty years standing. It caused it to suppurate in a few days, and entirely removed it. I applied it to a Mr. L. for a tumor on the side of the neck, of some ten years standing, and in a few weeks it caused suppuration, and completely cured it.

I have given permanent relief to several cases of Tic Douloureux, and restored the senses of hearing and smelling. In one or two cases of mucous diseases the effect has been astonishing.

I have recently applied it with wonderful effect in a very severe case of hip disease, using also your Electro-Magnetic pill at the same time.

I have just relieved two severe cases of St. Vitus' dance; and I might multiply the cases, but this must answer for the present.

As ever,

L. D. FLEMING.

#### MAGNETIC MISCELLANY.

In magnetizing a boy aged 12 years on the 23d of March inst., with recent paralysis of the left arm, tongue and face, and tetanic rigidity of the muscles of the neck, &c., we placed the positive button in his left hand, and the negative button in our left hand, while we made passes with the right hand over the face during four or five minutes. In about five minutes from the time we finished the operation, our left arm began to ache,\* and the intensity of this sensation increased so rapidly as to completely paralyze the arm in one minute, and in about two minutes it was so great as to be insupportable. A sinking sensation began to pervade the system, when we called for assistance, and had the negative button quickly placed in the left hand, and the positive on the neck, under the full power of our largest machine. We soon felt a pleasant sensation from the action of the instrument—the horrible aching sensation began to give way, and in about five minutes it had ceased very nearly, and the motion of the arm restored. In this case the disease in the left arm of the boy was conducted to our left arm by the current from the positive button in an opposite direction from the current which was at the same time moving from the negative to the positive button.

This manner of magnetizing is a very pleasant one for patients, but sometimes, as we have how learnt, a very dangerous one for magnetizers.†

The most severe cholic pains are reduced with great rapidity by the action of the machine, as we are informed by several physicians. Two cases of recent dropsy—one from chronic serosis or tubercular disease of the heart and muscles, and the other from chronic serosis of the liver and right kidney, have, we are also informed, been promptly removed by the action of these instruments.

Asthma's which have long defied every

\* *ACHING* is the sensation produced by the prevalence of the positive over the negative force and *PAIN* the sensation produced by the prevalence of the negative over the positive force.

† We have taken disease in mesmerizing patients, and in each case it was the exact counterpart of the disease with which the patients were affected.

other remedy, have readily yielded to the action of these machines. In these cases patients should be magnetized as in Bronchitis.

The importance of a scientific application of the buttons may be seen in the fact that many cases of disease which resisted an empirical manner of magnetizing, have yielded readily to a scientific application of the buttons.

Dr. Cox, of Williamsburg, N. Y., has cured a bad case of white swelling of the knee, with the Savage Rotary Machine alone.

Dr. Baker, of Brooklyn, New York, has brought a child about two years old to life, and saved it with one of these machines, after it had been apparently dead ten or fifteen minutes.

Dr. — brought a child to life under similar circumstances. It breathed a few minutes, but in consequence of some difficulty in running the machine, the child was lost. On learning these circumstances, we determined, if possible, to have a machine which should not be subject to such accidents, and we have succeeded in the Vibrating Machine with the assistance of the ingenious Mr. Cornell, of the Magnetic Telegraph.\*

**SALT RHEUM.** The worst cases of this disease are quickly cured by the action of the machine. Dilute Sulphuric acid is the remedy to use at the same time. One drop of the acid to ninety of alcohol—magnetize. Dose three to five drops two or three times a day, in a wine glass of water.

Dr. Milspaugh, of Orange county, N. Y., has cured a case of Amaurosis with the Savage Rotary Machine.

There are some cases of rheumatism in which pain in a limb or other part of the system commences or is increased on becoming warm in bed at night. In these cases the Tincture Rhus Toxicodendron† is the remedy which should be used in conjunction with the action of the machine. Dose 1 to 3 drops in a wine glass of water, three times a day, according to the age and condition of the patient.

\* Imports are already engaged in attempts to improve on the public miserable imitations of these machines.

† Weismann & Casebeer, German Apothecaries, New York.

**BILIOUS FEVERS.**—A number of physicians of this city and country, have reduced violent paroxysms of fever with these instruments, in from five to ten minutes. The excessive action of the instrument on persons in health, produces fever.

The blood is dark colored in fevers and in acute and chronic diseases, and becomes more florid under the action of the instrument.

In the Vibrating Magnetic Machines, the circuit of the forces is broken so fast as to make their motions continuous, without variation of intensity except by the action of the piston, and they consequently accumulate in the system with great rapidity.

In from five to ten minutes from the time we commence magnetizing patients, the pores of the skin are generally opened by the action of these forces, and they begin to perspire. It is commonly only necessary for patients to hold the buttons in the hands, under a moderate power of the instrument, to obtain these results.

Nothing can be compared to the curative action of these machines in acute diseases, or in inflammations. The Lancet, Calomel, and Blue Pill, which entail diseases on millions of the human race every year, may now be laid aside with perfect safety to patients, and abiding benefit to their posterity.

Some physicians think these instruments are of greater importance in acute diseases than in those that are chronic, from the great rapidity of the cures in such cases. They should, however, never forget the fact, that chronic diseases are slow in their progress, and consequently necessarily so in the cure.

**ULCERATED EARS.**—R. Jamaica spirits, a wine glass. Honey, a tea-spoon full. Mix, and introduce a little into the ulcerated ear morning and evening, with a feather.—[Dr. Van Buren.

**RHEUMATISM.**—The nitrate of potash (salt petre) is far superior to the hydriodate or iodide of potash in rheumatism or tubercular disease of the muscles, as well as in other scrofulous affections, or tubercular disease of other parts of the system. Yet physicians will prescribe the hydriodate until it goes out of fashion.

# THE DISSECTOR.

VOL. II.

JULY, 1845.

NO. III.

## FALLACIES OF THE FACULTY.

*Lectures delivered at the Egyptian Hall, Piccadilly.  
London, 1840*

BY S. DIXON, M. D.

### LECTURE VI.

#### Present State of Medical Practice in England.

*Dyspepsia—Hysteria and Hypochondria—Insanity—  
effect of Ligatures—Faint—Congestion, its nature—  
Infantile Convulsions.*

#### GENTLEMEN:

After a long intercourse with the world, and a rigid examination of what, in his day, was called its wisdom, the great Lord Bacon, musing doubtless over his own philosophical discoveries, thus writes:—"It is a view of delight to stand or walk upon the shore-side, and to see a ship tossed with tempest upon the sea, or to be in a fortified town, and to see two battles join upon a plain; but it is a pleasure incomparable, for the mind of man to be settled, landed, and fortified in the certainty of truth; and from thence to descry and behold the errors, perturbations, labours, and wanderings up and down of other men." But, Gentlemen, however exciting this kind of pleasure be to him, who should be content with merely making a discovery to himself—the making of it public has its drawbacks; for "whoever," in the words of Johnson, "considers the revolutions and the various questions of greater or less importance, upon which wit and reason have exercised their power, must lament the unsuccessfulness of inquiry, and the slow advances of truth, when he reflects that great part of the labor of every writer, is only the destruction of those that went before him. The first care of the builder of a NEW SYSTEM, is to demolish the fabrics that are standing." But how can you brush away the cobwebs of ages from the windows of truth, without rousing the reptiles and insects that so long rejoiced in the darkness and secrecy these cobwebs afforded—the bats

and spiders, to whom the daylight is death! Truth, like a torch, does two things; for not only does it open up to mankind a path to escape from the thorns and briars which surround them; but breaking upon a long night of ignorance, it betrays to the eyes of the newly awakened sleeper, the bandits and brigands who have been taking advantage of its darkness to rob and plunder him. What has Truth to expect from these?—What, but to be whispered away by the breath of calumny, to be scouted and lied down by the knaves and fools, whom interest or intercourse has leagued with the public robber as his partizans. Who will talk to me of conciliation? Who will tell me that mild and moderate measures ever brought over such implacable enemies to the ranks of their destroyer; or that robbers rioting in the spoils of their victim, will listen to the voice of the charmer, charm he never so wisely? Surely people must be out of their senses, who imagine that any exposition of Truth will be acceptable to men whose emoluments are chiefly derived from a course of studied and systematic mystification—Professors, who lure the student by every possible promise to their schools, and, when once in their net, keep him there by every possible artifice and pretext which collusion and corruption can devise! one day entangling him in a web of unmeaning sophistry—another, stimulating him to waste his time and labor in splitting straws, or in magnifying hairs—now encouraging him in a butterfly chase after shadows—now engaging him in a wordy and worthless disputation with his fellows! Gentlemen, I appeal to you, if this is not the mode in which, in most cases, from four to six years of the best part of a young man's existence are passed in our medical schools—passed in the fruitless endeavor to know a profession, upon the exercise of which he is too often compelled to enter with no other pretensions to a knowledge of its principles than the trumpery certificates and diplomas for which he has been duped and deluded.

How is that student to be repaid the capital of time and money he has expended upon what he calls his education? How, but by deluding and mystifying in his turn the suffering sick who apply to him for relief. For relief?—Vain hope! Look at the numbers of persons who live, or try to live by physic,—doctors, surgeons, apothecaries, druggists, cuppers, nurses—and ask yourselves how even one tithe of these can do so, but by alternately playing upon the passions and prejudices,—the hopes, fears, and ignorance of the public? in one case inflicting visits too numerous to be necessary; in another, employing draughts, mixtures, or measures, too expensive, too frequently and too fruitlessly repeated, to be all for the benefit of the patient! Think you, that the members of the medical profession are different in their feelings from every other human being—that their minds are so constituted, that, under the most terrible temptations, they can so far set at defiance the stern law of necessity, as in their present crowded and starving state, receive with open arms a system that threatens so many of their order with ruin? Is it in the nature of things that they will welcome a practical improvement, by which the practitioner may, in a few hours, cut short cases and chances, which, by daily visitations, or by three draughts a-day, might be profitably protracted to a month, if the system on which it is based were only advocated in calm, mellifluous, and complimentary language! As soon may you expect a needy attorney to be prevailed upon by his client's tears to cut short a chancery suit; or the master of a sailing-smack to listen patiently to the praises of steam; or a coach-proprietor to admit the safety and superiority of railroad over coach conveyance, when estimating each the losses they shall respectively sustain by the too general use of the superior motive power. What, though the present condition of medical practice be less the crime of the profession, than the fault of the legislature, that permits men clothed with collegiate authority,—professors enjoying the sanction of its protection,—annually to lure, by misrepresentation and lying promises, thousands of credulous and unsuspecting youths into a path strewed, even in the very best of times, with thorns and briars innumerable? Better far that one half of these should at once abandon a walk of life, where the competition is so keen and close, that comparatively few in the present day can live honestly by means of it,—than, that they should hereafter have to eat their precarious bread, at the daily and hourly sacrifice of their own honor, and their patients' interests. Who will tell me half-measures can be of any

avail, under circumstances like these? Gentlemen, in corrupt and difficult times, half-measures, so far from succeeding, have either been taken as a sign of weakness in the cause, or as a symptom of timidity on the part of the advocate. Away then, with half-measures!—away with the idea of conciliating men, the already rotten tree of whose sustenance you sap—the long-cemented system, whose existence depends, not on a virtuous adherence to nature and truth, but upon a collusive and fraudulent perversion of both! When persons little versant with the present state of medical affairs, see men of established name supporting a system of dishonesty and error, they too often doubt the light of their own reason. “Would Dr. So-and-So,” they ask, “and Mr. Such-a-One, hold this language, if they did not themselves believe it—men so respectable, and so amiable in private life?” But tell these simpletons, that Dr. So-and-So's Bread depends upon his Belief—that Mr. Such-a-one's family would wither with his fading fortunes, if the father, in the language of Hazlitt, “ceased to support that which he had so long supported, and which supported him”—and you bring an argument which, though not quite convincing in itself, will at least compel a closer investigation of the system it is your wish to expose and crush. Gentlemen, I have been blamed for the tone and spirit in which I have spoken of my adversaries—I have been asked why assail their motives—why not keep yourself to their errors? But in this particular instance I have been only the humble imitator of a great master—a man whose name will at once call up every sentiment of veneration—the indomitable Luther. *Magnis componere parva*, I have followed in his wake—I hope soon to add *passibus aequis*. Think you, the Reformation of the Church could have progressed with the same rapidity, had its most forward champion been honey-mouthed—had his lip been all smiles, and his language all politeness—or had he been content, in pointless and unimpassioned periods, to direct attention solely to the doctrinal errors of Rome? No—he thundered, he denounced, he heaped invective upon invective, and dealt in every form of language which could tell best against his enemies, whether in exposure or attack. Too wise to leave them the moral influence of a presumed integrity, which they were far from meriting, he courageously tore away the cloak of sanctity and sincerity with which, in the eyes of the vulgar, they had been too long invested. Had he done otherwise, he might have obtained the *posthumous* praise of moderation, at the price of defeat and the stake.

Gentlemen, let it not for a moment be supposed that in thus sweepingly arraigning the present system of medical polity, I can have the remotest wish to degrade the profession of the physician. On the contrary, it has been my endeavor throughout to improve his *morale*, and to elevate his condition,—to render him a useful, honorable, and honored person,—to make him what neither the mere lawyer, nor the mere churchman can possibly be—a student of nature, and an intellectual expounder of his Maker's works; one from whose ranks kings may still, as they once did, choose their counsellors. And how can this be done but by rescuing the art of medicine from the hands of the miserable creatures who at this moment principally usurp its practice? Nor do I for an instant wish to insinuate that among the individual members of the profession, there are not numerous exceptions to the line of conduct pursued by these creatures. In every one of its grades and conditions,—apothecary, surgeon, and physician,—I have had the pleasure to meet practitioners who not only heartily join me in deploring the present shameful state of practice, but who aid me with their best efforts to expose and correct it. One and all of these honorable persons acknowledge that unless some great and speedy change in the mode of educating and remunerating medical men be introduced by the legislature, Medicine must shortly cease to be regarded in the light of a liberal profession; for as things now stand, the only sure path to lucrative popularity in physic is a complete sacrifice of conscience and principle on the part of the physician. How often have I been told, in my own case, that by courting the apothecary, and offering up incense at the false shrine of the professors, I might easily and cheaply obtain the bubble reputation, to be blown me by their breath: while by exposing the intrigues of the schools, and the collusions and corruptions of the professional world, not only do I stand as one man to a host, but I lay myself open to the secret stabs of a thousand unseen assassins. To tempters of that sort this has been my answer;—let it be yours also—

Slave! I have put my life upon a cast,  
And I will stand the hazard of the die.

That hazard now, thank Heaven is small—for the daily increasing number of upright and honorable practitioners who espouse my views, place me already sufficiently far above the reach of my enemies, to enable me to despise them thoroughly; and at this moment I feel as secure of victory, as at one period of my life, I feared defeat! As yet, I have only assailed the System—carefully

avoiding individual attack. True, I have repelled the attacks of others, somewhat strongly too; but that was all in self-defence. If, in tearing away the veil of iniquity, I have not altogether remained unscathed, I have, at least, the satisfaction to know, that my enemies have done every thing but laugh at the blows I dealt them. If it be said I have used language too strong for the occasion, I answer in the words of Burke: "When ignorance and corruption have usurped the Professor's chair, and placed themselves in the seats of science and virtue, it is high time to speak out. We know that the doctrines of folly are of great use to the professors of vice.—We know that it is one of the signs of a corrupt and degenerate age, and one of the means of insuring its further corruption and degeneracy, to give lenient epithets to corruptions and crimes." What reformer has not been called a "violent person!"—none that I ever heard of. Now, Gentlemen, to the more orthodox matter of this lecture.

We have hitherto spoken of the Brain as a unity—yet this organ is divided into two hemispheres. Like the features of the face it is two-fold. We have two eyebrows, two eyes, two nostrils, two ears, and in the early fetal state, the mouth and chin are separated in the middle—you have the marks of this original separation in the infant,—I may almost say in the adult: Now though a man may lose one eye, he is not therefore blind; or, though he lose the hearing of one ear, he is not necessarily deaf. It is just possible that a small part of one of the hemispheres of the Brain may in like manner become diseased, and the subject of it shall appear to reason very fairly to the last. But that must be a shallow observer indeed, who from such a possible fact should draw the fictitious inference that even one hemisphere of the Brain may be disorganized throughout its entire substance, without the intellectual powers being at all disturbed! If you read of such facts, set them down as false facts. The Brain then, like the body, in some of its parts is double, yet like the body in its integrity, the Brain is a unity, and like the same body it also has a diversity of parts. That the scalpel has hitherto failed to trace any well-marked divisions betwixt the various cerebral portions to which phrenologists have ascribed variety of function, is no argument against this doctrine. Do not all the different parts of the frame merge into each other—the elbow into the arm—the arm into the hand, &c.? What more clearly a unity than the Hand?—Yea we not frequently find from the weakness of one or more of its joints or muscles, the ability

on the part of its possessor to do a particular work, though he may still accomplish many others by means of it.—It is the same thing with the head. Partial disease of the Brain produces partial intellectual injury, and you see the effects of such injury in these persons who reason rightly upon every subject but one,—monomanjacs as they are called. Oh! I want no better proof of diversity of parts in the Brain than this. Like every other organ, the Brain of man commences its foetal existence in the lowest type of the same organ of those animals that possess a brain—gradually assuming by additions and superadditions, the form of the infant Brain. In some instances, as in the case of other organs of the body, one or more of the superadditions are never properly developed. The result you can anticipate. Idiocy, according to the degree of the defect; and yet there are medical twaddlers who say the Brain is not the organ of intellect! This much I have thought it right to premise before entering upon the subject of

#### DYSPEPSIA, OR INDIGESTION;

for to the state of the Brain and nervous system we shall have to ascribe the disease. When treating of Pulmonary Consumption, at a former meeting, I explained to you, that no individual could possibly suffer from any complaint whatever, without his digestion being more or less implicated. The patient who labors under any severe form of disease, such as Gout, Consumption, or Erysipelas, has all the symptoms or shades of symptom, that medical men group together under the head of Indigestion; but the gravity, prominence, or locality of the superadded symptoms, which may disperse the physician to term the disease Consumption, Erysipelas, or Gout, may also dispose him to overlook, or esteem as insignificant, the coincident errors and disorders of the digestive apparatus. In the lower and more subdued forms of Fever, the patient very often has no particular tendency to decomposition in any organ or locality, but from every function being more or less wrong, he very naturally turns his attention to his stomach or bowels, the errors of which come more particularly under the immediate cognizance of his feelings. Such a patient will complain to you of flatulence and acidity, or of that distressing symptom termed “water brash.” If you ask him about his appetite, he will tell you it is “so-so,” or “he cares nothing about eating,” or it is positively “excellent”—which last, I need scarcely tell you, means that it is morbidly craving. Ten to one, it is capricious,—the patient now

wishing for this, and now for the other, and rejecting what he desired most, the moment it comes before him. Perhaps he has thirst. He is wearied upon the least exertion; has little inclination to get up in the morning, and when he does get up, he is indolent, and dawdles his time away. He is apathetic in mind as he is indolent in body; and he has often a great disposition to sleep, especially after meals. Others again will just be quite the reverse of all this; these perpetually harp upon some particular topic—fidget themselves and every body else about trifles, and look always at the dark side of life. Some fly in a passion for nothing, or upon the least contradiction, and in a few minutes after the gust of passion has passed away, they lament their mental weakness. Their nights are either sleepless or broken and disturbed by unpleasant dreams. One moment they dream of robbers, from whom they cannot escape; or they are on the eve of tumbling down a precipice; dreaming sometimes within a dream—asking themselves, even in the very act of dreaming, whether they dream or not—and they will satisfy themselves by a process of unreason, that they are actually awake and walk the air. Even during the day many of these patients have their dreams or reveries—pleasurable sometimes, but more often the reverse;—they see things either as if “through a glass darkly”—or their perceptions are all exaggerated and unnatural. Phantoms may even pass before them at mid-day, phantoms such as they see in their dreams of the night. The very colors of things may be altered to their eyes—red appearing to them green, and vice versa. Even the shapes and dimensions of bodies may be quite changed to their sight—though the greater number have sufficient judgment remaining, to know this to be an optical delusion merely. John Hunter had the sensation that his own body was reduced to the size of a pigmy!—I have met with some patients who have even at times doubted their own existence.—Light and shade have wonderful effects upon most invalids of this class. One is perfectly miserable, except when he is in the sunshine—another cannot bear the light at all. Ringing in the ears, or partial deafness, is a common complaint of dyspeptic persons. Some can only hear distinctly during the noise of passing carriages, or in the hum of a city, or of falling waters; while others hear so acutely, that they complain of the ticking of the clock. The sense of touch is very often similarly vitiated; one patient having partial or general numbness,—another, his feelings so sensitive, that he shrinks with pain if you merely touch him. Occasional-



ly, though more rarely, you have examples of a reverse kind; the patient in that case will say—"Oh, do not take your hand away the pressure does me good—it acts like magnetism."

All kinds of aches are complained of by dyspeptic patients—headache perhaps most frequently,—headache, for which, on the hypothetical assumption of fulness of blood in the brain, the leech, lancet, and cupping-glass are so frequently in requisition. But to what end? In the words of Abernethy, supposing such assumption to be correct—"Does blood-letting cure diseases in which there is a fulness of blood in the head? It must be granted, that in many instances, it temporarily alleviates them, but in others, it fails to relieve, and even aggravates them."—What are those headaches, those night and day dreams, all those various signs and sensations, but the effects of a great instability of Brain, now brought on by one thing, now by another? I have known the most severe and distressing headaches arise from loss of blood, and I have known them originate in a long fast. Surely for such diseases, the leech and the lancet are not the proper remedies. But, Gentlemen, there are many other ways by which the brain may be weakened. You may as certainly exhaust it by prolonged literary or other mental labor, as by starvation or loss of blood; for there are times to think, and times to cease thinking: and if the brain be eternally harassed by an over anxiety in any of the pursuits of life; if it be always at work on one subject, not only will there be headache or confusion of head, but the constitution must be injured. How can this organ painfully revolve again and again the occurrences of the external world, and give the proper attention to the internal economy, over which it presides? When you listen to an orator or a preacher whose discourse powerfully affects you, the brain becomes so engaged, that it cannot at the same time attend to the breathing—and you are, therefore, compelled ever and anon to draw a long breath—you must take a deep sigh, to make up for the ordinary succession of short inspirations and expirations, which constitute the natural art of breathing. Now, Gentlemen, if the function of the lungs be so easily disturbed in this way, can you doubt that the heart, stomach, bowels, and other parts, may be similarly influenced? What are the complaints of men who have much on their minds, of bankers, merchants, and great lawyers?—what the diseases of aged persons—persons whose brains become weaker and weaker by the slow but certain operation of time? Do not these patients con-

stantly complain of their stomachs and bowels? Do not many of them suffer from palpitations of the heart,—from giddiness and sensations like fainting, with a fear of falling? Now, Gentlemen, this giddy sensation, this disposition to fall, is most commonly felt upon suddenly raising the head, or in rising from a chair. What surer sign of cerebral weakness? Yet, not long since, two gentlemen each upwards of seventy, informed me, they had been bled and leeches by their respective apothecaries for this disease of pure cerebral exhaustion. Bless my life, you may bleed or purge a healthy man into this state any day!

In these diseases, one patient will tell you he is troubled by a feeling of sinking and pain of stomach, which is only relieved by eating. Another suffers from spasm, and pain of the heart or stomach, with acidity or flatulence, the moment he begins to eat; and in either of these cases the pain may sometimes become so violent, that if it did not soon go off, the patient must die. Now, this kind of spasm, whether affecting the stomach or heart, is a disease, for which you are expected to give immediate relief, and nothing will do so more readily than a glass of hot water—water as hot as the patient can possibly drink it. This point of practice we owe to John Hunter, who having frequently suffered from spasm of the stomach, tried every thing he could think of, and among others hot water. The ease which this gave him, led him to extend its use to his dyspeptic patients; and my own experience of its virtues, enables me to bear him out in the encomiums he has passed upon it. To this simple means, palpitations, spasms, head-aches, wind and acidity, will all sometimes yield as to a charm. Is not this another instance in proof, how mere change of temperature acts on the body under disease? Now, as hydrocyanic acid very frequently gives the same immediate relief in every one of these affections, we at once see that its medicinal power must depend upon the change of temperature which it electrically produces. Of the various cordials to which you may have recourse for spasmodic pain of the heart or stomach, there is none so good as noyeau, and the virtue of this "strong water" depends very much upon the prussic acid it contains. Of all the remedies with which I am acquainted there is none equal to this acid, in convulsions and spasms of every kind. But spasms of the stomach and heart are not the only ones of which dyspeptic patients complain. Some are troubled with a sense of tension of the brain—others with a tightness of the throat or chest, and some, partic-

ularly females, suffer from a spasmodic affection of the gullet, which gives them a feeling as if they had a ball there. Others are subject to stitch or pain of the side, produced by cramp of the muscles of the ribs. How correctly Shakespeare described the nature of these pains, when he made Prospero say to Caliban in the Tempest,

For this be sure, to-night thou shalt have  
Cramps,  
Side-stitches, that shall pen thy breath up!

The common practice in these cases is to say, "draw your breath," and if you cannot do so for the pain, "inflammation" is the imaginary goblin of the doctor, and blood-letting in some of its forms the too ready remedy (?) to which he flies:—how vainly for the patient—how profitably for himself, truth must one day tell! To small doses of nitrate of silver, prussic acid, or quinine, such pains will often yield, after having resisted every form of depletion, with all the usual routine of blisters, black draught and blue pill to the bargain. The great error of both patient and practitioner, in dyspeptic cases, is to seize upon some of the most prominent features as the Cause of all the others. In one instance they will blame wind—in another acid. But as it happens, these, instead of being causes, are only the common and the coincident effects of a great cerebral weakness, and not the product, as many imagine, of fermentation of the food—they are morbid secretions from the lining membrane of the alimentary canal. And of this you may be assured, not only by the mode of their production, but by the manner of their cure, when that happens to be accomplished. Just watch a dyspeptic patient when he receives a sudden or unexpected visit; his "heart burn," as he calls his acidity, comes on in a moment, and his bowels commence tumbling and tossing about, and will often guggle so audibly as to make even the bystanders feel sorry for him—showing you clearly that this acidity, as well as the gases so suddenly extricated, are the effects of a weakened nervous system,—that they are, in a word, the common effects of wrong secretion. Now the term Secretion is so constantly associated in the mind of the student with the notion of a Liquid, that some of you may not all at once comprehend how gas can be secreted; but, Gentlemen, is not every tissue of the body the result of secretion?—are not the hair and the nails as certainly secreted as the saliva or the bile? Only place your naked arm for a few minutes under water, and you will find bubbles of air constantly forming upon it—such air being in that case actually

secreted before your eyes by the glandular apparatus of the skin! Can you be at any difficulty now, to conceive how flatus is a secretion from the alimentary canal? If a doubt remain, you have only to debilitate the brain of an animal by bleeding him slowly, and his bowels will become full of flatus even to bursting. Then again, as regards the cure of dyspeptic patients, a drop or two of prussic acid, twice or thrice a-day for a week, or a short course or treatment by quinine, nitrate of silver, or alternations and combinations of these medicines, will often do away for months, and even years, with every symptom of wind and acidity—while cordials, alkalis and mild laxatives, seldom do more than give a temporary relief. Oh! I never saw much good done by that placebo mode of practice—nor is this at all to be wondered at, if you reflect, that every part of the constitution of a dyspeptic patient is more or less disordered. In every case of this kind there is an unnatural temperature of body; some patients complaining to you of chills or heats, or alternations of both in the back, stomach, hands, and feet, &c. In these cases the skin, partially or generally, is either more moist than in health, or it is harsh and dry—perspiring, if at all, with difficulty. In the latter case, some other secretion may be morbidly active. The urine or the bile may be in excess; or the natural fatty or watery deposit of the great cavities of the chest and abdomen, may be in superabundance. The looker-on may even have a false impression of the patient's case and condition from the increase of either in the minute cells of the investing membrane of all the cellular substance. Should such a patient complain of being ill, he is sure to be laughed at for his pains—for nobody has any sympathy with him—and this is one of the many cases in the world, where "appearances are deceitful."

The dyspeptic patient is either torpid, and with difficulty roused to exertion, whether corporeal or mental, or he is acted upon by every thing he hears. The last person that speaks to him is the man for him. His spirits are depressed by the merest trifle, and raised again by a straw or a feather. Then, as regards his actions or his promises, you can scarcely depend upon any thing he tells you. What he is dying to do to-day, he is miserable till he can again undo to-morrow; he spends his life betwixt acting and regretting;—hesitating, hoping and fearing by turns—one moment all confidence, the next all suspicion. Now, is not this one of the strongest of many striking proofs how much our mental workings are the effects of our material state—the result of our brain's con-

dition, and its atomic relations and revolutions? It is in perfect accordance with what we observe in all our corporeal motions. If the muscles be tremulous, can you wonder that the mind should be vacillating and capricious?—or when these are cramped and spasmodic, why should you be astonished to find a corresponding wrong-headedness, and pertinacious and perverse adherence to a wrong opinion?—*mens sana in corpore sano*. You may argue for hours to no purpose whatever with some patients;—for how can you expect the wrong brains of wrong bodies to reason rightly? These persons are like the inebriated, who see two candles when there is only one—their perceptions being false, so also must be their mode of reasoning. The plunge bath, or a short course of chrono-thermal treatment will make them alter their minds sooner than the most powerful and persuasive arguments of a Cicero or Demosthenes.

Lady Mary Montague held the notion that the whole world hate more or less to be told the truth. She formed her opinion, doubtless, from observing how badly the Public had for the most part treated its best benefactors. From what I have seen of mankind myself I cannot help thinking of the ass that kicked the good-natured man, when trying to relieve it from the weight of its panniers! Never yet did I attempt to open the eyes of a person imposed upon, but he was sure to abuse me. The poet was therefore right when he said,

The pleasure surely is as great,  
Of being cheated, as to cheat.

In all my experience, the more unscrupulous and unprincipled the imposter has been, the more certainly he appeared to fascinate his dupes. All he had to do was to hold out an impossibility to them, and they were sure to dance attendance at his door for months. Taking advantage of a popular but puerile prejudice against Mineral medicine, the medical charlatan is very careful to prefix the word Vegetable to his nostrum; and this, he tells the public, is *SAFE* in every form, dose, and degree—which being in utter repugnance to every thing in nature, is greedily swallowed by the multitude as an undisputable truth! Can weight, measure, heat, cold, motion, rest, be so applied to the human body with impunity? Can you without injury cover yourselves with any weight of clothes, or swallow any measure of food? Or can you retain any part of the body in perpetual motion or repose without that part suffering? No, truly! responds the same dyspeptic, who believes that such and such a medicine is safe in every form, dose and degree! When treat-

ing patients of this class, it is better not to tell them what they are taking; but should they chance to find out that you have been giving them arsenic, prussic acid, or nitrate of silver, you will be sure to be worried to death by questions, dictated sometimes by their own timidity, and sometimes by the kind feeling of some “damned good natured friend” secretly set on by some equally damned good natured apothecary. Now, as these patients are for the most part great sticklers for authority, your only course is to tell the truth—which after all, in nine cases out of ten, will make no impression—and that is the reason why the quack and the subordinate practitioner who can keep their medicines secret, have an advantage over the honorable physician—an advantage so great, that in a few years, if matters do not take a turn, I doubt if one such will be found practising medicine at all. You may say then what, if it have no effect with patients themselves, will at least appear reasonable to their friends—that the medicines you ordered are all contained in the pharmacopœia of the three Colleges of Edinburgh, London and Dublin, and that they are therefore recognized as medicines of value by all physicians who have a character to make or a name to lose—that the dose in which you give them is perfectly safe, inasmuch as, if it disagree with their particular constitutions, it will only cause a short temporary inconvenience; and to sum up all, you may quote Shakespeare, who says, and says truly “In POISON there is *PHYSIC*.”

And again:

“Oh mickle is the powerful grace that lies,  
In herbs, plants, stones and their true qualities,  
Nor nought so vile that on the earth doth live,  
But to the earth some special good doth give;  
For aught so good but strained from that fair use,  
Revolts from true birth, stumbling on abuse.  
Virtue itself turns vice, being misapplied,  
And vice sometime's by action dignified,  
Within the infant rind of this small flower,  
Poison hath residence, and MEDICINE power!”

So that Poison and Physic—whether vegetable or mineral, are either Poison or Physic according as they are wrongly or rightly applied.

But to return to Dyspepsia, or that low Fever so termed. In cases of this kind, my practice is to combine the chrono-thermal remedies with what you may call, if you please symptomatic medicines. For example, where flatulence is the most prominent symptom, I prescribe quinine, hydrocyanic acid, or nitrate of silver, with aniseed or cardemoms. In acidity, either of the two first remedies will often answer very well with soda or potash. Where the bowels are slow and torpid, rhubarb, aloes, or both are very good medicines with which to combine any of the

chrono-thermal medicines. In such cases purgative effervescing draughts are also useful. Should the patient complain of muscular or other pains, you may add colchicum or guaiac, and so proceed in a similar manner with other symptomatic remedies for other local indications; keeping in mind, however that these symptomatic medicines are merely a means of secondary importance in the treatment of a great constitutional totality of derangement. In addition to these measures plasters to the back or stomach may be very beneficially resorted to in many cases of dyspepsia, and you may also run the changes upon various kinds of baths. The cold plunge and the shower bath are my favorites, though I need not tell you that the feelings of the patient, after he comes out of it, are a better guide to you in your choice and continuance of any bath than all the theories of all the doctors that ever wrote or reasoned upon disease and its treatment.—“How do you think me now, doctor?” is a question I am asked every day, and every day I give the same answer: “How do you feel?” If the patient is better, he says so; if worse, he will be sure to tell me he is not so well: and according to his answer do I change or continue his physic. Now, whether this be common sense or not, I leave you to judge. Heaven only knows it is not science, or what very learned people call science; for when the patient says he gets worse and worse every day, science generally tells him to continue his medicine, for that he has not taken enough of it, and that he will be worse before he be better, which I need not tell you is a lie, or more politely to speak, a piece of imposture.—Should the patient die, why, then, he dies a natural death, and he has had the first advice, for not only did Mr. So-and-so, the fashionable apothecary, attend him, but Dr. Such-a-one, the great physician, was also called in and he said all was right, and that nothing better could be done. Had the doctor said all was wrong, he might perhaps have been nearer the mark—but, in that case, what apothecary would either call him in again himself, or let him in again when requested, where he could by a little gentlemanly trickery keep him out! In my own particular case, the custom of the apothecary has been *secretly* to play upon the fears of the patient or his friend against “strong medicine,” to shrug his shoulders and smile contemptuously. “Oh I can tell you something of Dr. Dickson,” he has said “but you must not give up me as the author: whereupon he has proceeded to lie Dr. Dickson’s life away; and when he had thus, to his own thinking, sufficiently poisoned the ear

of his patient, he has turned round in this manner to him—“But if you still want a second opinion, why do you not call in Dr. This, or Sir Thingumy Pother, they are leading men, you know!” Now that only means, that the physicians in question are the fashionable puppets whom he and all people like him, call in to conceal their bad work—men, who would as soon think of differing with the opinion of their supposed subordinates but real patrons, as of quarrelling with their breakfast, because it was purchased with the shilling of a dead man’s guinea!

What a just observation was that of the author of Lacon. “The rich patient cures the poor physician much more often than the poor physician the rich patient: and it is rather paradoxical, that the rapid recovery of the one usually depends upon the procrastinated disorder of the other. Some persons will tell you with an air of the miraculous, that they recovered although they were given over, when they might with more reason have said, they recovered because they were given over.” But in very truth “the great success of quacks in England has been altogether owing to the real quackery of the regular physicians.” What does that mean? Just this, that the morality of many legalized practitioners even of the highest grade, is not one remove above that of the Morisons and St. John Longs, whose dishonest practices they are so constantly decrying! Now, this you will say, is a startling statement, and much will doubtless depend upon the character of the person making it, whether you treat it with a laugh of contempt or listen to it with something like respectful attention. Gentlemen, the man who deliberately put that on paper, (and I quote him to the letter) was no less a person than Adam Smith, the author of the *Wealth of Nations*! If such, then, was the certain and settled conviction of that very keensighted observer of mankind, will any assertion, any asseveration on the part of individuals interested in declaring the contrary, weigh with you one straw against the evidence of your own senses, when you choose to examine this matter fairly and fully for yourselves? So far as my own experience goes—that is, from what I have seen of the profession in London and the English country towns, eminence in medicine is less a test of talent and integrity than a just reason of suspecting the person who has attained to it, of a complete contempt for both! I say suspecting, for I have met with exceptions, but not many, to the rule. Could you only see as I have seen, the farce of a medical consultation, I think you would agree

with me, that the impersonation of Physic, like the picture of Garrick, might be best painted with comedy on one side and tragedy on the other. In saying this much, not only have I acted against everything like medical etiquette—but I shall be sure to be roundly abused by the medical profession for it. The truth, however, I maintain it to be—but not the whole truth; for the world must have its eyes a little more open before it can believe all I happen to know upon the subject. By and bye I shall tell the English people something will make their ears tingle!

To return to the consideration of Disease. You now see that in all the cases of which we have been speaking, the constitution is for the most part primarily at fault, and that the names of disorders depend very much upon the greater or less prominence of some particular symptoms—which symptoms, or their shades, may be readily detected in all diseases. With every case of Dyspepsia, depression of spirits, and more or less mental caprice, with hasty or erroneous notions upon one or more points, will be found to be associated. When such depression amounts to despondency, medical men, according to the sex of the patient, change the word *DYSPEPSIA* into

#### *HYPOCHONDRIA, OR HYSTERIA :*

and some professors are very particular in their directions how to distinguish the one from the other! Gentlemen, what is the meaning of *Hysteria*? It is a corruption of the Greek word (*Hystera*) the *womb*; and it was a name given by the ancients to the particular symptom we are now considering, from a hypothetical idea that in such cases the *womb* was the principal organ at fault. From the same language we also derive *Hypochondria*, a compound word formed of (*Hypo*) under, and (*Chondros*) cartilage, from the supposed seat of the disease, being the liver or stomach; for both of these organs, as you know, are situated under the cartilaginous portions of the lower ribs. So that when a female suffers from low spirits and despondency, with occasional involuntary fits of laughing, crying sobbing, or shrieking, you must call her state *hysteria*; and when a male is similarly affected, you must say he has *hypochondria*. Now it so happens, that medical men sometimes pronounce even their male patients to be hysterical! And this brings me in mind of an honest Quaker of the profession, who being very ill, had three doctors to attend him—Mr. Abernethy, Dr. Blundell, and a physician whose name I now forget. Each of these had his own notion of the disease; Mr. Abernethy of course said, it was all owing to the state of the

"digestive organs." Dr. —, being a stethoscope man, maintained that the "heart" was affected, and Dr. Blundell, in the true spirit of a man midwife, declared that their patient was only "hysterical." Now the patient, though a Quaker, was a humourist; so he ordered in his will, that when his body should be opened after his death, his digestive organs should be presented to Mr. Abernethy, his heart to Dr. —, and to Dr. Blundell his womb, if he could find one! Gentlemen, that the brain is the principal organ implicated in all disorders, which come within the physician's province, more especially in such as are termed hysteria or hypochondria, the smallest reflection will convince you. Suppose a person of either sex had been accidentally debilitated by loss of blood—a person who previously was strong in nerve as in muscular fibre; suppose a letter comes with a piece of bad news—the patient in that case bursts into tears, laughs and cries time about, and then sinks into a state of dismal and gloomy despondency.—And all this, forsooth, you must put down to the state of the womb or digestive apparatus, according to the sex of the patient, instead of placing it to the account of the brain and nerves, without which the ill-timed letter, the cause of all, could not, by any possibility, have affected the mind in the least! Another class of practitioners, scarcely less unreasonable than those to whom we have just alluded, will have it, that patients coming under the head of hysteria and hypochondria, are not ill at all.—"Oh! there is nothing the matter with this man:" they will say, "he is only hipped!" and if the female, "she is only hysterical." Dr. Radcliffe, when he refused to come to Queen Anne, declared he would not stir a foot "for there was nothing the matter with her but the Vapours!" Such was the term by which the doctors of that day characterized the shifting shades of symptom now called *Hysteria*. Gentlemen, do I require to tell you that no man or woman suffers from melancholy, or indulges in whims and fantasies, without being positively ill. Whoever labors under mental delusion or despondency, has alternate chills and heats; and remissions and exacerbations of all the more prominent symptoms characterize the disorder in every form. The late Lord Dudley, in a letter to the Bishop of Landaff, relates his own case, and it is so like what you will daily meet in practice, that I shall give it to you in his own words:—"It is in vain," he says, "that my reason tells me that the view I take of any unpleasant circumstances in my situation is exaggerated. Anxiety, regret for the past, apprehensive uneasiness

as to my future life, have seized upon me as their prey. I dread solitude; for society I am unfit; and every error of which I have been guilty in life stands constantly before my eyes. I am ashamed of what I feel when I recollect how much prosperity I still enjoy, but it seems as if I had been suddenly transplanted into some horrible region beyond the bounds of reason or of comfort; now and then I enjoy a few hours respite, (the remission?) but this is my general condition. It is a dismal contrast: for you will remember that I was naturally gay and cheerful." Now, although Lord Dudley recovered perfectly from this particular attack, his disease, at a later period of his life, returned; but this time he was less fortunate, for the symptoms of his disorder gradually deepened in their hue, until they amounted to the most complete

#### INSANITY,—

a proof to you that the hypochondriac whim, and the hysteric fancy, differ from hallucination and mania, in shade merely, and the chills and heats which precede or accompany them, from the cold and hot stages of the most intense fever, in nothing but degree. Has not the maniac, in every form of his delusion, lucid intervals—remissions? Your schoolmen, your "pathologists," your profound medical reasoners, speak of madness and other diseases, as if they were the effects of some fixed cerebral malformation, instead of being the consequences of external influences acting on an atomic instability of brain. They tell you they are curable or not, according to the CAUSE;—they look in the dead body, for the causes of an intermittent living action, for the origin of hypochondria and mania,—diseases which they have even themselves, perhaps, traced to hard study or a passion! External agencies, then, were the real causes, not the structural deviations detected within after death by the scalpel. Students of medicine! young men honorably ardent in the pursuit of knowledge, for the sake of your profession and your future patients, learn to think for yourselves. Pause, examine, weigh, before you give a slavish assent to the dicta of your teachers. When these tell you that madness with a lucid interval is an inflammatory essence, or that it depends upon some cerebral malformation or tumour, ask them how they reconcile days or even hours of sanity and sense with a cerebral structure thus partially, but permanently malformed or disorganized! That medical men, mystified from boyhood by their teachers, should fall into such errors, is not so astonishing as that the leaders in our periodical literature should be equally

unfortunate. What, for example, can be more egregiously absurd than an observation the reviewer of Lord Dudley's letters in the Quarterly Review has allowed to escape from his pen! "The gifts of fortune and intellect," says this writer, "were counterbalanced by an organic malformation of the brain." How can intellectual power even for one moment be compatible with a defective cerebral organization? How can the cause of an intermittent disease be a corporeal entity, or something permanently fixed? Let no sounding words, no senseless sophistry, cheat you of a reply to this question. The maniac who has lucid intervals is curable in the greater number of instances—the hypochondriac who at any time of the night or day enjoys the very briefest immunity from his miserable feelings, may be equally susceptible of improvement from well-devised remedial means. The modern medical treatment of both being essentially aggravant, can you wonder that these diseases should so often remain unrelieved, or that a sceptic smile should be the reward of the individual who tells you that in his hands at least they have ceased to be the opprobria of medicine! What has been the result of the Antiphlogistic treatment of insanity? Let the physicians who attended Lord Dudley in his last illness answer that question, for they spared neither lancet nor leech in his case. In the case of Lord Byron, delirium, which is only another word for mania, was actually produced by the lancet. But the better to open your eyes to the effect of such cruel treatment in this disease, I will read a short extract from a letter I received from Dr. Hume, the same staff-surgeon whose successful practice I have already had occasion to detail to you. "I lately," he thus writes, "paid a visit with our Depot Pay-master to the Armagh lunatic asylum. Being the receptacle for the insane poor of four counties, namely, Monaghan, Fermanagh, Cavan and Armagh, it generally contains about 150 inmates. Having visited the different apartments, I enquired of the manager, Mr. Jackson, the treatment pursued. His answer was: 'Although I am not a professional man, I have paid great attention to the treatment of the insane for the last five and twenty years, and the result of my observation is, that the usual practice of bleeding, leeching, cupping, &c., only aggravates the condition of the patients. Of those who were BLEED on admission I never saw one recover.' Now this is a curious fact elicited from a plain practical man of great experience, who, had he known I belonged to the medical profession, might not perhaps have been so candid in his remarks." Dr. Conolly, in his

Report of the Hanwell Lunatic Asylum, is obliged to admit that great numbers die shortly after their admission into that establishment. The large abstraction of blood which he so lauds in his work on Insanity, will easily account for the unsuccessful termination of his cases.

Well then, Gentlemen, Hysteria, Hypochondria, Mania, are merely modifications, or developments of chronic or habitual low Fever. And since I commenced to treat them as such, I have had a practical success and a mental satisfaction, that contrast somewhat strongly with the poor opinion I entertained of the resources of our art, and the vexation I experienced when first entering upon my professional career. This much you should know, however, that in all such disorders you will be obliged to change your remedies frequently—for in chronic disease what will often succeed to admiration one day, may as often have an opposite effect the next; and this is strictly in accordance with what you find in every thing in life. The toy that will stop the cry of the weeping child to-day, may make it cry more loudly to-morrow. You must, in that case, change its rattle for some other gew-gaw; and so it is in the diseases we have been now considering—diseases where the temperament of the body, like the temper of the mind, is constantly varying. The great secret of managing chronic diseases properly then, consists in the frequent change and right adjustment of the chrono-thermal and other remedies, to particular cases;—and this also explains the good effect of Traveling upon many of these patients, for to the constantly shifting scenes and to the frequent repetition of novel cerebral excitement produced by these scenes, we must ascribe the chief advantages of such a course; clearly proving that the Brain in this instance, as in every other, is the true key to all good medical treatment. Whatever then, be the name by which you choose to designate your patient's complaint, you will be sure to meet with nothing but disappointment, if you pin your faith exclusively to any one medicine. To-day a mild emetic will give relief—temporary only if you do not follow it up to-morrow, with iron, opium, musk, quinine, or the bath. One week arsenic will be a divine remedy; the next, having lost its power, you may dismiss it for prussic acid, valerian, creosote, strychnine, or silver. In regard to silver, the nitrate is the preparation which I am in the habit of using, and an admirable medicine it is, when properly managed. Boerhaave, the greatest physician that ever lived, speaks in raptures of its remedial powers in "nervous complaints." Cullen, Pit-

cairn, every medical man but the most ill-educated apothecary or the equally ill-educated puppet who enjoys, at the mercy of his breath, the reputation of being *par excellence* a physician, will readily bear testimony to its safety and value as a medicine. Like every good thing, however, the nitrate of silver has been abused in practice, and in some half-dozen instances it has been pushed to so great an extent as to give the patient a permanent blueness of skin for life; but, Gentlemen, in these cases, the practitioners who employed it committed the double error of giving it too long and in too great quantities, and that people should entertain a prejudice against it on that score, is just as reasonable as that a man should be afraid to warm himself when cold, because his next-door neighbor had burnt his fingers. For myself, I can truly say, that though I have prescribed the nitrate of silver in some THOUSAND cases, I never had the misfortune to give the slightest tinge to the skin of a single individual. But should objections to the use of this medicine still continue to be urged, after a proper explanation on your part, you may be pretty sure that some ignorant or interested rival has been secretly playing upon the timidity of your patient or his friends. In that case you are less to be pitied than the patient; for if you have no remedy for rascality, he may have no relief for his suffering. So much then for one of many annoyances every practitioner must experience when his patient happens to be

— "the tool  
That KNOWS do work with, called a FOOL."

But, Gentlemen, we must not suppose that medicine is the only profession where able and honorable men experience such annoyances. Doctors of divinity, and doctors of law, are equally obnoxious to intrigue and prejudice,—aye, and State doctors too, as Dr. Peel and Dr. Melbourne, could tell you if you would ask them. To return. The shifting shades of mental distress, and the various vagaries and wrong thoughts—to say nothing of wrong actions—of persons whose diseases come under the head we have just been considering, are so many and so multifarious, that to attempt to describe them all would be a mere waste of time and labor—inasmuch as however greatly they may appear to differ from each other in shape and hue, they all depend upon a similar totality of corporeal infirmity, and yield, when they yield at all, to one and the same system of corporeal treatment. A few instances in proof, may suffice to show you this:—

Case 1.—A married lady consulted me under the following circumstances:—Every se-

cond day, about the same hour, she had an unconquerable wish to kill her children, and when she happened to look at a knife, her terror, lest she should do so, was extreme. Now, as every function of this lady's frame was more or less wrong, I prescribed for her quinine with sulphuric acid. From that day she had no return of the homicidal feeling.

Case 2.—A gentleman, every second day, took a fit of suspicion and jealousy of his wife, without the slightest cause whatever, as he confessed to me, on the day of remission, when he called to consult me; and however absurd and unreasonable the idea which haunted him, he found it impossible to drive it from his mind. Prussic acid and the plunge bath cured him completely.

Case 3.—Another gentleman, after a hard contest at the university for prize honours, suddenly became moody and sullen; lost his flesh and appetite, and fancied himself Judas Iscariot. Such was his belief one day—to be laughed at even by himself the next! I saw him six times, at the end of which he was perfectly cured by chrono-thermal treatment. Two years afterwards his sister consulted me for "nervousness," when I learnt that her brother had not had the slightest symptom of return.

Whoever, in his progress through life, takes the trouble to study individual character, must be struck by the perversities, inconsistencies, and other *bizarries* of the human mind. Many people, for example, commit follies, faults, and crimes even involuntarily and without any apparent object. Some of you may possibly remember the case of Moscati, a person singularly gifted with talent, but who, at the same time, had such an invincible disposition to *lie*, that nobody would believe him, even when by accident he spoke the truth. A lady, who was once a patient of mine, told me that every time she became pregnant she caught herself frequently telling lies, for no end or purpose whatever. I knew a gentleman, with high feelings of honor, who was occasionally in the habit, when under the influence of wine, of pocketing the silver forks and spoons within his reach; you can easily imagine his distress of mind the next day, when he packed up the articles to return them to their owners. From these cases you now see how much the *morale* of every one must depend upon his *physique*; for if I know any thing in the world, I know that attention to corporeal temperature will be found of more avail in mending the morals of some individuals than a well-written homily.

How many pretty things have been said for and against the morality of Suicide! I wish it were always in a person's power to

abstain from it. But that the disposition to commit it may, like many other bad dispositions, be cured by medicine, I could give you a great many proofs. However, as our time will not now permit me to enter into these subjects so fully as I could wish, I shall content myself with reading to you part of a letter I some time ago received from Dr. Selwyn, formerly of Ledbury, now of Cheltenham. Speaking of Mr. Samuel Averill, of the Plough Inn, Dynock, Gloucestershire, Dr. Selwyn says: "Before he came to me, he had consulted Mr. ———, of Ledbury, and other medical men, to no good purpose, as you can easily understand when I tell you they principally went over the old routine of cupping, purging, &c. Mr Averill's symptoms were depression of spirits to crying—thoughts of suicide, fears of becoming a lunatic, sleepless nights, and, generally speaking, the greatest possible state of mental wretchedness. He passed immense quantities of urine, as pale and pellucid as the water from the pump. Finding no particular organ in a worse state than another, I thought this a good case for your doctrines; and accordingly I rang the changes on the nitrate of silver, strychnine, musk, prussic acid, creosote, iron, quinine, and opium—varying and combining these according to circumstances with valerian, hartshorn, blue pill, &c. In a fortnight you would have been astonished at the improvement effected upon him. In about six weeks more he had no complaint, and he was with me about a month ago, when I considered his cure complete. I have treated a great many cases of Dyspepsia successfully, by attending to the intermittent principle, and I had lately a case of Tic Douloureux, which, after having been under the successive treatment of several eminent practitioners with no perceptible improvement, yielded to the chrono-thermal remedies. The subject of it, Miss T——, was formerly a patient of your own for some other complaint. I still hold that, in chronic diseases, by keeping your principles in view, we have a great help in many of these anomalous cases, which I would defy a nosologist or pathologist to name or classify; and as I am still consulted in such cases, I do not, I assure you, lose sight of them. Often, indeed, when I should, under the scholastic system, have been completely puzzled what to do, I now proceed at once to act upon the intermittent principle, and I have every reason to be satisfied with my success. Believe me, yours faithfully,

CONGREVE SELWYN."

Gentlemen, that the numerous diseases which medical men group together under the head of Dyspepsia, Hysteria, and Hypo-



chondria, are caused by circumstances from without, acting upon an atomic instability of brain within, might be proved by an affinity of facts. But this instability may be produced or rather put in action by different influences in different individuals—one patient being only susceptible to one agent, while another may be acted upon literally by every wind that blows.

General O'Hara, when he commanded the troops on the Mediterranean, was so sensible of the Levant wind, that before he rose in the morning, he knew if it had set in, by the effect it had on his temper; and during its continuance he suffered from a moroseness and irritability no effort on his part could conquer; by his own desire his servants kept out of his way on these occasions. The different effects of the winds on the human system, Shakespeare well knew when he made Hamlet say,

—"I am only mad *north, north-west*,  
When the wind is southerly I know a hawk  
from a handsaw."

And in confirmation of Shakespeare's truthfulness to nature in this as in most of his other observations, Sir Woodbine Parish, in his publication upon Buenos Ayres, tells us that "not many years back, a man named Garcia was executed for murder. He was a person of some education, esteemed by those who knew him, and, in general, rather remarkable than otherwise for the civility and amenity of his manners. His countenance was open and handsome, and his disposition frank and generous; but when the *north wind* set in, he appeared to lose all command of himself, and such was his extreme irritability, that during its continuance, he could hardly speak to any one in the street without quarrelling. In a conversation with my informant, a few hours before his execution, he admitted that it was the third murder he had been guilty of, besides having been engaged in more than twenty fights with knives, in which he had both given and received many serious wounds, but he observed that it was the *north wind*, not *he* that shed all this blood. When he rose from his bed in the morning, he said, he was at once aware of its accursed influence upon him:—a dull headache first, and then a feeling of impatience at every thing about him, would cause him to take umbrage, even at the members of his own family, on the most trivial occurrence. If he went abroad, his headache generally became worse, a heavy weight seemed to hang over his temples—he saw objects, as it were, through a cloud, and was hardly conscious where he went. Such was the account the wretched man gave of him-

self, and it was corroborated afterwards by his relations, who added, that no sooner had the cause of his excitement passed away, than he would deplore his weakness, and he never rested till he had sought out, and made his peace with those whom he had hurt or offended." The same difference of effect upon individuals may take place from any of the common articles of diet. Dr. Millengen in his *Curiosities of Medical Experience*, tells us he knew a person who could never indulge in tea without experiencing a disposition to commit suicide, and nothing could arouse him from this state of morbid excitement but the pleasure of destroying something—books, papers, or any thing within his reach. Under no other circumstance than this influence of tea were these fearful alterations observed." Coffee effects many people with fever. But if coffee, tea and other things so apparently trifling sometimes set up severe disorder—things equally trifling will sometimes cure it, indeed there is nothing, perhaps, in the whole history of disease more curious than the readiness with which the paroxysm of many complaints will occasionally yield to measures so simple and so apparently powerless in themselves, that it might almost seem puerile to suggest their application. Who, for example, could, *a priori* suppose it possible to stop a fit of mania with a thread? or who would be believed, were they to tell a person that had never heard the like before, that aches and agues had been cured with a song?—Yet in sober truth, such things have been actually done!

#### EFFECT OF LIGATURES.

Of the power of mere words over the morbid motions of the body, we shall afterwards have occasion to speak. Of the efficacy of a thread or ribbon in arresting the maniacal paroxysm, I shall now give you a striking example. "Mr. R., a chemist, naturally of a gentle disposition, voluntarily claimed admission to a madhouse in the Faubourg St. Antoine, on account of a desire to commit homicide, with which he was tormented. He threw himself at the foot of the altar, and supplicated the Almighty to deliver him from the horrible propensity. Of the origin of his disease he could say nothing; but when he felt the *accession* of the fatal desire, he was in the habit of running to the Chief of the Establishment, and requesting to have his thumbs tied together with a ribbon. However slight the ligature, it sufficed to calm the unhappy R—; though in the end, he made a desperate attempt upon one of his keepers, and perished, at last, in a paroxysm of fury."—[*Annales d'Hygiène*

*Publique, et de Medecine Legale.*] Now, every man of any information in the profession, knows that the application of a ligature to the arm or leg will frequently stop the commencing ague-fit. Dr. Davis, in his account of the Walcheren ague, tells us that he very often arrested it merely by grasping the leg or arm strongly with his hand. Putting aside, then, all consideration of the remittent nature of the case of homicidal mania I have just read, all consideration of the thermal and other changes which usher in the fit of every maniacal case, you could not fail to find, in the very simple measure which may equally succeed in preventing or arresting the fit of mania and ague, a new bond of connection with which to associate ague and mania together in the same category. But, Gentlemen, these are not the only complaints in which the ligature may be thus advantageously employed. In epilepsy, asthma, and other convulsive affections, I have often obtained the same salutary result by its application. Not very long ago, I happened to be in the room of a medical man, when he was unexpectedly seized with severe cramp in his back and loins. Observing him to become pale and shiver all over, I caught him suddenly by the arm and opposite leg. "My God!" he exclaimed, "I am relieved." And his astonishment was extreme; for immediately afterwards he became warm and comfortable, though for several days previously he had been suffering from cold feet and general malaise. Mania, epilepsy, asthma, cramp, ague, then, completely establish their fraternal relationship by means of the ligature; for had we no other facts, no other bond of association than that which the ligature furnishes us, we should still be led to the irresistible conclusion, that those particular diseases, at least, amid all their apparent diversity, have yet some principle in common which determines their unity. When I come to explain to you the manner in which the ligature acts, you will find that the connecting link of the whole is the Brain. They are all the result of a weak and exhausted state of that organ; but not produced, as the late Dr. Mackintosh of Edinburgh supposed by any Congestion or fulness of its blood-vessels. That, you know, was his doctrine of the cause of ague;—and as he was a very eloquent man, and a very pleasant and gentleman-like person to boot, he made many proselytes to his opinion, not only among his own pupils, who were very numerous, but also among the profession generally. To prove his hypothesis, or dream rather, he was in the habit, first of detailing the "congestion," found on dissection of the heads of persons who had died of the cold stage of

ague, and then he appealed to the relief which very often followed the practice of bleeding at the commencement of that stage. "Behold the fact," he would say; "behold how the shiverings cease the very moment you open the vein—what can be a more triumphant answer to the opponents of the lancet!" But mark the fallacy of that fact—mark how the too-confident doctor was deceived by his own practice. The relief of which he boasted, for the most part temporary only—instead of being produced by the very trifling quantity of blood which flowed before such relief was obtained, was in reality nothing more than the effect of the ligature by which the arm was necessarily banded for the operation! The late Dr. Parr tells us, that when called to a patient in the fit of asthma, he was in the habit of tying up the arm as if he intended to bleed, but that though he never did more than scratch the skin with his lancet, the fit was at once arrested. But Gentlemen, ague, asthma, epilepsy, nay, every one of the non-contagious diseases to which man is liable, have all been produced by loss of blood. In that case, at least, they must have been diseases of exhaustion, the effects in a word, of diminished cerebral power. But when we come to consider that, in every instance in which the causes of the diseases now under consideration have been known, the Brain has been suddenly and primarily affected—as in the case of a blow, a poison, a purge, a passion, we can be at no loss in forming an opinion as to the real nature of these diseases—they are all the effect of cerebral weakness, and have all more or less analogy to faint. Faint, in fact, may be the premonitory symptom of them all; and the Walcheren ague in particular, generally began with a fainting fit, which faint was sometimes so alarming as to cause the greatest possible anxiety in the minds of the attendants for the immediate result. Now, what is the condition of the body you call

#### FAINT?

Is it not a state very like death! A person from his brain all at once ceasing to act, becomes instantly pale and pulseless;—the blood, having thus suddenly left the arteries and external vessels of the body, must go somewhere else. Had we never dissected a person who had died of faint, we should naturally expect it to settle in the internal veins, and there accordingly, when we do dissect the bodies of such persons, we do find the greater part of the blood. Now, this was what first misled Dr. Mackintosh. On opening the heads of subjects who had died in the cold fit of ague, he almost inva-

riably found the veins of the brain gorged with blood. This constant Effect of every kind of exhaustion he at once presumed was the Cause of such exhaustion. Gentlemen, he did not know that the very same internal vascular fulness may be seen on opening the bodies of those who died of loss of blood! To prove, however, what I say,—to demonstrate to you that this

#### CONGESTION,—

this bug-bear of medical quidnuncs—instead of being the invariable cause, is in reality the invariable effect of sudden exhaustion, I shall now read to you one of several experiments in which Dr. Seeds bled healthy dogs to death. The editor of the Medical Gazette will pardon me for reading it from his pages; but as my facts have been sometimes said to be “selected facts,” I have at least this answer in store, that, in the greater number of instances, they have been selected from the writings of my opponents.

“All the larger veins of the legs,” Dr. Seeds tells us, “were opened in a small Dog. At first the pulse was accelerated—soon after it became slow and languid. The heart’s motions though feeble, were never irregular; and indeed, long before death, they could neither be seen nor felt. *Borborygmi* [flatulent gurglings] were early heard and lasted a long time. The breathing at first was hurried; soon it became slow and laborious, and at last convulsive. The pupils were frequently examined: they became gradually less and less obedient to the influence of light, and at length ceased to contract altogether. [That is, they became dilated.] Slight spasmodic contractions took place, first in the femoral and abdominal muscles: then the head, neck, and fore-legs, were likewise powerfully affected with spasms, [or convulsions.] At this time a deep sleep seized the animal: he breathed slowly and with difficulty, and, for a little time before death, respiration at intervals was suspended altogether. [All the symptoms of apoplexy!] Whenever the breathing was strong and quick, the pupils recovered their tone, and the blood was more strongly propelled. In an hour death closed the scene.” Now for the dissection:—“The Dissection of the Head was first begun. The membranes of the Brain were loaded with turgid vessels, the larger of which were of a very dark color. A bright red spot was observed near the cornua, where some degree of sanguineous effusion had taken place. The sinuses were full of blood. In all the ventricles there was more or less water effused: the base of the brain, and the eighth and ninth pairs of nerves, were inun-

dated with water. A net-work of red vessels was spread round their origins, and the optics were in the same state. In the cervical and lumbar regions of the spinal marrow there was a considerable degree of redness. The right side of the heart was full of blood; the left auricle contained a little. Some blood was found in the large veins, and a few clots in the thoracic aorta. The stomach, and all the intestines were tumid with flatus; the veins of the mesentary were turgid. The turgid state of the veins of the head was very remarkable: indeed, throughout the whole body the veins were tumid.”

Now, Gentlemen, if anything in this world could open the eyes of “pathological” professors,—if facts or reasoning of any kind could possibly move those mechanical minded persons, who plan their treatment of living men from what they see on dissecting dead bodies,—this and similar experiments ought surely to do so. For here you not only find dilated pupil, convulsions, deep sleep, slow and difficult breathing, with other apoplectic symptoms, the effect of literally bleeding a healthy animal to death; but, to complete the deception of such as constantly ascribe these phenomena to pressure on the brain, the cerebral and other veins of the same animal were found after death loaded and congested with blood throughout! Nay, in addition there was water on the Brain, with “some degree of sanguineous effusion” even.\*

Not long ago, I was shocked with the details of an inquest which took place “before the coroner for Middlesex, Mr. Wakley who is also the editor of the lancet. The inquest, according to the report in that paper was held on the body of a man, who, in the act of disputing with his master about his wages, “turned suddenly pale, and fell speechless and insensible for a time, breathing heavily until his neckerchief was loosed. In falling, his head struck the edge of a door and received a deep wound three inches long, from which blood flowed enough to soak through a thick mat on the floor.” Before being taken from his master’s shop to his own house, he recovered sufficiently to complain of pain of his head, and this fact I beg you will particularly mark. His wife immediately sent for “a doctor:” and what do you think was the first thing the doctor did,—what can you possibly imagine was the treatment which this wise man of Gotham put in practice the moment he was called.

\* We constantly hear of children dying of “Water on the Brain.” I scruple not to declare, that in ninety-nine of every hundred of such cases, the water in the Brain is produced by the lancet or leeches of the doctor.

to a person who had fallen down in a faint, and who, from injury occasioned by the fall, had lost blood "enough to soak through a thick mat?" Why, to bleed him again! And what do you think was the quantity of blood he took from him? More than three pints! The landlady of the house,—and she was corroborated by other witnesses,—swore that "she thought that about three and a fifth pints of blood was taken besides what was spilt on the floor. The bleeding, she calculated, occupied twenty minutes. The bandage also got loose in bed, and some blood, not much, was lost there before its escape was discovered. He had convulsions on Saturday, after which he lay nearly still, occasionally moving his head. On Sunday he was more exhausted and quiet; in the evening he was still feebler, and on Monday afternoon, at ten minutes to one, without having once recovered his sensibility to surrounding objects, he died." Remember, Gentlemen, he did recover his sensibility after he left his master's shop, and only lost it again on repeated bleeding. And how could he possibly survive such repeated bleeding! That he died from loss of blood, was the opinion of every person who heard the evidence, till the Coroner, luckily for "the doctor," had the corsé opened. Then sure enough, just as in the case of the dog that was bled to death, the internal veins were found to be turgid and congested throughout. Deceived by this very constant result of any great and sudden loss of blood, Mr. Wakley and the jury were now convinced, not that the man had been bled to death but that he had not been bled enough! One of the strongest proofs of bad treatment was thus received as evidence of the best possible treatment under the circumstances, and a verdict pronounced accordingly! That an ignorant coroner and an ignorant jury should be imposed upon in this manner, were nothing very wonderful; but that the Editor of the *Lancet*, who publishes the case, and who from his position knows every thing going on at the present time in the medical world, should in his capacity of coroner pass over, without a word of reprobation, a mode of practice no conceivable circumstance could justify, only shows the lamentable state of darkness in which the profession are at this very moment on every thing connected with the proper treatment of disease! When St. John Long, or any other unlicensed quack, by an over dose, or awkward use of some of our common remedies, chances to kill only one out of some hundreds of his dupes, he is immediately hunted to death by the whole faculty; but when a member of the profession at one bleeding takes more blood by

three times than is taken on any occasion by practitioners who kill their man every day with the lancet; not from a strong powerful man, but from a person so weakly that during the excitement of a trifling dispute with his master, he fainted and fell, and in falling had already lost blood enough to soak through a thick mat; not a word of blame is said! On the contrary it was all right, or if there was any error, it was on the safe side! If such things be permitted to be done in the heart of the metropolis, not only without censure, but with something like praise even, homicide may henceforth cease to be looked upon as a reproachable act.—The only thing required of the perpetrator is, that he should do it under the sanction of a diploma and *secundum artem*!

But, Gentlemen, to return to Ague, and the other morbid motions which led to this digression. Some of you may be curious to know how so simple a thing as the Ligature can produce such a salutary effect in these disorders. I will tell you how it does this, and the explanation I offer, if received as just, will afford you an additional proof not only that these diseases have all their common origin in the BRAIN; but that they are all the natural consequences of an arrest or other irregularity of the ATOMIC MOVEMENTS of the different portions of that organ; for to the diversity of the cerebral parts, and the diversity of the parts of the body which they respectively influence, we ascribe the apparent difference of these diseases, according to the particular portion of the brain that shall be most affected by some outward agency. Thus, after a blow on the HEAD, or elbow even, one man shall become sick, and vomit, another fall into convulsions, a third shiver, fever, grow delirious, and become mentally insane. In all these diseases the atomic movements of the brain being no longer in healthy and harmonious action, the natural control which it exercised in health over every part of the body, must be then more or less withdrawn from the various nerves through which it influenced the entire economy. The consequence of all this is, that some organs are at once placed in a state of torpidity, while others act in a manner alike destructive to themselves, and the other parts of the body with which they are most nearly associated in function. We find palsy of one organ, and spasm or palpitation of another. In fact, if it may be permitted to use so bold a simile, the various organs of the body, when beyond the control of the Brain, resemble so many race-horses that have escaped from the control of their riders—one stands still altogether, another moves forward in the right course perhaps,

but with vacillating and uncertain step, while a third endangers itself and every thing near it, by the rapidity or eccentricity of its movements. When the atoms of the various parts of the Brain, on the contrary, act in harmony with each other, there is an equally harmonious action of every organ of the body—supposing of course, every organ to be perfect in its construction. Whatever suddenly arrests or puts into irregular motion the whole cerebral actions, must with equal celerity influence the previous motive condition of every member and matter of the body—for evil in one case, for good in another. Were you suddenly and without any explanation to put a ligature round the arm of a healthy person, you would to a dead certainty excite his alarm or surprise. Now as both of these are the effects of novel cerebral movements, should you not thereby influence in a novel manner every part of his economy? How should you expect to influence it? Would not most men in these circumstances, tremble or show some kind of muscular agitation?—their hearts would probably palpitate—they would change color, becoming pale and red by turns, according as the brain alternately lost and recovered its controlling power over the vascular apparatus. If the alarm was very great, the pallor and tremor would be proportionally long. But in the case of a person already trembling and pale from another cause, the very natural effect of suddenly tying a ligature round the arm would be a reverse effect—for if the cerebral motive condition should be thereby changed at all, it could only be by a reverse movement; and such reverse cerebral movement would have the effect of reversing every previously existing movement of the body. The face that before was pale, would now become redder and more life-like; the trembling and spasmodic muscles would recover their tone; the heart's palpitations would become subdued into healthy beats; and a corresponding improvement would take place in every other organ and function of the body. The ligature, then, when its application is successful, acts like every other remedial agency; and a proper knowledge of its mode of action affords us an excellent clue to the mode of action of medicinal substances generally—all of which, as you have already seen, and I shall still further show, are, like the ligature, capable of producing and curing the various morbid motions for which we respectively direct their administration. It is in this manner that every one of the various passions may cause or cure every disease you can name—always excepting, as I have said before, the properly contagious disorders. The Brain, Gentlemen, is the principal organ to

which, in most cases, you should direct your remedial means. When a person faints and falls, whatever be the cause of such faint—a blow, a purge, or loss of blood—the first thing to be done is, to rouse the brain. You must throw cold water on his face, put harts-horn, snuff, or burnt feathers to his nose, and a little brandy, if you can get it, into his mouth. You may also slap or shake him strongly with your hand—if you can only make him feel, you will be almost sure to recal him to life; but to think of BLEEDING a person in such a state—ha! ha! After all, this is no laughing matter; for when we see such things done in the nineteenth century, we should rather blush for a profession that would endeavour to screen any of its members from the contempt they merit, when they have so far outraged everything like decency and common sense. The proper treatment of a fit of fainting or convulsion, should be in principle the same as you may have seen practised by any well-informed midwife, in the case of children that are still-born—children all but dead. You may have seen the good lady place the child on her knee and beat it smartly and repeatedly with her open hand on the hips and shoulders, or suddenly plunge it into cold water: now while this is doing, the infant will often give a gasp or two and then cry—that is all the midwife wants. And if you will only follow her example in the case of

#### INFANTILE CONVULSIONS,—

which, after all, are the very same thing as Epileptic fits in the adult,—you will often succeed in substituting a fit of crying, which I need hardly say, is attended with no danger at all, for a spasmodic fit, which, under the routine treatment, is never free from it. Only get the child to cry, and you need not trouble yourself more about it,—for no human creature can possibly weep and have a convulsion fit of the epileptic or fainting kind at the same moment. Convulsive sobbing is a phenomenon perfectly incompatible with these movements—for it depends upon a reverse action in the atoms of the brain. The only thing which may prevent some of you from doing your duty on such occasions, is the fear of offending an ignorant nurse or mother, who will think you a monster of cruelty for treating an infant so. Gentlemen, these persons do not know how difficult it is to get a child in convulsions to feel at all;—and in proof of this, I may tell you, that such slaps as in a perfectly healthy child would be followed by marks that should last a week, in cases of this description leave no mark whatever after the paroxysm has ceased. During the fit, the child is so perfectly insensible as to be

literally all but half dead. Now this brings to my mind a case of infantile convulsions, in which I was gravely requested to meet an old woman in consultation—a nurse or midwife, I forget which, who being much with children, must necessarily be wonderfully clever in the cure of their diseases. You smile, doubtless, that I should be asked to do any thing of the kind; but it was in the case of the child of a relative; and relatives, you know, sometimes take strange liberties with each other. Still it was not altogether to tell you this, that I reverted to the case in question—it was, on the contrary, to show you what a wise person she proved, the female doctor who, on this occasion, was proposed for my coadjutor. On being asked by the mother what should be done in the case of a return of the convulsion fits, the old lady answered, “Oh madam, you must let the child be very quiet and not disturb it by noises or any thing of that sort!”—which sapient advice I have no doubt was found one of the best antidotes in the world to a state in which, if you were to roar till your lungs cracked, you could not by any possibility make the subject of it hear at all.

What is the present routine treatment of an infant taken with convulsion fits? That I can scarcely tell you; but when I settled in London, some four years ago, the Court doctors, who, of course, give the tone to the profession in the country, had no hesitation in applying all at once the Eight lancets of the cupping instrument behind the ear of infants under six months old,—and that, in some cases, repeatedly! In addition, they were in the habit of leeching, purging, and parboiling the poor little creatures in warm baths! If mothers will really suffer their children to be treated in this manner, surely they only deserve to lose them. The strongest and healthiest child in existence, far less a sick one, could scarcely survive the routine practice. But whether you believe me or not, there is nothing more true than what the Duke says in the play of *The Honey-moon*, such fits are

—seldom mortal,  
Save when the doctor's sent for.

In the case of adult epilepsy, especially at the commencement of the fit, a very little thing will often at once produce a counter movement of the brain sufficiently strong to influence the body in a manner incompatible with its further continuance. The application of so simple a means as the ligature may then very often do this at once; but, like every other remedy frequently resorted to, it will be sure to lose its good effect when the patient has become accustomed to it; for in this and

similar cases, every thing depends upon the suddenness and unexpectedness of the particular measure put in practice whether your influence the brain of a patient in a novel manner or not. The sudden cry of “fire” or “murder,” nay, the unexpected singing of some old song, in a situation, or under circumstances which surprised the person who heard it, has charmed away a paroxysm of the severest pain. In the army, the unexpected order for a march or a battle will often empty an hospital. The mental excitement thereby produced, has cured diseases which had baffled all the efforts of the most experienced medical officers. In the words of Shakespeare, then, you may positively and literally

Fetter strong madness with asilken thread;  
Cure ache with *air*, and agony with *words*!

#### Suggestions relative to the cause of sleep.

By WILLIAM SMITH, Esq. Surgeon, Clifton.

Sleep appears to depend on a retardation of the circulation through the brain, thereby producing a venous condition of the blood in that organ, and this diminished or retarded circulation may probably depend on a periodic exhaustion of the propelling powers of the heart. The proofs of the first portion of this proposition are many, and I think satisfactory.

First. Venous congestion of the brain, from any obstacle to the return of the blood will produce drowsiness, stupor, coma, and finally, apoplexy, if its intensity be sufficiently great.

Second. In sleep, respiration and circulation are performed more slowly than in the waking condition: hence a change in the blood of the brain does not occur so frequently.

Third. Animal heat, and its causes, respiration and circulation, are feeble in hibernating animals during their winter sleep.

Fourth. The adult, in whom the respiratory and circulating systems are at the maximum of developement, takes less sleep than the infant, in whom the nutritive or glandular system is in full activity, but in whom the respiratory functions are at their minimum.

Fifth. Motion, with its tendency to increase circulation and respiration, prevents sleep.

Sixth. Hence an easy and quiet position of the body, and all the means which tend to favor a tranquil circulation, are incentives to sleep.

Seventh. Hence the whole class of seda-

tive remedies eventually produce slowness of the heart's action after a longer or shorter stage of stimulation.

**Eighth.** Hence the desire of sleep after exercise, as the circulation becomes so much slower after, in proportion to its acceleration during it.

**Ninth.** From the same cause, wine and all stimulants act primarily as excitants; and when their stimulation has subsided, the circulation becomes slow, slightly oppressed, and drowsiness supervenes.

**Tenth.** The same may be said of the warm bath, the pulse at first rising, and subsequently becoming retarded.

**Eleventh.** Cold, applied to the head, rapidly lessens the circulation, and tranquil sleep is sometimes produced by this means in fierce delirium, and in violent paroxysms of insanity.

**Twelfth.** Motion is employed as a remedial means in obviating the effects of opium. We walk the patient about, and so keep the circulation excited, till the poison is got rid of, or its effects shall have passed off.

**Thirteenth.** Intense cold produces slow and retarded circulation, drowsiness, and coma. Hence the necessity not to allow persons exposed to its influence to cease from exercise, which supplies the necessary stimulation to the circulation. A celebrated surgeon, in describing the disastrous retreat from Moscow, says "those who sat down went to sleep, and those who slept, awoke no more."

**Fourteenth.** Hence the amount of fat animal food which is not only eaten with impunity by those who are exposed to great cold, but is found to be absolutely essential to maintain the proper amount of circulation.

**Fifteenth.** We have sneezing and yawning as important illustrations of the effect of an accelerated circulation in preventing sleep. The sneeze is a forcible expiration, after which a deep breath is taken in: this of course, produces arterialization and subsequent circulation of the blood. Yawning is a prolonged and deep inspiration, and in the same manner has the effect, for a time, of keeping up the attention, by furnishing to the brain a fresh amount of arterialized blood.

**Sixteenth.** Immersion in an atmosphere of carbonic acid, or in an atmosphere which contains a large proportion of it, will produce drowsiness, coma, and the sleep of death.

**Seventeenth.** Breathing oxygen gas, on the contrary, will produce acceleration of the pulse, and all the vital functions, and eventually delirium.

**Eighteenth.** In delirium, whether attend-

ed with symptoms of power or debility, whether of the sthenic or asthenic type, we have an accelerated pulse. In the former case, as we lessen the excitement by depleting measures, and in the latter, or true delirium tremens, as we obtain the same end by the use of narcotics, sleep gradually steals on the patient, and delirium ceases.—In fact, our grand object is to lessen the rapidity of the circulation through the brain, and thus induce sleep.

I trust that these very imperfect remarks may call the attention of the readers of *THE LANCET* to this most interesting subject, and tend to elicit more observations on a point which, being closely connected with health and disease, is peculiarly worthy of investigation. *Lancet.*

#### SURGICAL DISEASES.

**DR. ALFRED AUGUSTUS HARVEY, M.R.C.S.E.,** and formerly surgeon in the Hon. East India Company's Service, has forwarded to us for publication, the following account of the mode of procuring a radical cure for **HYDROCELE**, without injection, employed by him, at intervals, for thirty years, successfully:—First, discharge the fluid with a trocar, or pocket lancet, and then apply a warm vinegar poultice all over the scrotum, in order to bring on inflammation, which generally takes place in a few hours, and becomes painful. When sufficient inflammation has been excited, remove the vinegar poultice, and apply a bread-and-milk poultice. In a short time, the pain and inflammation generally subside, and the cure is completed. Give a few smart doses of purgative medicine. Dr. Harvey adds the subjoined:

"**CURE FOR ENCYSTED TUMOURS, —OR Wens of the Head, or other parts of the body, without cutting them out.**" First, make a longitudinal cut along the scalp. This is performed with little loss of blood. Next press out the contents of the cyst, and apply, freely, alcohol in the cavity, with a camel's hair brush. Then place in the cavity, also, from two to six grains of nitrate of silver, and bring the edges together with strappings when inflammation takes place. Should it inflame too much, apply cold-water dressings, and give a few doses of active purgative medicine. This plan has ever been found to complete the cure in a few days.

**FISTULA IN ANO** (blind external) can often be cured without cutting, by injecting alcohol the whole length of the sinus, three or four times a-day, until it brings on inflammation; when that takes place, the cure is generally completed in a short time. In

full habits, bleeding by the arm should be practised, if required, and the bowels opened pretty freely, before the alcohol is injected. Should the inflammation become too severe, it should be regulated by poultice or cold-water dressings, and low diet should strictly be attended to. *Lancet.*

#### The Gastric Fluid, its nature and properties.

M. Blondlot has recently published in Paris a treatise on digestion, detailing very numerous experiments made upon a dog, in which a fistulous opening into the stomach was maintained for upwards of two years. The gastric juice was obtained in very large quantities. Submitted to distillation, the fluid passing over did not exhibit the slightest acid re-action, whilst the residue in the retort was always strongly acid. It is therefore certain that the acid of the gastric fluid is neither hydrochloric nor acetic acid, since both these are volatile. The gastric fluid of other animals gave the same result on being distilled. When chalk or any other carbonate of lime is added, no effervescence ensues, which further proves the acid not to be the lactic. M. Blondlot concludes, that the acid re-action of healthy gastric juice is owing to the presence of superphosphate and biphosphate of lime. He adds, 1st. "That there is no other acid which can remain acid, and fail to decompose carbonate of lime. 2nd. That sulphuric acid, added to gastric juice, precipitates an abundance of sulphate of lime, and oxalic acid precipitates oxalate of lime. 3rd. Potass, soda, ammonia, and lime water, produce abundant precipitates of neutral phosphate of lime. 4th. The calcined ash of gastric juice is not deliquescent, dissolves without effervescence in hydrochloric acid, forming chloride of calcium, it therefore contains neutral phosphate of lime, the excess of acid being drawn off in the calcination.

M. Blondlot also made many experiments, to determine whether, during digestion in the healthy stomach, lactic acid is formed by the transformation of sugar, starch, or other substance, and his conclusion is, that it is never found. He could never find even a trace of it, although he analysed the fluid expressed from the contents of the stomach, after remaining on the stomach various periods. He conceives that the acid of the gastric juice prevents the lactic acid fermentation, just as other acids are known to do under other circumstances. In confirmation of this, M. Blondlot relates many experiments upon birds and ruminating animals, which shew that the formation of lactic acid

in these creatures takes place only in those parts of the alimentary canals where no acid is present—namely, in the crop of birds, the first and second stomach of ruminants, and the cæcum of man, and other animals. He first proves that the acid found in these cavities is not secreted by their walls. Feeding sheep, goats, chickens, and pigeons, on food destitute of sugar, and examining the fluid found in the cavities mentioned, he found it invariably alkaline. On the other hand, the addition of sugar to the food produced an acid fluid in the same cavities which proved to be the lactic. The contents of the cæcum are not more acid than those of the small intestines, except sugar has been taken in the food; but when sugar has been taken, it undergoes the lactic fermentation in the cæcum. These experiments agree with those of Mr. Roes, published in *THE LANCET* for January and February, 1844. Tiedemann and Gmelin found acid in the crop of a pigeon, which had fed for several days on nothing but meat; but this, as M. Blondlot shews, probably had regurgitated from the stomach—an accident requiring precautions to prevent, after death.

M. Blondlot believes that the digestive property of gastric juice depends, not on its obvious chemical constitution, but upon a peculiar organic principle. If exposed to a temperature of 104° to 122° F., or higher, it loses entirely and irrecoverably its digestive powers, although to all appearance, and even as to its composition, as made known by analysis, it remains unchanged. With the exclusion of the air, gastric juice may be kept for two years without loss of its activity; but with the free access of air, it putrifies in five or six days, although the chyme which it forms from nitrogenous organic substances may be preserved for two or three months without change. The precipitation of all the lime it contains does not affect its activity, nor are its chlorides indispensable, but whatever acts upon its organic constituents, heat, strong alcohol, or strong acids, or which removes them, such as animal charcoal, chlorine, tannic acid, or acetate of lead, destroys all its digestive properties.

M. Blondlot also shews—A. That coagulated albumen resists the action of the gastric juice only from its compact form. When coagulated in very small particles, as white of egg beaten into a froth and poured into boiling water, it is digested as quickly as soft fibrine. B. That the action of the stomach in coagulating milk is not due to its digestive principle solely, but to its acid, which acts like lactic acid. C. The effect of the gastric fluid upon bones, whether entire



or not, is to disintegrate the animal matter slowly, beginning at the surface, and to reduce the earthy matter into a fine chalky powder, but without dissolving or decomposing it. The earthy matter not being dissolved, proves that no hydrochloric acid has acted upon it, but it all is discharged with the faeces.

The physiological results of M. Blondlot's experiments confirm those of M. Beaumont, which are already familiar to our readers.—*Lancet*.

#### Indian Hemp in Traumatic Tetanus.

By H. G. PORTER, F.R.S. Surgeon to the Newcastle Infirmary, and Lecturer on Surgery, at the Newcastle-on-Tyne School of Medicine and Surgery.

Though the attention of the profession has been frequently directed to Indian hemp as a medicinal agent in the treatment of spasmodic affections, I believe that its powers are not yet sufficiently appreciated. If, therefore, you will allow me a small space in your valuable publication, I will mention a case in which I lately tried this medicine with marked good effect. A young man while engaged at his work, Oct. 29, 1844, became entangled in the belt which moved a large wheel, and thus received a severe laceration on the upper part of right thigh, exposing the femoral vessels. He also received several other injuries. He was immediately brought to the Newcastle Infirmary, when the usual treatment, in such cases, was adopted. The case proceeded most favorably until the twelfth day, when symptoms of tetanus appeared. A large dose of calomel and Dover's powders was then given, and as no good effect followed, I ordered him to have ten grains of extract of Indian hemp, and to repeat the same dose every two or three hours, if required. I saw him again in a few hours, and finding that his bowels had not been acted upon by some purgatives he had taken, ordered two drops of croton oil to be placed on the tongue, and the following injection:—Tobacco leaves, one scruple; boiling water, eight ounces; macerate; strain for an enema. These produced free action in the bowels.

In consequence of the difficulty in swallowing, I determined to give the extract in the form of injection, and therefore ordered him to have the following enema every two hours: Extract of Indian hemp, one scruple; strong beef-tea, six ounces; mix. This was done, and the injections retained. No violent spasmodic actions took place, but the back became gradually more and more arched, so that it was necessary to place a pillow beneath. The extract did not cause any marked symptom of intoxication,

though it evidently produced, at intervals, calm sleep.

Without suffering any pain, the disease gradually progressed, death taking place on the fourth day after symptoms appeared.

In this case, four drachms and two scruples of the extract were administered, and to the action of this medicine I attribute the freedom from pain and *clonic* spasm, which surely is sufficient to induce any one to give this remedy a full trial in so fearful a disease.

Before I conclude, it may be well to mention, that no abnormal appearances were detected at the post-mortem, to throw any light on the pathology of this disease.—*Lancet*.

#### A New Preparation of Cinchona Bark.

Mr. M. Donovan, of Dublin, has collected a considerable amount of evidence from numerous medical authors, tending to prove that the alkaloids of the barks, quinine, cinchona, &c., are not the only constituents which give those barks their medicinal properties, but that their anti-periodic efficacy depends, in part, upon other ingredients, and much upon the combination in which the alkaloids are found in the natural state of the bark. The sulphate of quinine is, at present, the form most commonly employed but many authorities are adduced by Mr. Donovan, to shew that it cannot in all cases be depended on.

Under the impression that these preliminary points are proved, Mr. Donovan proceeds to relate his experiments, made with the view to obtain an agreeable preparation containing all the virtues of the bark in a small bulk. "Hitherto," he says, "there has been no way of exhibiting bark in its full powers, except in the state of powder which, to most persons, is so disgusting a dose that it is rarely prescribed." The following is the preparation which he conceives accomplishes the purpose:—

Let eight ounces of yellow bark, in coarse powder, be digested with a pint of proof-spirit for a week, in a close vessel, with frequent agitation. The tincture is to be fully extracted by the screw-press; the residuum is to be digested with another pint of proof-spirit for a week, and the tincture again expressed. The residuum is now to be boiled for half an hour with a pint of water, and the decoction strongly pressed out. The boiling of the residuum a second and third time, with a new pint of water is to be performed in the same manner, and then the three decoctions, mixed, are to be evaporated by heat to eight ounces. It will be much

the better if this be done in a vacuum. The tinctures, mixed, are to be distilled or evaporated until eight ounces remain; and these, still boiling hot, are to be added to the evaporated decoction. A pint of liquid will thus be produced, the chief ingredient of which is dikinate of quina.

To this liquid add 315.31 grains of dinoxalate of quina, and boil for a few moments; then add 21 troy ounces of refined sugar, and four ounces of best gum arabic, both in powder, and previously mixed. The whole is to be kept stirring until solution is effected, and if the resulting syrup, when cold, does not amount to 32 ounces by measure, water is to be added to make up that amount. When cold, filter through flannel.

In each ounce of this syrup there will be 16 grains of anhydrous dikinate of quina. This syrup is twenty-five times stronger than the decoction of bark.

It remains to offer a few suggestions relative to the pharmaceutical employment of this syrup. In general it may be used in any mixture of compatible liquids, when the powers of bark are required, and when the other liquids are already sufficiently voluminous, and would be altogether too bulky if decoction of bark were employed. Thus, in the simultaneous exhibition of decoctions of bark and sarsaparilla, in equal quantities the smallest efficient dose of the mixture is six ounces three times a day. By altering the formula to fifteen and a half ounces of decoction of sarsaparilla, and five and a half drachms of syrup of bark, the same powers are exhibited in half the foregoing bulk.

The following contains all its energy in a state of perfect development and activity, and is a pleasant carminative tonic:—

Cinnamon water, six ounces and a half; syrup of bark, half an ounce; compound tincture of bark, an ounce. An ounce measure of this mixture is equivalent to thirty-six grains of bark in substance.

When bark and iron are indicated, the following is the formula in which the least chemical action takes place between the tannin and the iron, as no discoloration appears for several days:—

Precipitated carbonate of iron, syrup of bark, of each an ounce. Mix. Dose, the size of a small nutmeg.

The strength of this syrup is such, that one drachm is a full dose, either by itself or in water. Aromatics, such as anise or fennel, are said perfectly to mask the bitterness of preparations of quina. M. Pierquin says that thirty-two grains of carbonate of magnesia conceal the taste of six grains of sulphate of quina, without interfering with its virtues.

To conclude: this preparation of bark seems deserving of the attentive consideration of physicians, as it contains all that is valuable in that medicine, in a state of perfect preservation and full energy. It presents the active ingredients exactly in their natural state, which good judges have declared to be in many forms of disease absolutely necessary. It contains nothing but what is an unaltered proximate principle of bark. The form is commodious, not liable to spoiling, is less disagreeable than any other, and may be rendered even agreeable.—*Pharm. Journal.*

#### Adulteration of Sulphate of Quinine, and a Method of detecting it.

The sulphate of quinine of commerce is very frequently adulterated with salicine. If the proportion of the latter alkaloid present be half, or even one-fourth, the fraud may be detected by the addition of concentrated sulphuric acid, which produces, with salicine, a characteristic red color. But if no more than a tenth of salicine is mixed with the sulphate of quinine, this red color is not developed by the addition of sulphuric acid. In order to detect the presence of salicine in this or less proportions, this alkaloid must be isolated. For this purpose, take three or four grains of the suspected sulphate of quinine, and pour on it about six times its weight of concentrated sulphuric acid, which dissolves the salt, and, if salicine be present, forms a solution of a brown color, just like sulphuric acid soiled by some vegetable matter. To this add carefully and gradually some distilled water, until a white precipitate appears. This will probably be salicine, which will not dissolve in a moderately dilute acid solution of sulphate of quinine. Filter the liquid, and collect the precipitate on a watch glass, and it will now produce, upon the addition of concentrated sulphuric acid, the bright-red color characteristic of salicine. If too much water be added, the precipitate will dissolve, and only a loose gelatinous precipitate will form, very difficult to separate. *Journal de Chemie Medicale.*

#### Epidemic Cholera treated by Transfusion.

In a preceding number of the same journal, several extraordinary cases of recovery from the late epidemic cholera thus treated by Mr. Torrance, are recorded. The fluid injected consisted of—Muriate of Soda, 2 drachms, carbonate of soda, 2 scruples, chloride of potassium, 7 grains, water (temperature 96°), 2 quarts. Of this solution, as many as 10 quarts were, in some instances, injected into the system, at intervals, during 28 hours!—*Lancet.*

Miss Martineau's repudiation of Mr. Greenhow's Report.

It will be remembered that when inserting our analysis of the pamphlet of Mr. Greenhow, describing the medical facts of the case of his sister-in-law, Miss Martineau, we stated that they had been published by that gentleman, with the full assent and approval of the lady. But it appears from a letter of Miss Martineau, published in *The Observer*, London newspaper, of Sunday last, that Mr. Greenhow, in supposing that he had obtained the consent of the patient, labored under a "mistake;" and the same letter informs us that Miss Martineau considers it to be "impossible for her to remain under the supposition of concurrence" in the publication. She admits, however, that in "the writing and the reading" of the communications which passed between her and Mr. Greenhow on the subject, she is not much surprised that he should have been thinking of one thing and speaking of another. Miss Martineau says, "I have not seen the report, of course, and it was in circulation, I believe, ten days before I received that shock of painful amazement which your declaration occasioned. I understand the matter thus:—You told me that certain attacks on you by some members of your profession would compel you to report the case, *professionally*, in self-defence. By a strong effort I abstained from the slightest expression of my natural reluctance. This respect for your liberty of professional self-defence seems to have been understood by you, not merely as acquiescence but participation. In reply to a note from you, I wrote the following note, which you interpreted (I cannot conceive how) as not only concurrence but as permission to use my name as your sanction:—'I have no right or wish to give any opinion whatever. In fulfilling my personal obligations to truth and science, I have no other wish than that everybody else should do what he believes to be most right. This was one mistake on your part; another arose from a similar misapprehension. Being aware that an account of my recovery by mesmerism must appear, I proposed that you should transmit to the recorder of my recovery, for his private reading, your view of the case, in order that you might have no cause of subsequent complaint of misrepresentation. My note was as follows:—'Dec. 6th, I said send him your statement, doing, I trust, full justice to your excellent temper in the matter. Keep in mind two essential things—that whatever is said about the various diseases attributed to me is pure invention on the part of those who know nothing of the

matter; and also that I may have my sense of duty about communicating the benefits I have received from mesmerism.' In July you were so struck as to write to me, 'I cannot but feel a great respect for the influence, whatever it be called, which has so improved your condition.' Your reply was—'As it becomes more and more evident that I must soon lay before the profession a complete report of your case, I must decline furnishing it, in the meantime, to any individual.'

"On this I remarked that your published report would answer all the purposes of a private statement to the recorder of my mesmeric recovery. Of all conceivable ideas, the last I could have found would be that of being made in any degree responsible for the issue of a shilling pamphlet of the kind that I am told yours is. A professional man may be enabled to understand the shock caused by such an act; but I must lament the misapprehension which has caused you to answer for any one but yourself. As a mistake, however, I take leave of it, and shall forget, as soon as possible, the painful occasion of this explanation."

It will now be seen, that Miss Martineau's physician, Dr. Greenhow, was compelled to draw up and publish an erroneous history of her case, to appease the agony of a portion of the medical profession, opposed to innovations or improvements in the theory and practice of the old astrological schools in which they were educated, and known under the familiar appellation of "Old Ladies in Breeches."

ACADEMIE DES SCIENCES.

Researches of MM. Andral and Gavarret on the Composition of the Blood.

MM. Andral and Gavarret have communicated the results of their further researches on the composition of the blood in disease. These researches tend still more to confirm the law which they previously found to exist with reference to the increase of fibrin in inflammatory diseases, and its decrease in adynamic. In four cases of acute meningitis, free from complication, which terminated fatally, (a malady that they had not yet been able to study under this point of view,) the blood drawn from the first bleeding did not present more fibrin than in the natural state. As the symptoms became more decidedly inflammatory, the quantity of fibrin increased from two-eighths to three-fourths, and at last to five-fourths; so that even before the

nature of the symptoms had clearly announced the transformation of a simple continued fever into inflammation of the meninges, the increase in the quantity of the fibrin contained in the blood forewarned it, constituting the first evidence of its manifestation: in these four cases of meningitis, the autopsy rendered it possible to appreciate, to their full extent, the changes which took place in the meninges and encephalon.

In several cases of saturnine epilepsy, the quantity of fibrin was normal, a circumstance which corresponds with our idea of the disease. In a case of jaundice, with pain in the right hypocondrium, tumefaction of the liver, and febrile re-action, the quantity of fibrin had increased: as, also, in women who presented, several months after delivery, the symptoms of a slight degree of inflammation of the uterus, and of the annexed organs; in a case of phlegmon of the right iliac fossa, which appeared on a woman delivered a few weeks previously; in a paralytic female, when an eschar, that had formed on the sacrum, separated; and lastly, in a case of erythema nodosum.

In forty cases of typhoid fever, free from complication, the quantity of fibrin always remained below four, and lowered even as far as two and one. In these forty cases there was a complete analogy between the diminution in the amount of fibrin and the adynamia.

The blood of a person who died from purpura hæmorrhagica, only contained 0.9 of fibrin, and there was only 0.6 in the blood of a man of fifty years of age, who, whilst being treated at the Charité, for cirrhosis of the liver, accompanied by its ordinary symptoms, all at once fell into a state of extreme prostration, with fever and delirium. When the bodies of these two patients were opened, the only anatomical data which had any reference to the last symptoms which they presented, were a liquid state of the blood in the heart and the large vessels, and ecchymoses in different parts of the sub-serous and sub-mucous cellular tissues.

The above results, substantiating the previous researches of MM. Andral and Gavarret in every respect, they are inclined to think that the examination of the varying proportions of the fibrin of the blood in certain diseases, may be of great use to determine the nature of disease, and to assist diagnosis.

MM. Becquerel and Rodier have likewise presented to the Academy an analysis of researches similar to those of M. Andral.—They have arrived at precisely the same results. But they have also ascertained two new facts: Firstly, that the proportion of

cholesterine increases in the blood from forty to fifty years of age, as well in woman as in man. Secondly, that the proportion of this substance increases along with that of the fibrin in inflammatory diseases, whereas, on the contrary, the albumen diminishes.

#### On the Degenerescence of Vaccine Matter.

M. Viard has been performing comparative experiments in order to ascertain the differential characters of the development, progress, and duration of the eruption of the vaccine matter taken from the cow in 1836 and 1844. The following are the conclusions at which he has arrived: It is not, as is generally supposed, in the degree of development of the vaccinal postules on the eighth or ninth day, that we must look for the degenerescence of the vaccine matter; but in the progress, and more especially in the duration, of the eruption, which diminishes progressively. In 1836, the vaccine of Jenner, after nine and thirty years sojournment in the economy of man, gave rise to postules which, on the twelfth day were perfectly dried; whereas postules, originating from vaccine matter taken from the cow that year, dried only on the seventeenth day. At present, the vaccine of 1836 dries on the thirteenth or fourteenth day; whereas that recently taken from the cow (1844) only dries on the seventeenth. Thus, in sojourning eight years in man, the vaccine of 1836 has decreased in its power of keeping up the eruption. M. Viard consequently concludes that vaccine matter should be procured fresh from the cow every five or six years.

*Lancet.*

#### The Sex of the Child as a Cause of Difficulty and Danger in Human Parturition.

Professor Simpson announces, and very adequately supports, the following propositions in the last number of the *Edinburgh Medical and Surgical Journal*:—

1. "Of the mothers that die under parturition and its immediate consequences, a much greater proportion have given birth to male than female children."
2. "Among labors presenting morbid complications and difficulties, the child is much oftener male than female."
3. "Amongst the children of the mothers that die from labor or its consequences, a larger proportion of those that are still born are male than female; and, on the contrary, of those that are born alive, a larger proportion are female than male."
4. "Of still-born children a larger proportion are male than female."
5. "Of the children that die during the actual progress of parturition, the number

of males is much greater than the number of females."

6. "Of those children that are born alive, more males than females are seen to suffer from the morbid states and injuries resulting from parturition."

7. "More male than female children die in the earliest periods of infancy; and the disproportion between the mortality of the two sexes gradually diminishes from birth onwards till some time subsequently to it."

8. "Of the children that die in utero, and before the commencement of labor, as large a proportion are female as male."

9. "Of the morbid accidents that are liable to happen in connexion with the third stage of labor, as many take place with female as with male births."

10. "The average duration of labor is longer with male than with female children."

11. "More dangers and deaths occur both to mothers and children in first than in subsequent labors."

The number of facts which Dr. Simpson brings forward in support of his views, extends his communication to a great length. The subject is treated with characteristic ability, and those for whom it has an interest will here find a fund of valuable practical information. The author concludes with the following startling announcement:—

"The official returns of the mortality of England and Wales have only, as yet, been collected for somewhat upwards of seven years—viz: from 1st July, 1837, to the present date. If the calculations we have already given are accordant with truth, (and we believe them to be much within the limits,) there have been lost in Great Britain, during that limited period, as a consequence of the slightly larger size of the male than of the female head at birth, about 50,000 lives, including those of about 46,000, or 47,000 infants, and of between 3000 and 4000 mothers who died in childbed. *Lancet.*

#### Illustrations of the Importance of Ventilation.

Mr. Squire, in the last month's number of the *Pharmaceutical Journal*, gives the following:

"The usual argand gas-burner consumes about five cubic feet of gas per hour, producing rather more than five cubic feet of carbonic acid, and nearly half a pint of water."

"Shops using thirty of these lights, therefore, in an evening of four hours, produce upwards of nine gallons of water, holding in solution the noxious products of the gas."

"An argand lamp, burning in a room twelve feet high and twelve feet square, containing 1728 cubic inches of air, with closed doors and windows, produces sufficient carbonic acid, in rather more than three hours, to exceed one per cent., which is considered unfit for respiration, and when it amounts to ten per cent., it is fatal to life."

"A man makes on an average, twenty respirations per minute. and at each respiration inhales sixteen cubic inches of air: of these 320 cubic inches inhaled, thirty-two cubic inches of oxygen are consumed, and twenty five cubic inches of carbonic acid produced."

#### On the use of the Thymus Gland.

"Dr. Picci, after glancing at the theories of his predecessors, suggests that the use of this gland is chiefly of a mechanical nature—viz: to occupy a certain space within the thoracic cavity, while the lungs remain unexpanded in the foetus; and thus to prevent the ribs and sternum from falling in too much upon these vital organs. The size of the thymus is inversely as the volume of the lungs; and, when the latter become dilated after birth by the admission of air into their cells, the former immediately begins to shrink and become atrophied. In truth, it is only in the adult that the thoracic parietes are moulded completely upon the lungs; for, in infancy and youth, it is rather the thymus gland that is, in their place, moulded upon the thorax."

"The situation of this gland in the anterior mediastinum, and along the median line, the very nature of its tissue, and the greater expansion and development of its inferior half, are adduced as arguments in favor of the opinion now adduced. Besides the well known circumstance that, in those newborn children in whom the thorax is very largely developed, the thymus continues to increase gradually even to the end of the second year, it deserves notice that all those animals, in which the lungs are similar to those in the human subject, are provided with this gland; whereas, we find it to be entirely wanting in those which breathe by branchiae, or membranous lungs. In hibernating animals, also, the thymus exhibits alternations of enlargement and decrease, according to the state of the respiratory organs. In the amphibia it attains its maximum of development."

"The circumstance, too, of the gland being usually rather larger than ordinary in phthisical patients, may be mentioned as lending some probability to the view proposed."—*Med. Chir. Review.*

Galvanism applied to the treatment of Uterine Hemorrhage, etc.

Dr. Radford says that he has pursued this practice with great success, in cases of hæmorrhage, accidental or unavoidable, accompanied by exhaustion, and occurring before, during or after labor. He adds—

"I am satisfied, from positive trial of the remedy, that it will be found a most important agent in tedious labor, depending upon want of power in the uterus, and where no mechanical obstacle exists. I would also suggest the probability of its proving valuable in originating uterine action de novo, in cases where it may be considered necessary, to induce premature labor. It seems to me also to be worthy of trial in certain cases of menorrhagia in the ungravid state, where, on vaginal examination, the uterus is found to be atonic, as evidenced by its large flaccid condition, and the patulous state of the os uteri."

The remedy is thus applied :—

"The brass ball of the vaginal conductor is to be passed up to the os uteri, at intervals, on to various parts of this organ; at the same time, the other conductor must be applied to the abdominal parietes over the fundus uteri. Shocks may be also passed transversely through the uterus, by simultaneously applying the conductor on each side of the belly.

"The application should be used at intervals, so as to approximate in its effects, as nearly as possible, to the natural pains. It may be continued until it meets the exigencies of the case."—*Lancet*.

In the same journal, Dr. Radcliff Hall recommends

**The Use of Chloride of Lime in Diseases attended with Contagious Discharge.**

"Gonorrhœa.—In the first stage, before the discharge has become completely puriform, or the scalding great, a single injection of about two fluid drachms of the strong solution will always put a stop to the disease, either in a first or subsequent clap. In the second stage, when there is considerable discharge of pus, and more pain, several injections are required. In gleet, provided the discharge be not kept up by some structural change in the urethra, the strong injection is likewise useful, but not to so striking an extent. The effects of injecting the strong solution are, sharp pain, and often erection for the moment, slight puffiness and eversion of the orifice of the urethra, and tenderness on pressure, and a feeling of unusual firmness for two or three inches down the corpus spongiosum, where these did not already

exist. In a short time, the pain subsides, and in a quarter or half an hour, a serous discharge issues from the mouth of the urethra."

Purulent Ophthalmia, Dr. Hall has treated with like success. He thus uses the solution :—

"The eyelids are slowly and gently separated until the cornea can be seen, when that is manageable, and all secretion is wiped away with a fine soft sponge. A large bushy camel-hair pencil, charged with the strong solution, is then insinuated beneath the upper eyelid and swept round the front of the eye; the pencil is again charged with the solution and applied to the everted lower lid. Unless plenty of the fluid be thus applied, the application will be equally painful but less effectual. There is considerable pain, of a smarting, burning character, for half an hour or longer, and the already swollen eyelids become still more tumid and prominent. This tumefaction is cedamatus in character, the skin losing in some measure its peculiar redness, and becoming more transparent. In a few hours, a serous discharge oozes out from between the eyelids, and the swelling partially subsides. This is followed by secretion of matter, but after two or three applications of the chloride, in perceptibly diminished quantity, the discharge gradually loses its characteristic yellow color, and is seen in flakes on opening the eyelids. After three or more applications, the eyelids no longer swell as they did after the first, and the pain is much less. The eyes are kept clean with warm water, matter never being suffered to collect beneath the upper lid; a little spermaceti ointment is smeared on the edges of the eyelids, and the strong solution is applied once in every twenty-four hours, until the secretion ceases to be in the least degree puriform. No other treatment whatever is necessary."

**Contributions to the Diagnosis and Pathology of Chest Diseases.**

Under this title Mr. Mac Donnell offers some valuable facts and observations in the last number of the Dublin Journal. At page 74 of the *Lancet* for April, 1844, we gave an analysis of an essay, by the same Gentleman, on the "Diagnosis of Emphysema." Of this form of disease his present communication affords another example. This case is chiefly remarkable for the close resemblance which it presented in its origin, in its general symptoms, and in many of its physical signs to tubercular consumption. These were present, emaciation, purulent expecto-

ration, hectic fever, mucous rales at the apex of the affected side of the chest, and various other signs, which would at once have led a superficial or ignorant inquirer to arrive at the most unfavorable prognosis. A sound knowledge of the phenomena of chest pathology discovered, however, sufficient grounds for a different conclusion, and the disease was pronounced to be Empyema. The progress of the case, and the final recovery of the patient, afforded the most satisfactory evidence of the accuracy of this opinion.

On the history of this, and of eight other cases of empyema, the author founds the following proposition:—

“That purulent expectoration in empyema, though attended by quick pulse, sweating, emaciation, and other hectic symptoms is not indicative of tubercular or pneumonic abscess, unless accompanied by unequivocal physical signs of these lesions; but, on the contrary, it is to be regarded as the consequence of an effort of the constitution to get rid of a large collection of matter by one of the ordinary emunctories.”

Gangrene of the lung also might have been supposed to have been present in this case, as the breath and expectoration were extremely fetid. The same characters were also present in certain other cases, which terminated fatally, showing that no such condition of the lung existed. Dr. Mac Donnell offers the following, and, we believe correct explanation of the phenomenon:—

“In such cases, we have a quantity of pus and air occupying the minute tubes and air cells, and having but an imperfect communication with the external atmosphere, owing to the larger tubes being nearly obliterated by the compression to which the lung is subjected by the fluid of the empyema, and in this way they act chemically on each other, and produce a decomposition, giving rise to the intolerable odour which both the pus and expired air soon acquire. In fact, the same phenomena are observed in these cases as in an ordinary abscess, the matter of which may be healthy and odourless on its being opened, but soon becomes altered in these respects when air enters the sac and acts upon its contents, which then become bad in quality and offensive in odour. This view is borne out by what was noticed in the present case—viz., that the breath was not fetid during ordinary expiration, but became so immediately after coughing, by which the air pent up in the remote tubes was expelled, whilst that taken in during ordinary inspiration was exhaled devoid of odour.”

A bruit synchronous with the heart's ac-

tion was heard during the progress of the case, at the left side of the spine. It disappeared with the effusion. Further investigation will probably show this to be a sign of some importance in acquiring information as to the actual physical relations of the parts within the chest.—*Lancet*.

#### ELEGANT EXTRACT.

More food for the Old Ladies in Breeches.

MESMERISM AND MISS MARTINEAU.

“We do not know whether to congratulate or condole with the talented Heroine of Political Economy on the strange dream that has come o'er her soul. It appears that Miss Martineau recovered her health and—we were nearly saying—lost her senses! But this is not the case—she has acquired an additional sense—CLAIRVOYANCE! Her maid, BETTY, placed her hand on her mistress's ivory forehead, and, presto, a STEAM-TUG that was passing became metamorphosed into a ship of celestial glory, fringed with gold and silver, and fit to be ‘a God-head's dwelling.’

Is all in my eye BETTY MARTIN—EAU!

Betty, however, is no fool. She prescribed ale and brandy-and-water to her mistress, instead of opium-eating, and the change resulted in the best effects. Harriet's Mesmerism dreams will prove a god-send to the animal magnetisers, and will command more attention among the old women of both sexes than her Political Economy and her “Preventive Checks.” But it won't do! It will be the wonder of the day—perhaps of nine days—and then sink into oblivion with the exploits of Miss Okey.”—*Medico. Chir. Review*.

Dr. Duncan relates, in the last number of the *Northern Journal of Medicine*, an interesting case of *Removal of a coin from the Larynx by inversion of the body*.

An individual amusing himself by tossing up a shilling, and catching it in his mouth, it slipped through the glottis. The accident gave rise to comparatively little inconvenience. The coin seemed to the patient to be fixed at the cricoid cartilage, and he had an impression that it could be displaced were he to stand on his head. This impression corresponding with the opinion of Dr. Duncan and his associates—

“The man was placed with his shoulders against the raised end of a pretty high sofa, and then being seized by three of the most powerful of those present by the loins and thighs, he was rapidly inverted, so as to

bring the head into the dependent position, and, after a shake or two, Dr. Simpson at the same time moving the larynx rapidly from side to side, the shilling passed into the mouth and fell upon the floor. Not the slightest cough nor dyspnea was produced, and the patient immediately started up, delighted with the result. He was now perfectly free from uneasiness, and there was a marked change in the character of the voice. He had not the slightest subsequent bad symptom."

**Curious case of Mesmeric Detection of Crime.**

LYNN, Mass., May 28, 1845.

MR. EDITOR,

Thinking that you and perhaps your readers, might be interested in a specimen of what may be said on the possibility of detecting rogues through the power of Mesmerism, or Animal Magnetism, I have concluded to give you a brief account of a case, that has recently passed under my notice.—It may exceed your belief—I am confident that it will your explanation, as it does mine—meaning the process by which the given result has been reached; but incredulous as it may appear, I beg to say that the circumstances which I relate are bona fide facts, and can be shown to be such, should truth or virtue require, in any court of justice.

One of my nearest neighbors, a man of unquestionable veracity, on Tuesday of last week, in opening one of the money drawers in the counters of his store, discovered that some money had been taken from it, evidently by a stealthy hand, since he had been to it to make change—which, I believe, was in the time of an hour. The exact amount that had been taken he could not tell, though he knew it could not be large; and as to the individual by whom it had been taken, he could form no reasonable or satisfactory conjecture. His thoughts first recurred to his clerk, he being a boy that had been with him but a few days, and not knowing what power temptation might have over him; though he had seen so much to encourage confidence in his honesty, that he could not believe him to be the rogue. Who it could be, of those who had been about the store during the day, or of the suspicious characters in the neighborhood, he could not imagine or satisfy himself. After waiting a day or two, without fixing upon any one as the probable criminal, and having heard of the wonderful revelations asserted to have been made by Mr. and Mrs. C. in a neighboring street, through the power of Mesmerism, to gratify his curiosity in the shape of seeing what might be said on the subject by a per-

son in the mesmeric state, taking along with him his clerk, he called on them for the purpose. Merely stating that he should like to have an experiment in clairvoyance, without telling them his motive or business, and they having had no means of knowing the circumstances in regard to the loss of money from his store, Mr. C. put his wife into the mesmeric sleep, and proceeded to ask her such questions as Mr. P. the applicant, might propose without being in communication with her. The first question related to the discovery and location of his store. She soon found it, describing it, without and within, to his entire satisfaction. The inquiry was next put, whether he had lost anything from the store within a few days. After a strong and somewhat protracted mental effort, she answered, "Yes, some money from a little drawer in the inside of a counter." In a free and earnest manner she went on to relate the particulars as they appeared to her, stating that, in the absence of Mr. P. from the store, and as the clerk stepped down into the cellar with a bare-footed boy to get some butter in a covered tin pail, (which the clerk well remembered,) a lad, apparently about fourteen years of age, entered the store, reached over the counter, pulled out the drawer, and took from it four dollars in two bills, one a three dollar bill, the other a one, which he hastily stuffed into his pocket; and then, instead of making off in a hurry, put on a composed air, and as the clerk came up from the cellar, made as if he had just come into the store in a very loitering, lazy, careless manner, and at last leisurely passed out of the store with the boy that had got the butter. She then described the boy, including his size, looks, hair, &c., with great particularity; also, his parentage, habits and business; and in tracing him from the store, followed him down to the corner of the next street, where she described him as going into a grocery, and giving two cents for an orange, &c., &c.—The clerk at once remembered that a boy answering exactly to her description had frequently been in the store, and that he saw him, apparently coming into the store, as he came from the cellar at the time mentioned; and he recognized as true of him what she had said concerning his parents and habits.

On returning from the examination, Mr. P. and his clerk thought the matter might repay a little further attention. They accordingly kept a look out for the fellow that had been so particularly, and, as they thought, on reflection, so correctly described. Before the week closed, he made his appearance at the store. Mr. P. taking him one side, and speaking to him in a friendly tone



and manner, told him that he wanted that money that he took from his drawer the other day, (intending to carry the impression that he knew him to be the rogue.) At first, he denied having taken the money; but when Mr. P. told him that a person in Nahant-street, (having in his eye Mrs. C.) saw him enter the store, take the money, put it into his pocket, and when he went out, pass down to a certain grocery, where he bought an orange, giving two cents for it, he lost his power of denial, and, in owning it, confessed that all the circumstances relating to the number and size of the bills, &c. were just as they had been described by the mesmerized subject; and after expressing regret and sorrow, and saying that he had paid away the money, he promised to go to work, earn it and restore it to him.

Such are the facts in the case, and I have them from the original and responsible sources. I submit them to the public, expecting them to be questioned and perhaps ridiculed, but knowing, at the same time, that they can be supported by the most unquestionable of human testimony. I have been particular to inquire whether either Mr. or Mrs. C. had any knowledge of the boy in question before the time of the examination, and if they had, whether they had any suspicion of him as a bad boy; and I learnt that, up to that time, they were ignorant that any such boy lived in town. Leaving every one to form his own opinion in the case, and to make his own comments, I here leave the subject.

Yours, believing in the progress of human discovery and knowledge.

M. S.

N. Y. Tribune.

#### The relation of the Physician to a Colleague.

This relation is twofold. The first embraces mutual respect, and where that is not possible, let indulgence at least be the principal law of conduct.

Nothing is more difficult than to judge others, but nowhere is it more so than in the practice of medicine. It is therefore unpardonable in the public; but it is revolting to hear physicians, who know the difficulties of the art, and of forming opinions regarding it, judge their colleagues with severity, harshness, contempt, or disclose their faults, and try to raise themselves by lowering others. O that I were able to impress the minds of my brethren with the truism, as forcibly as I am penetrated by it! He who degrades a colleague degrades himself and his art. For, in the first place, the more the public becomes acquainted with faults of physicians,

the more will physicians become exposed as contemptible and suspicious, and the more will such exposure impair confidence: and confidence in the whole body being diminished, every single one, and the censurers included, will lose a share of it. The public would be less prone to censure the medical profession, and its faults would not be a favorite topic of conversation, if the members themselves did not broach it, and set the bad example. It shows a short-sighted selfishness, and want of all common spirit, when a physician acts in such a manner, and thereby hopes to raise himself, as he degrades others.

*Lancet.*

#### A Doctor and his Lizards.

A letter from Vera Cruz, to the Albany Evening Journal, relates the following marvelous incidents in a notice of a visit to the estate of Dr. Stephens:

"While enjoying our segars under a broad-spread tamarind tree, the lizards came down as usual to keep the mosquitoes away from their protectors. The doctor's kindness for animals has developed instincts and awakened affections that would not discredit a race, intellectually endowed. His beautiful fan-tailed pigeons, when he returns from town, come with their greetings to his carriage, and perch upon his shoulders. His lizards jump from the trees into his hands. A year or two since, when several of the officers of the United States ship Potomac, with two gentlemen residing here, were at breakfast with the doctor, a huge lizard that had the misfortune to lose its tail by some casualty, marched into the rooms, and up to the doctor, with its dismembered limb in its mouth! This looks, I confess, too much like a "Remarkable Snake Story," but it is nevertheless, a well authenticated fact. The maimed reptile, under the influence of instinct highly excited, sought relief from the hand by which it had been fed and cherished. The doctor himself regards the circumstance as a tribute to his skill in surgery.

The unreasoning species are not alone, however, in their appreciation of Dr. Stephens' medical services. He performed, at an early day, with entire success, some of the most difficult surgical operations. His writings on yellow fever, scurvy, &c., won for him the highest medical honors that Europe confers. He was one of three eminent physicians upon whom degrees were conferred upon the occasion of Lord Wellington's installation as Chancellor of Oxford University. He is now devoting himself to investigations of the highest interest touching the Phenomena of Life, which, in his judgment, prove, 1st. That the action of the body is

regulated by some power or agency other than the Brain. 2d. That there is a living, vital agent, independent of, and so far as muscular action is concerned, superior to the mind; and 3d. That in man, and in the higher order of animals, the principle of life is seated in the solar ganglion, from which the nervous system or machinery draws its power of motion, and by which it is propelled and governed.

#### Extraordinary facts relating to Combustion.

At a meeting of the Academy of Science, February 3, M. Dumas related some experiments to which he had submitted liquid chlorine refrigerated to 90 degrees below the freezing point, in a mixture of solid carbonic acid and ether.

1. Phosphorus falling into liquid chlorine is ignited with a violent explosion.
2. Phosphorus, itself previously cooled in the freezing bath, inflames in the same manner, with violent explosion.
3. Arsenic, taken at the ordinary temperature, is kindled when dropped into liquid chlorine.

4. Antimony, on the contrary, manifests no action on liquid chlorine.

M. Bousingault proposed that the Academy should give facilities for extending these experiments (which are attended with much danger) on some determinate plan.—*Comptes Rendus*, 3d Feb.

#### MEDICAL SOCIETY OF LONDON.

DR. THEOPHILUS THOMPSON, President.

##### Effects of Counter-Irritation.

Mr. DENDY, in reference to the discussion at the last meeting, remarked, that when properly and judiciously applied, blisters to children were by no means attended with danger. He himself, however, preferred the use of the acetum lyttæ, which merely required to be painted on the skin with a camel's hair brush, once or twice, to produce vesication. He was in favor of small vesications, such as the size of a shilling, being formed successively at intervals of twelve or twenty-four hours. The acetum lyttæ had the advantage of not producing strangury.

Some remarks on the effects of blisters to children were made by several members.—Applied with due caution, and allowed to remain only a short period, they might be and were serviceable in many cases. Their abuse however, was calculated to do much evil, and never more so than when applied by ignorant persons, who allowed them to remain on for a long period.

In order to shew that blisters, or any other kind of counter-irritation, might occasionally be of serious consequence to the patient, it was observed by Mr. PILCHER that he recollected six cases of inflammation of the chest succeeding to measles, in which blisters had been applied, and they were all fatal. He mentioned also the instance of a youth fifteen or sixteen years of years of age, in whom the irritation produced by a compound frankincense plaster applied to the chest, was so great that the parts sloughed, and the patient sunk. In these cases, doubtless, the constitutional powers of the patients were very low.

Mr. STEDMAN had found the acetic acid as efficacious as the acetum lyttæ, and considered the efficiency of the latter preparation to be dependent on the vinegar.

Mr. DENDY recollected Sir A. Cooper mentioning a case in which a young lady, recently arrived from Jamaica, fell a victim to the application of common blister to her knees. She sank in three days, from sloughing of the parts. In respect to the effects of the various paper preparations of the lyttæ, he had found them so uncertain that he never employed them.

Mr. BISHOP remarked that when a large surface was exposed, either as the result of a blister or a burn, nervous irritation of such a character might be produced as to terminate fatally, and this even when the sore itself might have a healthy aspect. The nervous irritation killed Miss Clara Webster. In cases in which this irritation was set up, opium often exerted a most benign influence.

Dr. FORBES WINSLOW read a paper on

##### The Incubation of Insanity.

After dwelling upon the importance of studying and treating the disorders of the mind in their earliest or incipient form, or during the period of incubation, and lamenting the little attention which had hitherto been paid to this important subject, Dr. Winslow expressed as his belief, that a very large proportion of the 8,736 incurable lunatics confined in asylums in England and Wales, had been reduced to this sad state by the neglect to which they had been subjected in the incipient state of the malady. According to the last official return made by parliament, there were in the whole of England and Wales, confined in asylums, 11,272 lunatics. Out of this number, there were returned as "incurable," 8,736; and as "curable," only 2,519. This alarming disproportion was attributed to the ignorance which had prevailed with regard to the nature and treatment of this disease. The notion which had so generally been promulgated,

that insanity was an affection of the mind, the spiritual principle abstracted, and the material organization, and not at all associated with bodily disease, had had the effect of retarding the progress of sound pathological knowledge, with regard to the condition of the brain and nervous system, during this fearful inroad upon its recognized functions. The attempts which have also been made to define insanity, to establish a test or standard of mental unsoundness, had also operated most injuriously. Each medical man having formed his own notion of what constituted insanity, no person was admitted to be deranged until he came up to his preconceived standard; and, consequently, the period of incubation was entirely overlooked. The author maintained, with regard to the treatment of insanity, that the probability of recovery lessened in a ratio to the period which was allowed to intervene between the first onset of the disease and its more advanced stages; and that unless the result of physical injury, or connected with strong hereditary predisposition, derangement of mind was, if attacked in its incipient form, as easily curable as incipient inflammation, pneumonia, or rheumatism. He adduced a number of statistical facts to establish the point. He considered that in the primary stage, insanity was but slightly connected with lesions of nervous structure; but if the disorder be permitted to remain for any length of time without any attempt being made to remove it, serious organic changes take place in the delicate organization of the brain, which for ever place the patient beyond the reach of remedial measures. The author urged the importance of applying to the diseases of the brain and its disordered manifestations the same principles which guide us in the elucidation and treatment of other affections of organic structure. He considered that a person might be pathologically insane, who ought not to be held as legally mad. In studying this class of affections, the medical philosopher should dismiss from his mind all his preconceived notions, based upon legal and medical definitions of insanity; if he tied himself down to these metaphysical abstractions, he will close his eyes to a medical truth of the highest import to the human race. Dr. Winslow confessed his inability to define insanity. He thought that, with equal propriety, an attempt might be made to define yellow, red, blue, or any other abstract essence. He considered that insanity was not essentially different from other maladies, that it obeyed the same pathological laws. After entering at some length into the point, and having pointed out the evils which had resulted from the at-

tempts which have been made to throw about this malady an air of mystery and superstition, Dr. Winslow next proceeded to detail the incipient symptoms of this affection. He thought that the period of incubation might last for months and years; cases had been recorded in which it had been of fifteen years duration. Long prior to the explosion of insanity, patients have confessed that they have for months and years been struggling against the encroachment of this malady. In forming an estimate of the presence of insanity in any given case, care should be taken not to confound natural healthy singularity and eccentricity with those deviations from sound mental health which are clearly the consequences of physical disease of the nervous system. The patient's own mind must be the standard of comparison. The physician must compare the manifestations which prevail at the time when the mind is supposed to be affected with the mental state of the individual in its natural and habitual condition. Insanity is often but an exaggeration of the natural habits, passions, and character. The author considered that almost invariably there existed in the early period of insanity, a stage of consciousness during which the patient was perfectly aware of the existence of an altered state of mind, and the approach of "thick coming fancies," against which he often heroically struggled. It was a fallacy to suppose that insanity was often suddenly developed; in those instances in which the malady appeared to break out suddenly, it would be found that a well-marked premonitory stage preceded the attack of mania. This was remarkably the fact in most cases of suicidal insanity. The author thought that the first stage of insanity had been properly denominated the state of "moral incoherency," and that in every case the moral faculties would be found, in the first instance, to be implicated in the disorder and that the intellectual derangement was to be considered but as an advanced stage of the moral disease. He then enumerated the early signs of insanity, before any delusion had fastened itself upon the mind, and the patient had lost all control over the will.

The following was said to be among the incipient indications of insanity:—an altered state of the affections towards relatives and friends, that alteration being often in a direct ratio to the former attachment; a difficulty in guarding against dislike; a restlessness of disposition; a disposition to magnify trifles; weakened volition; defective memory; the patient is inordinately depressed or elated by the most trifling circumstances; he manifests a restlessness and inability to concentrate his

attention to any subject; he neglects his business; avoids the society of those with whom he formerly associated; becomes violently passionate about trifles; manifests a peevishness and impatience of contradiction; he exhibits an extravagance in all his thoughts and actions.

High spirits are often the first manifest signs of approaching insanity; the patient takes larger quantities of wine than usual; if naturally reserved and modest, he becomes the reverse; all his actions betray extreme mental agitation; the imagination is often unnaturally brilliant; old impressions are revived; the patient will be seen to sit for hours in a state of abstraction, as if his mind was occupied in the contemplation of gloomy fancies. In this stage the patient has the appearance of being intoxicated.—Combined with these mental symptoms, are certain physical indications, such as pain or lightness in the head; a sense of constriction across the forehead; heat and puffiness of the scalp; distress of countenance; prominence of cornea; contracted pupil; a disposition to bite the nails and tips of the fingers; defective articulation; sometimes, however, extreme loquaciousness; an oily or greasy appearance of the skin; fetid cutaneous exhalation; great restlessness; the patient is disposed to pace up and down a room for hours together, muttering to himself. Before the development of insanity the patient often complains of being troubled by frightful dreams, or with illusions or hallucinations, out of which he is unable to reason himself. The patient complains of sleeplessness; the secretions often become diseased, and the hepatic, in fact, the whole of the digestive organs give evidence of derangement. The pulse is the pulse of excitement without power.

The value of these signs, the author stated, was often not sufficiently estimated until it was too late to repair the cerebral mischief done. Dr. Winslow then pointed out the treatment of incipient insanity. He stated that no specific plan of treatment could be pursued which would be applicable to every case. The medical practitioner must be guided in his treatment by the circumstances connected with each case brought under his consideration. As a general rule, he deprecated bleeding in the early or advanced stages of insanity: there were, however, cases in which considerable vascular action was going on in the brain, and for the removal of which it was necessary to abstract blood both locally and generally. Dr. Winslow also spoke of the exhibition of morphia, purgatives, counter-irritants, and the application of cold in the treatment of insanity,

and pointed out the states of brain in which they were admissible.

Mr. Headland complained that the paper had failed in elucidating any new point connected with the subject discussed. He shewed that cause and effect had frequently been confounded, and referred to cases in which insanity existed without any appreciable physical change. He considered that the pathological condition was often the effect and not the cause of the mental disease. He had little expectation of insanity being either cured or prevented by physical remedies, but trusted that moral treatment and training might be of service in effecting, to some extent, its eradication. Altering the habits of the people would tend greatly to this desirable end. He shewed the difficulty of preventing the accomplishment of suicide where insanity on that point existed, although it was easy enough to detect its presence.

Mr. Dendy referred many states of mental aberration to a want of balance in the circulation of the brain, principally in respect to venous congestion.

The discussion was adjourned.

A communication was read from Mr. Curtis, in reference to the valerianate of zinc, in which it was stated that he had administered this medicine with great advantage in a variety of cases of tinnitus aurium, nervous deafness, amaurosis, and muscae volitantes. The dose was a grain. He introduced the medicine to the Society with the view of inducing the members to try it in cases of nervous debility; and as at present it was not easily procurable in London, he had placed some of the medicine in the hands of the President, to supply any gentleman who would wish to give it a trial. This remedy had the advantage of having mineral and vegetable properties.

Mr. Hird had employed this medicine in two cases of hysterical neuralgia. In one case it was of advantage.

A member had also used the valerianate of zinc in a case of brain affection closely resembling delirium tremens. It was of much benefit.

The discussion of Dr. F. Winslow's paper was then resumed.

Dr. Costello was astonished at the opinions expressed, at the last meeting, by Mr. Headland, as they were perfectly opposed to pathology.

Mr. Headland explained, that in the absence of paralysis or other manifest physical disease, in a great majority of cases of insanity, there would be no appreciable change in the brain after death. There was no relation whatever between the amount of phy-

sical disease and the mental aberration. He referred to a case published in *The Lancet* some years since, in which there was complete destruction of a great portion of both hemispheres of the brain, and yet mind remained perfect to the last.

Mr. Dendy drew an analogy between simple concussion and incipient insanity, in which recovery took place, one from a moral, the other from a physical influence.

Dr. Chowne considered that every mental disease had a physical origin. In all cases of insanity there would be a physical change, though it might not always be appreciable. The brain might be temporarily affected by some change in the circulation, independent of organic changes, as spasm and diarrhoea might exist without physical lesion.

Dr. Alison shewed that disorder of the function of the brain might exist without appreciable organic change. Yet who doubted its presence any more than they did the presence of organic change in the kidney (though not to be detected) in certain disorders of function of that organ?

Dr. Clutterbuck regarded insanity as not a disease per se, but merely a symptom of disordered function of the brain. If we admitted—and, he thought, it could not be reasonably doubted—that the brain was the organ through which the mind was manifested, it followed that every disordered condition of the mind was dependent on some disordered condition of the brain; not always, it was true, obvious or appreciable, but still it was clear that the brain was not in a sound state of health. Not always to the extent of disorganization, for it was known that insanity often left the patient for a time, and then recurred, from causes not very obvious. The brain was often found diseased in cases of insanity, but he wanted proof that those changes were always the cause of the insanity. Authors of eminence, however, had asserted that they had always found the brain diseased in cases of insanity; Sutherland and Haslam were of this number; and Mr. Lawrence, out of seventy-two cases, had found the brain diseased in all, a structural change existing in each case. These facts did not prove that the structural disease was the cause of the symptoms, but it shewed that in insanity the brain was not sound. That these conditions were not the proximate cause of the insane phenomena, however, was proved, for they existed independent of insanity. We found opacity of the membranes, increased vascularity, bloody points, induration, softening, and serous effusions of the brain, in cases in which insanity did not exist. Changes, however, might exist beyond what we were at present enabled to

discover. What then caused this state of brain? He believed that it was always the result of inflammation which had existed at some period or other. He thought this, because inflammation was the great disorganizing process; and if disorganized, therefore, the brain must, at one time, have been inflamed. The disorganization was the result, in some way, of inflammation. We might often trace insanity in its early stages to the influence of extreme mental emotion, the effects of alcohol, or of local injuries, the insanity subsiding on the subsidence of these causes, so that we had cause and effect at once before us. He complained that the term incubation was not expressive of the manner in which insanity progressed in its early stages. Confirmed insanity was incurable, as the brain had become permanently affected. The time for treatment was in the early stage; subdue the inflammation then, and you subdued the symptom, and the brain regained its natural condition.

Dr. Wigan agreed with Dr. Clutterbuck, except as to inflammation being the first cause in all cases. He briefly referred to his opinions on the duality of the brain and mind.

Dr. Costello agreed in the main with Dr. Clutterbuck; but believed that the changes of the brain connected with insanity might be dependent on other causes than inflammation. Thus there was a peculiar shining appearance of the white portion of the brain, not the result of inflammation, frequently found in cases of insanity. He alluded to the state of irritation, the result of long suckling, of softening of isolated portions of the brain, in which the vessels were impervious to injection, as being often passed over in examinations of the brain of lunatics.

Mr. Headland replied. He shewed that no observations which had been made affected the position with which he had started. He shewed, from reference to statistical facts, that insanity bore a ratio to the state of mental and physical destitution which prevailed, and he particularly directed attention to the prevalence of insanity in Wales. He shewed the little benefit likely to result from merely physical agents in the prevention of this disease, and trusted for the alleviation of mankind from this distressing malady to increased physical comforts, and improved mental and moral training.

IMBECILITY OF MEDICAL COLLEGES.—R. Replace the professors of the crude notions of a by-gone age, with the talented young men of the profession.—*Clairvoyant*.

## Swedenborg's "Animal Kingdom."

This wonderful man is clearly destined to be acknowledged as one of the great lights of the race. His scientific works, which have hitherto remained locked up in the obscurity of the Latin, are now appearing in an English translation, and the profoundest minds are astonished at the gigantic powers which they display. The "Animal Kingdom" in two large volumes, 8vo, has recently appeared from the London press, the character of which may be judged of from the following notices, the one from the London "Forcers," a Medical Journal, and the other from the "Monthly Review." The writers are neither of them in the interests of the New Church, nor believers in the divine mission of Swedenborg.

"This is the most remarkable theory of the human body that has ever fallen in our hands; and by Emanuel Swedenborg, too! a man whom we had always been taught to regard as either a fool, a madman, or an impostor, or perhaps an undefinable compound of all the three. Wonders, it seems, never will cease, and therefore it were better henceforth to look out for them, and accept them whenever they present themselves, and make them into ordinary things in that way. For thereby we may be saved from making wonderful asses of ourselves and our craft, for enlightened posterity to laugh at.

"To return to our book, we can honestly assure our readers, (which is more than it would be safe to do in all cases) that we have carefully read through both volumes of it, bulky though they be, and have gained much philosophical insight from it into the chains of ends and causes that govern in the human organism. What has the world been doing the past century, to let this great system slumber on the shelf, and to run after a host of little bluebottles of hypotheses which were never framed to live for more than a short part of a single season? It is clear that it yet 'knows nothing of its greatest men.' The fact is, it has been making money, or trying to make it, and grubbing after worthless reputation, until it has lost its eyesight for the stars of Heaven and the Sun that is shining above it.

"Emanuel Swedenborg's doctrine is altogether the wisest thing of the kind which medical literature affords, and cast into an artistical shape of consummate beauty. Under the rich drapery of ornament which diversifies his pages, there runs a framework of

the truest reasoning. The book is a perfect mine of principles, far exceeding in intellectual wealth, and surpassing in elevation, the finest efforts of Lord Bacon's genius. It treats of the loftiest subjects without abstruseness, being all ultimately referable to the common sense of mankind. Unlike the German transcendentalists, this gifted Swede fulfils both the requisites of the true philosopher; he is one 'to whom the lowest things ascend, and the highest descend, who is the equal and kindly brother of all.' There is no trifling about him, but he sets forth his opinions, irrespective of controversy, with a plainness of affirmation which cannot be mistaken; and in such close and direct terms, that to give a full idea of his system in other words would require that we lesser men should write larger volumes than his own.

"The plan of the work is this: Swedenborg first gives extracts from the greatest anatomists of his own and former times, such as Malpighi, Leuwenhoek, Morgagni, Swammerdam, Heister, Winslow, &c., &c., so that these volumes contain a body of old anatomy (translated now into close English) such as cannot be met with in this shape elsewhere. He then gives his own unnumbered deductions from this 'experience,' under the heading 'analysis.' Each organ of the thorax and abdomen in this way has a two-fold chapter allotted to its consideration, which chapter is a complete little essay, or we might say, epic, upon the subject. The philosophical unity of the work is astonishing, and serves to unlock the most abstruse organs, such as the spleen, thymus gland, supra-renal capsules, and other parts upon which Swedenborg has dilated with an analytic efficacy which the moderns have not even approached; and of which the ancients afforded scarcely an indication. Upon these more mysterious organs, we think his views most suggestive and valuable, and worthy of the whole attention of the better minds of the medical profession. Of the doctrine of series, since called by the less appropriate term 'homology,' he has afforded the most singular illustrations, not confining himself to the law of series in the solids, but boldly pushing it into the domain of the fluids, and this with an energy of purpose, and a strength of conception and execution, such as is rarely shown by 'any nine men in these degenerate days.' We opened this book with surprise, a surprise grounded upon the name and fame of the author, and upon the daring affirmative stand which he takes *in limine*; we close it with a deep-laid wonder, and with an anxious wish that it may not appeal in vain to a profession which

may gain so much, both morally, intellectually, and scientifically, from the priceless truths contained in its pages."

The language of the *Monthly Review*, June, 1844, is equally emphatic:

"In conclusion, we record our opinion positively, and not relatively, wholly and without reservation, that if the mode of reasoning and explanation adopted by Swedenborg be once understood, the anatomist and physiologist will acquire more information, and obtain a more comprehensive view of the human body, and its relation to a higher sphere, than from any single book ever published; nay, we may add, than from all the books which have been written (especially in modern times) on physiology, or as it has been lately named, transcendental anatomy. Swedenborg reasons not on any hypothesis, not on any theory, not on any favorite doctrine of a fashionable school, but on the solid principles of geometry, based on the immutable rock of Truth; and he must and will be considered at no distant period the Zoroaster of Europe, and the Prometheus of a new era of reason, however at present the clouds of prejudice may intervene, or the storms of passion obscure the corruscations of his intellect."

*Thomasville, Ga., May 1st, 1845.*

Dr. H. H. SHERRWOOD.

Dear Sir—Inasmuch as I recently sent you a summary view of the merits of Swedenborg's *Animal Kingdom*, as taken from a foreign medical periodical, I now send you, in connection therewith, an extract from the work itself—A. K., vol ii., page 158—in which the principles of motion appertaining to the human organization are explicitly stated, and apparently in direct accordance with those which you are now advocating. Should they meet an approval, please insert them in your *Dissector*, with such comments as you may deem proper.

Respectfully yours, &c.

WM. HUNNEWELL, M. D.

"It is a truth constantly presented to us as the result of all our analytic investigations, that every action of the cerebrum and cerebellum is determined through the fibres; and that the fibres cannot be determined into act, excepting by their beginnings or principles; in short, by the organs that are prefixed to the fibres. The latter must certainly be excited to motion by their principles, and commence and describe their motions in this way. It is absurd to suppose that any action can begin in the middle of a fibre, and

not in its first terminus. If, then, it begin in the first organs, it must inevitably begin in the cortical glands; for the fibres commence, and are conceived and produced, in those glands, and the arterial vessels of the cerebrum terminate also in them. Hence, if the principles of motion exist in them, according to all physical and philosophical laws, as mutually confirmed by and confirming each other, those principles must necessarily commence by a kind of active, living, or locomotive reciprocal force, that is, by a kind of expansion and constriction, or systole and diastole, such as we observe in a gross form in the lungs and heart; for the same conditions are involved, whether the spirit is to be driven through the fibres, or the blood through the vessels. The blood cannot be driven through its arteries without the reciprocal expansion and constriction of the heart; nor can the spirit be driven through the fibres, which are little canals and vessels analogous to the arteries, only more pure, without the reciprocal expansion and constriction of the cortical glands of the cerebrum, which on this account deserve the appellation of pure corcula, or little hearts. Assuming or granting these points, the necessary consequence is, that every time the cortical and cineritious substance of the cerebrum, cerebellum, medulla oblongata, and medulla spinalis, contracts or constricts itself, the whole mass of those parts sinks down, and undergoes systole; but, on the other hand, undergoes diastole, when the same substance, I mean the whole congeries, expands. This is the animation of the cerebrum—using the term cerebrum in its widest acceptance—that corresponds to the respiration of the lungs. We must now proceed a step farther. If the animal or nervous spirit, at the intervals of the constriction of these organic substances—of the little hearts of the cerebrum—is expressed by the cerebrum through the nerves and nervous fibres, of course it is expressed by the cerebellum into its grand sympathetic nerves, the par vagum and the intercostals: and granting this, it follows that these nerves act during the same intervals upon the fibres of the pulmonary plexus, and upon the fibres of the costal nerves; which cannot fail on the instant to act upon their muscles and membranes: nor the latter to act upon the ribs, and this upon the internal structure of the lungs. Hence, it follows that the animations of the cerebrum (using the term here again in its widest sense) must necessarily be coincident with the respiration of the lungs; and the fact is still more plainly declared by the influx of the fibres of the above-mentioned cerebellar nerves, the par vagum, and the intercostal,

into all the viscera of the abdomen ; and by the motion of those viscera agreeing exactly, and keeping perfect time, with the respiratory motions of the lungs, as proved in detail in our Analysis."—*Animal Kingdom*, vol. ii., pp. 158-9.

Each convolution of the brain or phrenological organ is divided into two equal halves, by a very thin nurilema, on the opposite sides of which the different, or diverging and converging fibres are attached. Swedenborg, a hundred years ago, called the convolutions of the brain, organs, cortical glands, and corcula, or little hearts. He was also familiar with the fact, that motion is produced by the action of two forces. Wonder how many hundred years it will require to beat this knowledge into the heads of the professors of our medical colleges!

#### *Magnetizing in Lateral Curvatures of the Spine.*

*Drawn and Engraved from a Daguerreotype.*



In magnetising for lateral curvatures of the spine, we have introduced the chair represented in the engraving. It is a strong common office arm-chair, the upper and back

part of which being sawed off, and the front part cushioned—the right arm resting on one cushion, and the magnetising buttons on the other. A loose cushion is crowded into the space on the right side, and a strong gallon glass bottle placed upon it ; when the young lady with a right and left spinal curvature—or having the upper part of the spine curved to the right, and the lower part to the left side—is drawn over the bottle by an assistant, in the manner seen in the figure, and the buttons applied in the usual manner, as described in p. 60, 61.

In this case, it was eight years since the curvature commenced ; and there was, as usual, a large white swelling of the right scapula, or shoulder-blade, which drew the spine under it.

On the 23d time we magnetised this patient (May 17, 1845,) the white swelling being greatly reduced, and the atrophied or emaciated muscles on the opposite side much thickened, the spine passed the centre, under the action of the machine, and began to curve to the left side, as seen in the figure.

The most prominent part of the white swelling was of a dark red color, produced by the heavy brass corsets the young lady had long worn, which was consequently shown in the daguerreotype.

We have here presented in the plainest manner, the extraordinary phenomena of the reduction of hypertrophied muscles on one side of the spine, and the thickened atrophied muscles on the other, by the action of the machine *alone*, directed by a scientific and easy application of the buttons.

#### **GREENLAND.**

English antiquarians are pursuing interesting enquiries relative to the original settlement of Greenland and the character of its soil and climate. It was supposed originally to have been connected with our continent but it has been distinctly ascertained that it is separated from the American continent by a wide channel called Davis Straits, and extends beyond 78 degrees of latitude. The most extraordinary fact about Greenland is the wonderful change of climate it has undergone. Barren soils have been reclaimed



by emigration and industry, and cold climates changed into warmer latitudes by clearing the woods and letting in the rays of the sun, but we have no instance on record of settlements originally in warm climates, and fruitful soils becoming in centuries cold, bleak, and barren, and yet such has been the case with Greenland. The country, although now consisting of little else than barren rocks, mountains covered with snow and ice, and vallies filled with glaciers,—although its coast, now lined with flocks of ice, and chequered with icebergs of immense size, was once easily accessible, and its soil was fruitful, and well repaid the cultivator of the earth. This country was discovered by the Scandinavians, towards the close of the tenth century, and a settlement was effected on the eastern coast in the year 982, by a company of adventurers from Iceland, under the command of Eric the Red. Emigrants flocked thither from Iceland and Norway, and the germs of European enterprise and civilization appeared on different parts of the coast. A colony was established in Greenland, and it bade fair to go on and prosper. That the climate must have been mild and the soil fruitful, we gather from the fact that in 1400 there were not less than 190 villages, 12 parishes and 2 monasteries, and for 400 years there was constant and profitable mercantile intercourse with the Danish provinces and Europe, but in 1406 every thing changed—a wall or ice barrier arose along the whole line of coast, and no landing could be effected, and up to the seventeenth century the whole approach to the country was blocked by unsurmountable barriers of ice—vegetation was destroyed and all vestiges of its former inhabitants are gone—parts of houses, churches, &c, remain, but the inhabitants have all perished by cold. One of our contemporaries in referring to the gloomy subject says:—It would require no very vivid imagination to imagine the appalling sense of destruction, which bleached the features and chilled the hearts of those unhappy colonists when they began to realize their forlorn condition, when the cold rapidly increasing and their harbors became permanently blocked with icebergs, and the genial rays of the sun were obscured by fogs—when the winters became for the first time intensely rigid, cheerless and dreary—when the summers were also cold, and the soil unproductive—when the mountains were no longer crowned with forests, but covered with snow and ice throughout the year, and the vallies filled with glaciers—when the wonted inhabitants of the woods and the waters were destroyed or exiled by the severity of the weather, and their places perhaps supplied by

monsters of a huge and affrightful character.—*The New-York Sun, March 8th, 1845.*

A solution of the mystery of the extraordinary changes of climate, in which the people of Greenland flourished in one period, and became extinct in another, is found in the revolutions of the magnetic poles and lines of no variation and maximum declination. These poles and lines perform a revolution around the earth in 666 years, and produce and mark the lines of the greatest cold, while the lines of maximum declination, 90 degrees east of these lines in the different hemispheres mark the lines of the greatest heat in the different latitudes.

The line of no variation which is now 37 minutes west of Pittsburgh, passed over London in 1657, and over the meridian of the City Hall, New-York, in 1791. The line of maximum declination, which is now 90° 37' west of Pittsburgh, passed over the meridian of that city in 1623, and the one which is now 90° 37' east of Pittsburgh passed over London in 1820. These lines are therefore moving from east to west, and the heat increasing on the east, and decreasing on the west side of the line of no variation.

The cold is consequently increasing in Europe, and the heat increasing in this country, east of Pittsburgh, and from a line drawn on the 1st of January, 1845, from a point 3 degrees, 34 minutes, 55 seconds, east of St. Augustine, Fla., in latitude 29 degrees, 48 minutes, 30 seconds north, and longitude 77 degrees, 54 minutes, 37 seconds west; to a point 7 minutes, and 51 seconds east of Ashtabula, on Lake Erie, in latitude 41 degrees, 52 minutes north, and longitude 80 degrees, 47 minutes, 57 seconds west of London.

These lines are at an angle of 6° 27' 33" with the terrestrial meridians, and the line of maximum declination which passed over London in 1820, is now, or was on the first of January, 1845, 10° 52' 55" west of that meridian, on that parallel of latitude. Its longitude in the arctic circle; (latitude, 66° 32' 27".) which passes through the southern part of Greenland, was at the same time 14° 47' 07" west. In latitude 70°, 15° 38' 30";

and in latitude  $80^{\circ}, 18' 18'' 57''$  west. On drawing a line on a globe through these latitudes and longitudes, it will be found to pass through the eastern and middle part of Greenland, where the mean heat in that country is now at its maximum, and the following table will show the position of the lines of maximum declination, in every 333 years from the commencement of the Christian era to the year 2178, or during the time the sun is passing through one sign of the Zodiac, and also the situation of the magnetic pole and lines of no variation in every 333 years of the intermediate periods.— $\times$  represents the pole and line of no variation, and  $=\times$  the pole and line of maximum declinations.

| Christian Era, | 0                  | Obliq. Eclip. $23^{\circ} 45'$ |       |
|----------------|--------------------|--------------------------------|-------|
|                | 166 $\frac{1}{2}$  | $=\times 180^{\circ}$          | West. |
| 333            | 166 $\frac{1}{2}$  | —                              |       |
|                | 183                | $= 90^{\circ}$                 | East. |
|                | 166 $\frac{1}{2}$  | —                              |       |
|                | 349 $\frac{1}{2}$  | $=\times$                      |       |
|                | 166 $\frac{1}{2}$  | —                              |       |
| 333            | 516                | $=\times 90^{\circ}$           |       |
|                | 166 $\frac{1}{2}$  | —                              |       |
|                | 681 $\frac{1}{2}$  | $=\times 180^{\circ}$          | W.    |
|                | 166 $\frac{1}{2}$  | —                              |       |
| 333            | 848                | $=\times 90^{\circ}$           | E.    |
|                | 166 $\frac{1}{2}$  | —                              |       |
|                | 1013 $\frac{1}{2}$ | $=\times$                      |       |
|                | 166 $\frac{1}{2}$  | —                              | 1073  |
| 333            | 1180               | $=\times 90^{\circ}$           | W.    |
|                | 166 $\frac{1}{2}$  | —                              |       |
|                | 1345 $\frac{1}{2}$ | $=\times$                      |       |
|                | 166 $\frac{1}{2}$  | —                              | 1406. |
| 333            | 1512               | $= 90^{\circ}$                 | E.    |
|                | 166 $\frac{1}{2}$  | —                              |       |
|                | 1678 $\frac{1}{2}$ | $=\times$                      |       |
|                | 166 $\frac{1}{2}$  | —                              | 1739  |
| 333            | 1845               | $=\times 90^{\circ}$           | W.    |
|                | 166 $\frac{1}{2}$  | —                              |       |
|                | 2011 $\frac{1}{2}$ | $=\times 180^{\circ}$          | W.    |
|                | 166 $\frac{1}{2}$  | —                              |       |
| 333            | 2178               | $=\times 90^{\circ}$           | E.    |

It appears from the above table, that in the year 1013 1-2, the magnetic pole in the arctic circle, was in the same longitude as

the line of maximum declination is in at the present period, and the cold was at its maximum in that latitude. This was 28 years after the first settlement of Greenland by Eric the Red.

It also appears that from the year 1073, when the climate may have become mild and the soil fruitful to the year 1406, when the whole coast was closed by ice barriers, was 333 years. From 1406 to 1739 was 333 years when the ice barriers gave way, and the climate became again mild and the soil began to be fruitful. The first period it will be seen from the positions of the pole and line of maximum declination, was that of heat, in which the colony flourished, and the second that of cold, in which it perished.

The historical evidence relative to the maritime enterprises, and voyages of discovery made by the northmen, at periods corresponding to those of the maximum and minimum temperature of this region from this cause, is highly interesting and corroborative. Thus we find that in the year 1000, but 13 1-2 years prior to the arrival of the pole in the longitude of Greenland,  $14^{\circ} 47'$  west.—Lief Ericson, son of Eric the Red, commenced a voyage of discovery to the south, and landed at various places on the eastern shores of this continent, to which he gave the names of Hallu-land, Markland, and Vin-land, supposed to be respectively Newfoundland, Nova Scotia, and the coast of New England, whence he returned with timber and grapes. Two years subsequently, in 1002, Thorwald, brother of Lief, made a voyage to Vinland, or Vine-land, and was killed by the Indians, together with eight of his crew. The survivors lingered until the year 1004 in the vain hope of effecting a settlement, but were so harassed by the natives as to be induced to return to Greenland in the spring of the ensuing year. In the course of the next six or eight years, several other expeditions were attempted, and appear to have been rendered abortive from the same cause. A long interval in the prosecution of this enterprise seems to have then ensued, and it is not until the year

1347, or more than 333 years from the date of the first recorded expedition, that we find it again resumed. At this period, however, the cold in Greenland had again become exceedingly severe, from the arrival of the magnetic pole on the same meridian, although 180 degrees of longitude distant, and on the opposite point of the arctic circle to the one which it had occupied 333 years previous. This return of cold probably furnished the strong impulse of necessity for the new expedition in search of the more genial climate of which record and tradition had preserved memorials; for the cold had become so intense, and the ice had so formidably accumulated, by the year 1406, as to create an insurmountable barrier of ice-bergs along the whole coast, gradually destroy the inhabitants, and leave their 190 villages desolate. The coast thus remained ice-bound, and the country inaccessible to explorers until the year 1739, or about 50 years after the magnetic pole had again passed that meridian, on its westerly quadrature of revolution. It was then that the desolation of the country, and the melancholy relics of its former prosperity were discovered, and a new colony established. In the present year, 1845, the descendants of these new colonists are enjoying the most genial climate of which their latitude admits, the pole being distant 90 degrees to the west, and the line of maximum declination in their midst. Their next cold period will be in the year 2011 1-2, when the pole will be 180 degrees west, coincident with their meridian of longitude as it was in 1345 1-2, but the cold will be less intense than it was in 1678 1-2, when its effects were so destructive and exterminating, because it will then be more distant from them in latitude, by the whole diameter of the arctic circle, or 46°, 56'; and this truly awful and intollerable epoch of maximum cold, will not return to them until the year 2344 1-2, or 666 years from the year 1678 1-2, when the pole will again be present, in all its horrors.

Similar changes of climate occur in all other latitudes, in the same periods, although in a milder and less remarkable degree, in

proportion as countries approach the equator. In the year 1780, so memorable for the intensity of its winter, the magnetic pole was on the meridian of this city of New York, and being also on the proximate side of the arctic circle, the cold was greater than it had been for the previous 666 years, or than it will be again for the same period to come. The whole bay of New-York was frozen over, so as not only to be traversed by sleighs, but to admit of heavy cannon being taken on the ice down through the Narrows, and across the lower bay to the shore of New Jersey. Since that time the average temperature of our winters has been growing milder, and will continue to do so until the year 1967 1-2, when the magnetic needle in this city will have acquired its maximum westerly declination, or, in other words, when the line of maximum declination will be on this meridian. In the meantime, though very temporarily, our springs may be rendered fickle and chilly in temperature, by the breaking up of the ice, on the northeast coast of Europe, where that line is present on its course to the westward, and by the consequent passage of large fields of ice off our coast, on their way to the southward. Since this line, however, like the line of minimum declination, or no variation, crosses the terrestrial meridians at an angle of 69° 28', (nearly) it follows, that countries situated in more southern latitudes, will receive their periodical meliorations and deteriorations of temperature later than those in higher latitudes; and consequently, the winters will be increasing in severity in Florida, Louisiana, Alabama, and all other regions which have now an easterly declination of the needle, while they are diminishing in severity in this and higher latitudes of this continent where the declination is increasing westerly.

In short, the temperature of all countries and climates is absolutely subservient to the following law, however it may have been over-looked by meteorologists and previous writers upon the subject, viz: Where the declination of the magnetic needle is increasing, the average cold is decreasing; and where the declination is decreasing, the average cold is

increasing. In briefer terms, the average temperature increases and decreases with the declination of the magnetic needle.

In Europe, where the westerly declination is decreasing, the cold of winter, as we learn from the unanimous report of the foreign journals, is sensibly increasing, and it will continue to do so, until the eastern half of the great circle of no-variation now in the East Indies, and  $9^{\circ}$  west of Pekin, shall arrive in Europe, and the declination there is diminished to Zero, preparatory to its becoming easterly.

#### LORD ROSSE'S TWO GREAT TELESCOPES.

[As the extraordinary telescopes recently constructed by Lord Rosse are beginning to excite popular attention, we extract from an able article in the *British Review*, a full account of what the noble astronomer has accomplished:]

'After the preliminary details respecting the constructions of gigantic telescopes, and the principal discoveries which they have enabled astronomers to make, our readers will be better able to appreciate the genius, the talent, the patience, and the liberality with which an Irish nobleman has constructed telescopes far transcending in magnitude and power all previous instruments, whether they were the result of private wealth, or of royal or national munificence. That nobleman is Lord Oxmantown, now the Earl of Rosse, one of a distinguished group of Irish philosophers, who, educated in the same academical institution, now adorn it with their genius, and sustain it with their labors.—In the records of modern science, there are few brighter names than those of Robinson, Hamilton, Lloyd and Macculagh, and in the person of the Earl of Rosse and Lord Enniskillen, the aristocracy of Ireland have contributed their contingent to her intellectual chivalry.

If, in an eloquent address to the British Association at Cork, Dr. Robinson has given expression to his delight, "that so high a problem as the construction of a six feet speculum should have been mastered by one of his countrymen—by one whose attainments are an honor to his rank—an example to his equals—and an instance of the perfect compatibility of the highest intellectual pursuits with the most perfect discharge of the duties of domestic and social life:"—we also may indulge in the pleasing recollection that Lord Oxmantown's earliest plans for

improving the reflecting telescope were first given to the world in three communications, which were published in a *Scottish Journal of Science*, and that some of us were the first to recognize their value, and to see looming in the distance that mighty instrument with which we are about to make our readers acquainted.

As the surfaces of all lenses and specula are necessarily of a spherical form, they are subject to what is called spherical aberration, that is the edge both of specula and lenses has a shorter focus than the centre. In lenses this may be diminished or even removed by the opposite aberration of a concave lens; but this remedy cannot be applied to specula. It therefore occurred to Lord Rosse, that the first step towards the improvement of the reflecting telescope, was to diminish the spherical aberration. With this view he formed the speculum of three parts, a central speculum, a ring, inclosing the central speculum, and outer ring. These three portions were cemented together, and ground and polished as one speculum.—They were then combined by an ingenious piece of mechanism, so that the first and second rings could be advanced each a small fraction of an inch, in order that their focus should accurately coincide with the focus of the central speculum. Lord Rosse's first attempt did not succeed to his wishes, owing to a defect in the mechanism, which required frequent adjustments, as the smallest shock displaced the images. He then tried to combine one ring only, 1 inch thick, with a central metal 1 1-2 inches thick, the two together forming a speculum of six inches aperture, and two feet focal length. This combination was more successful, as it "remained in perfect adjustment even after very violent shocks." In these combinations Lord Rosse did not perceive the ill effects which he had apprehended from contraction and expansion; and it remained to be seen, from future trials, if they did appear, whether or not they could be removed. "On my return from Parliament, (June 1828) says Lord Rosse, if other avocations do not interfere, I propose to construct a speculum in three parts of 18 inches aperture, and twelve feet focal length—this will be giving the experiment a fair trial on a large scale." This proposal was accordingly executed, and he found the speculum superior to a solid one of the same dimensions.

In order to grind and polish large specula, Lord Rosse soon perceived that a steam-engine and appropriate machinery were necessary. He accordingly invented a machine of this kind, and transmitted an account of it to the writer of this article, who published

it in the *Edinburgh Journal of Science*, for October, 1828. The engine which his lordship actually constructed and used was one of two horse power, though from some rude trials with it he inferred that a one horse power would be fully sufficient for executing at the same time three or four specula six inches in diameter. For such sizes Lord Rosse conceived that a day would suffice for completing the process, and that a machine on the scale shown in his drawing, 'would be sufficiently large to grind and polish a speculum of three feet diameter, or perhaps larger.' In this interesting communication Lord Rosse suggests what he afterwards accomplished, that the motion for producing a parabolic curve, 'might be imitated by means of the eccentric guides, and the slow circular motion of the speculum, and with this advantage, that, were it found really successful, the same result would probably be always afterwards obtained.'

Before the year 1830, Lord Rosse had made still further advances towards the great object he had in view. He found from many experiments that he could not cast a speculum of the modern dimensions of 15 inches, without reducing the composition considerably below the highest standard, that is without using so much copper as to produce a soft and yellowish metal. All the specula cracked in annealing when the proper composition was employed.

In order to get over this difficulty, he tried to cast the specula in different pieces, and to unite them by their surfaces; but though this was practicable, he abandoned it for the following plan. He found that an alloy of copper 2.75 parts, with 1 of zinc, expanded and contracted with a change of temperature in the same degree as speculum metal, and was an alloy malleable, ductile, and easily worked. With this alloy he cast a speculum 15 inches in diameter, with a rim and ribs behind. It was turned smooth and flat on one side, and tinned. Six pieces of the highest speculum metal, 1 1-4th of an inch thick, were then placed on the flat tinned surface, so as to complete a circular disc 15 inches in diameter, and when soldered to it, composed a plated speculum. When ground and polished, it formed an excellent telescope of twelve feet focal length. Upon the same plan, Lord Rosse constructed a speculum two feet in diameter, for a telescope twenty-six feet long. Hitherto it had been believed by opticians, that a fine polish could not be given to specula, unless when the polisher became dry and hot; but Lord Rosse at this stage of his researches found out a method of polishing a cold metal upon a moist polisher, an object of very great importance, as a

speculum should be polished at the same temperature at which it is to be used.

*First Telescope, Twenty-six feet long.*

The next step in Lord Rosse's progress was to make a plated speculum, three feet in diameter. The proportions of copper and tin, which he found to be the best, were the definite ones of four atoms of copper to one of tin, or 126.4 parts of copper to 58.9 of tin, or 32 of the one to 14.91 of the other. After preparing the alloy speculum, which was to be plated, and turning it to a radius of 54 feet, Lord Rosse proceeded to cast the small plates of speculum metal, about 9 inches square. In doing this he encountered great difficulties, owing to their extreme brittleness, arising, no doubt, from the too rapid cooling of their edges, and the consequent state of tension. In order to produce uniformity of cooling, he tried two ways of constructing the mould. The first was to make the lower surface of the mould, containing the liquid speculum, absorb the heat rapidly, and the upper retain it; and the second was to cool the lower surface while the heat of the upper surface was undiminished. The first plan did not succeed; but the second did, by making the lower surface of the mould of iron, and the upper of sand; but though the castings were sound, there was this defect, that bubbles of air were entangled between the iron disc and the speculum metal, producing cavities which it was troublesome to grind out. Hence he was led to replace the iron disc, by one made of pieces of hoop iron, placed side by side with their edges up, tightly packed in an iron frame, the surface thus composed of edges, being smoothed to the proper curvature, by filing or turning. By this most ingenious process he constructed a metallic surface every where open, as the closest plates allowed the air to pass freely between them.

'So successful was this expedient,' says Lord Rosse, 'that of sixteen plates cast for the three feet speculum, not one was defective. The following particulars require to be attended to. The disc of hoop iron should be as thick as the speculum to be cast upon it, so as to cool it with sufficient rapidity; it requires to be warm, so that there may be no moisture deposited upon it from the sand. It may be heated to 212 deg. without materially lessening the cooling power. The metal should enter the mould by the side, as is usual in iron founding, but much quicker, almost instantaneously; one second is sufficient for filling the mould of a nine inch plate of speculum. As to the temperature of the metal, this can be best ascertained by stirring it with a wooden pole occasionally,

after it has become perfectly fluid: when the carbon of the pole reduces the oxide on the surface of the metal, rendering it brilliant like quicksilver, the heat is sufficient. When the metal has become solid in the ingate or hole through which it enters the mould, the plate is to be removed quickly to an oven heated a little below redness, to remain till cold, which, where the plates are nine inches in diameter, should be three or four days at least.—[Phil. Trans., 1840, p. 511.]

When the nine inch plates are properly scraped and cleaned, much attention is necessary in soldering them upon the tinned surface of the alloy speculum. Care must be taken that until the tin on the speculum is fused, the melted rosin must not be poured in between the plates.

The great success which attended this new method of casting these nine inch specula, induced Lord Rosse to try it on a large scale, and he accordingly proceeded with one 20 inches, and another three feet, which on the first trial was cast perfect. The crucibles which he employed were made of cast iron, and cast with their mouth upwards; and the fuel used was peat or wood, which are both preferable to coke.

A perfect speculum being thus obtained; the next object to be accomplished is to work it, by grinding and polishing, to a perfect spherical figure. The machine for this purpose, which we have already described, was improved and enlarged so as to work a speculum three feet in diameter, and after several years experience, during which specula have been ground and polished with it many hundred times, it has been found to work large surfaces with a degree of precision unattainable by the hand. The peculiarity in this process, introduced by Lord Rosse, and as we conceive essential to success, is, that the polisher works above and upon the face of the speculum to be polished, and one singular advantage of this arrangement is, that the figure of the speculum can be examined as the operation proceeds, without removing the speculum, which, when a ton weight, is no easy matter. The contrivance for doing this is so beautiful, and has proved so useful that we must briefly explain it. The machine is placed in a room at the bottom of a high tower, in the successive floors of which trap-doors can be opened. A mast is elevated on the top of the tower, so that its summit is about 90 feet above the speculum. A dial plate is attached to the top of the mast, and a small plane speculum and eye-piece, with proper adjustments, are so placed that the combination becomes a Newtonian telescope, and the dial-plate the object.

During the operation of polishing the lar-

ger specula, a variety of difficulties occurred, but they were all surmounted by the ingenuity and patience of Lord Rosse. At first, in order to allow a lateral expansion of the pitch, it appeared necessary to increase the thickness of the bed of pitch as the diameter of the speculum was increased. This proved a failure, and the lateral expansion was provided for by making grooves in the pitch; but these grooves, though there were two sets at right angles to each other, and only two inches distant, were with difficulty kept open, and the other polisher lost its figure. All these evils, however, were removed by furrowing the polisher itself, so as to divide it into definite and insulated portions. The effect of this improvement was so great that the plated or divided three feet speculum defined better with a power of 1200 than it had previously done with a power of 300. In place of pitch, Lord Rosse used, as his polishing surface, a mixture of common resin and turpentine, and this composition was laid on in two strata of different degrees of hardness, the outer one being the harder, the subjacent softer layer expanding laterally, so as to preserve the figure of the polisher. The speculum being placed in a cistern of water, the polishing process is then effected by using peroxide of iron and water, of about the consistence of thin cream.

The last and most important part of the process of working the speculum, is to give it a true parabolic figure, that is, such a figure that each portion of it should reflect the incident ray to the same focus. This grand difficulty has been completely mastered by Lord Rosse. The operations for this purpose consist, 1st, of a stroke of the first eccentric, which carries the polisher along one-third of the diameter of the speculum. 2d. A transverse stroke 21 times slower, and equal to 0.27 of the same diameter, measured on the edge of the tank, or 17 beyond the centre of the polisher. 3d. A rotation of the speculum performed in the same time as 37 of the first strokes; and 4th. A rotation of the polisher in the same direction about sixteen times slower. If these rules are attended to, the machine will give the true parabolic figure to the speculum, whether it be six inches or three feet in diameter. In the three feet speculum, the figure is so true, with the whole aperture, that it is thrown out of the focus by a motion of less than a thirtieth of an inch, and even with a single lens of one-eighth of an inch focus, giving a power of 2592, the dots on a watch dial are still in some degree defined.

The twenty-six feet telescope thus executed, has a general resemblance to that of Ra-

mage, but the tube, gallery, and vertical axis of the stand are counterpoised. It is used as a Newtonian telescope, with a small plane speculum, to prevent the image being deformed by oblique reflection which is the effect of the front view. When the specula are not used they are preserved from moisture and acid vapors by connecting their boxes with chambers containing quick lime, an arrangement which Dr Robinson had applied for several years to the Armagh reflector.

#### *Discoveries made by the Telescope.*

When this telescope was completed, it became an object of high interest to ascertain its performance. In doing this, Dr Robinson had, as he remarks, "the advantage of the assistance of one of the most celebrated of British astronomers, Sir James Smith;" but the weather, the state of the air, and the light of the moon, between the 29th of October and 8th of November, 1840, were unfavorable. The following is the substance of Dr. Robinson's report:—

'Both specula, the divided and the solid, seem exactly parabolic, there being no sensible difference in the focal adjustment of the eye-piece with the whole aperture of 36 inches, or one of twelve; in the former case there is more flutter, but apparently no difference in the definition, and the eye-piece comes to its place of adjustment very sharply.

'The solid speculum showed a Lyrae round and well defined, with powers up to 1000 inclusive, and at moments even with 1600; but the air was not fit for so high a power on any telescope. Rigel, two hours from the meridian, with 600, was round, the field quite dark, the companion separated by more than a diameter of the star from its light, and so brilliant that it would certainly be visible long before sunset.

'Orion is well defined, with all the powers from 200 to 1000, with the latter a wide black separation between the stars; 32 Orionis and 31 Canis minoris were also well separated.

'It is scarcely possible to preserve the necessary sobriety of language, in speaking of the moon's appearance with this instrument, which discovers a multitude of new objects at every point of its surface. Among these may be named a mountainous tract near Ptolemy, every ridge of which is dotted with extremely minute craters, and two black parallel stripes in the bottom of Aristarchus."

\* Dr. Robinson, in his address to the British Association, on the 24th August, 1843, stated, that in this telescope, a building the size of the one in which they were assembled would, under favorable circumstances, be easily visible on the Lunar surface.—(*Athenæum*, Sept. 23, p. 367.)

'There could be little doubt of the high illuminating power of such a telescope, yet an example or two may be desirable. Between  $\alpha$ 1 and  $\alpha$ 2 Lyrae, there are two faint stars, which Sir J. Herschel (*Phil. Trans.*, 1824) calls 'debilissima,' and which seem to have been at that time the only set visible in the 20 feet reflector. These at the altitude of  $180^\circ$  were visible without an eye-glass, and also when the aperture was contracted to 12 inches. With an aperture of 18 inches, power 600, they and two other stars (seen in Mr. Cooper's achromatic of 13.2 inches aperture, and the Armagh reflector of 15 inches) are easily seen. With the whole aperture, a fifth is visible, which Dr R. had not before noticed. Nov. 5, strong moonlight.

'In the nebula of Orion, the fifth star of the trapezium is easily seen with either speculum, even when the aperture is contracted to 18 inches. The divided speculum will not show the sixth with the whole aperture, on account of that sort of disintegration of large stars already noticed, but does, in favourable moments, when contracted to 18 inches. With the solid mirror and whole aperture, it stands out conspicuously under all the powers up to 1000, and even with 18 inches it is not likely to be overlooked.

Among the few nebulae examined were 13 Messier, in which the central mass of stars was more distinctly separated, and the stars themselves larger than had been anticipated; the great nebula of Orion and that of Andromeda showed no appearance of resolution, but the small nebula near the latter is clearly resolvable. This is also the case with the ring nebula of Lyra; indeed, Dr. R. thought it was resolved at its minor axis; the fainter nebulous matter which fills it is irregularly distributed, having several stripes or wisps in it, and there are four stars near it, besides the one figured by Sir John Herschel, in his catalogue of nebulae. It is also worthy of notice, that this nebula, instead of that regular outline which he has there given it, is fringed with appendages, branching out into the surrounding space, like those of 13 Messier, (Sir J. H's, 86), and in particular having prolongations brighter than the others, in the direction of the major axis, longer than the ring's breadth. A still greater difference is found in 1 Messier, described by Sir John Herschel, as 'a barely resolvable cluster,' and drawn, fig. 81, as a fine elliptic boundary. This telescope, however, shows the stars, as in his figure 89, and some more plainly, while the general outline, besides being irregular and fringed with appendages, has a deep bifurcation to the south."

\* *Phil. Trans.*, 1833, p. 603.

In a Paper entitled 'Observations on some of the Nebulæ,' communicated to the Royal Society on the 13th of June last, Lord Rosse has given sketches of five of the nebulæ in Sir John Herschel's Catalogue,\* numbered 88, 81, 26, 29, and 47, as seen in his three feet specula, and as soon as this paper is printed, the comparison of these drawings with Sir John Herschel will exhibit the power of the new telescope.

Fig. 26 of Sir J. Herschel's Catalogue (Messier 27) called the Dumb-bell Nebulæ, from its supposed resemblance to a dumb-bell, is shown by Lord Rosse's telescope to be a cluster of stars, or rather two clusters in close proximity, and, indeed, to a certain extent, blended together, and without the exact elliptical termination of Herschel's figure.

Fig. 81 of Sir J. Herschel's Catalogue (Messier 51) seen as an oval nebula by both these astronomers, is found to be a cluster of stars remarkable for its singular appearance, the ramifications from its southern extremity extending to a distance equal to its major axis, and giving it the appearance of a scorpion.

Fig. 45 of Sir J. Herschel's Catalogue is a perfectly circular planetary nebula: but Lord Rosse has discovered it to be an annular nebula like the elliptical annular nebula in Lyra, (29 Sir J. Herschel's Catalogue, and 57 Messier) but very much more difficult to be seen.

Fig. 49 of Sir J. Herschel's Catalogue is represented as a remarkable round planetary nebula, containing three stars, one at each of the three vertices of an equilateral triangle; Lord Rosse's telescope shows this as a long irregular patch, with about seven stars in it, grouped unsymmetrically.

There are a few interesting examples of the manner in which the new telescope has resolved nebulae into stars, and has destroyed that symmetry of form in globular nebulae, upon which was founded the hypothesis of the gradual condensation of nebulous matter into suns and planets.

#### *The second Telescope, 50 feet long.*

Such is a brief account of the construction and performance of a telescope which Dr. Robinson characterizes as the most powerful that has ever been made. Its superiority to all other instruments must have been very gratifying to Lord Rosse, and might have justified him in resting from his labors, and enjoying the honor of having triumphed in so noble an undertaking; but the instrument

was scarcely out of his hands before he resolved upon attempting the construction of another reflector, with a speculum six feet in diameter, and fifty feet long! This magnificent instrument was accordingly undertaken and within the last month has been brought to a successful termination. The speculum has six feet of clear aperture, and therefore an area four times greater than that of the three feet speculum, and it weighs nearly four tons! The focal length is 53 feet. It was polished in six hours, in the same time as a small speculum, and with the same facility; and no particular care was taken in preparing the polisher, as Lord Rosse intended to re-polish it as soon as the focal length was ascertained to be correct; but upon directing it to a nebula, the performance was better than he expected, and he therefore has suffered it to remain in the tube for the present. The second or duplicate speculum, not yet finished, is in every respect the same in size. It was only three weeks in the annealing oven, and is reckoned very good.

The casting of a speculum of nearly four tons must have been an object of great interest, as well as of difficulty; but every difficulty was foreseen and provided against. In order to insure uniformity of metal, the blocks from the first melting, which was effected in three furnaces, were broken up, and the pieces from each of the furnaces were placed in three separate casks, A, B, and C.

Then in charging the crucibles for the final melting of the speculum, successive portions from cask A were put into furnaces a, b, and c, from B into b, c, d, and so on.

In order to prevent the metal from bending or changing its form, Lord Rosse has introduced a very ingenious and effective support. The speculum rests upon a surface of twenty seven feet of cast iron, of equal area, and strongly framed so as to be stiff and light. There are twelve of these in the outer rim, nine in the next, and six sectors at the centre. Each of these pieces is supported at the centre of gravity on a hemisphere bearing at the angle of a triangle of cast iron, these triangles being in their turn similarly supported at the angles of three primary triangles, which, again, are supported at their centres of gravity by three screws which work in a strong iron frame, and serve for adjusting the mirrors. This frame carries also levers to give internal support to the speculum, in the same diffused manner. The frame, which contains the speculum, is attached to an immense joint, like that of a pair of compasses moving round a pin, in order to give the transverse motion for following the star in right ascension.

\* Proceedings of the Royal Irish Academy, No. 26, pp. 8, 11, Nov. 9, 1840.



This pin is fixed to the centre piece between two trunnions, like those of an enormous mortar, lying east and west, and upon which the telescope has its motion in altitude. To the frame there is fastened a large cubical wooden box, about eight feet a side, in which there is a door through which two men go in to remove, or to replace the cover of the mirror. To this box, is fastened the tube, which is made of deal staves, hooped like a huge cask. It is about 40 feet long, and 8 feet diameter in the middle, and is furnished with internal diaphragms, about 6 1-2 feet in aperture. The Dean of Ely walked through the tube with an umbrella up!

In looking back upon what the telescope had accomplished—in reckoning the thousands of celestial bodies which have been detected and surveyed—in reflecting on the vast depths of ether which have been sounded, and on the extensive fields of sidereal matter out of which worlds and systems of worlds are forming and to be formed—can we doubt it to be the Divine plan that man shall yet discover the whole scheme of the visible universe, and that it is his individual duty, as well as the high prerogative of his order, to expound its mysteries, and to develop its laws? Over the invisible world he has received no commission to reign, and into its secrets he has no authority to pry. It is over the material and the visible he has to sway the intellectual sceptre—it is among the structures of organic and inorganic life that his functions of combination and analysis are to be chiefly exercised. Nor is this a task unworthy of his genius, or unconnected with his destiny. Placed upon a globe already formed, and constituting part of a system already complete, he can scarcely trace either in the solid masses around him, or in the forms and movements of the planet, any of the secondary causes by which these bodies have been shaped and launched on their journey. But in the distant heavens where creation seems to be ever active, where vast distance gives us the vision of huge magnitudes, and where extended operations are actually going on, we may study the cosmogony of our own system, and mark, even during the brief span of human life, the formation of a planet in the consolidation of the nebulous mass which surrounds it.

Such is the knowledge which man has yet to acquire—such the lesson which he has to teach his species. How much to be prized is the intellectual faculty by which such a work is to be performed—how wonderful the process by which the human brain, in its casket of bone, can alone establish such remote and transcendental truths.

A soul so capacious, and ordained for such an enterprise, cannot be otherwise than immortal.

But even when all these mysteries shall be revealed, the mind will still wrestle with eager curiosity to learn the final destiny of such glorious creations. The past and the present furnish some grounds of anticipation. Revelation throws in some slight touches of its light—but it is in the indications of science chiefly—in the results of mechanical laws—that we are likely to find any sure elements for our judgment. In the creation around and near us all is change and decomposition. This solid globe, once incandescent and scarcely cooled, has been the theatre of recurring convulsions, by which every thing has been destroyed, and after which every thing has been renewed. Animal life in its varied organizations has perished, and written its epitaph upon imperishable monuments. Man too, though never extinct as a race, returns one by one to his clay, and his intellectual functions are perpetuated in the re-production of his fellow. In the solar system we see fragments of planets—asteroids, as they have been called—occupying in almost interlacing orbits, the place of a larger body; and in the direction and amount of the annual and diurnal motions of the primary and secondary planets we recognise the result of a grand creative movement, by which the sun, with its widely extended atmosphere, or a revolving atmosphere itself, has cast off, by successive throes, the various bodies of the system, at first circling in gaseous zones, but subsequently contracted into planets and a sun.

This system, so wonderfully formed, is again enchainèd with another more distant by an assemblage of comets—a class of bodies which doubtless carry on some reciprocal intercourse for the benefit of both. Composed of nebulous matter, they may yet be consolidated into habitable globes; and resembling in aspect the vast nebulae which fill the sidereal spaces, and forming a part of our own system, they countenance the theory, that the nebulae which the telescope cannot resolve may be the pabulum out of which heat and motion are to form new systems, where planets, thrown off from a central nucleus, will form new abodes of life and intelligence.

But while all the phenomena in the heavens indicate a law or progressive creation, in which revolving matter is distributed into suns and planets, there are indications in our own system, that a period has been assigned for its duration, which, sooner or later, it must reach. The medium which fills universal space—whether it be a luminiferous

ether, or arise from the indefinite expansion of planetary atmosphere—must retard the bodies which move in it, even though it were 360,000 millions of times more rare than atmospheric air; and, with its time of revolution gradually shortening, the satellite must return to its planet, the planet to its sun, and the sun to its primeval nebula.

The fate of our system, thus deduced from mechanical laws, must be the fate of all others. Motion cannot be perpetuated in a resisting medium; and where there exists disturbed forces, there must be primarily derangement, and ultimately ruin. From the great central mass, heat may again be summoned to exhale nebulous matter—chemical forces may again produce motion, and motion may again generate systems: but, as in the recurring catastrophes which have desolated our earth, the great First Cause must preside at the dawn of each cosmical cycle—and, as in the animal races which were successively reproduced, new celestial creations, of a nobler form of beauty, and of a higher order of permanence, may yet appear in the sidereal universe. 'Behold, I create new heavens, and a new earth, and the former shall not be remembered.' 'The new heavens and the new earth shall remain before me.' Let us look, then, according to this promise, for 'the new heavens, and the new earth, wherein dwelleth righteousness.'

#### MAGNETIC SLEEP.

(Continued from page 106.)

##### LIGHT AND IMAGES OF THE DEGREES.

In the first degree and first state of magnetic sleep, the light is a pale blue.\*

In the second degree and second state, the light is a little stronger, and a little deeper blue.

In the third degree and third state, these sleepers are fully under magnetic influence, and the light a clear sky blue. They see objects in a straight or direct line, through the magnetic medium in space, but not comprehensively, or inclosing various objects as in the natural state.

In the fourth degree and fourth state, the light is stronger, and extends farther than in the lower degrees. Persons with moral organs largely developed, are disposed to see immaterial or spiritual objects in this degree.

They change from the natural to higher states, as they enter in, and advance in the degrees.

In the fifth degree and fifth state, the light is still more intense, and clairvoyants less inclined to view or take cognizance of natural, external or material subjects, but disposed to remain in this exalted state.

In the sixth degree and sixth state, the tendency of going into it is instant death, and should be most cautiously avoided.

*Galvanic Rings.*—A knowledge of the remedial effects of magnetized rings, in persons who are very susceptible to magnetic or mesmeric influence, has excited the cupidity of adventurers, who are inundating the country with "Galvanic Rings"—so called, under the patronage of the professors of medical colleges.

These rings are made of zinc and copper, and zinc and copper gilded, plated or silvered. Such rings cannot, however, be galvanized or magnetized so as to retain or maintain polarity; and are, consequently, of no value as remedial agents. They serve, however, as a badge to distinguish the weak, ignorant and credulous from the rest of the community.

*Magnetized Rings.*—These rings should be made of steel wire, plated with gold, silver, tin, copper, or brass. When finished, they should be magnetized, one at a time, by placing a ring flat on one of the poles of a strong magnet, and then pressing on, and at the same time drawing it entirely off of the magnet with a quick motion. The ring will then have two poles, which will affect the compass or variation-needle; one of which should be worn on a finger of the right, and another of the left hand.

Gold rings made in this manner have a real value, as their influence on children and adults affected with *tubercula*, and at the same time very susceptible to magnetic or mesmeric influence, is very salutary, as shown by a trial of their effects in a great number and variety of cases during the last three years, and they will last a life-time. They have, however, little or no effect upon those who are insusceptible to these influences.

These rings are manufactured by J. & R. ELKINS, Jewellers, 60, Reads Street, near Broadway.

MEDICAL DUODYNAMICS.

The symptoms we have introduced to distinguish chronic tubercula or chronic disease of the serous surfaces, are always present in acute diseases of these surfaces, and depend entirely upon the action of two forces, or upon the duodynamic or moving powers of the system. They are founded upon the fact that these forces act in unison in health, but are interrupted in disease—the signs of which are distinguished with facility and certainty, without any previous knowledge of the case.

The absence of these symptoms, and the presence of disease in the organs, limbs, or other structures, determine, with the same facility and certainty, disease of the mucous surfaces, acute or chronic.

The duodynamic treatment we have introduced, is founded on the fact that motion is interrupted or lost in some part of the body, organs, or limbs, and cures the disease in restoring the interrupted or lost motions, by the action of two forces, emanating from different kinds of matter, and acting on the same, or different surfaces of the body, organs or limbs. These symptoms are prominent and uniform in their character, and reduce and bind down the classification of diseases to the narrow limits of *acute* and *chronic* diseases of the *serous*, and of the *mucous* surfaces, or to four classes, orders, genera, and species, and the duodynamic treatment of diseases which we long since adopted, supports and sustains this classification in the most steady and successful manner, and presents a strong contrast with the old never ending classification and ever varying symptoms and treatment.

The posterior spinal nerves are connected with and terminate in the serous membranes or serous surfaces of the body, organs, and limbs, including those of the skin and fasciæ of the muscles, &c., and are the media of sensation: while the anterior motor nerves are connected with and terminate in the mucous membranes, or mucous surfaces, including those of the fasciæ of the muscles, the bronchia and the alimentary canal, and are the media, only, of the forces which produce motion.

These different arrangements of the nerves of motion and those of sensation account for the absence of the magnetic symptoms in disease of the mucous surfaces. Insensibility in these surfaces is as necessary to the maintenance of animal life, as sensibility is in the serous surfaces. The most intense inflammation of the mucous surfaces produce no pain. There is never any pain in these cases without an extension of the disease to

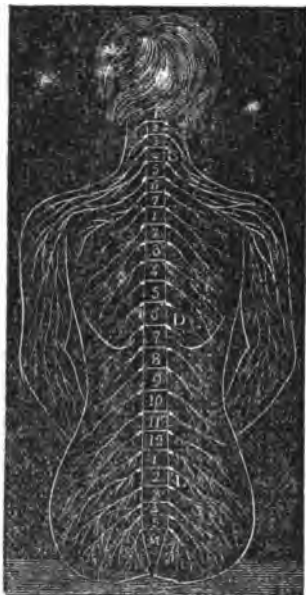
the serous surfaces; yet our modern medical writers continue to repeat the tales of their grandfathers about the great and wonderful sensibility of the mucous surfaces.\*

Acute or inflammatory diseases run through their course in a few days, or a few weeks: while chronic diseases continue not only many months, but many years. The excitement of the system in the first is exalted and continuous, or has brief remission or intermissions, while in the last it is depressed and periodical or accidental, with long periods of repose of many weeks or months, and is consequently as different as darkness is from light; yet the modern astrologers of the schools, like their ancient masters who were priests, physicians and astronomers, class them all as inflammations of the different degrees, and treat them as such. Our modern astrologers also follow their ancient masters in pretending to distinguish these diseases by feeling the pulse, the aspects of the tongue and urine, and the color and odor of the stools, &c.

There is however nothing more uncertain than these signs or symptoms, unless it is the treatment founded upon them, as is well known to our faculty; yet they are taught as a science with all the gravity due to these subjects, involving life or death. On the contrary there is nothing more certain than the magnetic symptoms, or the duodynamic treatment founded on them, in the absence of accidents not under the control of the physician; yet such is the attachment of men to old systems—the old astrological symptoms and treatment will continue to be taught by the professors in our medical colleges as long as they are of any value in their market.

Acute and chronic tubercula, or inflammatory and chronic diseases of the serous membranes, or serous surfaces of the body, organs or limbs; including the skin and fasciæ of the muscles, is easily and invariably distinguished by pain more or less severe (in proportion to the intensity of the disease) produced by pressure on the ganglions of the spinal nerves, in the intervertebral spaces along each side of the spine, without any previous knowledge of the case—no matter what name may have been given to the disease by physicians, nosologists, or other medical writers.

\* We commenced a series of experiments with the magnetic machine about a year since, for the purpose of ascertaining whether the least susceptibility could be detected in the great mucous surfaces, and the result showed that no sensation whatever could be felt from the brass cylinder in contact with these surfaces, under the action of our most powerful machines, while the sensation from the button in contact with the skin or serous surface, was so intense that it would only be borne momentarily.

**Ganglions of the spinal nerves in the intervertebral spaces.**

There are 7 cervical vertebrae, C; 12 dorsal, D; and 5 lumbar, L; these vertebrae with the os-coxyx, m; constitute the spinal column.

Press on the sides of the 1, cervical vertebrae to find symptoms of tubercula of the head—of the brain, throat, nose, eyes, or ears.

Press on the sides of the 2, 3, 4, 5, 6 and 7 cervical to find tubercula of the muscles, (Rheumatism) or of the vertebrae, or of the joints of the limbs—white swellings, &c.

Press on the sides of the intervertebral space between the 7 cervical, and 1 dorsal, to find tubercula of the lungs, and

Press on the left side of the same space to find tubercula of the heart.

Press on the space between the 1 and 2 dorsal vertebrae to find tubercula of the stomach.

Press on the space between the 2 and 3 dorsal to find tubercula of the duodenum.

Press on the right side of the space between the 7 and 8 dorsal to find tubercula of the liver.

Press on the spaces between the 11 and 12 dorsal to find tubercula of the small intestines.

Press on the spaces between the 12 dorsal and first lumbar to find tubercula of the kidneys.

Press on the spaces between the 1 and 4 lumbar to find tubercula of the uterus.

Press on the spaces between the 4 lumbar

and os-coxyx to find tubercula of the genital organs.

We always press with the thumb of the right hand on the intervertebral spaces of the left side of the spine, and with that of the left hand on the intervertebral spaces of the right side.

These directions will enable any person of common sense to distinguish tubercular disease with facility and certainty, without even the aid of a physician. Negative matter, as the acids and the metals should be the principal ingredients in the preparations of medicine for disease of the serous surfaces, and should be used in connection with the action of the rotary magnetic machine.

**Diseases of the Mucous Surfaces.**

Acute and Chronic diseases of the mucous surfaces are invariably distinguished by the presence of disease of the body, organs or limbs, and the absence of the magnetic symptoms; and require for their reduction a treatment entirely different from that of tubercular disease of the serous surfaces. Positive matter, as the alkalies and the gums, should be the chief ingredients in the preparations of medicine for diseases of the mucous surfaces, and should be used in connection with the action of the rotary magnetic machine.

(For the Dissector.)

**"ELECTRICAL PILLS," &c.**

Dear Sir:—I have thought it might subserve the cause of justice, if I were to give you some account of a man, who has been travelling through the New England States, for a year or two past, selling what he calls "Electrical Pills," "Magnetic Ether," and "Galvanic Plaster." That these pretended "Electrical Pills," are sold on the credit of your remedies, there can be no doubt, and hence it would seem to be time for the public to be duly informed of the base imposition played upon them in the sale of these worthless drugs.

The man who sells them is in the practice of lecturing on what he calls the "Philosophy of Mesmerism Discovered." He has a subject whom he puts to sleep for examining disease; and, of course, in every case examined, his oracle recommends the invalid to take the "electrical pills," or the "magnetic ether," or, to wear the "Galvanic Plaster." Hundreds and thousands, I have no doubt, have been duped in this way, as B—(for this is the man's name), stated in Provincetown, Mass., a few weeks since, that he had made over \$1800 during the last six months.

Having stated that this man's name is B——, I should add, that this is not the name by which he announces himself to the public, at the present time. He was apprehended for theft in the city of New-York, some years since, and gave his name as H. H. B.——; and a few years after he was exposed in the Boston Recorder, as an infamous impostor, under the name of J. B. D. He was expelled from Phillip's Academy, Andover, and again from the Bangor Seminary; and has been found guilty of forging letters, and other disgraceful crimes, which render him unworthy of public confidence. And yet, this man is ever and anon announcing himself in the public papers, as "*Dr. J. B. D.*"!! As he will probably visit the South and West, it would seem to be important that the public should be made acquainted with his character; and hence the above is submitted for your columns.

JUSTITIA.

May, 1845.

We are acquainted with the correspondent, who has sent us the above exposure of a very gross case of imposition, and we are well informed, both by observation and frequent transmitted intelligence, that it forms but one of many, of a very similar character which are practised in almost every part of the country, including this city, and Philadelphia. The real and indisputable effects of metallic, medicinal, and animal magnetism, are so truly remarkable and are exciting so much attention throughout our wide spread population that mercenary impostors, without the least regard to conscience or character, are taking advantage of it in a thousand ways, throwing deplorable obstacles in the progress of a science so important to humanity, if not inflicting more direct injury upon the community.

#### IMPORTANT PROPOSAL.

The acknowledged importance of Magnetism and Phrenology, as physical and psychological sciences; the profound and fervent interest which they are exciting and maintaining in every section of this extensive country; and their manifest liability to ignorant desecration and mercenary charlatanism, forcibly appeal to all who desire the advancement of knowledge, to adopt some

means by which these comprehensive sciences may be propagated with more systematic efficiency and greater security from perversion. To this end the undersigned have deemed it important, if not indeed essential, that a central society, for the rigid investigation of the facts and inferences which these subjects involve, should be established in this metropolis, with the view of affording authentic information concerning them to the public in general, and to induce the formation of kindred associations, in fraternal alliance, in the principal cities and towns of the country.

Aiming at nothing but fair and honest inquiry, and the extension of useful knowledge for the benefit of mankind, they earnestly invite the many scientific and philanthropic individuals around them, who already concur in this object, to co-operate with them in forming the society here respectfully suggested. Ample intelligence and talent could readily be contributed for this purpose, without any serious sacrifice of time, or any hazard of reputation; while sciences, confessedly the most interesting and elevated of any now in active progress, would be rescued from the incompetent dissemination which now stamps them with but an equivocal authority and character.

Communications upon the subject, post paid, will be cheerfully received and published in the Journals, of which the undersigned are the editors.

H. H. SHERWOOD, M. D.

Editor of N. Y. Dissector.

O. S. FOWLER, A. B.

Editor N. Y. Phrenological Journal.

#### MAGNETIC MISCELLANY.

*EYES*—acute and chronic diseases of. The forces from the magnetic machine combine to reduce acute and chronic diseases of the eyes, and to remove opacities of the cornea, in the most extraordinary manner. These interesting and important results furnish the best materials for the most withering comments on the absurd theories and practice of the schools.

**ALOPACIA**—*loss of hair, baldness.* The effects of the magnetic forces in producing the most rank vegetation from the earth, suggested their employment in the production of a luxuriant vegetation from the skin, which has been found perfectly successful.

Among the cases in which magnetic machines have been used for this purpose, is that of a gentleman who having lost every hair from his head, commenced magnetising it with one of our vibrating instruments in February last, and, on the first of June, had already cut two heavy crops of hair from his head!

**APOPLEXY.**—The magnetic machine reduces the apoplectic state in a more safe and powerful manner, than any other means that has been heretofore adopted.

**ULCERATED LEGS AND VARICOSE VEINS.**—Nothing can be compared to the action of the magnetic machine in these cases, or in acute or chronic diseases of the skin.

**PROLAPSUS UTERI.**—*atonic.* These cases from feebleness or debility are quickly restored by the action of the instrument or by the mesmeriser. In cases, however, which are the consequence of tubercular disease of the uterus, the remedies for chronic tubercula are required to aid the action of the instrument.

**MAGNETIC SLEEP.** There are now a great many persons who have gone into the magnetic sleep, under a very slight but steady action of the magnetic machine, some of whom have been clairvoyant. These facts, with the increased susceptibility to mesmeric influence by the action of the instrument, are strong evidences of the identity of the influences from these different sources.

#### Homœopathy.

The homœopathic practice is everywhere increasing in favor with the people, and many alopatic physicians have consequently found it necessary to adopt it, or lose their practice in many of the most intelligent and wealthy families.

In 1837 there was only four homœopathic physicians in this city, and there is

now more than forty, and their number has increased in the other cities of the Union in about the same proportion to the population.

It is the extraordinary effects of homœopathic or magnetised medicines upon children and upon adults who are very susceptible to magnetic or mesmeric influence that maintain the high character of these remedies. They have, however, little or no effect upon those who are naturally insusceptible to these influences.

#### Animal Magnetism.

It is now only about nine years since the subject and practice of animal magnetism was first introduced into this country, and although it has everywhere met with great opposition in its progress from the bigoted and the ignorant, a practical knowledge of it has extended more or less into all the States of the Union; and its extraordinary and beneficial effects are everywhere acknowledged.

#### MAGNETIC MACHINES.

The magnetic machines first used in medical practice, although very superior to the old electrical apparatus, were naturally very defective and strikingly inferior, both in construction and effect, to those of the improved rotary and vibratory principle which greater knowledge and experience have at length produced. The former were not only comparatively clumsy and unmanageable, but liable to such derangement as to be frequently wholly inoperative except in the hands of persons accustomed to their defects, and skilful in repairing them. Notwithstanding this, we find that these obsolete contrivances, with miserable imitations of our machines, are still imposed upon persons ordering magnetic machines, through druggists and other indirect agents, as those of the latest and best construction. The natural consequence is that, from perplexing difficulties almost inseparable from the use of them, and the failures in beneficial effect which thence ensue, the influence itself, however inestimable, becomes disparaged in the estimation of medical men who have had no better means of testing its value, and

still more so in private practice. This is much to be regretted, as well for the sake of science, as the victims of disease who might otherwise have been relieved and restored. The most improved and best instruments, can be applied with ease and certainty, without any other instruction than is afforded in the *Manual* which accompanies them, by any person of the most ordinary capacity, and in a wide range of cases. The others are constantly liable to complete failure, even in the hands of the most patient professional men, on whom they may be either carelessly and ignorantly, or designedly and selfishly imposed.

Mr. J. G.——of Penn Yan, N. Y., reports the following case which recently came under his observation.

Mrs. A. C. Randall living near the village of Penn Yan, N. Y., had been deranged nearly one year; during which time she was incapable of taking care of herself. She was attended by three or four physicians, without any favorable results. Her husband made application to me to mesmerize her—but instead of doing so, I mesmerized a young lady, who in the clairvoyant state, examined Mrs. Randall. Her report was, "That the brain was diseased—that it had become inflamed in consequence of taking cold, together with some other irregularities of the system. To mesmerize the deranged person, would have a tendency to spread the disease through the system."

Her prescription was, to put a seton in the back part of the neck, saying that the disease would run off by this means, and the brain would resume its healthy functions. This was done—the seton was kept in about two months, during which time the patient improved; at the end of the second month, her reason was restored—she was cured. This was about two months ago. She is now in good health, and perfectly sane.

J. G.

*Penn Yan, N. Y., April 5, 1845.*

*Newark, N. J., June 2nd, 1845.*

DR. SHERWOOD, Sir:

A few weeks since I was called to a Mrs. B. of this city, who had been for two months under regular treatment for fever: a few days before I was called, she aborted,

and excessive hemorrhage, and inflammation of the womb ensued. Before the miscarriage, she had lost the use of the lower limbs and was helpless. In this condition her physician left her, and sent word to the family that they might employ whom they pleased. I was called upon, but regarded the case as a hopeless one. The symptoms were aggravated and discouraging. After some simple applications for allaying the inflammation and hemorrhage of the womb, I resorted to the magnetic instruments, and although, she had not slept for nights, and the cerebral derangement was bordering on delirium; yet under its influence she soon fell into a refreshing sleep, and convalescence commenced from that hour. She is now getting about the house, and looks more healthy, than for many months previous.

On the 8th of May, I was called on to visit Mrs. G. an elderly lady, under an attack of pleurisy. It was a clear case. She said she had been subject to it for years, and had always been confined to her room from four to six weeks. Two applications of the instrument reduced the symptoms, and on the 12th she was about her house. They were perfectly astonished at the result of the treatment.

About the same time I was called to see Master L., ten years of age with inflammatory rheumatism. He was perfectly helpless; not a finger could be moved without causing him to scream. In one week he was entirely relieved, by the machine. I am satisfied of the value of the instrument in both acute and chronic diseases.

In haste, I am as ever yours,

L. D. FLEMING.

#### ANTIQUITY OF AMERICA.

A person writing to the Paris Academy of Sciences, from Brazil, says he has observed in one of the numerous calcareous caverns in that country a quantity of human bones near those of different species of animals, some of which are now extinct. He concludes from this fact that it is erroneous to regard the South American race as a variety of the Mongolian race, who are supposed to have peopled what is called the New World, by emigration. The geological constitution of America shows, he says, that it is anterior to what we call the old continent, and the Mongolian race is but a branch of the American race, instead of being the primitive root.

**CLAIRVOYANCE.**

We were requested to see a clairvoyant, at Professor Roger's rooms, 95 Chamber-street, on the 23d of June inst., in the person of a little girl aged nine years, who it was reported, could read with facility while in the mesmeric state. We went prepared to secure her eyes with adhesive plaster, and after having placed one securely over each eye, presented her with a book, which she handled in the same manner, and read in various places, with apparently the same ease as in the natural state.

Such feats have been frequently performed by clairvoyants of private families in this city.

**SWEDENBORG'S ANIMAL KINGDOM.***Introductory Remarks by the Translator.*

JAMES JOHN GARTH WILKINSON,  
Member of the Royal College of Surgeons,  
of London.

It will be the aim of the following remarks to give a general view of the doctrines of the "Animal Kingdom," and of their relation to the past, present and future state of science; and in so doing, to address those chiefly who are acquainted with the theological writings of Swedenborg, as forming the class by whom, at present, the work is most likely to be read, and to whom it may be the most useful and satisfactory.

The evolution of the natural sciences amounts to the creation of a new sphere in the human mind; and since this development has not taken place under the auspices of theology, but either in direct or tacit opposition to the prevailing church; since it proceeds from without, and proposes knowledge and intelligence as ends distinct from spiritual life; therefore it constitutes a sphere which is not in unison with the current doctrines of religion, but from the beginning has menaced their subversion; and which, unless reduced to order, is opposed, however true its materials in themselves may be, to the understanding of all genuine truth. It was a perception of this character in science, and also of the fact that the universal human mind was becoming immersed in scientifics, that impelled Swedenborg to enter the field of nature, for the pur-

pose of demonstrating in it an order corresponding to the order of heaven, and thereby of making it a medium to spiritual and sacred truths. This was his paramount end in the construction of the "Animal Kingdom."

The system therein propounded rests upon the foundation of experience; namely, of such experience as the learned world had accumulated at Swedenborg's time; not indeed upon the particular experience strictly and proximately belonging to any one science; for such experience would be inadequate, in the present imperfect state of our insight, to suggest the universal truths that each science involves; but upon the general experience of all ages in all the sciences. This, it is to be presumed, was Swedenborg's meaning, when he likened himself to one of the racers of olden time, who before he could merit the crown, was commanded to run seven times round the goal; and again, when he declared that we must be instructed by all things of one thing, if we are to know that one thing thoroughly. As his theory is not derived from particular experience, so it cannot finally be either confirmed or denied by any isolated fact or facts. For it is a conclusion from the order and tenor of facts universally; in a word, from an integral survey of nature. Unless this be borne in mind, the very largeness of the field from which his inductions are drawn, and the very strictness of mind which caused him to test them through all the sciences, will only make them seem the more like baseless hypotheses. In this case the analytic process may easily be mistaken for the synthetic, and Swedenborg may be charged with committing the error which he begins his work by denouncing in others.

Swedenborg announced the starting-point of his method in the first lines of his first chapter; namely, that "the use or effect which produces the end must be the first point of analytic enquiry." First comes the question of fact or result; next, the reasoning upon it. Unless we reason from uses, what chart have we in the exploration of structures? To illustrate this, let it be supposed that a complicated tissue—for instance, the skin—presents us with three undoubted effects, say of absorption and excretion; from these effects we infer the existence of a threefold organism to produce them; for effects imply causes, and functions forces, motions, accidents, &c., are predicates and unvarying signs of substances. Having proceeded so far, we have then to distribute the effects to their proper organic causes in the tissue; and thus effects furnish the rule for the first analysis of a structure.



In many instances indeed it will be impossible to trace effects to visible organic causes, in which case the mental sight must take up the operation, and continue and complete it, and this, by the assistance of the several instruments and appliances which are now to be mentioned.

It is impossible to understand either the Word or the works of God without doctrines, which in both cases require to be formed by "one who is enlightened." The doctrines made use of by Swedenborg in the "Animal Kingdom," are the Doctrines of Forms, of Order and Degrees, of Series and Society, of Influx, of Correspondence and Representation, and of Modification. These doctrines themselves are truths arrived at by analysis, proceeding on the basis of general experience; in short, they are so many formulas resulting from the evolution of the sciences. They are perpetually illustrated and elucidated in the "Animal Kingdom," but never stated by Swedenborg in the form of pure science, perhaps because it would have been contrary to the analytic method to have so stated them, before the reader had been carried up through the legitimate stages, beginning from experience, or the lowest sphere. Each effect is put through all these doctrines, in order that it may disclose the causes that enter it in succession, that it may refer itself to its roots and be raised to its powers, and be seen in connexion, contiguity, continuity, and analogy with all other things in the same universe.† They may be compared to so many special organs, which analyse things apparently homogeneous into a number of distinct constituent principles, and distribute each for use as the whole requires. To deny any of these doctrines, or to give them up in the presence of facts that do not range upon them at first sight, is to nullify human mind as the interpreter of nature.

The Doctrine of Forms teaches that "the forms of all things, like their essences and substances, ascend in order and by degrees from the lowest to the highest. The lowest form is the angular, or as it is also called, the terrestrial and corporeal. The second and next higher form is the circular, which is also called the perpetual-angular, because the circumference of the circle involves neither angle nor rectilinear plane, being a perpetual angle and a perpetual plane; this form is at once the parent and measure of angular forms. The form above this is the spiral, which is the parent and measure of circular forms, as the circular, of angular forms. Its radii or diameters are not rectili-

near, nor do they converge to a fixed centre like those of the circle; but they are variously circular, and have a spherical surface for a centre; wherefore the spiral is also called the perpetual circular. This form never exists or subsists without poles, and axis, foci, a greatest circle, and lesser circles, its diameters; and as it again assumes a perpetuity which is wanting in the circular form, namely, in respect of diameters and centres, so it breathes a natural spontaneity in its motion. There are other still higher forms, as the perpetual-spiral, properly the vortical; the perpetual-vortical, properly the celestial;\* and a highest, the perpetual-celestial, which is spiritual, and in which there is nothing but what is everlasting and infinite." There is then a scale of forms, whereof the higher are relatively more universal, more perfect, and more potent than the lower. The lower again involve the higher and the highest, and are generated by them: so that where there is an angular body, there is a circular form and force intimately present as its ground; where there is a circle, it is the limit of an interior spiral; and so forth. For nature operates from the very principles of geometry and mechanics, and converts them all to actuality and use. The purer substances in creation gyrate through the higher forms; the less pure circulate through the lower, or are fixed in the lowest. All the essentials of the angular form are opposed to each other, whence the origin of gravitating and inert matter, intrinsically unfitted for motion. But the other forms, according to their eminence, are more and more accommodated to motion and variation.

The Doctrine of Order teaches that those things which are superior in situation, are also superior in forces, in power, in dignity of office, and in use; and that a similar law determines the situation of the parts of things, and of the parts of parts. Corresponding to the highest or first of the series of subordination, is the central or innermost of the series of co-ordination.

The Doctrine of Degrees teaches the distinct progressions through which nature passes when one thing is subordinated to, and co-ordinated with another. There are three discriminated degrees in all things, both natural and spiritual, corresponding to end, cause, and effect. In the human body there is a sphere of ends, a sphere of causes, and a sphere of effects. The body itself, comprehending the viscera of the abdomen and chest, and the external sensoria of the

\* Arcana Coelestia, n. 10682.

† By a universe, Swedenborg appears to mean any complete series as referable to its unitary.

\* Swedenborg here uses the term celestial, not in the sense which is peculiar to it in his theological writings, but more with the meaning attached to it in the phrase, "celestial globe," as pertaining to the form of the universe.

head, is the sphere of effects; the brain, and the whole of its appendages, are the sphere of causes; the cortical substances of the brain are the sphere of ends or principles. These spheres are subordinated to each other in just series from the highest to the lowest. The highest degree or sphere is active, the lowest is passive and re-active. The above degrees, in their order, indicate the progression from universals and singulars to generals or compounds. But every organ again involves the same triplicity of spheres; it consists of least parts, which are congregated into larger, and these into largest. All perfections ascend and descend according to degrees, and all attributes, functions, forces, modes, in a word, all accidents, follow their substances, and are similarly discriminated. Each degree is enveloped with its common covering, and communicates with those below it thereby.

There is no continuous progression from a lower degree to a higher, but the unity of the lower is the compound of the higher, and in transcending that unity, we leap out of one series into another, in which all the predicates of force, form, perfection, &c., are changed and exalted. The Doctrine of Degrees enables us to obtain a distinct idea of the general principles of creation, and to observe the unity of plan that reigns throughout any given organic subject; and by shewing that all things are distinct representations of end, cause, and effect, it empowers the mind to refer variety to unity, as the effect to the cause, and the cause to the end, and to recognize the whole constitution of each series as homogeneous with its principles.

Series is the form under which the co-ordination and subordination of things, according to order and degrees, ultimately present themselves. The whole body is a series, which may be looked at either generally, from above to below, as comprising the head, the chest, and the abdomen; or universally, from within to without, as divisible into the three spheres already alluded to. All the organs of each region are a series; each organ in itself is a series; and every part in each organ likewise. In short, everything is a series and in a series. There are both successive and simultaneous series, but the latter always arise from the former. Essences, attributes, accidents, and qualities follow their substances in their series. Every series has its own first substance, which is more or less universal according as the series is more or less general. This first substance is its simple, unity, or least form, governing in the entire series, and by its gradual composition forming the whole. Each series has its limits, and ranges only

from its minimum to its maximum. Whatever transcends those limits at either end, becomes part of another series. The compounds of all series represent their simples, and shew their form, nature, and mode of action. The Doctrine of Series and Society teaches that contiguity and continuity of structure, are indicative of relationship of function, and that what goes on in one part of a series, goes on also, with a determinable variety, in all the other parts: wherefore each organ is to be judged of, and analysed, by all the others that are above and around it. In this manner, the whole series is the means of shewing the function of each part of itself, and indeed of analysing that function into a series similar to that of the whole; for the least in every series must represent an idea of its universe. Under the operation of this law, the point becomes a world analogous to the great world, but infinitely more perfect, potent, and universal.

Such is a very brief illustration of the Doctrines of Order and Degrees, Series and Society, from which it will be evident how closely connected these doctrines are, and that they can hardly be stated without our seeming to repeat of one what has already been predicated of the others. Degrees appear to involve the distinct progressions of creation from above to below, or from within to without: order, to appertain to the law of succession observed in degrees, whereby rank and height are given to excellence, priority, universality, and perfection; series, to involve the complex of the whole and the parts when created and coexisting; and society, to be the law of contiguity and relationship existing between different series, and between the parts of any single series. Perhaps it would not be far wrong to state in generals, that order and degrees involve the creating and successive, series and society, the created and simultaneous. But as we have said before, Swedenborg never stated these doctrines as promised in the "Animal Kingdom," but contented himself with using them as analytic instruments in the exploration of the body; and therefore the reader will learn them best in the way of example and illustration in the Work itself.

The Doctrine of Influx involves the manner in which the lower substances, forms and forces of the body subsist, as they at first existed, from the higher and the highest; and in which the body itself subsists from the soul, as it at first existed; and the natural world from the spiritual. But there is not only an influx from within, but also from without; and by virtue of both, the body, which otherwise would be a mere power, is raised into an active force.\*

\* See "Animal Kingdom," vol. II, p. 268.

The Doctrine of Correspondence and Representation teaches that the natural sphere is the counterpart of the spiritual, and presents it as in a mirror; consequently that the forms and processes of the body are images of the forms and activities of the soul, and when seen in the right order, bring them forth and declare them. It shows that nature is the type of which the spiritual world is the ante-type, and therefore is the first school for instruction in the realities of that which is living and eternal.

The Doctrine of Modification teaches the laws of motion and change of state in the several auras or atmospheres of the world, and in their spiritual correspondents.†

What was stated of the Doctrines of Order, Degrees, Series, and Society, as mutually supposing, or as it were interpenetrating each other, may be repeated generally of the whole of these doctrines, and this, because they are all but so many varied aspects of the one principle of divine truth or order. Like nature itself they are a series, each link of which involves all the others.

The Doctrine of Series and Degrees in conjunction with that of Correspondence and Representation, teaches that there is a universal analogy between all the spheres of creation, material, mental, and spiritual; and also between nature and all things in human society. The circulation of uses in the body perfectly represents the free intercourse of man with man, and the free interchange of commodities between nation and nation. The operations that go on in the body, analogically involve all the departments of human industry; nay, and infinitely more, both in subdivision, unity, and perfection. There is not an art or trade, whether high or low, so long as it be of good use, but the Creator himself has adopted and professed it in the human system. Nay, in the richness of his pervading love, the very prerogatives of the mind are representatively applicable to the body. End, cause, and effect, as existing in Himself, are represented in the latter as well as in the former. Liberty and rationality, the universal principles of humanity, are transplanted by analogy from the mind into the body. It presents an analogon of liberty, in that every organ, part, and particle, can successfully exercise an attraction for those fluids that are adapted to its life and uses; of rationality, in that it acts as though it took cognizance of the adaptability, and operates upon the materials demanded and supplied, in such a manner as will best secure the well-being of itself and of the whole system.

This may account to the reader for the

extremely figurative character of Swedenborg's style, and shew that it proceeded from the reason and not from the imagination. It is because each thing is a centre to the life of all things, that each may freely use the exponent terms of all. Analogous uses in the body and the soul, furnish the point of contact between the two, and the possibility and the means of intercourse. Had Swedenborg confined himself to the dry straitness of what is now called science, he must have forfeited the end he had in view; for matter, as matter, has no communion with spirit, nor death with life. It was absolutely necessary that the body should be tinctured with life in all possible ways, when it was to be the medium of instruction respecting the soul.

But it is time to instance a few of the results to which the above doctrines lead when wisely applied to the living body. It will, however, be impossible to give anything beyond the merest sketch of Swedenborg's physiology, or to look at it from more than a single point of view. He himself has regarded it from all sides, or from each organ and sphere of the body, and given what may be called a combined proof of its correctness.

The alimentary canal and the whole of the viscera of the abdomen form one grand series subservient to the creation of the blood. This again is divided into three inferior series, whereof one primarily respects the chyle, another the serum, and a third the blood already formed. There are then three series of digestions. 1. The alimentary canal commencing at the tongue and terminating with the rectum, performs as many distinct digestions of the food, and eliminates from it as many distinct products, as the canal itself has distinct divisions and articulations. Thus there is the chyle of the tongue and mouth, the chyle of the stomach, the chyle of the small intestines, and the chyle of the large intestines, and all these chyles subserve the blood in a successive series, coincide in its formation, and ultimately coexist within it in a simultaneous series. When the chyle has been inaugurated into the blood, and is once in the arteries and veins, it is no longer called chyle, but serum. 2. The serum is the object of the second digestion. The finer parts of it therefore are secreted, and the worthless parts are excreted and thrown out, just as was before the case with the food. The former operation is performed by the pancreas, the latter by the kidneys. 3. The blood itself is the object of the third digestion. This process, termed by Swedenborg

† See *Animal Kingdom*, vol. II., p. 40.

the lustration of the blood, takes place in the capillaries and glandular elements all over the system, but specifically in the spleen, the pancreas, and the liver. As in the first series there are various menstrua or media between the chyle and the blood; namely, in the mouth, the saliva; in the stomach, the gastric juice, which is the saliva potentialized by the peculiar action of the stomach;\* in the small intestines the pancreatic juice, and the hepatic and cystic biles; and in the large intestines the liquid distilled from the vermiform appendage of the cæcum; so in each of the other series corresponding menstrua are required and applied. The blood of the pancreas, and the blood of the spleen deprived of its serum by the pancreas, serve in the liver as a menstruum for refining the chyle and lustrating the blood. The lymph is a kind of ultimate saliva which digests the chyle as the common saliva digests the food. The lymph of the spleen, for instance, digests the chyle in the mesentery, as its blood digests the chyle and blood in the liver. In short, as all the abdominal viscera form one series of uses, so the lowest and largest form of that series may be taken as an exponent of the whole; and it will then be found that all these organs are high evolution of the alimentary tube, digesting finer and finer aliments, (for the blood itself is the essential aliment of the body,) and throwing out subtler and subtler excrements or impurities. Thus the liver is the stomach of the chyle and blood; and the ductus hepaticus and the gall-bladder and ductus cysticus are respectively analogous in their proper series to the small and the large intestines.

The viscera of the thorax also minister to the blood. The heart is a chemical organ for preparing liquids to enter into its composition, at the same time that it is the beginning of the circulation. It separates the blood into two parts, a purer and a grosser; the purer it sends away through the lacunæ underneath the columns on its inner surface, by a series of ducts into the coronary vessels, which are the true veins of the heart;† the grosser into the lungs. Thus it also is an organ of blood-digestion or sanguification. The lungs have three general functions: 1. They lustrate all the blood of the body, especially in regard to its chyle or serum; their office in this respect being analogous to that of the kidneys in the abdomen. 2. They feed the blood with ærial and ethereal chyle, as the viscera of the abdomen

with terrestrial chyle. 3. They call forth the powers of all the organs of the body by respiration. With respect to the last-named of these offices of the lungs, namely, that they supply the body and all its parts with motion, it is one of the most important discoveries in the "*Animal Kingdom*," and not less wonderful in its consequences than in its simplicity and obvious truth.

We have published the above commencement of the Translator's Introduction to Swedenborg's "*Animal Kingdom*," with the view of continuing it, to completion, in the future numbers of this Journal, together with such other extracts from the work itself as we may deem most interesting and important. This introduction by the translator, a medical scholar of distinction, probably gives a better synoptical and analytical view of the whole of this really wonderful work than could be presented by any one less thoroughly acquainted with every page and sentence of its contents. It will be seen from notices of it which we adduce from English Reviews, that it is beginning to excite the profound attention and astonishment of the enlightened and learned minds of that country; and there being no American reprint whatever, and the London edition, moreover, being entirely exhausted and out of print, we have thought it scarcely possible to occupy a portion of our pages with any matter of equal novelty and value. We confess, too, that in making these extracts we are not wholly uninfluenced by what, we trust, is a very natural and excusable gratification, in finding and submitting to our readers such remarkable and unexpected illustrations of the physiological doctrines which, in perfect independence of the great mass of medical writers and on the authority of our own discoveries and convictions alone, we have been publishing to the world, and adopting in practice, for more than thirty years past.

Being fortunately in possession of a copy of Swedenborg's "*Principia*," we intend to enrich our Journal with consecutive specimens of this extraordinary work also, which successfully aspires to the highest altitude of intellectual acumen and generalization.

\* See "*Animal Kingdom*," vol. I., p. 122, note (a) p. 123, note (y.)

† On this subject examine Swedenborg's "*Economy of the Animal Kingdom*," tr. I., n. 399-400.

# THE DISSECTOR.

VOL. II.

OCTOBER, 1846.

NO. IV.

## FALLACIES OF THE FACULTY.

*Lectures delivered at the Egyptian Hall, Piccadilly,  
London, 1840.*

BY S. DIXON, M. D.

### LECTURE VII.

Unity of all Things.

*Diseases of Women—Cancer—Tumour—Pregnancy—  
Parturition—Abortion—Teething—Hereditary Peri-  
odicity.*

GENTLEMEN:

Many of you have doubtless read or heard of Dr. Channing of Boston, one of the boldest and most eloquent of American writers. In a little Essay of his, entitled "Self-Culture," I find some observations bearing so strongly upon the subject of these lectures, that I cannot resist the temptation to read them at length. How far they go to strengthen the view I have thought it right to instil into your minds, you will now have an opportunity of judging for yourselves:—"Intellectual culture," says this justly eminent person, "consists, not chiefly, as many are apt to think, in accumulating information—though this is important; but in building up a force of thought which may be turned at will on any subjects on which we are forced to pass judgment. This force is manifested in the concentration of the attention—in accurate penetrating observation—in reducing complex subjects to their elements—in diving beneath the effect to the cause—in detecting the more subtle differences and resemblances of things—in reading the future in the present,—and especially in rising from particular facts to general laws or universal truths. This last exertion of the intellect—its rising to broad views and great principles, constitutes what is called the philosophical mind, and is especially worthy of culture. What it means, your own observation must have taught you. You must have taken note of two classes of men—the one always employed on details, on particular facts—and

the other using these facts as foundations of higher, wider truths. The latter are philosophers. For example, men had for ages seen pieces of wood, stones, metals falling to the ground. NEWTON seized on these particular facts, and rose to the idea that all matter tends, or is attracted towards all matter, and then defined the law according to which this attraction or force acts at different distances;—thus giving us a *grand principle*, which we have reason to think extends to, and controls the whole outward CREATION. One man reads a history, and can tell you all its events, and there stops. Another combines these events, brings them under ONE VIEW, and learns the great causes which are at work on this or another nation, and what are its great tendencies—whether to freedom or despotism—to one or another form of civilization. So one man talks continually about the particular actions of this or that neighbor,—while another looks beyond the acts to the inward principle from which they spring, and gathers from them larger views of human nature. In a word, one man sees all things apart and in fragments, whilst another strives to discover the harmony, connection, UNITY of ALL."

That such Unity, Gentlemen, does actually and visibly pervade the whole subject of our own particular branch of science—the history of human diseases,—is a truth, we have now, we hope, placed equally beyond the cavil of the captious and the interested. In this respect, indeed, we find it only harmonizing with the history of every other thing in nature. But in making INTERMITTENT FEVER OR AGUE the type or emblem of this unity of disease, we must beg of you at the same time, to keep constantly in view the innumerable diversities of shade and period, which different intermittent fevers may exhibit in their course. It has been said of Faces,

—Facies non omnibus una,  
Nec diversa tamen—

And the same may with equal truth be said of Fevers—all have resemblances, yet all have differences. For, betwixt the more subtle and slight *thermal* departures from Health,—those scarcely perceptible chills and heats, which *barely deviate* from that state, and the very intense cold and hot stages characteristic of an *extreme* fit of ague, you may have a thousand differences of scale or degree. Now, as it is only in the question of scale that all things can possibly differ from each other, so also is it in this that all things are found to resemble each other. The same differences of shade remarkable in the case of *temperature* may be equally observed in the *motive* condition of the muscles of particular patients. One man, for example, may have a tremulous, spasmodic, or languid motion of one muscle or class of muscles simply—while another shall experience one or other of these morbid changes of action in every muscle of his body. The chills, heats and sweats, instead of being in all cases *universal*, may in some instances be *partial* only. Nay, in place of any increase of perspiration outwards, there may be a vicarious superabundance of some other secretion within: of this you have evidence in the dropsical swellings, the diarrhoeas, the bilious vomitings, and the diabetic flow of urine with which certain patients are afflicted. In such cases, and at such times, the skin is almost always dry. The same diversity of shade which you remark in the symptoms may be equally observed in the period. The degree of duration, completeness, and exactness of both paroxysm and remission, differs with every case. The cold stage, which in most instances takes the patient first—in individual cases may be preceded by the hot. Moreover, after one or more repetitions of the fit, the most perfect ague may become gradually less and less regular in its paroxysms and periods of return; passing in one case into a fever apparently continued—in another, reverting by successive changes of shade into those happier and more harmonious alternations of temperature, motion and period, which Shakespeare, with his usual felicity, figured as the “fitful fever” of healthy life. If you take Health for the standard, every thing above or beneath it—whether as regards time, temperature, motion, or rest, is Disease. When and correctly analyzed, the symptoms of carefully such disease, to a physical certainty, will be found to resolve themselves into the symptoms or shades of symptom, of intermittent fever. Fever, instead of being a thing apart from man, as your school doctrines would almost induce you to believe, is only an abstract expression for a greater or

less change in the various revolutions of the matter of the body. Fever and disease, then, are one and identical. They are neither “essences” to extract, nor “entities” to combat—they are simply variations in the phenomena of the corporeal movements; and in most cases, happily for mankind, may be controlled without the aid either of physic or physicians. The same reparative power by which a cut or a bruise, in favorable circumstances becomes healed, may equally enable every part of a disordered body to resume its wonted harmony of action. How often has nature in this way triumphed over physic, even in cases where the physician had been only too busy with his interference.—It is in these cases of *escape* that the generality of medical men arrogate to themselves the credit of a cure.

“It was a beautiful speculation of Parmenio,” remarks Lord Bacon, “though but a speculation in him, that all things do by scale ascend to unity.” Need I tell you, Gentlemen, that every thing on this earth which can be weighed or measured, is matter—matter in one mode or another. What is the difference between a piece of gold and a piece of silver of equal shape and size? A mere difference of degree of the same qualities—a different specific gravity, a different ring, a different degree of malleability, a different lustre. But who in his senses would deny that these two substances approach nearer in their nature to each other than a piece of wood does to a stone; yet may not a piece of wood be petrified, be transformed into the very identical substance from which at first sight it so strikingly differs! Nay, may not the bones, muscles, viscera, and even the secretions of an animal body, by the same inscrutable chemistry of nature, be similarly transmuted into stone? Gold and silver have differences assuredly, but have they not resemblances also—certain things in common, from which we deduce their unity, when we speak of them both as metals? How much more akin to each other in every respect are these substances than water is in either of its own elemental gases? What certainty then have you or I that both metals are not the same matter, only differing from each other in their condition or mode? Does not every thing in turn change into something else—the organic passing into the inorganic, solids into liquids, liquids into gases, life into death, and vice versa? The more you reflect upon this subject, the more you must come to the opinion that all things at last are only modes or differences of *one matter*. The unity of disease is admitted by the very opponents of the doctrine, when they give to apoplexy

and toothache the same name—*disease* or *disorder*. But the approaches to unity may be traced throughout every thing in nature—Betwixt the history of man's race, for example, the revolutions of empires, and the history of the individual man, the strongest relations of affinity may be traced. The corporeal revolutions of the body, like the revolutions of a kingdom, are a series of events. Time, space, and motion are equally elements of both. "An analyst or a historian," says Hume, "who should undertake to write the history of Europe during any century, would be influenced by the connection of time and place. All events which happen in that portion of space and period of time, are comprehended in his design, though, in other respects, different and unconnected.—They have still a species of unity amid all their diversity."

The life of man is a series of revolutions. I do not at this moment refer to the diurnal and other lesser movements of his body. I allude now to those greater changes in his economy, those climacteric periods, at which certain organs that were previously rudimental and inactive, become successively developed. Such are the teething times, the time of puberty, and the time when he attains to his utmost maturity of corporeal and intellectual power. The girl, the boy, the woman, the man, are all different, yet they are the same; for when we speak of Man in the abstract, we mean all ages and both sexes. But betwixt the female and the male of all animals, there is a greater degree of conformity or unity than you would at first suppose, and which is greatest in their beginning. Now this harmonizes with every thing else in nature; for all things in the beginning approach more nearly to simplicity. The early *fetus* of every animal, man included, has no sex; when sex appears it is in the first instance hermaphrodite, just as we find it in the lowest tribe of adult animals, the oyster, for example. In this particular, as in every other, the organs of the human *fetus*, internal as well as external, first come into existence in the lowest animal type—and it depends entirely upon the greater or less after development of these several hermaphroditic parts, whether the organs for the preservation of the race, take eventually the male or female form.—How they become influenced to one or the other form we know not. Does it depend upon position? It must at any rate have a relation to temperature. For a long time even after birth, the breasts of the boy and girl preserve the same appearance precisely. You can see that with your own eyes. But the comparative anatomist can point out

other analogies, other equally close resemblances in the rudimental condition of the reproductive organs of both sexes. During the more early fetal state the rudiments of the testes and the ovaries are so perfectly identical in place and appearance, that you could not tell whether they should afterwards become the one or the other. What in the male becomes the prostate gland, in the female takes the form of the womb. To sum up all, the outward generative organs of both sexes are little more than inversions of each other. Every hour that passes, however, while yet in its mother's womb, converts more and more the unity of sex of the infant into diversity. But such diversity, for a long period, even after birth, is less remarkable than in adult life. How difficult at first sight to tell the sex of a child, of two or three years old when clothed: at puberty the difficulty has altogether vanished. Then the boy becomes bearded and his voice alters; then the breasts of the girl—which up to this period in no respect differed from his, in appearance at least—become fully and fairly developed, assuming by gradual approaches the form necessary for the new function they must eventually perform in the maternal economy. Another, and a still greater revolution, imbues them with the power of secreting the first nutriment of the infant. But even before the girl can become a mother a new secretion must have come into play—a secretion which, from its period being, unlike every other, monthly only, is known to physicians under the name of *Catamenia* or the *Menses*. How can such things be done but by a great constitutional change—without a new febrile revolution of the whole body? Mark the sudden alternate pallor and flush of the cheek and lip, the tremor, spasms and palpitations—to say nothing of the uncontrollable mental depressions and exaltations—to which the girl is then subject, and you will have little difficulty in detecting the type of every one of the numerous diseases to which she is then liable. Physicians may call them *Chlorosis*, green-sickness, or any other name, you will recognize in them the developments of an Intermittent fever simply—as various in its shades, it is true, as a fever from any other cause may become—producing, like that, every wrong action of place and time you can conceive, and like other fevers, often curing such wrong actions as previously existed, when it happens to reverse the atomic motions of the various parts of the body. Before touching upon the principal

#### DISEASES INCIDENTAL TO WOMEN,

I must tell you that the *Catamenia*, in most

cases, disappears during the period of actual pregnancy; nor does it return while the mother continues to give suck. During health, in every other instance, it continues from the time of puberty, or the period when women can bear children, to the period when this reproductive power ceases. As with a fever it comes into play, so with a fever it also takes its final departure. Why it should be a peculiarity of the human female, I do not know—but in no other animal has any thing analogous been observed. Some authors, indeed, pretend to have seen it in the monkey; but if this were really the case, I do not think so many physiologists would still continue to doubt it, especially as they have every opportunity of settling the question definitively. Various speculations have been afloat as to the uses of this secretion, but I have never been satisfied of the truth of any of them. I am better pleased to know that the more perfect the health, the more perfectly periodical the recurrence of the phenomenon. It is therefore, without question a secretion, and one as natural and necessary to females of a certain age, as the saliva or bile to all people in all times. How absurd, then, the common expression that a woman, during her period, is “unwell.” It is only when the catamenia is too profuse or too defective in quantity, or too frequent or too far between in the period—when the quality must also be correspondingly altered—that the health is in reality impaired. Then, indeed, as in the case of other secretions imperfectly performed, pain may be an accompaniment of this particular function.

Need I tell you that no female of a certain age can become the subject of any fever without experiencing more or less change in this catamenia? or that during any kind of indisposition, how slight so ever it may be, some corresponding alteration in this respect must, with equal certainty take place? In cases where the alteration thus produced takes the shape of a too profuse flow, practitioners are in the habit of prescribing as tringents and cold applications. Happily for the patient the medicines usually styled “astringents,” (iron, bark, alum, opium, &c.,) are all *chrono-thermal* in their action; and the general salutary influence which they consequently exercise over the whole economy, very frequently puts the catamenia, in common with every other function, to rights—when the practitioner who prescribes them has no idea that he is doing more than attending to the derangement of a part. He accordingly places profuse menstruation in his list of local diseases? When deficiency or suppression of this secretion, on the contrary, chances to be the coinci-

dent feature of any general constitutional change—a thing which may happen from a transitory passion even—such effect or coincidence of cerebral disturbance is by many practitioners assumed to be the cause of all the other symptoms of corporeal derangement! And under the formidable title of “obstruction,” how do you think some of your *great* accoucheur doctors are in the habit of combating it?—By leeching the patient—by applying leeches locally. Now, I only ask you what you would think of a practitioner, who, on finding the same patient feverish and thirsty, should leech her *tongue*? or when she complained of her skin being uncomfortably dry, should apply leeches to that? You would laugh at him of course; and so you may, with just the same reason, laugh at the fashionable practitioners of the day, when you find them leeching their patients for defective or suppressed menstruation—a derangement of function which a passion might produce, and another restore to its healthy state. Is it then, a local disease or a disease of the brain and nerves—an affection of a part or a disorder of *totality*? If the latter, who but a mechanic would think of applying leeches locally? In either case, who but a cow-leech or a quack salver would dream of restoring any periodical secretion by a mode of practice so barbarous and disgusting? You might just as reasonably, in the absence of an appetite for dinner, expect to make your “mouth *water*” by the application of leeches to your stomach when the clock should strike five!

Having thus far explained the nature of these cases, I have now little else to say of them. The general principle of treatment is obvious—attention to temperature; for in every case of catamenial irregularity, whether as regards quantity, quality or period, the temperature of the loins must be more or less morbid—one patient acknowledging to chill, another to heat. In the former case, friction or a warm plaster may be tried as a local means—in the latter, cold or tepid sponging: though I may tell you that, with the *chrono-thermal* remedies singly, you may produce the most perfectly salutary results in numerous cases. In both instances, cold, warm, and tepid baths may also be advantageously employed, according to the varying circumstances of the case.

The majority of women who suffer from any general indisposition short of acute fever, are more or less subject to a particular discharge which, by the patients themselves is very often termed weakness, but which is more familiar to the profession under the name of *leucorrhœa* or *whites*. The usual



concomitant of this disease is a dull aching pain at the lower part of the back. Now, I never questioned a woman who suffered from it, but she at once acknowledged that the local *flow* was one day more, another less, and that she had, besides, the chills, heats, and other symptoms of general constitutional derangement. But of that derangement, the discharge so often supposed to be the cause, is in the first instance nothing more than a coincident feature or effect; though from pain or profuseness, it may again react upon the constitution at large, and thus form a secondary and superadded cause or *aggravant*. In cases of this kind I am in the practice of prescribing quinine, iron, or alum, sometimes with, and sometimes without *copaiba*, *catechu*, or *cantharides*—one medicine answering best with one patient, another with another.

I have been frequently consulted in cases of painful whites, and also in cases of painful menstruation, disorders which practitioners, as remarkable for their professional eminences for their utter want of high professional knowledge, had been previously treating by leeches, some applying these to the loins, which, in every case, whether of whites or irregular menstruation, is weak and consequently painful; some, to the disgust of every woman of sensibility, introducing them even to the orifice of the womb itself. What practice can be more erroneous? What relief, if obtained, more delusive! Bark, iron, opium,—these are the remedies for cases of this description; and the general constitutional improvement which, for the most part, follows their use, together with the disappearance of the more prominent local irregularities for which your aid had been asked, affords the best answer to any hypothetic objection that may be brought against their employment. The best topical application in these cases—and you will find it useful in most—is a plaster to the spine to warm and support it; though, cold, hot, or tepid fomentation to the loins or womb may also be occasionally employed, according as one or other shall prove most agreeable to the patient's own feelings.

The various female disorders of which I have just been treating are matter of daily practice. The more formidable affection to which I now draw your attention,

#### CANCER OF THE BREAST.

fortunately for the sex, is of rare occurrence—not one woman, perhaps, in five thousand ever becoming the subject of it. Now, what is Cancer? What but a slow and painful decomposition—a canker or blight of the particular organ affected. The manner in

which cancer of the breast generally commences is this:—A tumor, at first smaller than a nut, possessing more or less hardness, and to a certain extent circumscribed, is observed in the neighborhood of the nipple; the patient's attention, in most cases, being first called to it by a slight itching or uneasiness in the part affected, which soon deepens into a "pricking," "darting," or "shooting" pain—for such are the various phrases by which different patients describe their pain. The tumor gradually but slowly increases in size and hardness, while the pain becomes more and more intolerable and "lancinating." The disease, in every case, is intermittent, and in most instances, this intermission is periodical, the tumor being one day perceptibly diminished, another as obviously enlarged. The pain, in like manner, disappears more or less completely, for a time, to return at a particular hour of the clock with undiminished violence. Now, when surgeons were more in the habit of performing operations in cases of this kind, than at present, such tumors, after removal by the knife, were usually, from motives of curiosity, bisected. If their internal structure when thus divided, resembled something betwixt a turnip and a cartilage, the disease was pronounced to be "true cancer"—a *schirrus* or *carcinoma*. On the contrary, if instead of this appearance, the tumor had a resemblance to the substance of the brain, or to lard, jelly, or was of a mixed character, disputes frequently arose as to the name by which the disease should be christened; as if it signified one straw whether the breast, when so completely changed in its structure and nature, as to be productive of nothing but misery to its owner, should be called *schirrus*, *carcinoma*, cancer, or any thing else! Oh! it matters very little what that organic change be termed, when, as in all these cases, the glandular fabric of the breast becomes at last completely destroyed and decomposed.

How and in what manner is this disease developed? Gentlemen, it is the result of general constitutional change. It is the effect of a weak action of the nerves on an originally weak organ; and of this you may be satisfied, when I tell you that in most instances cancer is a hereditary disease; or, to express myself better, there is hereditary predisposition, and what is more, the disease generally makes its first appearance about that period of life when the breast ceases to be any thing but a mere personal ornament to its possessor. It comes on much about the same time when the catamenial secretion is about to terminate for life. Can such termination take place without a new corporeal

revolution? Certainly not: every female at such time suffers more or less from constitutional disorder. Analyze this disorder, and you will find that it resolves itself into a general intermittent febrile action of the whole body, varying in its shade with every case. Cancer, then, is a development of that fever. Now, why is it that the word cancer sounds so fearfully in the female ear? The difficulty to cure it simply—the difficulty in most instances—the absolute impossibility in many. To understand the reason of this difficulty, we must consider the nature and uses of the organ. However beautiful and ornamental to its possessor, the breast is not, like the heart or lungs, an organ of the least importance to her own vital economy. It is a part superadded for the preservation of the race. Rudimental, or all but absent in the child, this organ only reaches its full maturity of development when the girl becomes the woman. After the woman ceases to bear children, or whether she has borne them or not, when the period of the possibility of her being pregnant has passed away, the substance of the breast is generally more or less absorbed, though you occasionally meet with instances where it becomes enlarged beyond its previous size. In fewer cases still it takes on a process of decay—in other words, it becomes cancerous. But nature in this instance, even when aided by art, will not often exert her usual reparative efforts—she will not put forth her powers (so to speak) for the preservation of a part which now, not only so far as the individual economy is concerned, but so far also as regards the race, has become a useless part. This I take to be the true reason of the difficulty to cure a cancer; for although in many cases more or less improvement in the state of the affected organ may follow the employment of remedial means—such means as beneficially influence the whole health—still, as if to prove more fully the truth of my explanation, you may even succeed to a great extent in raising the general healthy standard, and yet fail to procure the slightest arrest of the local process of decay. While a cut or bruise upon any other part of the body of a cancer patient will heal with ease, the breast, partaking no longer in the preservative power of the economy, may perish piece-meal. Gentlemen, never in my life did I meet with a cancer in any state or stage, the subject of which did not acknowledge to chills and heats, or who did not admit errors of secretion; to say nothing of variations in the volume, temperature, and sensation of the part affected. I lately attended the sister of a Fellow of the Royal College of Physicians,

who was first induced to consult me, from hearing that I looked upon ague as the primary type or model of all complaints. Her own cancer, she assured me, was preceded by shivering fits, which she traced to a sudden chill; and during the whole progress of the disease she suffered more or less from aguish feelings. Previously to my seeing her, she had been visited by a surgeon of eminence, who ordered her to apply leeches, but the effect of their employment was an increase of her pain. And no wonder—for if that great man had only taken the trouble to enquire, he would have found that, instead of the hypothetic “inflammation,” which doubtless suggested their employment, the breast in that instance was generally cold! Would not a warm plaster under these circumstances have been of more service? You, gentlemen, may try at least, and if you do not find it produce more or less relief in many similar instances, I know nothing whatever of the science I now pretend to teach you. No local application, however, will be long productive of any very effectual advantage in this or any other disease, without attending to the chrono-thermal principles of paroxysm and remission. Arsenic, quinine, opium, copper, prussic acid, may be all successively tried. But you must here always keep in mind that cancer is a chronic disease, a disease of time; and you must farther hold in your remembrance what I have already said in regard to most cases of chronic disease, namely, that no medicine will produce its beneficial effect for any great continuance in those disorders; for once the constitution becomes accustomed to the use of a remedy, such remedy either loses its salutary influence altogether, or acts in a manner the reverse of that which it did when tried in the first instance. No medicinal agent had a greater reputation at one time, in the treatment of cancer, than arsenic; arsenic in fact was supposed to be a wonderful specific in cases of that nature. What was the consequence? Like every thing else in this world, whether person or thing, physician or physick, that ever enjoyed the temporary distinction of infallibility, after a few decided failures in particular instances, this mineral came at last to be almost entirely abandoned in such cases. And yet, notwithstanding this, I do not know a remedy which may be more successfully used in cancer than arsenic. “We have seen from its use,” says Dr. Parr, in his Dictionary, published in 1809, “an extensive [cancerous] sore filled with the most healthy granulations, the complexion become clear, the appetite improved, and the general health increased. Unfortunately,” he continues, “these good

effects have not been permanent. By increasing the dose we have gained a little more, but, at last, these advantages were apparently lost." And was it ever otherwise with any other remedy? No power on earth could always act upon the living body in the same manner. The strongest rope will strain at last, and so will the best medicine cease, after a time, to do the work it did at first. But a physician who should, on that score, despise or decry a power that had, for a given time, proved decidedly advantageous in any case, would be just as wise as the traveller who, on reaching his inn, instead of being thankful to his horse for the ground it had enabled him to clear, should complain of it for not carrying him without resting to the end of his journey. What, under the circumstances mentioned by Dr. Parr, either he or any other doctor should have done,—and what I have confidence in recommending you to do on every similar occasion is this,—Having obtained all the good which arsenic or any other remedy has the power to do in any case, change such remedy for some other constitutional power, and change and change until you find improvement to be the result; and when such result no longer follows its employment, change your medicine again for some other; or you may even again recur with the best effect to one or more of the number you had formerly tried with benefit; for when, (if I may speak so metaphorically) the constitution has been allowed time to forget a remedy that once beneficially influenced it, such remedy, like the re-reading of a once admired, but long-forgotten book on the mind, may come upon the corporeal economy once more with much of its original force and freshness. In all such cases, then, you must change, combine, and modify your medicines and measures in a thousand ways to produce a sustained improvement. Arsenic, gold, iron, mercury, creosote, iodine, opium, prussic acid, &c., may be all advantageously employed, both as internal remedies and as local applications, according to the changing indications of the case.

When Cancer is suffered to run its course undisturbed by the knife of the surgeon, or the physic of the doctor, the usual termination of it is this:—a small ulcer shows itself upon the skin of the most prominent part of the tumour, gradually increasing in dimension. And so exceedingly weak do the atomic attractions of the matter of the breast become during the change produced by the disease, that scarcely has the atmospheric air been allowed to come in contact with the tumour, than it commences to mortify and die—falling away in most cases, (as it did indeed in the case of the lady to which

I have already alluded,) after a certain time, in a dead and corrupted mass. The ulcer which it leaves behind, is in all such cases, extremely fetid, and shows a great disposition to spread; the reason of which is this,—first, because the whole constitution of such persons is more or less weak; and secondly, because the particles of dead, or half-dead matter, which coat the bowl of the ulcer, not only have no power of reparation in themselves, but are the cause of a further failure of reparative power in the already weak parts with which they come in contact. Exactly the same thing takes place when any part of an old tree becomes decayed, and very much after the manner of such vegetable decay, as you may see it in a gnarled oak, we have in this disease, mushroom-like and other excrescences springing from the sides and bottom of the ulcerous and decaying part, and that too with a rapidity truly astonishing. A case of this kind I lately attended with Mr. Farquhar of Albermarle-street. Unless every portion of these fungoid bodies be completely removed, you must not hope to arrest the progress of the disease. The whole surface of the ulcer should be cauterized and completely destroyed with a burning iron, nitrate of silver, ammonia, or potass. All four may, in some cases, be resorted to with advantage. Nor must you here spare any part that shows even a symptom of weakness; but cauterize, and cauterize again and again, until you get red, small, healthy granulations to appear. The dressings which you will now find most successful, are ointments or other preparations of the red oxide of mercury, iodine, arsenic, creosote, lead, &c., and each and all of these will only prove beneficial in particular cases, and for particular periods. The law that holds good in the case of internal remedies, will be now more conspicuous in the case of external applications,—namely, that all medicinal powers have a certain relation to persons and periods only, and must in no case, be a priori expected to do more than produce a temporary action. If that action be of a novel kind, they will produce benefit; if, on the contrary, the increased motion from their action be in the old direction, and which cannot be foreseen till tried, the result of such trial will be a greater or less aggravation of the state for whose improvement you ordered them to be applied.

Dr. Abel Stuart, while practising in the West Indies, where the disease is more frequent than in England, had many opportunities of making himself acquainted with every one of the various states and stages of cancer—and since I settled in London,

where he also now practices, he has shown me cases of this kind, which he has treated with the greatest success. You must not then suppose, like most of the vulgar, and not a few of the members of the profession, that cancer of the breast is necessarily a mortal disease. So long as you can prevent the ulcer from spreading, and at the same time keep up the general health to a certain mark, how can there be danger? The breast I repeat, is not a strictly vital organ; it is not, like the lungs or heart, necessary to the individual life,—it is a part superadded for the benefit of another generation. How many women at one time remarkable for a large full breast, in the course of years, lose every appearance of bosom by the slow but imperceptible process of interstitial absorption; what inconvenience do these suffer in consequence? But for the tendency to spread, and the accompanying pain, cancer would seldom terminate fatally at all; it is the pain principally that makes the danger, not any loss of the organ itself. Pain alone will wear out the strongest: relieve this, therefore, in every way you can, but avoid leeches and depletion, which, I need not say, are the readiest means, not only to exhaust the patient's strength, but to produce that extreme sensibility of nerve, or that intolerance of external impression, that converts the merest touch into the stab of a dagger. Strong people seldom complain of pain: it is bloated and emaciated persons who mostly do so. Keep up your patient's health, then, by every means in your power, and she may live as many years with a cancer of the breast, as if she had never suffered from such a disease. Sir. B. Brodie mentions the case of a lady who lived twenty years with Cancer, and died at last of an affection of the lungs, with which it had no necessary connexion. What shall I say in regard to amputation of the breast? Will amputation harmonize the secretions? Will it improve the constitution in any way whatever? Those patients who, in the practice of others, have been induced to undergo operations, have seldom had much cause to thank their surgeons,—the disease having, for the most part, reappeared at a future period in the cicatrix of the wounded part. Gentlemen, you have only to look at the pallid, bloated, or emaciated countenances of too many of the sufferers, to be satisfied that something more must be done for them than a mere surgical operation—a measure doubtful at the best in most cases, and fatal in not a few. Shiverings, heats, and sweats, or diarrhoea, or dropsy; these are the constitutional signs that tell you you have something more to do than merely to dissect away a

diseased structure, which structure, so far from being the cause, was in reality but one feature of a great totality of infirmity. That the knife may sometimes be advantageously employed I do not deny, but instead of being the rule, it should be the exception; for the majority of honorable and enlightened surgeons will admit how little it has served them in most cases beyond the mere purpose of temporary palliation. When you hear a man now-a-days, speaking of the advantage of early operating, you may fairly accuse him of ignorance, with which, I regret to say, interest, in this instance may occasionally go hand in hand. The large fee for amputating a breast enters into the calculation of some of your "great operators"—for that they get whether the operation be successful or not.

I have twice in my life, seen cancer of the male breast—the subject of one was a European, the other a native of India.

Let me now say a few words on

#### TUMOURS

generally; premising that the term tumour is merely the Latin word for any Swelling, though we commonly employ it in the more limited sense of a morbid growth. It is a very common error on the part of medical men, to state in their report of cases, that a "healthy" person presented himself with a particular tumour in this or that situation. Now, such practitioners by this very expression show how much they have busied themselves with artificial distinctions—distinctions which have no foundation in nature or reason—to the neglect of the circle of actions which constitute the state of the body termed health. Never did a tumour spring up in a perfectly healthy subject. In the course of my professional career, I have witnessed tumours of every description, but I never met one that could not be traced, either to previous constitutional disturbance, or to the effect of local injury on a previously unhealthy subject. Chills and heats have been confessed to by almost every patient, and the great majority have remembered that in the earlier stages their tumour was alternately more and less voluminous.

Every individual, we have already shown, has a predisposition to disease of a particular tissue. Whatever shall derange the general health, may develop the weak point of the previously healthy, and this may be a tendency to tumour in one or more tissues. The difference in the organic appearance of the different textures of the body, will account for any apparent differences between the tumours themselves; and where tumours appear to differ in the same tissue, the difference will be found to be only in the amount

of the matter entering into such tissue, or in a new arrangement of some of the elementary principles composing it. It is a law of the animal economy, that when a given secretion becomes morbidly deficient, some other makes up for it by a preternatural abundance. If you do not perspire properly you will find the secretion from the kidneys, or some other organ increase in quantity. I was consulted some time ago by a female patient, whose breasts became enormous from excess of adipose or fatty deposit. Now, in the case of this female, the urine was always scanty, and she never sweated. Every tissue of the body is built up by secretion. The matter of muscle, bone and skin, is fluid before it assumes the consistence of a tissue, and the atoms of every texture are constantly passing into each other. "The great processes of nature," says Professor Brande, "such as the vegetation of trees and plants, and the phenomena of organic life generally, are connected with a series of chemical changes." But, Gentlemen, this chemistry is of a higher kind than the chemistry of the laboratory;—it is Vital Chemistry, under the influence, as I shall afterwards show you, of Vital Electricity. Secretion of every kind is the effect of this vital chemistry; and Tumours instead of being produced, as Mr. Hunter supposed, by the "organization of extravasated blood, are the result of errors of secretion. They are principally made up of excess of some portion the tissue in which they appear, or the result of new combinations of some of the ultimate principles which enter into its composition.

If you search the records of medicine upon the subject of tumours, you will find that the medicinal agents by which these have been cured or diminished, come at last to the substances of greatest acknowledged efficacy in the treatment of ague. One practitioner (Carmichael) lauds iron; another (Alibert) speaks favorably of the bark; the natives of India prefer arsenic; while most practitioners have found iodine and mercury more or less serviceable in their treatment. Gentlemen, do you require to be told that these substances have all succeeded and failed in ague! Wonder not, then, that each has one day been lauded, another decried, for every disease which has obtained a name, tumors of every description among the number. We now come to

#### PREGNANCY.

But this, you will very likely say, is not a disease. In that case, I must beg to refer you to ladies who have had children, and I will wager you my life, that they will give

you a catalogue of the complaints that affected them during that state, equal in size to Dr. Cullen's Nosology. In the case of every new phenomenon in the animal economy, whether male or female, there must be a previous corporeal revolution. We find this to be the case at the times of teething and puberty,—and so we find it in the case of pregnancy. Can the seedling become an herb in the frost of winter, or the sapling grow up into maturity without a series of changes in the temperature and motion of the surrounding earth?—No more can the infant germ become the fœtus without a succession of febrile revolutions in the parent frame! Once in action it re-acts in its turn.

The influence of the mother's brain over the growth of the child while in the womb, is sufficiently proved by the effects of frights and other passions, induced by the sight of objects of horror, and so forth, while in the pregnant state. Hare lips, distortions, moles, marks, &c., have in too many instances been traced by the mother to such passions, to render us in the least sceptical upon that point. Now, in this particular instance, some of the parts or divisions of the mother's brain must act in association or simultaneously, while others act independently or in alternation, for otherwise you could not understand how the brain of the mother should influence the growth of the child in utero, and at the same time continue to play its part in the parental economy. Some of its various portions must act in these respects alternately, for they cannot do both at one and the same moment of time. But, here again, as in other instances, a want of harmony may arise—the brain may continue to exercise its influence over the child too long; in other cases it may forget the child for the mother. How such want of harmony affects the child, we can only guess from analogy. How a too long cerebral neglect of the mother's economy may influence her, we may daily see in the numerous disorders to which she is then liable—more particularly in the periodic vomitings which take place in most instances, and also in the swoon or faint which occasionally comes on during the pregnant state. Are not these the very symptoms that happen in the case of a person who has had a blow on the head, or who has been much bled? It appears to me probable that the infant's growth must take place principally during the period of maternal sleep. For it is chiefly in the morning, just as she awakes, that the mother experiences those vomitings and other symptoms from which I infer the brain has been too long neglecting her own economy.

But even as a natural consequence of the more favorable alternations of cerebral movement which take place during pregnancy, the mother for the most part experiences chills, heats, and sweats,—she has symptoms, or shades of symptom, at least, of the same disorders that may arise from any other agency affecting the brain in a novel or unusual manner—she becomes at certain times pale and flushed alternately, and, as in the case of other fevers, frequently complains of headache. When blood-letting—the usual refuge of the ignorant—is in such cases tried, the blood drawn exhibits the same identical crust, which under the name of “buffy-coat,” “inflamed crust” &c., so many practitioners have delighted to enlarge upon as the peculiarity of “true inflammatory fever!”

Pregnancy has been defined by some very great doctors, to be a “natural process.” Now, that certainly is a very great discovery; but they might have made the same discovery in the case of disease and death. Is not every thing in Nature, a natural process, from the fall of an apple to the composition of the *Illiad*! Every thing that the eye can see or the ear can hear is natural; miracles only are miraculous; for they are events that are contrary to the natural order of things. Pregnancy, then, is a natural process;—but is it on that account the less surely a Febrile state? Is it for that reason the less certainly an Intermittent Fever?—What disorders have not originated in pregnancy? What, in cases where they previously existed, has it not like every other fever cured? If it has produced Epilepsy, Apoplexy, Toothache, Consumption, Palsy, Mania,—each and every one of these diseases have I known it to ameliorate, suspend, or cure! I remember the case of a lady who, before her marriage, squinted to perfection. But when she became pregnant, her Squint diminished, and long before the period of her confinement it was cured;—never did I see such an improvement in the face of any person. Still, if pregnancy has cured squint, I have known cases where it produced it. How completely, then, does this harmonize with the unity which pervades Disease generally!

#### PARTURITION,

I have already said, is a series of pains and remissions, but it is not an intermittent fever; nor, indeed, has it any resemblance to that affection! So, at least, I have been assured by very clever doctors: and they have told me the same of pregnancy! Is this question, then, completely settled in the negative? Certainly,—It is settled to the satisfaction of all who pin their faith upon mere

human authority. But human authority seldom settled any thing with me; for wherever I have had an interest in knowing the truth, I have generally appealed from the decrees of that unsatisfactory court to the less fallible decision of the Court of Fact. And what does Fact say in this instance? Fact says that child-labor, in almost every case, commences with chills and heats, and that these are again and again repeated with longer or shorter periods of immunity during its progress. But how do I know all this? you will ask,—I who hold modern midwifery in such horror! I will tell you truly—I first guessed it: for I could not suppose that parturition unlike every other great revolution of the body, could be either a painless or an unperilous state, or that it could be free from the chills, heats, and remissions, which I had always observed in cases of that character. Still not being a person easily satisfied with guess-work, I took the trouble in this particular instance, to interrogate Nature. And as sure as the sun ever shone on this earth, Nature completely verified the fact of my anticipation, that parturition, in every instance, is an intermittent fever. In some of my medical books, too, I found shiverings among the numerous other symptoms mentioned as incidental to women at this period. “Sometimes,” says Dr. Ramsbotham, himself a man mid-wife, “they are sufficiently intense to shake the bed on which the patient lies, and cause the teeth to chatter as if she were in the cold stage of an ague-fit; and although she complains of feeling cold, the surface may be warm, and perhaps warmer than natural.”

Now, this cold sensation, as you well know, is often complained of by ague patients, even in the hot stage. In spite of every assertion to the contrary, then,—in spite of every declaration on the part of medical or other persons, Pregnancy and Parturition are agues—agues in every sense of the word; for not only do their revolutions take place in the same manner as ague, but, like ague, they may both be influenced by medicines as well as by mental impressions. Indeed in most cases of parturition, the labor-fit,—mark the word!—will stop in a moment from the new cerebral movement induced by Fright or Surprise. In some the fit never returns, and the most terrible consequences ensue. When the fœtus is fairly developed in the case of pregnancy, and the labor completed in that of parturition, health is the general result; but in the course of both, as in the course of other fevers, every kind of disease may show itself, and, when developed, may even proceed to mortality. An occasional termination of pregnancy is

## ABORTION OR MISCARRIAGE;

And this, in every case, is preceded by the same constitutional symptoms as pregnancy and parturition, namely, the symptoms or shades of symptoms of ague. Moreover, when a woman gets into a habit of miscarriage, such miscarriage, like an ague, recurs periodically, and takes place almost to a day, at the same month as the first. A lady who had been married several years, but who had never borne a living child, although she had had frequent abortions, consulted me upon the subject. Her miscarriages have always taken place at the same period of pregnancy—about the end of the third month—I desired her when she should again become pregnant to let me hear from her within a fortnight of the time she might expect to miscarry. She did so, telling me at the same time she knew she should soon be taken ill, as she had already had shiverings. I directed her to use an opium suppository, nightly, which she did for a month, and she was thus enabled to carry her child to the full time. She has had two children since, and all three are now well and thriving. I have succeeded in similar cases with the internal exhibition of quinine, iron, hydrocyanic acid, &c. But opium, where the drug does not decidedly disagree, will be found the most generally useful of our medicines in checking the habit of miscarriage. Need I tell you that in no case should it be continued where it excites vomiting.

The tendency to return of any action which has once taken place in the constitution, is a law even in some effects of accidents. A lady, who from fright during a storm, miscarried of her first child, a Boy, never afterwards when pregnant with boys, would carry them beyond the time at which she miscarried of the first. On the other hand, she has done well with every one of her daughters, five in number, all of whom are at this moment living.

To mothers and nurses, next to Pregnancy and Parturition, there is no subject so interesting as that of

## TEETHING.

The birth of the first tooth, like the birth of a first child, is commonly expected by both with a certain degree of anxiety, if not with fear. Why is this? Why, but because as in the case of pregnancy, before the dormant germ can be called into action—before the embryo tooth can be developed—there must be a complete corporeal revolution, an intermittent fever, of more or less intensity, varying according to the varying conditions of particular constitutions. And

what a curious unity runs through all creation, producing those wonderful analogies that alone can lead us to the proper study of nature. The embryo tooth, like the embryo infant, is the offspring of a *womb*—tiny indeed, but still rightly enough termed by the profession *matrix*—that being only another Latin word for uterus or womb. Both also come into the world by a fever. The more healthy and vigorous the child, the more subdued will the teething fever for the most part be, and the teething itself will consequently be less painfully accomplished; just as under the same circumstances the parturient mother will more surely bring forth her young in safety. In those cases, on the contrary, where the child is weakly or out of health, the fever will be proportionally severe. The generality of teething children, after having been comparatively well during the day, become feverish at a particular hour in the night. Now, the newly developed tooth, though in the first instance itself a mere effect of the fever, very soon contributes, by the painful tension which its increasing growth produces in the gum, to aggravate and prolong the constitutional disorder. It is first an effect, and then a super-added cause, or aggravant. Gentlemen, in this fever we have a fresh illustration of the unity of disease—a fresh proof that intermittent fever, in some of its many shades, is the constitutional revolution which ushers in every kind of corporeal disorder. How many varieties of local disease may not be produced during the intermittent fever of teething! Every spasmodic and paralytic distemper you can name—convulsions, apoplexy, lock-jaw, squint, curved spine, with all the family of structural disorders, from cutaneous rash and eruption to mesenteric disorganization and dysentery. Should the gum be lanced in these cases? Who can doubt it? If you found the painful tension produced by the matter of an abscess keeping up a great constitutional disorder, would you not be justified in letting out the matter with a lancet? The cases are similar. In many instances of teething, then, the gum-lancet may be used with very great advantage—but with greater advantage still may you direct your attention to the temperature of the child's body. When that is hot and burning, when its little head feels like fire to your hand, pour cold water over it, and when you have sufficiently cooled it throughout, it will in most cases go to sleep in its nurse's arms. During the chill-fit on the contrary, you may give it an occasional teaspoonful of weak brandy and water, with a little dill or aniseed to comfort and warm it—having recourse also to friction with hot

flannel, or to the warm bath. During the period of remission, the exhibition of small doses of calomel, quinine, or opium, with prussic acid occasionally, will often anticipate the subsequent fits, or render them trifling in comparison with those that preceded them.

But, Gentlemen, I should explain to you, that you may sometimes be met with considerable opposition on the part of the wisecracks of the profession, when you propose Quinine or Prussic Acid in infantile disease. I was once requested to see the infant son of a gentleman living in Hertford Street, which had been suffering from convulsions and flatulence. You remember what I told you of this disease—that infantile convulsion depends in every instance upon cerebral exhaustion. It is often the effect of cold, and frequently follows upon a purge; I have known the disease come on after the application of a leech. "No fact," says Dr. Trotter, "is better known to the medical observer, than that frequent convulsions are a common consequence of the large loss of blood." And you may recollect that in the experiment of the animal bled to death by Dr. Seeds, flatulence and convulsions were among the symptoms produced by the evacuation. But to return to the child in question. Before I saw it, the poor little thing had been the subject of thirteen distinct convulsive fits, with an interval of remission of longer or shorter duration between each. What do you think was the treatment to which this infant had been in the first instance subjected by the practitioner then and previously in attendance? Though its age was under six months, and the disease clearly and obviously remittent, he had ordered it to be cupped behind the ear,—afraid as he explained to me, of the old bugbear, pressure on the brain! How compatible this doctrine, permanency of cause, with remission of symptom! The quantity of blood taken was about an ounce, but the convulsions recurred as before. This was the reason why I was called in. The child at that particular moment had no fit—so after taking the trouble to explain the nature of the symptoms to the attending Sangrado, I suggested quinine as a possible preventive. The man of cups and lancets stared, but acceded. The quinine, however, upon trial proving abortive in this instance, I changed it, according to my custom, for prussic acid—after taking which, the infant was free from fits for a period of at least five or six weeks,—when the convulsive paroxysm again recurred—from what cause, I know not, unless it might be from a Purge which its mother injudiciously gave it on the

morning of recurrence. The flatulence, too, with which the child was all along troubled, began to diminish from the moment it took the prussic acid. You may perhaps ask me in what dose I prescribed the acid here. I ordered one drop to be mixed with three ounces of cinamon water, and a tea-spoon full of the mixture to be given every two hours all that day; so that there is no earthly agent, however powerful, even in a small quantity, that may not by dilution, or some other mode or diminution, be fined away to any state and strength—to any age or condition of life for which you may be desirous of prescribing it. In this respect, medicine resembles every thing in nature. Take colors for example;—the most intense blue and the deepest crimson, by the art of the painter, may each be so managed that the eye shall not detect, in his design, a trace of either one or the other. In the case of the infant just mentioned, the dose of prussic acid was about the twenty fourth part of a drop, and its good effects were very immediate and very obvious. Nevertheless, when the attending practitioner came in the morning to see the little patient, then completely out of danger, he was so horrified by the medicine which had produced the improvement, that he stated to the family he could not, in conscience, attend with me any longer. He accordingly took his leave of the child he himself had brought into the world, and all because he, a man-midwife! could not approve of the treatment that saved its life. Yet this very person, without hesitation, let loose all at once the Eight lancets of the cupping instrument on the head of the same infant, whose age, be it remembered, was under six months! Gentlemen, though I will not condescend to name the individual who having so heroically, in this instance, swallowed the camel, found such a difficulty afterwards in approaching the gnat; I may state for your diversion that he is a very great little man in his way—being no less than one of Her Majesty's principal accouchers—a proof to you that "Court-fools" are as common as ever. Indeed, the only difference I see in the matter is this,—that whereas in the olden time such personages only exhibited in cap and bells at the feast and the revel, they now appear in a less obtrusive disguise, and act still more ridiculous parts on the gravest occasions.

One very great obstacle to improvement in medicine has been the very general preference given by Englishwomen to male over female practitioners of midwifery. For by means of that introduction, numbers of badly educated persons not only contrive to worm themselves into the confidence of families,



but by the vile arts to which they stoop, and the collusions and conspiracies into which they enter with each other, they have in a great measure managed to monopolize the entire practice of physic in this country. And what an infamous business medical practice has become in their hands! To check the career of these people, Sir Anthony Carlisle wrote his famous letter to the *Times* newspaper, wherein he declared that "the birth of a child is a natural process, and not a surgical operation." Notwithstanding the howl and the scowl with which that letter was received by the apothecaries, it is pleasing to see that the public are now beginning to be aware of the fact that more children perish by the meddlesome interference of these persons, than have ever been saved by the aid of their instruments. How many perish by unnecessary medicine common sense may form some notion—for the fashion of the day is to commence with physic the moment the child leaves the womb—to dose every new-born babe with castor oil before it has learnt to apply its lip to the nipple!

Who but an apothecary could have suggested such a custom? Who but a creature with the mind of a mechanic and the habits of a butcher would think of applying a cupping instrument behind an infant's ear to stop wind and convulsions? The nurses and midwives of the last age knew better. Their custom in such cases was to place a *laurel-leaf* upon the tongue of the child. The routinists laughed at what they called a mere old woman's remedy, and declared that it could have no effect whatever; they little knew that its strong odour and bitter taste depended upon the *prussic acid* it contained! Gentlemen, you may get many an excellent hint from every description of old woman but the old women of the profession—the pedantic doctors, who first laugh at the laurel-leaf as *inert*, and yet start at the very medicine upon which its virtues depend, when given with the most perfect precision in the measured form of *prussic acid*! men who, in the same mad spirit of inconsistency, affect to be horrified at the mention of opium or arsenic, while they dose you to death with calomel and colocynth, or pour out the blood of your life as if it were so much ditch-water!

Gentlemen, there is such a thing as

#### HEREDITARY PERIODICITY.

If you take a particular family, and, as far as practicable, endeavor to trace their diseases from generation to generation, you will find that the greater number die of a particular disease. Suppose this to be pulmonary consumption. Like the ague, which makes its individual revisitations only on given

days, you shall find this disease attacking some families only in given generations—affecting every second generation in one case; every third or fourth in another. In some families it confines itself to a given sex, while in the greater number, the age at which they become its victims is equally determinate—in one this disease appearing only during childhood, in another restricting itself to adult life or old age. By diligently watching the diseases of particular families, and the ages at which they respectively reappear, and by directing attention in the earliest stages of constitutional disorder to those means of prevention which I have in the course of these lectures so frequently had occasion to point out to you, much might be done to render the more formidable class of disorders of less frequent occurrence than at present—mania, asthma, epilepsy, and consumption might thus, to a certain extent, be made to disappear in families where they had been for ages hereditary. But alas! then, for the medical profession, the members of which might in that case exclaim, "Othello's occupation's gone!"

[While the second edition was in the course of printing I received the three following letters, which, as they go far to bear me out in many of my previous observations, may not be deemed by the reader to be entirely out of place here. The first is from Dr. McKenzie of Kenellan, in Scotland. "KENELLAN, near Dingwall, 24th Feb. 1841. Dear Sir,—After studying at Edinburgh, London and Paris, I graduated in 1824, and immediately afterwards received an appointment to the Medical staff of the army. I conceive that, phrenologically speaking, my head is a fair sample of the common run; and during my pupilage I had the very best opportunity of acquiring what most people call "medical information." In the military hospital at Fort Pitt I had abundant opportunities of testing its value, yet though I did my best to put in practice the rules and directions which I had so sedulously studied in the schools of medicine, the result of their application was anything but satisfactory to me; nor did the observations I made on the practice of my comrades mend the matter. The Sangrado system was in full operation. Like my neighbors, I did as I had been taught, but the more I considered the result of our practice, the more convinced I became that we were all in the dark, and only tampering with human life most rashly, in a multitude of cases. Still I thought it my duty to do as my superiors directed, hoping soon to see my way more clearly. In process of time I was appointed

to a Regiment, with which I served about two years. I then married, and finding that a married man has no business to be in the army, I resolved to embark in private practice, expecting that with the excellent opportunities of becoming acquainted with disease in every form which I had possessed in the army, and aided by numerous friends, I might rise easily in my profession. I settled in Edinburgh, and became a Fellow of the College of Physicians. I soon found, however, that in leaving the army for private practice, I was "out of the frying pan into the fire;"—there were obstacles to success that I had never even dreamt of. In the military hospital I had only to say "do," and it was done; and I knew to a nicety the effect of my remedies, for in every instance they were faithfully administered. In private practice all this was changed. There, in order to live like other men by labor, I found it absolutely essential to practise the *suaviter in modo* on many occasions when the *fortiter in re* would have been the best for my patients. I therefore felt myself obliged to consider how others managed such matters, and I was soon able to divide the medical body into three classes. At the top of the tree I noted here and there a solitary individual whose word was law to his patients. I endeavored to trace the career of these favored practitioners, and was grieved at being compelled to think that in few instances had they ascended to their eminence by the ladder of integrity, talent, or real medical knowledge. On the contrary, I was compelled to believe that these qualities often were a bar to a physician's rise, and that flattery and humbug were far more valuable qualities in the eyes of the world, and, if skilfully practised, would ensure first rate eminence. Lower down I found a certain number who, like myself, did their best to retain practice, and preserve the *vultus ad sidera*. But when I looked to the bottom of the tree, I saw around it a host of creatures, void of any scruples, determined to acquire wealth, and to act on the ancient maxim, *rem si possis recte; si non, quocunque modo rem*; [Make money,—honestly if you can; if not, make money!] men who, void of integrity and all honorable self-respect, looked upon such as differed from them in this point as insane. I certainly was taken quite aback, and looked and better looked in hopes that my senses deceived me; but the more I looked the more was I satisfied, or rather dissatisfied with the correctness of my views. It was now quite clear that I never should rise in the profession, and that "although bred to physic, physic would never be bred to me." I could not scramble

for subsistence at the expense of self-respect, and live upon an *ipecacuan loaf*. In spite of the lamentations of my friends and patients, who thought me "getting on so nicely," but who were unable to read my real feelings, and at the expense of being ridiculed by many who supposed me actuated by foolish pride, &c., I bade adieu to private practice, and turned my lancet into a ploughshare. In short, I took to farming, in which vocation I have now continued for nine years, enjoying a happiness and peace of mind that I think few medical men can understand. Among the poor I still keep up a little practice, and occasionally am consulted by my country practising friends, but, like my old lancets, I grow very rusty. Perhaps you will say so much the better. And now, why have I troubled you with all this from an entire stranger? Simply as a preface to the thanks that I now beg to offer you for the new light that broke upon me on reading your *Fallacies of the Faculty*, sent me by a non-medical friend. My ideas on physic have been totally revolutionized by it, and I now recal to my mind many cases where I made most fortunate cures accidentally, by following your system, though without any knowledge of the principles of its application. Most sincerely do I congratulate you on your discoveries, and most confidently do I look forward to the day, not distant, when they will be duly appreciated. I have myself been all but a martyr at the shrine of Sangrado, but nothing will ever again induce me to part with a drop of blood, so long as it will circulate in the veins of—Your obliged and faithful

J. M'KENZIE, M. D."

The next letter is from Dr. Charles Greville of Bath: "BATH, Feb. 24, 1841. My dear Sir, I have perused with much interest your excellent and original lectures on the *Fallacies of the Faculty*, and have much pleasure in attesting the truth of your remarks. I have treated numerous cases of disease upon the chrono-thermal principle, with perfect success. Should time permit, I will furnish you with various instances. I have no doubt the public will eventually appreciate the superiority of your views, and take its leave of the nefarious apothecary, whose existence seems to depend upon the deluging of his patient with unnecessary and too often deleterious compounds. I remain, my dear Sir, Yours very faithfully,  
CHARLES GREVILLE."

The third letter is from Mr. Henry Smith, a surgeon in very extensive practice at Cheshunt, in Hertfordshire: "CHESHUNT, Feb. 24, 1841, My dear Sir, At a time

when your doctrines are so much the subject of discussion both with the profession and the public, the evidence of a country practitioner as to the result of their application in his hands, may not be altogether unacceptable to their author. The first time I heard your name was about eighteen months ago, when the Hon. Edmund Byng sent your *Unity of Disease* to my father-in-law, Mr. Sanders. We were both equally struck with the novelty and simplicity of your views, as there detailed, and we determined to put them to the test. You will be gratified to hear, that neither Mr. Sanders nor myself, from that time, have ever had occasion to use either leech or lancet in our practice, though formerly we felt ourselves compelled to use both. Every day has confirmed us in the truth of your opinions by our increased success. I have treated cases of Apoplexy with the most perfect success with no other means than the application of cold water dashed over the head and face,—following that up after the fit had gone off, with quinine, ammonia, and prussic acid. I have cured all kinds of cases of convulsion, by the same treatment; indeed, in the convulsive diseases of children, the prussic acid has been my sheet-anchor. In cases where children have been apparently still-born, I have succeeded in rousing them by dashing cold water over their bodies. With quinine, and prussic acid, I have treated many cases of croup, and in no instance do I remember to have lost a patient. Many cases of hysteria, and some of epilepsy, have been cured or relieved by creosote, after every other medicine had been tried in vain. I have treated cases of both chronic and acute rheumatism successfully by arsenic. By the tonic practice I have been equally successful in inflammations of the chest and bowels. Before concluding this hasty sketch, permit me to express how thankful and grateful I feel towards you, for the light by which you have expelled the darkness in which medicine was formerly so much enveloped by its professors.

Yours, my dear Sir, very faithfully,

HENRY SMITH."

Since the publication of the second edition of this work, Mr. Smith confirms his previous statement by a further experience of eighteen months—three years in all—during which he has not used a leech or lancet. I have also received among other communications the following:

From H. C. Deshon, Esq., Surgeon.  
"SHROTON, BLANDFORD, 10th November, 1841. Dear Sir, I have from time to time anxiously waited to hear of the state of

health of that beloved relative [his mother] I left under your care, and I am now glad to hear that she considers herself better, \*

\* \* I have cured palsy and epilepsy by hydrocyanic acid, quinine, arsenic, &c., and I have also found these medicines of avail in convulsions and dropsies. Indeed, I am confident that most diseases may be cured (I refer to chronic diseases chiefly) by medicines useful in ague, and on your principles with reference to Periodicity and Temperature. Dear Sir, very truly yours,

HENRY C. DESHON."

From Charles Trotter, Esq., Surgeon:  
"HOLMFIRTH, near HUDDERSFIELD. Dear Sir, having read your second edition, *Fallacies of the Faculty*, I have been induced in a great number of cases to try the chronothermal system of treatment, and I must confess that in very many instances it has exceeded my expectations. I have cured what are termed inflammations without the patient losing a single drop of blood. Very recently I succeeded in bringing a case of Peritonitis (inflammation of the membranous covering of the bowels) to a favorable result without bleeding at all. Several well-marked cases of Pneumonia, (inflammation of the lungs,) as well as of pure Bronchitis, (inflammation of the air-passages,) have also yielded to medicine without any bleeding. And I may at the same time observe, the recovery was in every case quicker, and the consequent weakness less than if blood had been drawn. Yours truly,

CHARLES TROTTER."

From Dr. Fogarty, Surgeon of the St. Helena Regiment: "LONDON. My dear Sir, I have read with the greatest delight your *Fallacies of the Faculty*. Every word ought to be written in letters of gold. Yours faithfully,

M. FOGARTY."

From H. W. Bull, Esq., Surgeon, R. N.:  
"WOKINGHAM, 5th February, 1843.

Dear Sir, I beg to forward to you a statement of my own case, and one or two cases of others treated on your plan, all of which are evidence of the value of the chronothermal system. I was attacked by paralysis on the 28th October, 1841, which deprived me of the use of my right arm and leg, affected the same side of the face, and produced some difficulty of speech. The usual plan was adopted, bleeding, purging, leeching, mercury and blisters. In this state I crawled on to May, 1842, when I lost more blood to prevent another anticipated attack, goaded on by what you term the bugbear Congestion. In this manner I went on occa-

sionally cupping and purging, and with a very restricted diet. In consequence of all this I was much reduced, and I became exceedingly weak; the heart palpitated very much on the least motion, and I had in addition occasional fainting fits. Last May my son sent me some extracts from your work, the *Fallacies of the Faculty*, the perusal of which induced me a few days afterwards to state by letter the particulars of my case to you. The first prescription you were so kind as to send disagreed; you then ordered quinine, and this I took with good effect. The shower-bath which you also ordered I found very beneficial. I have followed the plan laid down by you with very great advantage; changing the different medicines from time to time as occasion required; and I can now walk two miles without assistance. I have not only power to raise my right arm and wave it round my head, but I can lift a weight of forty pounds with it. I am now following the same plan with very good effect; I must confess I was at first startled by a practice so very different from all I had been taught in the schools, but a practice, I can truly say, to which I owe my life. Like Dr. McKenzie, nothing will ever induce me to lose a drop of blood again so long as it will circulate in the veins of,

Yours, most sincerely and faithfully,

H. W. BULL, Surgeon, Royal Navy.

Cases alluded to in the above letter.

"Case 1. Mr. C—— was attacked with acute rheumatism in almost every joint, great difficulty of breathing, and violent pain in the chest. I prescribed an emetic, but he refused to take it: he is a Hampshire man, and almost as obstinate as one of his own hogs. He continued in this state two days more; at last he was prevailed on to take the emetic. It operated soon and gave him instant relief. I followed it up with quinine and colchicum; he is now quite well, and has gone to his brother's house, some distance from this.

"Case 2.—A girl twelve years of age was brought to me from Binfield in convulsive fits. The pupils of her eyes were much dilated, and the fits followed each other in rapid succession. I first gave her a purgative, and followed it up with prussic acid; this was on a Monday. The fits became less and less frequent, and from the following Friday they entirely ceased. I also lately used the prussic acid with the best effect in the case of a child seven weeks old.

"Case 3.—A gentleman lately brought his child, a fine boy, to me for squint; the age two years. Some days the boy squinted less than others. I gave him six powders

containing quinine and a little calomel: no other medicine was prescribed. There has been no squint since the powders were finished. In many other cases I have followed your plan with the best success.

H. W. B."

From John Yeoman, Esq., a surgeon in extensive practice at Loftus in Yorkshire: "LOFTUS, Feb. 2, 1843. Sir, Hearing that you are about to give us another, a third edition of the *Fallacies of the Faculty*, I beg now to offer to you my best thanks for the service you have already done the medical profession, by the publication of your original doctrines on disease. Being convinced, from my own experience and observation, that there is a Periodicity in most diseases, and that blood-letting is resorted to, as a curative measure, far too indiscriminately, I have read the *Fallacies of the Faculty* with very great interest and advantage. With interest, because I have been anxious and ready, for the last two years, to test the Chrono-thermal doctrine and remedies fairly, and with advantage, because I have succeeded in a wonderful manner to cure diseases, by acting up to the principles and practice you recommend. I have treated several cases of decided *Pleurisy* and *Pneumonia* according to the Chrono-thermal system, using emetics, purgatives, tartar emetic, prussic acid, and quinine, and *without* the aid of *lancet* or blister, most successfully. In croup and typhus-fever, I can bear ample testimony to the good effects of emetics, cold affusions, prussic acid and quinine; and with these agents alone, I have cured several cases of both within the last six months. You are at liberty to make use of these few remarks, to make them known to the profession, or the world, as you please; and wishing you every success in your future efforts, good health, and happiness, I am, Sir, yours sincerely,

JOHN YEOMAN,

Member of the Royal College of Surgeons, and Licentiate of the Apothecaries Company, London."

From J. H. Sprague, Esq., M. D., formerly a Medical Officer on the Staff:—"CLEVELAND, near Bristol, Feb. 6, 1843. My dear Sir, Having read over and over again your invaluable work, the *Fallacies of the Faculty*, and having devoted much time to the study of the principles laid down, I am desirous to convey in plain language my sentiments in regard to the immense benefit which would indubitably be conferred on mankind by the general adoption of your opinions and practice. I was strictly

educated to the Medical profession from my youth up, and have been in actual practice for more than thirty-three years, time enough you will say, to be rooted and grounded in all the prejudices of an age of such superficial thinking as the present. Those prejudices, doubtless, I should have imbibed, and possibly cherished, like many others who know no better, had I not been taught at an early age by my mother, a woman of superior sense and discernment, to imitate the example of one whom I am proud to call my ancestor—the immortal John Locke. Her constant advice was, think for yourself and never take any man's assertion for proof. Examine before you believe :

Seize upon Truth where'er 'tis found,  
Among your friends, among your foes,  
On Christian, or on heathen ground,  
The flower's divine where'er it grows,

Watts.

I have, therefore, through life carefully examined and compared effects with their supposed causes, believing nothing upon the mere assertion, or *ipse dixit* of any authority, however high. It was my fortune to be a pupil of the late once popular Dr. Beddoes, at a period when Pneumonic medicine was all the fashion ; or in other words, when the inhalation of various gases was prescribed for chest diseases. At that time, it was also common to place consumptive patients in cow-houses, to breathe the odor of the animal, then believed to be a specific for that complaint. Beddoes, however, prescribed digitalis (fox-glove) ; maintaining that he could cure consumption with that drug, as certainly as he could cure an ague with bark. Yet all these things are now candidly allowed to be only specious fallacies. Soon after this originated the doctrine first brought to this country by invalids returning from India, that the Liver is the seat of all disease ; and this doctrine my friend and correspondent, Dr. Curry, of Guy's Hospital, promulgated to the world as true, in his attractive and eloquent lectures ; assuring his numerous pupils, at the same time, that the cure was to be effected by calomel, in scruple and half-drachm doses ! So extensively, indeed, at one time, was this mercurial used through Dr. Curry's influence, that calomel was generally known at the druggist's shops in London by the name of Curry powder ! How many thousands of lives have been destroyed by the *mercurius dulcis*, or sweet mercury, as calomel was once called ! On the subsidence of the Hepatic mania, Mr. Abernethy appeared upon the medical stage with his blue pill and black draught, which, with decoction of sarsaparilla, were long considered as the only remedies required for

"all the ills that flesh is heir to." Somewhat later, began the rage for profuse bleeding, which, with very few exceptions, has up to the present time been zealously advocated by the whole medical fraternity. 'The Sanguinary Science,' as you have most appropriately named it, has been, and is still taught and inculcated in all the English schools of medicine ; and sanctioned by such authorities, the practice of phlebotomy has spread through the land like a destructive torrent. Whether the doctor entered the rich man's habitation, or the poor man's dwelling, the first word was 'You must be bled !' Or if the operation had been performed, the next most important question to be decided was, 'Has enough blood been taken ?' Among the principal British slaughter-houses, I must reckon the Army Hospitals. There the living blood was and is still poured out, as if it were the most pernicious element in nature ; so much poisonous ditch-water. I recollect a spruce young surgeon, of the 13th Regiment of Foot, with whom I was in garrison in the Island of Jersey, who made it his boast that 'when the battalion was in Canada, he thought nothing of having seventy or eighty pounds of blood thrown out upon the dung-hill every morning !' To preserve my credit with the Director-General of the Army Medical Department, I was of course obliged to follow at an humble distance this terrible practice : for had not the letters V. S., or Venæ Sectio, appeared opposite to the patient's name in my returns to the Medical Board, I should undoubtedly have been deprived of my commission ; so indispensable was the operation considered to be ! But even at this early period of my life, by a judicious use of Emetic Tartar and other medicines, which I now call chrono-thermal remedies, I was much more successful in my practice than those who trusted almost exclusively to the lancet. A few years after the time I refer to, a perusal of the excellent practical treatise of Dr. Balfour led me to adopt the Antimonial treatment. Up to this hour, in this part of the country, the dangerous system of depletion is thoughtlessly persisted in, and the delicate and weakly, as well as the more robust, are every day drained of their life's blood,—the unfortunate patient sinking into a state of exhaustion—and death produced not by disease, but by the doctor. But of all the sanguinary projects ever had recourse to, surely there is none so barbarous and cruel as the practice of scalping a patient by a cut of six or seven inches along the upper part of the head, for the purpose of making an issue. I have known cases in this neighborhood where the patient has rapidly sunk from loss of blood, shortly

after the infliction of such an incision; and other cases in which the bleeding has been so impetuous, that it could only be stopped by means of searing the wound with a red hot iron! What an idea, to call the practice of illiterate quacks in question, when medical men are permitted to perform operations so unprofitable! Lord Ellenborough's act for 'cutting and maiming' surely applies to these torturers of their fellow-creatures. A very clever physician, whom I lately had the pleasure of meeting in Devonshire, showed me a preparation of the head of an unfortunate man who had formerly been a patient of his, and who had cancer of the eye. A short time before his decease, the poor man went to Bristol for advice, where his case was treated by two medical men, a physician and an oculist, as inflammation of the Brain. This patient, by their directions, was unmercifully leeches and then cut and hacked, as I have described to you, and he returned home with an issue, containing fifteen beans, in his scalp! after which, he lingered a few weeks, and died of complete exhaustion. Notwithstanding the strenuous and persevering advocacy with which blood-letting has been so universally urged, and that, too, in the face of the great destruction of human life indubitably produced by it, to you, Sir, belongs the honor of triumphantly proving by evidence the most incontrovertible, that 'all diseases which admit of relief can be successfully treated *without* loss of blood.' And here do I most willingly record my unbiased testimony to this important TRUTH. Let me further add, that by a course of patient investigation and much practical experience, I had arrived at the same conclusion before I had the pleasure of perusing your writings. I am therefore bound to acknowledge how highly I value the *moral courage* which has induced you to promulgate your invaluable opinions, and which, I believe are built upon an immovable foundation. In proof of the benefits derived by the application of your principles in my own practice, I annex a few remarkable cases, some of them highly inflammatory, which I have lately cured by the chrono-thermal treatment, without the loss of a single drop of blood. With a deep sense of obligation to you for the information I have derived from your various writings, especially the 'Fallacies of the Faculty,' I remain, my dear Sir, yours very faithfully,

J. H. SPRAGUE, M. D.

Cases referred to in Dr. Sprague's letter:—

Case 1.—I was suddenly called upon to see the butler of Sir C. A. Elton, Bart., Clevedon Court, who, I was told, had Brain-fever,

and was "ramping mad." On my arrival, I found that a practitioner, previously in attendance, had bled him largely at the arm, and applied leeches to his head, and put him on a low diet. His state, when I saw him, was one of great danger. He looked wild and agitated—his head at intervals being intensely hot, succeeded by a low sinking pulse, and his skin bedewed with a clammy perspiration; he had not slept for seven nights. The case was evidently *Delirium tremens*. I immediately ordered the cold dash to the head, which was repeated at intervals in the course of the day. Muddled port to be taken occasionally with some cordial medicine and an opiate. The next day he was effectually relieved, having had six hours' comfortable sleep. A remission of symptoms being thus established, I prescribed quinine, and other chrono-thermal medicines, and at the end of a fortnight he was so far recovered as to be able to walk a distance of two miles, much to the surprise of all who had heard of his illness, the medical man formerly in attendance having declared that if he did not die, he must become the inmate of a mad-house. He is now doing his duty as butler in good health.

Case 2.—A girl, aged four, who had been ill four days, was brought to me, with intense pain of head, and the peculiar scream that generally attends inflammatory brain affection. She had much fever, with hard and incompressible pulse—the pupil of her eye was contracted—she was intolerant of light, and she had repeated fits of vomiting. Having had her head shaved, cold applications in various forms were employed, and her feet, at the same time, were kept warm with hot water bottles. An emetic was also given, with other medicines, to subdue the fever. In the course of three weeks, this severe case of cerebral inflammation was completely cured, without the loss of a single drop of blood. Under the anti-phlogistic plan, such cases usually terminate in water of the head and death.

Case 3.—A child, twelve months old, had croup; he was hot and feverish, had great difficulty in breathing and cough, with the metallic sound peculiar to that disease. By an emetic twice repeated, followed up with quinine, and sulphate of copper, in minute doses, to say nothing of warm applications to the throat and other chrono-thermal means the child recovered rapidly. Under the old system of leeching, bleeding, and blistering, such cases, if the subjects of them survive at all, which is seldom, generally end in a long protracted weakness of body.

Case 4.—Miss S—, aged 30, had repeatedly suffered from spitting of blood, for

which her physician in Bath had ordered her to be as repeatedly bled and leeches. When called upon to see her, she was bringing up considerable quantities of florid blood, and her anxious friends, in the belief that I would bleed her, had the bandage and basin ready for the operation! I ordered an emetic instead, which at once stopped the hæmorrhage. This I followed up with antimonials and opiates. I then prescribed quinine, and other chrono-thermal medicines, with nutritious diet, directing her chest, at the same time, to be sponged with cold water. In the course of three weeks, her health was very greatly improved. In six weeks more, she left Clevedon quite an altered person, and without any apparent tendency to return of the hæmorrhage.

Case 5.—Mrs. S——, aged about 38, applied to me for a lancinating pain of the left side, cough, and difficulty of breathing, increased by inspiration, with the other common symptoms of Pleurisy. I prescribed an emetic, and having, by means of this, and antimonials in small doses, subdued the more urgent symptoms, I ordered a mustard cataplasm to the chest, and prescribed the usual chrono-thermal remedies, which, in a few days, cured an attack of as severe Pleurisy as I ever witnessed, and that, too, without the abstraction of a drop of blood in any form.

Case 6.—Mr. T—— N——, age about 28, from exposure to wet, was seized with severe shiverings, followed by violent fever, in course of which, the elbow, wrist, and the ankle joints became so swollen, painful, and agonizing, as to prevent his moving in any manner. Emetics, opium, bark, and warm fomentations to the affected joints, rapidly produced a cure. Since that attack, he has had much better health than formerly, without any return of Rheumatism, to which he was before very liable.

Case 7.—Mr. H—— D——, age about 50, had for years suffered from severe pain in the back and limbs, the temperature of his skin being colder than natural. Cupping, bleeding, blisters, &c. had all been tried in his case unavailingly. I prescribed quinine, sulphur, guaiac, and small doses of turpentine, which, with a liniment of turpentine and mustard, worked wonders on him. These measures, and an occasional tepid bath, cured him completely in three weeks.

*Nausea, or Sickness of the Stomach.*—R. Tinct. Ipecac. 3 to 5 drops, in a wine-glass of water; or of first dilution 5 to 10 drops, in a wine-glass of water.—*Homæopathic.*

(For the Dissector.)

# TRACTS ON CONSUMPTION.

## NUMBER ONE.

On a new Diagnostic Symptom in Tubercular Phthisis.

By J—— G——, M. D.

The improvement in the science of medicine has been so great during the past century, that, if it does not constitute one of the glories of modern philosophy, it is a just object of pride to the physician. It is not detracting unfairly from the character of this improvement to confess that our science is still very imperfect. We may even admit that in several departments, which, from their comprising enquiries into the greatest evils incidental to man, have been most assiduously investigated, we have made no important advance in knowledge. Consumption is a striking example of the stationary character of medical science. This disease has been regarded as influencing the happiness of man as much as any circumstance connected with his existence, and, as such, has engaged the attention of physicians from the earliest ages of medicine; and yet it may be questioned whether it is more submissive to the power of art, at the present day, than it was in the time of Hippocrates. Improvements in diagnosis have enabled us to point out the disease, at least in its advanced stages, with considerable accuracy; and yet it acknowledges no more control from the art of medicine, than when the means of distinguishing it were so ill defined that its characteristics might be applied to a whole class of complaints. The zealous cultivation of pathological anatomy has shown us an approximation to the true nature, if not the actual state, of the malady; but still it is as rarely cured as when pathology consisted wholly of fiction and hypothesis. Therapeutics, based upon a sound diagnosis and an improved pathology, have, apparently, suggested the most direct and energetic means of subduing this terrible disease; but so unsatisfactory are the results of their most judicious application that no physician attaches any importance to, or places the least reliance on them.

Pathological anatomy has clearly demonstrated that the powers of nature are frequently adequate to cure consumption; and it is considered equally certain that it is utterly beyond the reach of art. So indisputable is the latter position deemed, that the physician who should pretend to cure the disease would be considered unacquainted with its morbid anatomy, if, indeed, he did not subject himself to the imputation of being a boasting charlatan. And yet, when we see, as mor-

bid dissection demonstrates, that nature by her unaided efforts, not only changes the condition of the system on which a disease primarily depends, but even remedies its local ravages, it is certainly not unreasonable to suppose that art may be so applied as to imitate, or at least, to aid her labors. An accurate knowledge of the morbid condition which characterizes a disease ought, in every instance in which it is curable, to establish a foundation for a successful method of treating it. And until, in these cases, the latter follows the former, like effect from a cause, it will be more philosophical to consider that our views are erroneous or too limited, and to seek, by new modes of investigation, sounder results, than to suppose an evil beyond the reach of art to remedy, and thus allow ourselves to sink into the hopeless indifference of despair.

The treatment of consumption, whether under the daring energies of the empiric, or the suggestions of reason based upon recognized principles of pathology, has been so uniformly unsuccessful that, taking into view its spontaneous curability, it affords conclusive evidence it must be associated with error. Its melancholy results furnish a strong incentive, if they do not indeed imply an absolute duty, to review the whole subject in a light entirely different from that in which it has been accustomed to be looked at. Examined in this way, it will no doubt be discovered that many of the supposed facts and principles, upon which our knowledge of this complaint is founded, and deemed to be incontestable, are but hazardous conjectures. There can be as little doubt that a due attention bestowed on what is indisputable in consumption, will show not only that its pathology is incomplete, and that the deductions from it are erroneous, but that reasoning applied with the earnestness due to a subject so important and interesting, will point out the deficiencies. But in order to do this with a rational hope of attaining the great object of controlling consumption, it will be necessary to establish, on a certain basis, three conditions of the disease, viz; first, an accurate means of determining its existence; second, an indisputable pathology; and third, a means of treatment in strict conformity with its pathological principles. An examination of these three fundamental conditions of consumption will form subjects for three separate articles, which will be furnished for publication in this journal.

**DIAGNOSIS.** The first step in the consideration of any disease is to ascertain its precise diagnostic characters. This department of medical science is nowhere more useful than in its application to consumption, be-

cause there are a number of diseases simulating it, but arising from pathological causes so different as to require treatment of an opposite character. Chronic inflammation of the different tissues of which the lungs are composed is often accompanied with symptoms closely resembling those produced by tubercular disease; and the distinction between them becomes, by the ordinary means of diagnosis, very difficult—more especially after the tuberculous disease has existed for some time, and become complicated with inflammation. It is, therefore, an important desideratum to be able to determine the peculiarities or pathognomonic signs of these distinct diseases. A certain degree of perfection in identifying phthisis is indispensable to the reputation of any means which pretends to exert an influence over it; for the ordinary manner of setting aside the evidence of recoveries, under remedial agents, has been by denying the identity of the disease and tubercular consumption. And this summary but invidious mode of disposing of a difficulty has, hitherto, been sanctioned by the uncertainty attending the diagnosis of the disease, as well as by the vast preponderance of the testimony against the success of the same means when employed by others, than their introducers, in unequivocal cases of consumption. It is of still higher importance to be able to distinguish it in its early stages from the other diseases with which it is liable to be confounded, since, it is considered, that, if it is not exclusively in the commencement of the disease that we can hope to effect a cure, or even to arrest its progress, it is much more controllable in these stages under an appropriate treatment.

It is due to the progress of medical science as well as to the interests of society, that the diagnostic characteristics of tubercular consumption, in every stage, should be accurately determined. The enquiry into the subject has been much facilitated by the labors of Broussais, Abercromby and Laennec, subsequently confirmed by the minute and laborious investigations and researches of Louis, Andral, Clark, Williams, and a host of modern physicians. Notwithstanding this vast mass of labor it is still encumbered with contradictory facts, and results which are difficult to reconcile or explain in a satisfactory manner. In analysing the usual diagnostic symptoms and signs of phthisis we shall find that there is not one of the former which may not belong to a multitude of complaints, and scarcely a leading one of the latter which may not be absent. Indeed, it has been stated, instances have occurred in which tuberculous disease has proved fatal almost without any local or general symptoms, and



the most accurate observers have been deceived, even in the last stages of consumption, by the apparent absence of all physical signs.

The ambiguity and obscurity in which the diagnosis of this disease, particularly in its early stages, is involved, fully sanction a new attempt at its elucidation. In making this attempt, I am not without hopes of being able by a simple but natural means, in most cases by itself alone, and always by contrasting it with the nosological character and physical signs, to render its diagnosis so plain and distinct that no one who is competent to undertake the treatment of phthisis can mistake it. In conducting this enquiry, I shall avoid, as much as possible, and always, except to point out their general insufficiency, details of the symptoms and phenomena, which are commonly considered evidences of either phthisis or the diseases which admit of being identified with it. This I do, not that I think them valueless, but because they are to be found, accurately described, in almost every treatise on the subject. My observations will be strictly confined to a notice of those nosological points which contribute to illustrate the main subject of investigation, and which must be accurately decided upon in order to render the disease the aid our profession affords.

**NOSOLOGICAL SYMPTOMS.** The value of general symptoms of disease consists in their affording an index to the causes from which they arise. If they were unerring, and consequently to be relied upon, they would afford a very simple process for arriving at a knowledge of the physiological or pathological conditions of diseased structures. But though the progress of pathology, during the present century, has done much to explain the rationale of the general symptoms of disease, nosology furnishes but feeble agents in determining its precise nature. In no disease is the imperfection of this department of medicine more apparent than in consumption; for no collection of symptoms has been ever able to define it, even in the loosest and most general acceptance of the term. The enumeration of phenomena never conforms invariably with the disease, nor are they always dependent on the same pathological cause. The whole train of symptoms, laid down as pathognomonic of phthisis, may occur as the result of a simple cause, such as a common cold, producing catarrh, pleurisy or peripneumonia, in the first instance, followed more particularly if improperly treated, with wasting, expectoration and hectic fever. How embarrassing this absence of precision, in a disease so destructive as consumption, must have been to the practitioner of past

ages, when, under the sole guidance of nosology, it was of the highest consequence to identify the symptoms with the name given to the disease, and thereon found the treatment, must be apparent!

If we examine the general symptoms of phthisis, we shall find that they are common to a variety of diseases, in which there is not only an absence of tubercles, but in which there is neither disorganization of the lungs nor any material interruption of their functions.

**COUGH.** "This symptom is generally the earliest indication of pulmonary irritation, and the first circumstance which excites the attention of the patient or his relatives." While, in general, among the most obvious and constant attendant throughout the whole progress of consumption, it is sometimes so slight as to be overlooked, and cases are on record, in which tubercles have proceeded to a fatal termination without its having ever occurred. That it does not uniformly depend on the pathological process of genuine consumption, every practitioner, as well as the public at large, very well knows. In truth, the diseased conditions in which it may arise are so numerous and various that it can hardly be considered a distinctive sign of any disease. Inflammation of the pulmonary mucous membrane gives rise to and renders it a prominent symptom of chronic bronchitis—a disease that, from its prevalence and fatality, is scarcely less a scourge than consumption itself—and hence, as it is different both in its nature and the tissue affected, and consequently requires a very different mode of treatment, it is important to distinguish it from the tuberculous cough. Gastric irritation is frequently attended with cough, not unlike that which accompanies the early stage of tuberculous disease, and as its cure depends on principles of treatment very different from that of the tubercular, it is obviously important that its distinctive characters should be known. Besides these more common sources of chronic cough, irritation of the liver and duodenum, and irritation of the uterus often give rise to a cough which may be confounded with that of consumption. For a description of the characteristics of the various kinds of coughs, so far as they are connected with a general history of the disease, I must refer the reader to systematic treatises on consumption, and particularly to the admirable one of Sir James Clark. It is sufficient for my purpose to state that the new diagnostic symptom I propose to introduce, will be sufficient to, negatively, recognize them as unconnected with tubercular phthisis.

**DYSPŒA.** This symptom, though never

wholly wanting in consumption, varies greatly in the degree of its intensity in different cases, and even in the same individual. Its presence will generally be found proportionate to the extent of the disease of the lungs and to the rapidity of its progress. Though commonly put down as a diagnostic symptom of phthisis, and certainly present when the disease exists to any extent, it so often and so obviously arises from other causes than tubercles, that little reliance can be placed on it as a distinguishing characteristic.

**EXPECTORATION.** Few of the symptoms of phthisis have excited more attention than the matter excreted from the lungs, or have been considered of equal importance in distinguishing consumption from bronchial disease. But since morbid anatomy has shown that pus may exist in the simple affections of the larynx, trachea and bronchia, or may be an attendant on chronic pleurisy, or pulmonary abscess, it has also satisfied physicians of its inutility as a diagnostic. Whether, indeed, in correcting the error which formerly attached so much importance to this much labored diagnostic, physicians have not gone to an opposite extreme and deprived themselves of some advantages it is capable of affording, is a subject worthy of investigation. Animal chemistry has not done much to illustrate the nature of purulent discharges, or of tubercular depositories; but it is impossible to identify the melted down matter of tubercles with that bland and salutary fluid which is poured out on the surface of granulating sores, or even with that discharged from bronchial ulcers. It is not improbable that the cultivation of this science would show that tuberculous matter is essentially different from that fluid discharged from inflamed mucous surfaces; and, if so, might elevate discharges from the lungs to the important position in diagnosis they were formerly considered to possess. That there is a distinctive difference between pus and the matter of tubercles is apparent from their appearance; and Majendie expressly states that he had a pupil, who was able, by simple inspection of the globules to distinguish pus from the lung, the pleura, the peritoneum, and the cellular tissue with unerring accuracy. It is, however, possible for phthisis to run its course without expectoration, and it occasionally does so. From this circumstance, conjoined with its varying characters, and our inability, at present, to distinguish it from the matters discharged in other affections of the lungs, no pathologist places any reliance on it, either in a negative or positive sense, as a diagnostic symptom of phthisis.

**HÆMOPTYSIS.** Among the consequences of the pathological condition of the lungs, accompanying the development of tuberculous disease, is a tendency to hæmoptysis. It is no doubt, occasionally, idiopathic, or at least totally unconnected with any previous disease of the lungs; but it is generally to be considered symptomatic of the existence of tubercles. Occurring in a large proportion of cases, and frequently in a very early stage of tuberculous disease, it is a diagnostic symptom of some importance. Being wholly absent, in many cases, it cannot be looked upon as an unerring characteristic of consumption.

**HECTIC FEVER.** Hæctic fever is an invariable attendant on consumption; but as it is common to every disease in which there is local disorganization, or a process of destruction accompanied with chronic inflammation; and as it may be both considerable and conspicuous, while the tissue of the lungs is neither tuberculated, destroyed by ulceration nor otherwise diseased it cannot be looked upon as a nosological characteristic of phthisis.

**EMACIATION.** This very prominent symptom forms a part of every nosological definition of consumption, and, generally, is so disproportioned to the other symptoms by which it is preceded or accompanied, that it is frequently the first that attracts the attention of the patient, while it exercises a great influence over his feelings. Its importance as a diagnostic sign is inconsiderable, because, like hæctic fever, it is common to a large class of diseases; while in consumption, other symptoms of a more marked character to the eye of the physician, usually precede and accompany it.

**APHTHÆ.** The difficulty of defining phthisis accurately, in any of its stages, by means of symptoms, led to the introduction of an apthous state of the mouth as one of its characteristics. But, besides, that it is one of the last evils that appears in the long catalogue of maladies which form the nosological definition of phthisis, it cannot be regarded as a diagnostic, because it follows hæctic from any cause, chronic bronchitis for instance, or dysentery, or from abscess in the liver or groin, psoas abscess, &c.

The view which I have taken of the assemblage of morbid phenomena, called by nosological authors symptoms of consumption, shows that they may arise from pathological causes so widely different, that they cannot often possess the precision for pointing out either tubercular phthisis, the several species of disease that stimulate it, or even to designate the whole as a class. In the few cases, even, in which their indications

might be regarded as unequivocal they would be of no value, because they must mark a stage of disease too far advanced in destructiveness to admit of being arrested by the art of medicine. The advance in the knowledge of pathology, by pointing out the variety of causes on which apparent consumption might depend, and the importance of recognizing them in the earliest stages of disease, called for diagnostic means more positive and particular, in their information, than general symptoms afford. Without these the practitioner must continue, as he had done through all time, to administer medicines, destitute of any certain principles for determining whether they may be beneficial or injurious to the particular variety of morbid action in his patient's lungs. In this difficulty, as applied to the disease before us, the science of medicine has received a powerful collateral aid from what are called the physical signs of consumption.

**PHYSICAL SIGNS.** These valuable diagnostic agents depend on the general laws of physics, and are explained on the same principles as other phenomena illustrated by natural philosophy; hence they stand on a broader and more intelligible basis than ordinary symptoms, and possess a great superiority as a channel through which to investigate disease. Their discovery introduced them to a rapid popularity; for, with many physicians, they immediately superceded the necessity of attending to the external symptoms of such diseases as phthisis. In this respect the value of their indications has been over-rated; for there are certain organic affections of the chest, which furnish nearly or quite the same physical signs, but in which the general and specific symptoms can be brought into service to indicate the difference. Thus, however inadequate mere nosological symptoms may be for fixing the character of consumption, they may render considerable aid to the physical signs in removing doubts on the subject. It is true that both conjoined are often very equivocal in characterising the first occurrence of pulmonary tubercle; yet, at this time, they may aid each other in affording very valuable information, if not in a positive at least in a negative point of view. If, for instance, they cannot give us positive assurance of the presence or absence of tuberculous disease, they may enable us to say that, if present, it exists in a very limited extent.

**RESPIRATORY MOVEMENTS.** In examining a patient the first of the physical signs we should notice is the state of the respiration. If, in the act of inspiration, we find the chest is unequally raised on both sides we may infer that there is disease, and that

the side which is least raised is either exclusively diseased or the seat in which it is the most extensive. But it is right, that tuberculous disease must occupy a considerable portion of the lungs to be capable of influencing to a perceptible degree the motions of the chest, and it, therefore, cannot be of any value in the stage in which it is most important to determine the presence of the disease.

**PERCUSSION.** The importance of this test of tubercular phthisis has been much exaggerated. In most cases it is of very little value in the early stage of the disease, as tubercles may exist even to a considerable extent, if the surrounding pulmonary tissue is healthy, without being detected by it. "The sound elicited by it may even be clearer than that over a more healthy portion of lung, which is the case when the pulmonary vesicles are dilated, as they often are, amid groups of small tubercles." Percussion, therefore, cannot be regarded as a very valuable diagnostic in the early stages of phthisis.

**AUSCULTATION.** Of all the diagnostic agents of phthisis, auscultation is, at the present day, the one most generally relied upon. The indications to be obtained from it afford more valuable and precise information than those derived from either general symptoms, the respiratory movements or resonance of the thorax. But it is unfortunate that not even the ear, with or without the stethoscope, can give us satisfactory evidence of the presence of tubercles in their early stage, or of the nature of any malady in the chest previous to excavation. However capable of pointing out the extent of the ravages tubercles have produced, when it is too late to arrest their progress, it is insufficient to announce their presence with certainty while the disease can be regarded as curable. In many instances, though, perhaps, only in injudicious hands, it has been the cause of mischief; for by indicating sound lungs while the disease is in an incipient state it has too often inspired security till tubercles have attained a progress which has placed them beyond the reach of remedial measures. The powers of the stethoscope may, however, be enhanced, and made highly useful, by collateral circumstances and the exercise of a sound judgment; for by affording negative evidence of the absence of tubercles, and, either alone, or in conjunction with a careful observation of general symptoms, positive evidence of other morbid conditions of the lungs, information of great certainty and value may be obtained. Again, when all the usual symptoms of consumption exist, but the physician is unable to determine whether they are occasioned by chronic bronchitis or tubercular softening, the

skilful auscultator may rely on the evidence of the stethoscope with the greatest confidence. In other instances, as in distinguishing between chronic pleurisy, and the second stage of tubercles, or between fistulous opening into the pleura, and actual tubercular excavations, the necessity of disregarding all other indications, and employing the less ambiguous aid of the stethoscope is very obvious.

The value of physical signs has been lessened by the undue importance attached to them. The inventor of the most important of them, auscultation, deemed it fully adequate to determine the nature of any disease of the chest; and his followers and admirers have thought that when they have failed to obtain the success he claimed, as the result of a judicious use of the stethoscope, the fault has been in their observations, and not in the imperfection of the means. They have thus been led to rest satisfied with a feeble instrument, and simply urged to strive more earnestly to master its supposed powers. In this effort its value has been still further diminished; for in the endeavor to make its indications accurate for all stages of disease, it has occasioned such an enormous increase of the number, and such a minute and needless division of physical signs, as would require the observation of a life time to understand. This abuse of a valuable means of indicating disease has excited despair in many who have doubted their ability to master it, and ridicule from those, even, who place confidence in auscultation; while, seeing the difficulty or absurdity to which it has led, it has tended to repress attempts to discover new means of diagnosis.

If our previous observations are founded on truth, it is apparent that neither semeiology, nor physical signs, nor both conjoined, affords the practitioner of medicine, a certain means of distinguishing tubercular phthisis from other diseases of the lungs having the same constitutional characteristics. That there is this difficulty in discriminating affections of the chest, must be acknowledged by every physician who has been accustomed to treat these diseases. It is, therefore, highly desirable to obtain diagnostic agents more certain in the information which they afford, and through which we shall feel a confidence in employing the kind of curative process which we may deem the most appropriate to the morbid action we have to remove. Above all we need a means of recognizing phthisis not only in its advanced and incurable stages, but also in its early and obscure, but remedial stages. Fortunately, a portion of the diseased structures, which has heretofore been unnoticed

as constituting a part of the disease, supplies this urgent want, while anatomy and physiology concur in explaining its mode of action.

**THE SYMPATHETIC NERVE:**—In every form of tuberculous disease this grand nerve is affected either in its structure or functions. In phthisis, the sensibility to pain in particular portions of the spinal region, induced by its deviation from ordinary healthy action, renders it the most sensible, as well as the most certain diagnostic of the disease. It forms a symptom of tuberculated disease of the lungs which is always present at the commencement, and continues uniformly throughout the disease. By a rigid and proper examination of it, the greater number, if not every case of tuberculous phthisis may be discovered, independently of the symptoms referable to the respiratory organs, or even in their absence, and often weeks, or occasionally months, before auscultation or percussion afford any evidence of an appreciable alteration of the pulmonary parenchyma. If there are any exceptions to its application, they must be of very rare occurrence, for I have never found it absent; and certainly they do not occur so often as to interfere with its establishment as a general law in phthisis. This simple sign is so sensible and accurate, that if it could be allowable to trust to a single means of diagnosis, when there are concurring ones, it would be found sufficient for all practical purposes.

The parts of the system primarily affected in the production of this symptom, are, no doubt, the nervous filaments distributed through the lungs, and connected with, and involving one or more ganglia of the grand sympathetic system. As disease of this nerve can scarcely exist without involving the ganglia of the spinal nerves, and the corresponding portion of the spinal marrow, the symptom is made manifest by pressure on the intervertebral spaces of the adjacent vertebrae. The tenderness thus induced is always seated in and around the part occupied by the particular ganglia with which the nerves of the diseased lung are connected. In phthisis, pressure on the intervertebral spaces between the last cervical and first dorsal vertebrae will indicate the seat of this sensibility. In the incipient stage, or during a suspended action of the disease, the tenderness of the spine, to an ordinary and superficial examination, will be slight, and confined to the seat of the ganglia; but if it has advanced to the second stage, or is in active progress, the pain will dart like an electric shock into the affected organ, and induce apparent spasm of the lung, and a suspension of the respiration. But if the pressure be

judiciously made, and its effects be carefully observed at the commencement of the formation of tubercles, the phenomena will be found, it is true much milder, but similar to, and even identical with, the signs accompanying their advanced stage of development. In some cases a very considerable force is necessary in making the requisite pressure. In the advanced stages of the disease, the sensibility of the spine is greater from its being diffused over a larger space, owing to the extension of the irritation, through the medium of the connecting and anastomosing nervous branches, to the spinal nerves, spinal marrow, and possibly to their membranes, and a slight pressure will give the most acute pain.

Contrary to the opinion of that able investigator of the living functions, Dr. Willson Phillip, who says, "he has found it impossible by depriving the lungs of their nervous power, or by any other cause operating on them, to produce the symptoms of spasmodic asthma," I have frequently observed that pressure on the first dorsal ganglia, in tubercular phthisis, is capable of producing a genuine, though temporary paroxysm of asthma. Excited sensibility of the sympathetic nerve, re-acting upon the diseased lungs, is, no doubt, the frequent, and perhaps the sole cause of the neuralgic pains which are so often a distressing accompaniment of phthisis. This is shown in the connection between the nerve and the seat of these pains, as well as in the methodus medendi employed; relief being afforded, in these painful paroxysms, by remedial means directed to the affected spine and ganglia.

Neither in pure chronic bronchitis, chronic laryngitis, chronic pleurisy, chronic pneumonia, or in any of the other complaints that simulate consumption, is sensibility of the spine ever found present as a necessary concomitant of the disease. Modern pathology has, however, shewn that these diseases exist very rarely in a simple state: and, it may be said, that chronic pleurisy, and, indeed all affections of the pleura, are always accompanied with more or less of tubercular development.

It is proper to remark that nervous irritation of the ganglia, and sensibility of the spine may exist as an idiopathic and primary disease, and though affecting the functions of the lungs, may have no connection with organic disease of that organ.

Teale, in his treatise on neuralgia, was, I believe, the first to call the attention of physicians to diseases of the spinal marrow and their symptomatic manifestation in the muscular system and organs of the chest and abdomen; but, Dr. Sherwood, of New York,

was the first to point out the converse relation between these structures, and to show the connection between tubercular disease and spinal sensibility. It would be desirable to show that the diagnostic view we have taken of the sensibility of the spine, in tubercular phthisis, is in strict conformity with anatomical and physiological facts. If this be established, the evidence of the diagnostic sign can neither be considered as based on a slight foundation, an accidental coincidence, nor a bold conjecture; for it must be founded on science, and the laws of the animal economy, and being so, its correctness cannot be disputed. There is certainly nothing in the origin, course, or distribution of the grand sympathetic nerve, which does not tend to support the probable connection between disease of the lungs and its manifestation in the spine. But the subject of the functions of the nerves is either so new, or involved in so great obscurity, that our view can derive little collateral support from physiology. Dissection can hardly afford direct evidence of any change which nervous ganglia, or the spinal marrow, undergoes from sympathetic irritation; and in its absence we can only resort to conjectural reasoning to elucidate the facts. The enquiry is rendered intricate, but not, on that account, the less interesting; from the lungs being supplied with nerves from two sources—the cerebro spinal system, through the medium of the pneumo-gastric nerve, and from the sympathetic system through the filaments from the ganglia—and from the circumstance, that the facts assign to them, particularly the latter, functions different from those adopted by physiologists. The absence of sensibility of the spine in affections of the mucous membranes, the sub-mucous cellular, or the pulmonic tissues of the lungs, would seem to indicate that the sympathetic nerve has no communication with, or agency in their functions. Its presence in tubercular disease, and obscurely, perhaps, in simple inflammatory affections of the serous membranes, is equally conclusive that it is distributed to the glandular and serous tissues and exerts a control over their functions.\*

The power of the sympathetic nerve to transmit the impression of pain, and, as has been shown, to influence or even arrest the great function of the lungs, is an interesting physiological fact, because it tends to demonstrate that the automatic system of nerves, are nerves of sensation and motion. The assignment of the latter function to them is neither new nor of much importance,

\* The doctor is here mistaken in supposing there is any obscurity in these symptoms in acute or inflammatory diseases of the serous membranes.—Ed.

as the dependance of the muscular action of the heart, stomach, and respiratory movements of the lungs, &c., on this system of nerves, is generally acknowledged. But the question whether the sympathetic nerve is capable of bestowing sensibility, is one on which physiologists are, at least, divided in opinion, if, indeed, they have not universally decided upon it in the negative. And it is probable that in a perfectly healthy state it is entirely devoid of this function. In the absence of direct evidence from experiment, the precise relation of this nerve to the whole system must, to a certain degree, remain conjectural; but I am unable to conceive of any nervous communication, which can convey the evidence of disorganization, and painful affections of the lungs and heart, to the spinal region, but the sympathetic nerve. That the transmission of the sense of pain from the lungs to the spine cannot be dependant upon the pneumo-gastric nerves is evident upon anatomical considerations; and hence, as these and the sympathetic are the only nerves of connexion with the lungs, its necessary dependance on the latter, for this evidence of nervous power, must be apparent. This, however, does not necessarily prove that the sympathetic nerve is, in its natural and healthy condition, a nerve of sensation. Lobstein has shown, with much reason, that there probably exists a relation between the sympathetic nerve and par-vagus, by which one may take on it the functions of the other. In this way the former may become, in diseased lungs, either from the stimulus of irritation, or from inability of the pneumo-gastric to perform its appropriate functions, a vicarious nerve of sensation. It is unfortunate that the subject has not received any elucidation from post-mortem examinations; though it is probable the indications of disease would be too obscure to admit of the detection of any morbid appearances. Such is the difficulty in which this part of the subject is involved that it is questionable whether even inflammation of the nerves and ganglia afford, after death, any evidences of disease; and it is therefore scarcely reasonable to suppose that mere irritation, or altered nervous function, should be productive of such appearances.

In conclusion I will remark that, while I place very great reliance upon the indications furnished by spinal sensibility, I must not be understood as proposing this simple means as an exclusive method of distinguishing phthisis from all other ailments. The tact which results from long experience may have imparted a facility in detecting this disease, through this symptom, which others may find some difficulty in attaining; but

it is so uniformly present that a little care and attention will always enable the practitioner to find it. Viewed in its least favorable light, it presents an additional way to the discovery of the actual condition of organs affected with tuberculosis, of which the physician may avail himself to the saving of much labor in diagnosis, and which cannot be neglected without the risk of injury to the patient. But after bringing into requisition all the means of diagnosis above described, it will be found that attention to a minute history of the case, and a strict reasoning upon it, on the principle of induction, will be beneficial in supplying any deficiencies arising from the obscurity of external symptoms, the imperfections of physical signs, and the insufficiencies of pathological deductions, while they will determine any doubt as to the character of the spinal sensibility. In the incipient and obscure stages of this destructive disease no circumstance connected with the patient should be overlooked; his aspect should be noticed; his past health and occupations, the previous diseases and family predisposition should be ascertained; while the condition of the more important functions, independent of the respiratory organs, should be investigated. In the early stage of tuberculous disease it would be unwise to depend on any one local sign or symptom, but it will be necessary to examine it in relation to all the means by which it may be identified. By a careful analysis of the whole of them, and by availing ourselves also of the negative symptoms, as regards the other pulmonary diseases with which consumption is liable to be confounded, we shall not be liable to err in forming a correct diagnosis at a very early stage of phthisis. No pains in discharging this essential duty of the physician ought to be deemed unnecessary, for the important reason, already mentioned, that several diseases have so striking a resemblance that they are not easily distinguished from consumption, and for the still more important one that they arise from different morbid states, and consequently require a treatment that has no affinity with that which we have found not only the best, but a very efficient means of controlling phthisis.

#### Missions in Greenland.

From late English papers it appears, that on the ice-bound coast of Greenland, four Moravian settlements are made, to which are attached 26 missionaries; in a climate where the cold is often 50 degrees below the freezing point. These settlements now contain 1864 native converts to christianity, who gain chiefly from an icy and stormy sea the needful support of their families.

**Dislocation of the Long Head of the Biceps.**

By HENRY HANCOCK, Esq., Surgeon to Charing-Cross Hospital.

[There are probably few accidents so little noticed or understood as displacement of the tendons. The subject is scarcely mentioned in any of the numerous works on dislocations, although the consequence, when unreduced, is great inconvenience to the patient, and in the case of displacement of the tendon of the long head of the biceps, which happens more frequently than any other kind, the patient is deprived in a great degree of the use of the limb. Mr. John Soden, of Bath, in 1841, published a paper on the subject in the "Transactions of the Royal Medico-Chirurgical Society of London, giving details of two cases which he had the opportunity of dissecting, and this is the only detailed and satisfactory account we have of these cases. It is but rarely that the opportunity occurs of examining these injuries by dissection, but Mr. Soden availed himself of his opportunities, and the profession is indebted to him for a very good paper, which has dispersed the doubt and obscurity investing them. Magnetus, who died at Geneva in 1742, relates a case, and in the second edition of William Cowper's "*Anatomy of Human Bodies*," is a case which there is reason to think is a pirated version of that of Magnetus. Boerhaave observed that muscles often slip out of their places when their sheaths are so relaxed during violent efforts, as to offer little resistance, but he gives no cases. Lieutand in 1742 refers to displacement and injury of the tendons of the lumbar muscles; and Claude Ponteau in 1760 published a case which he describes as a displacement of one of the attachments of the *splenius colli*. Mr. Bromfield and Mr. Stanley each met with one case, and Mr. Gregory Smith met with two cases in his dissecting room, both in the same person. This very vague and unsatisfactory account is all we had on the subject until the appearance of Mr. Soden's paper; indeed till then we knew very little of the matter.]

The principal signs of this accident are pain and tenderness in front of the joint, corresponding to the bicipital groove; acute pain in the course of the biceps when it is thrown into action, the pain being referred more particularly to its two extremities; the patient is unable to raise his hand to his head, or his arm beyond an acute angle from his body; the appearance of the shoulder is somewhat altered, the head of the humerus being drawn upwards, and more forward than natural, lying close beneath the acromion process, while the posterior and exter-

nal part of the joint is somewhat flattened. When we consider how much in appearance these accidents resemble partial dislocations of the head of the humerus upward and forward, we can entertain but little doubt that they have frequently been mistaken for them.

In the treatment of these cases you have three principal objects in view:—to overcome the action of the capsular muscles, to reduce the tendon, and to keep the tendon in its groove when you have reduced it. Through the kindness of Mr. Bainbridge, Jr., I have been enabled to make some investigations on the dead subject, which may, perhaps, be of some service, as guiding us in the treatment of these cases. Assisted by this gentleman, I cut down upon and dislocated the long tendon of the biceps on to the lesser or inner tubercle. I first endeavoured to return it by flexing the forearm and relaxing the muscle, while I rotated the humerus strongly inward, but without success. I next straightened the arm, and holding it by the wrist, I rotated it inward as far as I could, and then with a sweep carried it across the chest, while, with my left hand on the deltoid muscle, I pressed the head of the bone downward and outward, and the tendon returned to its groove with a very evident snap. I next displaced the tendon on the outer or greater tubercle, when, by rotating the arm outward with my right hand, and drawing the head of the bone downward and outward with my left, I reduced it, but I found it was more easily restored to its proper position by taking hold of the wrist with my right hand, and placing my left in the axilla; with the latter I pressed the head of the bone gently outward, while with the former I supinated the hand and rotated the arm strongly outward, at the same time bringing it to the side of the body, my left hand serving as a fulcrum in the axilla. By this means the deltoid was put upon the stretch, and its anterior fibres, upon the insertion of which the biceps tendon lay, evidently assisted the latter into its groove. I next endeavoured to ascertain in what position of the arm the tendon would remain most securely in its proper place. Accordingly, I flexed the forearm, and placed the hand in the position of pronation across the chest, when the tendon became again displaced, as it did immediately the head of the humerus was rotated inward, although the forearm was extended; but when I extended the forearm, placed the hand supine, and separated the arm from the side, it remained properly in its place, being now bound down by the tendon of the *pectoralis major*. I am fully aware, in these experiments, that the

subject being dead I did not encounter that opposition from the capsular muscles which I should in all probability have met with in a living patient; but, making every allowance for this, I am still in hopes that what I have here endeavoured to explain to you, may serve to place the treatment of these accidents on some surer basis than mere conjecture, and that, henceforth, you may have some rule to guide you.

We have seen that the head of the humerus is drawn up against the acromion process, and that the greater tubercle striking against that process, when the arm is separated from the side, prevents its being raised beyond a very acute angle. I should advise you to adopt the following method, should you find the plan as recommended by Mr. Bromfield fail. I am not aware of any particular symptom by which we can be guided with any certainty as to when the tendon is dislocated inward, or when outward; but, as a result of my experiments, I should imagine that it is more frequently dislocated inward than outward, the inclination of the head of the humerus, and the greater projection of the large tubercle, being unfavorable to the latter displacement. Place your patient on a low chair, and let an assistant fix his scapula by pressing upon the superior angle and costa; then separate the patient's arm from his side, as far as you can; keep his hand in the prone position, and make extension downward and outward from the wrist, until you have somewhat withdrawn the head of the bone from the acromion process. Now let an assistant sit down on the floor, underneath the injured arm, and, clasping both his hands over the deltoid muscle, draw the head and neck of the bone downward and a little backward, while you rotate the head of the bone inward and backward in the glenoid cavity, by making the patient's arm describe a circle, carrying it backward, upward, forward and inward, across the chest. Should you have reason to suppose that the tendon is displaced outward, separate the arm as far as you can from the body, and let an assistant make extension in that direction best calculated to remove the head of the humerus from the acromial process, that is, downward and outward. Unless this be done, in either form of the dislocation the bicipital tendon remains pressed up by the head of the humerus against the acromial process, and is obviously prevented from returning into its natural position. Next place your left hand well up in the axilla, and direct your assistant, while he keeps up the extension, to rotate the arm strongly outward, and at the same time to bring it to the

patient's side. Having reduced it, gently separate the arm from the patient's side; keep it steadily rotated outward, and the hand supine; place a long splint which extends from the shoulder to the fingers, along the back of the arm and hand, and also a pad or compress in front, over the bicipital groove. Fix the whole with a roller evenly and carefully applied, and place your patient on his back in bed, where he had better remain until you consider that the parts have become sufficiently firm to prevent a recurrence of the accident.

The reason why I recommend you to separate the arm from the side after reduction, is, that by so doing you place the pectoralis major muscle upon the stretch, and consequently make its broad tendinous insertion press more closely and directly over the bicipital groove. In my experiments, the difficulty was not so great in reducing, as in keeping the tendon in its place when reduced, and certainly the plan which I am now advocating appeared both to Mr. Bainbridge and myself to be the most efficacious.—*Provincial Med. and Sur. Journal.*

#### **Rupture of the Tendon of the Long Head of the Biceps.**

By HENRY HANCOCK, Esq., Surgeon to Charing-Cross Hospital.

This accident may be occasioned by falling upon the arm, by violent twists of the limbs, without external violence referred to the part, or by the sudden and violent extension of the limb, as when we put out our arms to save ourselves in falling. The patient experiences at the moment a sensation of snapping in the shoulder, soon succeeded by inability to raise the hand to the head; acute pain is caused by even slight pressure in the course of the bicipital groove, or lower down, on the muscle itself; the latter becomes flabby, and the movement of the arm backwards and forwards produces acute suffering, mostly referred to the situation of the biceps, where it passes over the head of the humerus.

*Treatment.*—Your object in these cases should be to approximate the two portions of the tendon, to obtain union if possible, or otherwise to favor the attachment of the lower portion to the head of the humerus, as Mr. Stanley has pointed out. To do this effectually, place the hand in the semi-supine position, that is with the thumb upwards, making your patient grasp the opposite shoulder; thus you effectually relax the biceps muscle, as you will at once perceive, upon recollecting that the biceps is inserted



into the back of the tubercle of the radius, and that the first action of the muscle, when the hand is prone, is to render it supine before it can effect flexion of the elbow. Now apply a roller carefully, beginning from below, carrying it up to the axilla, and fixing a compress over the course of the biceps tendon, by which means you will keep the muscle quiet and prevent spasms; and lastly, secure the arm in this position by bandages.

[Mr. Earle's and Mr. Chapman's apparatus for injuries about the shoulder, though well adapted for the purpose intended, are very complicated and consequently expensive. Mr. Hancock has invented a modification of Mr Earle's, which combines simplicity with cheapness, and can be made in less than half an hour.]

It consists of a long sleeve, made either of old sheeting or bed-ticking, which should be long enough to extend from the middle of the humerus to about three inches beyond the patient's fingers, and having, consequently, what (for the purpose of description) I shall call a humeral and a digital extremity, and also a hole corresponding to the olecranon to allow that process to project through. The digital extremity terminates in a *cul de sac*, or, in other words, is sewn up, and to it is attached a bandage three inches wide, made either of the same material as the sleeve, or of strong webbing, which is firmer and consequently better. This bandage should be at least three yards long, but you must be guided as to its length by the corpulence and size of your patient. To the posterior and external margin of the humeral extremity of the sleeve is attached another strap, from three quarters to a yard long, of the same width, and made of the same material. A pad for the axilla, made with bran, with a tape to pass round the patient's neck, completes the apparatus.

I will now show you the manner in which it is to be applied; we will suppose that you have a fracture of the acromion process or of the neck of the scapula; in the former, as I have already told you, you should not place a pad in the axilla. In the latter you must not only use a pad for the axilla, but also one between the elbow and the side, or one which, extending from the axilla to the elbow, will answer the purpose of both. I first put the sleeve on the injured arm, with the elbow projecting through the opening made for that purpose, and then, bending the forearm, place it horizontally across his chest. I carry the bandage from the digital end of the sleeve under the opposite arm, obliquely across the back, from below upwards over the front of

the injured shoulder, without pressing upon the acromion-process, under the opposite arm round the back under the elbow of the injured side, and pin the end to the band crossing the breast. I now carry the strap from the humeral end of the sleeve upwards across the back towards the opposite shoulder, and pin it up to the oblique band, by which the head of the bone is drawn upwards and backwards and completely supported against the acromion process. Should the case be one of rupture of the bicipital tendon or fracture of the coracoid process, you employ the axillary pad, and apply the apparatus as follows:—Having put the patient's arm in the sleeve, you rest his hand on the shoulder of the opposite side, and carry the long bandage obliquely across the back, over the elbow of the injured side, round the waist as often as it will go; pin it there, and support the elbow by carrying the short strap over to the sound shoulder and fasten it to the bandage encircling the waist.

You will observe that this apparatus is free from the objection urged by Mr. Chapman against that invented by Mr. Earle, as it leaves the motions of the sound shoulder entirely free and unimpeded, and the seat of injury uncovered, enabling you to watch the state of parts, without the necessity of disturbing the apparatus.—*Prov. Med. and Sur. Journal*.

#### Reduction of Dislocation of the Scapula.

By JONATHAN TOOGOOD, Esq., M. D., Bridgewater.

Dr. Toogood has published the following plan of fixing the scapula:—"Having seated the patient on a low chair or stool, firmly secured the body, and fixed the pulley, he stands over him, and places the heel of his right hand on the acromion process, bearing his whole weight on his hand."

By this method the scapula is rendered fixed and immovable, extension is made and reduction quickly follows. A patient, a tall and remarkably muscular man, about forty, had his right shoulder dislocated, and the united strength of one physician, four surgeons, and sixteen assistants were required to reduce it; he again met with the same accident, but on the left side, when Dr. Toogood reduced it in two minutes by his method of fixing the scapula.—*Ibid*.

*Sterility* is one of the consequences of chronic serosis, or tubercular disease of the uterus, for which the magnetized gold pill is the specific, as is well known to many physicians.

**On the Cure of Hydrocele Encysted Tumours, and Fistula in Ano, without Operation.**

By Dr. ALFRED A. HARVEY, Bristol.

[Dr. Harvey has for thirty years successfully employed the following treatment in hydrocele, obtaining a radical cure without injection: his mode is as follows:—]

First, discharge the fluid with a trocar, or pocket lancet, and then apply a warm vinegar poultice all over the scrotum, in order to bring on inflammation, which generally takes place in a few hours, and becomes painful. When sufficient inflammation has been excited, remove the vinegar poultice, and apply a bread-and-milk poultice. In a short time, the pain and inflammation generally subside, and the cure is completed. Give a few smart doses of purgative medicine. Dr. Harvey adds the subjoined:—

“Cure for Encysted Tumours, or Wens of the Head, or other parts of the body, without cutting them out.”—First, make a longitudinal cut along the scap. This is performed with little loss of blood. Next press out the contents of the cyst, and apply, freely, alcohol in the cavity, with a camel's hair brush. Then place in the cavity, also, from two to six grains of nitrate of silver, and bring the edges together with strappings, when inflammation takes place. Should it inflame too much, apply cold-water dressings, and give a few doses of active purgative medicine. This plan has ever been found to complete the cure in a few days.

*Fistula in Ano* (blind external) can often be cured without cutting, by injecting alcohol the whole length of the sinus, three or four times a day, until it brings on inflammation; when that takes place, the cure is generally completed in a short time. In full habits, bleeding by the arm should be practised, if required, and the bowels opened pretty freely, before the alcohol is injected. Should the inflammation become too severe, it should be regulated by poultice or cold-water dressings, and low diet should be strictly attended to.—*Lancet*.

**New Method of Introducing the Catheter.**

M. Maisonneuve read a memoir upon a new method of introducing the catheter, even in the most difficult cases. He preceded his description by pointing out the difficulties and dangers in many cases of introducing the catheter, and he described the various methods of its introduction, which, as they are known to the profession, we need not here enumerate. He described his method as follows: He first introduces into the urethra a very fine gum-elastic bougie,

of size No. 1 or 2, and he then slides down upon this bougie a sound, open at both extremities, and proportioned to the calibre of the canal; the introduction of the sound is facilitated by means of a thread of silk or metal, which is fixed to the external extremity of the bougie. Having previously passed it into the canal of the sound, it suffices to push gently the sound upon the conducting bougie, first stretching the thread so that it may glide easily, and without causing pain, into the bladder. M. Maisonneuve says that in all cases where he has tried this method, he has succeeded, though many of them were serious, and all attempts to introduce the catheter by the ordinary methods had failed; and from his experience he draws the following conclusions:

1. The introduction of the catheter by means of the conducting bougie is the most easy and the most certain method known.
2. It succeeds perfectly where the ordinary methods are applicable.
3. It succeeds also where the ordinary methods fail.
4. It guards securely against painful explorations (tatonnements douloureux), lacerations of the canal, false passages, &c.
5. It requires no particular dexterity, and can be used by the most unskilful.
6. It renders useless the “arsenal” of instruments recommended to overcome different obstacles, and requires the employment of the ordinary instruments only.—*Lancet*, March 1, 1845.

This method of passing the catheter Mr. Barrington states to have been known and practised in the Dublin Hospitals so far back as five years ago, when Dr. Hutton, of the Richmond Hospital, employed it. The mode there adopted is perhaps preferable to that of M. Maisonneuve.

A fine catgut bougie, eighteen or twenty inches long, was first passed within the stricture; a gum-elastic catheter, open at both ends, was then passed upon the catgut down to, and, by proper management, unerringly through the stricture. The difference, then, consists in employing catgut of such a length that enough may remain external to the urethra to be passed through the canal of the catheter with facility, rendering the use of string of any kind unnecessary.

*Lancet*, March 15, 1845.

**Creosote in Nevus Maternus.**—Dr. Thornton informs us that of all the applications he has tried against nevus, the most effectual is creosote. He had treated three cases in the course of the year successfully with this substance. It is applied two or three times daily, more or less diluted. Excoriation, ulceration, and gradual disappearance of the nevus ensues; the cicatrix had always been smooth and sound.—*N. J. M.*, Dec., 1844.

## SWEDENBORG'S ANIMAL KINGDOM.

*Introductory Remarks by the Translator,*

JAMES JOHN GARTH WILKINSON,

Member of the Royal College of Surgeons  
of London.*[Continued from page 168.]*

If the reader can once succeed in apprehending it, there will be no danger of his letting it go again even among the perilous quicksands of modern experience. It is one of those truths that rest upon the facts within the range of the most ordinary observation, and require but little anatomical investigation to confirm and demonstrate them. It is visible in its ultimate effects during every action that we perform, and at every moment of our lives. Perhaps there is nothing in the history of physical science that is more illustrative of the native ignorance of the mind, or that better shews how far we have departed from the simplicity of nature, than the manner in which this grand office of the lungs has been overlooked; particularly when coupled with the fact, that it should have required a great and peculiarly instructed genius, by an elaborate process, to place it once again under our mental vision. But nature is simple and easy; it is man that is difficult and perplexed. Not only in the lungs, but in the whole body, the primary office is disregarded, and the secondary substituted for it. It has been supposed that the lungs inspire simply to communicate certain elements of the air to the blood; and expire for no other end than to throw out by means of the returning air certain impurities from the blood. Under this view, their motion is only of use for other things, or instrumentally, and not as a thing in itself, or principally.

And yet it is not confined to the sphere in which these secondary offices of the lungs are performed, but pervades the abdomen as sensibly as the chest, and according to the shewing of the experimentalists, extends also to the heart, the spinal marrow, and the head. It was therefore incumbent on the physiologist to shew what its function was in all the regions where it was present, and to declare its action as a universal cause, as well as its action as a particular cause. Now the motion itself which the lungs originate, is their grand product to the system: the inspiration and expiration of the air are but one part of its necessary accompaniments, being performed in the chest alone. Granting that the inspiration and expiration of the air are the particular use of

this motion in the chest, what then is the use of the rising and falling which the lungs communicate to the abdomen, the heart, the spinal marrow, and the brain?—What office, analogous to respiration, does the motion of these parts communicate to the organs? It manifestly causes them all to respire, or to attract the various materials of their uses, as the lungs attract the air. For respiration is predicable of the whole system, as well as nutrition: otherwise the head would not be the head of the chest, nor the abdomen the abdomen of the chest; but the human body would be as disconnected, and as easily dissipated, as the systems that have been formed respecting it. The universal use, therefore, of the respiratory motion to the body, is, to rouse every organ to the performance of its functions by an external tractive force exerted upon its common membranes; and by causing the gentle expansion of the whole mass, to enable the organ, according to its particular fabric, situation, and connexion, to respire or attract such blood or fluid, and in such quantity, as its uses and wants require, and only such. Each organ, however, expands or contracts differently, according to the predicates just mentioned; the intestines, for instance, from articulation to articulation, to and fro; the kidneys, from their circumference to their sinuosity or hilus, and vice versa, the neighborhood of their pelvis being their most quiet station and centre of motion: and so forth. In a word, the expansion as a force assumes the whole form of the structure of each organ. In all cases the motion is synchronous in times and moments with the respiration of the lungs. The fluids in the organs follow the path of the expansion and contraction, and tend to the centre of motion, from which these motions begin, to which they return, and in which they terminate. The lungs, however, only supply the external moving life of the body; but were it not for them, the whole organism would simply exist in potency, or more properly speaking, would cease to be; or were it permeated by the blood of the heart,—a condition which can by no means be granted,—the latter would rule uncontrolled in all the members, subjugate their individualities, and not excite them to exercise any of the peculiar forces of which they are the forms. In a word, the whole man would be permanently in the fetal state, for ever inchoate and ineffective.

It need not surprise the members of the New Church that no writer before or since the time of Swedenborg should have seen the primary function of the lungs in the human body. For it is shewn in those won-

derful theological treatises with which they are familiar, that the heart and lungs of the natural body correspond to the will and understanding of the spiritual man; and as the understanding or rational mind has hitherto brought out none of those truths which enable man spiritually to live, nor been an external cause co-operating with the Word as an internal cause in the work of regeneration, so it had in itself no ground from which to recognise the necessity of the above function in the human frame; but its lower chambers alone being opened, took cognizance only of the lower and relatively passive offices of its bodily correspondent, the lungs. Unwittingly it yielded up the sceptre of the body to the heart, and here again obeyed the law of correspondence. But the truth is that the lungs mediate between the brain and the body, precisely as the rational mind of man is intended to mediate between heaven and earth.

The brain supplies the body and the blood with life, and its functions in this respect combine nutrition, circulation, and respiration. It inspires the ethers of the world, it nourishes its life with ethereal chyle, and it circulates the animal spirit elaborated therefrom through the corporeal system. It may be regarded as a unity which involves in principle and idea all the varieties that are manifested in the two inferior regions of the thorax and abdomen. Its cortical substances involve the functions of both the heart and lungs, because they are in the degree above both. They are so many corcula propelling the animal spirit through the medullary fibres and nervous system, and so many pulmuncula performing an animatory motion synchronous with the respiratory motion of the lungs, although not dependent upon it, but automatic or self-derived, and which indeed generates the motion of the lungs, as the end generates the cause, or the cause the effect. The ethereal medium that they respire they derive principally through what are termed by Swedenborg the corporeal fibres, which originate in the skin, and run back from the last boundaries of the body to the first in the brain. Now the physiologists have never discovered the animation of the brain, because they have never seen the respiration of the lungs in its primary light. Had they done this, it would have been evident that the respiratory motion exercises a traction upon the sheaths of all the great nerves, and expands them, and that this traction is the external cause of a nervous circulation; for were there no fluid to respond to the force, there would be a tendency to a vacuum in these most impressible organs,

and their parts would be strained, or drawn asunder. But if there be a real circulation in the nervous system, it must have centres that propel it, and times and moments in which it is performed. We have already seen that in this case the fluid is externally drawn forth by the attraction of the lungs, consequently in the times of the respirations, and hence it must be drawn in by the brains in the same times; in short the animations of the brains must be synchronous with the respirations of the lungs. Hence it is that the brain supplies the body with internal motive force at the same instants as do the lungs with external; the heart only maintaining the organs in a state of potency and supplying what they demand by the influx of this compound attractive force operating according to their various fabrics.

It must not be inferred that a truth of such paramount importance in physiology as the animation of the brain, rests upon the slight chain of reasoning attempted above. No; its attestation is as general as the truth itself is universal. But since Swedenborg has taken the proof of it upon his own Atlantean shoulders, the reader is referred to his treatise\* on the subject for further corroborations. But it may be useful to indicate, that the doctrine is in no way shaken by the existence of the pulsatile movement so readily felt in young children, nor yet of that other movement, alternate and not synchronous with the respirations, which has been observed by some experimentalists. The truth is that all the three movements proceed uninterrupted by each other; and that the alternate movement, which is referable to the blood rushing out by the veins during inspiration, is what chiefly masks the synchronous movement, which is automatic, or referable to the brain itself.

There is no part of Swedenborg's system which is better worthy of attention than the doctrine of the skin. As the skin is the continent and ultimate of the whole system, so all the forms, forces and uses of the interior parts coexist within it. Moreover as it is the extreme of the body, and the contact of extremes, or circulation, is a perpetual law of nature, so from the skin a return is made to the other extreme, namely, to the cortical substances of the brain. Hence the first function of the skin is, "to serve as a new source of fibres." For the fibres of one extreme, to wit, the brain, also called by Swedenborg the fibres of the soul, could not of themselves complete the formation of the body, but could only supply its active grounds; and therefore these fibres proceed

\* Economy of the Animal Kingdom, tr. II, 1-68.

outwards to the skin, which is the most general sensorial expanse of the brain, and there generate the papillæ; and again emerging from the papillæ, and convoluted into a minute canal or pore, they take a new nature and name from their new beginning, and become the corporeal fibres, or the fibres of the body, which proceed from without inwards to the brain, and unite themselves to its cortical substances. These are the passives of which the nervous fibres are the actives; the veins or female forces of which the nervous fibres are the arteries or males; and "they suck in the purer elemental food from the air and ether, convey it to their terminations, and expend it upon the uses of life."

Besides this, the skin has a series of other functions which there is not space to dwell upon at present. Inasmuch as it is the most general covering of the body, therefore it communicates by a wonderful continuity with all the particular coverings of the viscera and organs, and of their parts, and parts of parts. And as it communicates with all by continuity of structure, so it also communicates by continuity of function; the whole body being therefore one grand sensorium of the sense of touch. In short, the animal spirit is the most universal and singular essence of the body and all its parts; the skin, the most general and particular form corresponding to that essence.

Having thus bestowed a cursory glance upon some points of Swedenborg's doctrine of the three spheres of the body, and their most general and particular continent, the skin, we shall now enlarge a little on certain subjects that have already been mentioned, in order to give them a more distinct place in the reader's apprehension. And first with respect to the circulation. It is clear that in assigning its due weight to the primary function of the lungs, we obtain a law which enables us to limit the functions of the heart and arteries; and the result is, that the heart and aorta simply propel the blood to the mouths of the arteries leading into the viscera, and the viscera themselves attract it thenceforth, and dominate over the circulation of their own vessels, commanding it to take place in the times of the respirations, and not in the times of the pulses of the heart. As one means to this end, the vessels which supply the organs, generally come off at right angles from the great artery.

But there is another branch of this subject which is worthy of attention. The circulation in the great vessels is comparatively inordinate or confused, because in them the blood is all mingled together in a heteroge-

neous mass, and propelled onwards by an external force; but the circulation in the capillaries is most orderly and distinct, being an automatic movement performed by the single globules of the blood, in vessels which correspond to them individually, and where they are perfectly at home. If a comparison be permitted, they constitute a medley crowd in the heart and aorta, but march separately, man by man, in the capillaries. Hence the blood in its mass can but imperfectly manifest its living endowments, but when sundered into its individualities or leasts, it distinctly exercises its dynamic nature, and flows spontaneously; for it is a spiral and circular force and tends therefore to a spiral gyration, or to circulation. Indeed in a universal sense, the leasts of the blood are the causes of the heart's action, and the grounds of the whole sanguineous movement; although speaking in generals, the heart, and the lungs acting on the viscera, are the joint causes of this effect.

The blood is the product of the whole organic system. The brain and lungs give it soul and spirit; the abdominal viscera, by means of the food, supply it with body or embodiment; wherefore each globule is an image of man inasmuch as it has both a soul and a body. Every viscus contributes a distinct share to its generation and regeneration. The animal spirit is its organizing principle. The blood consists, in the language of Swedenborg, of mere simples; that is to say, it contains the primal unities of all the series in the body, and being readily resolvable into each, can give origin and seed to all its possible compounds, whether they be solids or fluids: Nothing exists in the body that did not pre-exist in the blood. As it is distinctly compounded of a triple order of substances, so during each round of the circulation it is distinctly decomposed or resolved into each. Its spirit, spirituous lymph, and bodily portion are sundered as often as it circulates; the former is claimed by the cortical substances of the brain; the lymph is rendered back to the blood in a circle by the lymphatics; and the embodiment, by the veins. The reason why it undergoes this resolution is, that thereby, when its simples are disengaged, it gives birth to all the vital fluids, and renovates all the solids; and moreover submits itself to perpetual purification, self-examination, or lustration. Those portions of it which are no longer of use are thrown out of the system by various excretions, the loss thus occasioned producing that sense in the little veins all over the body, which in the aggregate we term hunger and thirst. The blood of the jugular veins which has been de-spirituated in the

brain, is vivified afresh in the lateral sinuses, by a spirituous lymph sent forth from the pituitary gland, which is the conglobate gland of the cerebrum. Thus the effete spirit of the brain unites with its effete blood, and both together serve as menstruum, medium, or saliva for introducing the new chyle into the sanguineous system. It is for this reason that the thoracic duct is inserted at or near the bottom of the jugular vein. But the circulation of the blood, although it may be considered by itself, yet like all things in the body, is but a part of a more universal order, termed by our author the circle of life; and which involves in one the circulation of both the blood and the spirits.

All the fluids of the body institute circulations after the image of the circulation of the blood. Such may be readily seen to be the case with respect to the saliva, the bile, the fat, &c., &c.

The circulation of the animal spirits, supplied to the brain through the corporeal fibres from the ethereal media of the universe, as well as by the blood of the carotid arteries, and elaborated in the cortical substances, is not a simple circle, like that of the blood, but a transcendent circle, leaping from series to series, omnipresent in all things and conjoining all. For the spirit is propelled by the cortical substances or "corcula cerebri" through the medullary and nervous fibres; by the nervous fibres into the arteries, where it is inserted into the globules of the blood, and constitutes their life and soul; and it is carried back in the bloody the carotid arteries to the same cortical substances, there to be purified, conjoined with fresh spirit, and begin its circle anew. The animation of the brain is the first moving cause of the circulation of the spirits; the respiration of the lungs the secondary or corporeal cause, which operates by a general traction upon the external membranes of all the organs, vessels, and fibres of the body. For the brains give the universal or most internal life of the body, and in this respect, as propulsive causes, represent the capillaries or distinct corcula of the nervous circulation; the lungs, the general, or most external life, and represent the one heart of the same.

The above doctrine may conveniently suggest the idea, that points of analogy are not points of sameness or identity, but in reality, of harmonic difference. The circulation of the blood is one thing, and images that of the spirits; but notwithstanding, the circulation of the spirits is quite another. Each fluid has its own peculiarities, and its circle is applicable only to its own sphere. It is an abuse of analogy if we use it to destroy

and not to reconcile differences; and if so abused, it becomes a childish and paltry instrument, totally inadequate to guide the mind through the labyrinths of nature. To revert to the present case, it has been attempted to be shown, that the circulation of the animal spirits is a simple circle, precisely like that of the blood. But for the purposes of analysis, it ought to be paralleled with what is higher than itself, and not with what is lower. Let us take as illustrative the grand circle involved in generation; for "all things that involve an end constitute a circle." In this example, the male and female conspire to generate a new being; the male fluid is propelled out of the body into the body of the female, or from one series into another; here it is developed or embodied, and is again propelled from the maternal series into that of the external universe; afterwards it is developed inwards from the body to the mind, and when its circles of education and information are completed, it returns as a member of that society from which it proceeded, to commune with the principles that gave it origin in the parents, to amplify their sphere, and enlarge their amount of social life. The circulation of the spirits is more like this of generation, than like that of the blood; for being a universal it belongs to the sphere of universals, and is but poorly imaged in particulars, which are, indeed, but portions of itself.

We have already treated of the limits of the circulation considered as proceeding from the heart, and have had occasion to hint at the attraction exercised by the several organs. The truth is, that the latter demand different and varying quantities and qualities of blood at different times, according to their different states as determined by and determining the state of the body; and that the heart and aorta, as a propulsive power, can have no share in apportioning these. Hence an attractive force is given to the viscera themselves, whereby all the commodities in the body are placed at their disposal; or as Swedenborg says, "they are enabled to summon what they require, from the universal mass of the blood." For each organ, and each part and particle of each, is an individual member of a perfect society, possessing the form of a stupendous rationality whereby to discern its wants, and of an equal liberty to enable it to supply those wants from the community, on the condition of reciprocation of use: not the smallest intrusion upon its individuality by the common powers is permitted for a moment; for should this take place, disease is the inevitable consequence. But let it not

be imagined that the attraction exerted by the organs is of a violent character, or that that their movements are other than gentle and tranquil. It is unnecessary that such should be the case; inasmuch as there is always a propulsion or incitation corresponding to the attraction or invitation, so that what the organ demands is immediately supplied. For when the unities or leasts of an organ expand to draw in their blood, their vessels contract to propel it; and by virtue of the simultaneous expansion of the unities and contraction of the vessels, the size of the organ is scarcely altered, and its motion is almost imperceptible.

The motions of the organs of the body are an important subject in Swedenborg's theory; occasionally seen in glimpses by many writers, among whom may be instanced our own philosophic Glisson,\* yet not recognized by them as a necessary law. It has been remarked before, that the lungs and the brains give each organ a universal motion, at once internal and external. But it would be an error to suppose, because the motion communicated is one and the same, that therefore it is not received and appropriated differently, in other words, modified, by the organs themselves. So truly is this the case, that the motion takes place in every instance in accordance with the geometrical form of the organ, as made up of lesser and least parts, and these forming axes, diameters, and circumferences, general, specific, particular, and singular. Always indeed it is expansion and constriction, these being nature's own motions, and pervading the universe, elemental, material, and organic. Nevertheless it is an expansion and constriction proceeding according to the form of the organ. As a general rule, the most fixed point of every organ is its centre of motion, from which its expansion and constriction begins, to which it returns, and in which it terminates. For each organ is an individual, made up of an infinity of lesser individuals, whereof one and all live their own lives, exercise their own forces, and perform their own actions, and only rely upon the general system for supplies, which they can convert to use in their own way, and according to their own essence: and this, no matter whether the supplies be supplies of blood and fluids, or supplies of motion. The material always comes from without, but the disposal of it from within. These motions convert the organs from powers into forces; so that it may be stated as a law, that the heart and the blood generate

the body; but that the brain and the lungs make use of it, and wield it as an instrument of action. As a rude illustration of this, we may instance the case of human machines. The fabrication of a steam engine by artificers in the workshop is one thing, and analogous to the formation of the body by the blood, the vessels, and the heart; but to make use of the same engine requires altogether a different series of powers,—fire, water, steam, and a new order of workmen, analogous to the brain, the lungs, and their motions.

As motion is a necessary condition of actual life in the whole body, and all its organs and their parts, so likewise is sensation. For without sensation the organs would not be able to exercise their attractions and repulsions with benefit either to themselves or the system. The cerebrum is our general sensorium, in which we are conscious of all the impressions that rise from the external sensoria, of sight, hearing, smell, taste, and touch; which sensoria occupy the circumference of the body: but the cerebellum takes cognizance, apart from our consciousness, of all the impressions that are made in the interiors of the body; namely, of every contact,\* in general and in particular, between the solids and the fluids. Therefore the cerebellum is aware of the whole state of the kingdom of the body in its minutest details, and disposes and governs it agreeably to the ends for which corporeal life is instituted. Now the human frame, unlike that of other animals, is co-ordinate with the whole external universe; it is an organization correlated and responsive to the entire series of the natural creation. The brain is a form of the elemental kingdom; the lungs, of the atmospheric world; and the abdomen, of the terraqueous globe. Nothing less than this can be the case, inasmuch as the body descends from the highest sphere to the lowest, and, by the heart and its vessels, reascends from the lowest to the highest, and thus doubly draws with it the order of the universe. Each degree of the body involves a sensation of its external co-ordinate. Of the external senses specifically, sight is co-ordinate with the ether, and apprehends its modifications; hearing, with the air, and perceives its vibrations; smell, with the effluvia of matter; taste, with the essences of body; and touch, with body

\* Glisson is well worth consulting on the motion of the liver: see his "*Anatomia Hepatis*," pp. 62, 63, 67, 68, 69; *Edmo., Amsterdam, 1666*.

\* It is suggested to the medical reader to consider, whether Swedenborg's theory, that the sense of touch, and its organism and accidents, pervade every particle of the body, lends any support to the remarkable view taken by Hahnemann, that seven-eighths of the chronic maladies afflicting the human frame are forms of poise, and that all such maladies are referable in some sense to three types of skin disease.

in its ultimate or concrete form. The first two senses therefore are atmospheric senses; the latter, material, and may be fitly regarded as different forms of touch. There are then three grand genera of touch. The first genus prevails all over the circumference, and constitutes touch proper: the second prevails in the innermost parts of the body, beginning from the tongue; namely, in the *œsophagus*, the stomach, the intestines, and all the viscera of the abdomen, and at the threshold of this series is called taste: the third genus prevails likewise in the innermost parts of the body, but beginning from the nares; namely, in the trachea, the larynx, and the lungs, or in the viscera of the thorax, and at the entrance to these is called smell. The sense of taste again is divided into as many species as there are viscera of the abdomen, and these species into as many particular differences as there are unities in each viscus. "From the variety of the particular sensations of one viscus, a common sensation arises; and from the variety of sensations of many viscera, a still more common sensation arises. And from all and each of these sensations conveyed by the fibres to the cerebellum, the soul, by means of this sense, here apprehends specifically the states of chyfication, sanguification, and purification; in a word, of nutrition; and according to the perception, disposes those viscera to the conservation of the whole and the parts, which is the effect and use that this sense produces." The villi on the internal surfaces of the abdominal organs are the papillary sensoria of the above sense.

#### Digestion of Saccharine and Amylaceous Matters.

M. MIALHE has recently made numerous researches with reference to the physiology of digestion. The essential basis of the alimentation of animals, he states, is constituted by three distinct groups of bodies: albuminous, fatty, and saccharine matters. The labors of modern chemists have shown that albuminous substances become assimilable through the assistance of the gastric juice, which, by its acid, swells these azotized products, and by its *pepsin* liquefies them, a phenomenon analogous to that of diastasis on amidon. Fatty matter becomes assimilable by the intervention of bile, but with regard to feculaceous and saccharine matter, says M. Mialhe, there is nothing positive known. This lacuna in science he has endeavored to fill.

The new facts at which M. Mialhe has arrived, tend to show that all hydro-carbonaceous substances can only undergo the phenomenon of assimilation when they have

been decomposed by the weak alkaline solutions contained in the vital humors; either immediately, as with glucose, dextrine, sugar of milk; or mediately, as with cane-sugar and amidon, which have to be first transformed in the economy, the one (cane-sugar) into glucose, the other into dextrine or glucose. As to hydro-carbonaceous substances, which are neither susceptible of fermentation nor of decomposition by weak acids, or alkalies in solution, such as lignite or mannite, they escape, in man, the digestive and assimilating action. But by what chemical action is the amidon transformed into dextrine and glucose? Numerous experiments have proved to M. MIALHE that this transformation is produced by the saliva, through a principle which this humor contains, a principle comparable, in every respect, to *diastasis*. In order to isolate it, human saliva, first filtered, is treated by five or six times its weight of alcohol, alcohol being added until precipitation ceases. The *animal diastasis* is deposited in white flakes. It is gathered on a filter, from which it is taken still moist, and dried in layers on glass, by a current of warm air, at a temperature of from 40 to 50 degrees (centigr.); it is preserved in a well-stoppered bottle. This active principle of the saliva is solid, white, or of a greyish white, amorphous, insoluble in alcohol, soluble in water and weak alcohol. The aqueous solution is insipid, neutral; the subacetate of lead does not give rise to a precipitate. Abandoned to itself, it soon becomes acid, and whether or not in contact with the air. This *animal diastasis*, studied comparatively with *diastasis* extracted from germinating barley, presents the same modes of action. It transforms amidon into dextrine and glucose; acting on starch, and elevating the temperature to 70 or 75 degrees, the liquefaction is nearly immediate. One part of this substance suffices to liquefy and convert two thousand parts of fecula. The agents, such as creosote, tannin, the powerful acids, the salts of mercury, of copper, of silver, &c., which destroy the properties of *diastasis*, act in the same manner with respect to the active principle of saliva. An equal weight they both liquefy and transform the same quantity of hydrated amidon. It appears, even, that the active principle of germinated barley is seldom as energetic as that of saliva, which is owing to the greater facility of obtaining the latter in a pure state. Finally, as a last resemblance, the *animal diastasis* existing in the saliva of man rarely exceeds two thousandths, and this is exactly the proportion of the *diastasis* contained in germinating barley.—*Lancet*.



## ACADEMIE DES SCIENCES--PARIS, 1845.

## Researches on Generation.

The researches of M. Pouchet on the pro-gression and the state of the seminal fluid found in the genital organs of female rabbits, have led him to the following conclusions;—From the sixth to the twenty-fifth hour, zoospermata are found constantly in the vagina and in the uterine cornua. Until the twenty-first or twenty-second hour, these animalculæ are very agile, but they soon after become less active, and towards the twenty-third hour they dry, and appear to undergo a kind of cadaveric rigidity, as characterized by the rectilinear direction which their caudal appendix assumes. After this period, they are only found lacerated. Sometimes, nevertheless, and principally when the death has been preceded by violent convulsions, living zoospermata are still found, towards the twenty-fifth hour, engaged in the entrance of the uterine extremity of the Fallopian tubes. They never ascend beyond a depth of twenty millimetres, the mucus which fills the Fallopian tubes, formed of dense globules, offering an insurmountable resistance. It is, therefore, only in the uterus, and, perhaps also in that part of the Fallopian tubes which approximates to the uterus, that fecundation takes place in mammalia. If the zoospermata reach the ovaries, it can only be in the abnormal cases which give rise to extra-uterine pregnancies.—*Lancet*.

*Mr. Bonjean on the poisonous effects of the Secale Cornutum.*

The ergot of rye, taken as an alimentary substance, may give rise to two kinds of symptoms; to convulsive phenomena or to gangrene. These series of symptoms may present themselves singly or combined. A year ago, M. Bonjean attended a family in the vicinity of Chamberry, all the members of which were attacked with the convulsive form; he has lately observed, in the same neighborhood, a case in which the gangrenous form alone prevailed. A family composed of eight individuals—the father, mother, and six children, between the ages of two and seventeen—ate, during three weeks, bread containing one and a half per cent. of ergot. The father and mother merely experienced lassitude in the limbs; the three eldest children present no abnormal symptom. Two of the youngest only were attacked with gangrene; one, a boy, ten years of age, after eating the bread during fifteen days, felt a severe pain from the left groin to the calf of the leg. The feet and legs became tumefied, covered with

phlyctenæ, and the gangrene, appearing at the inferior third of the legs, descended towards the feet, and ascended to the upper part of the legs, where it became limited. The other, aged twenty-eight months, was attacked in the same way, but on one leg only. There were no premonitory symptoms whatever in either case. The two children were admitted into the hospital at Lyons, where the gangrenous limbs were taken off, and they were subsequently quite cured.—*Ibid*.

*On the Value of Vaccination and Revaccination.*

In 1842, the Academy of Sciences offered a prize for the best treatise on the above subject. Thirty-five candidates responded to the call, and the perusal of their labors has proved so laborious an undertaking, that it is only very lately that M. Serres has been able to present a report to the Academy, in the name of the committee appointed to decide on the comparative merit of the essays. M. Serres' report is a remarkable document, and is also important from its conclusions having been adopted by the Academy after mature deliberation. We extract the following data from this report:

"Vaccination preserves the human species from variola, but its preservative power is not absolute. Variola itself, either spontaneous, or produced by inoculation, does not preserve absolutely from future attacks, therefore it is not extraordinary that vaccination should not. Thus, Mead mentions having seen three variolous eruptions take place successively on the same woman; the son of Forestus was twice attacked with variola, and Dehaen states that one of his patients was attacked six times by variola with impunity, but died of a seventh invasion of the disease. Although, however, vaccination is sometimes powerless to preserve us from variola, it *always* diminishes the gravity of the malady. This property, which Jenner and his first successors did not even suspect, is thoroughly proved by the various facts which have been recently accumulated. In one of the most terrible epidemics of variola that has taken place in Europe since the discovery of vaccination,—that of Marseilles, in 1828,—more than ten thousand persons were attacked. Of these, two thousand only had been vaccinated, and of that number forty-five only died, whereas, one thousand five hundred of the eight thousand who had not been vaccinated were carried off by the pestilence.

"Vaccine matter evidently loses part of its efficacy in passing from arm to arm; it is therefore desirable to renew it as often as

possible. A remarkable fact mentioned by one of the competitors, supplies us with a means of renewing it, as it were, at will. A cow was vaccinated with matter taken from a child. Not only did the pustules rise, but they were communicated to other cows, so that the cow-pox was observed nearly in its natural state. The pustules were identical in both cases.

"The propriety of revaccination is now fully established. In Germany, the various governments have been induced to pay great attention to revaccination, owing to the circumstance of epidemics of variola having latterly manifested themselves with a severity to which we had become quite unaccustomed since the introduction of vaccination. Revaccination has, consequently, been resorted to on a very extended scale, and has had the effect of arresting the epidemics. Thus, in Wurtemberg, forty-two thousand persons who have been revaccinated, have only presented eight cases of varioloid, whereas, one-third of the cases of variola have latterly occurred on persons who had been vaccinated. It is principally between the ages of fourteen and thirty-five that vaccinated persons are exposed to be attacked by variola. When there is an epidemic, the danger commences earlier, and children of nine years of age may be seized. Prudence, therefore, requires that, under ordinary circumstances, revaccination should be performed at the age of fourteen or fifteen, and four years earlier if within the radius of an epidemic of variola."—*Ibid.*

#### On the Anatomy of the Sympathetic Nerve.

M. Bourguery states that the sympathetic divides at its cephalic extremity into two branches, one vertebral, the other carotidian. These branches offer five modes of termination, to which are associated the cephalic nerves and the pituitary gland. M. Bourguery looks upon the latter, along with Gall, MM. Blainville, Thierry, and Bazin, as a ganglion of the great sympathetic, which appears to be the intermediary, or the organ of reunion, of the encephalic mass—that is, of the psychological and instinctive nervous centres, and of the cephalic nerves, their most active agents, with the great sympathetic, which on its side represents the entire splanchnic nervous system. The most voluminous terminations of the great sympathetic, that which appears to constitute the suture of the splanchnic nervous system with the encephalic mass, takes place in the pituitary gland. That which forms the two median plexuses has for its object the anastomosis, external to the central ganglion, of the two lateral halves of the sympathetic.

The apparent termination on the cerebral arteries may be considered more as an origin, and would appear to be no other than the proper visceral nervous apparatus of the encephalic mass, united in the middle—like all the extra-visceral plexuses—with the central ganglionic mass, the pituitary ganglion, but like these plexuses, continued on the arteries with the great common chain of the sympathetic. The last termination of the sympathetic consists in its anastomoses with the grey twigs emanated from the cephalic nerves. Considered in their common chain of connexion, the three kinds of nervous organs of sus-sphenoidal region, offer seven varieties of anastomosis, by means of which all the parts of the encephalic mass, and the origins of the proper nerves of the face, are placed in communication with the cephalic extremity of the splanchnic nervous system: and if we add the chain of the sympathetic, and of its annexed organs, we find that the entire central cerebro-spinal nervous system is in relation with all the splanchnic nervous system. This intimate connexion of the pituitary ganglion, and of the sympathetic, between each other, and with the cephalic nerves and encephalon, unites all the parts of the two great systems of organic and of animal life one to the other. It shows clearly the anatomical reason of the consensus, as prompt as lightning, which manifests itself between the nervous organs, and more especially between the cephalic organs.—*Id.*

#### The Functions of the Pancreas.

MM. BOUCHARDAT and SANDRAS, following out their researches on the chemical phenomena of digestion, have recently ascertained that the pancreatic juice possesses the same properties as the saliva. This liquid, taken from the Pancreas of strong farm-yard fowls, was transparent and viscid, presenting a slightly alkaline reaction. Mixed with amidon jelly, it liquefied it and transformed it into dextrine and glucose. By adding alcohol, it formed a white deposit, which also acted on the jelly of fecula in the same manner as diastasis. A temperature of 100, (centig.) or the adhesion of various substances, such as tannin, the mineral acids, or the metallic salts, destroyed its properties. The pancreas itself, extracted from animals, and carefully separated from the different vessels which pass through it, and from the blood by which it may be soiled, possesses in a high degree the property of giving rise to the transformation of fecula. A few fragments of the gland, mixed with starch, tepid, and very consistent, convert it, after a few minutes, into a liquid free from viscosity. Pounded and

mixed with water, they give a fluid, from which it is possible to separate, with the assistance of alcohol, a flaky precipitate, endowed with the power of dissolving fecula. Other organs, such as the liver, treated in the same manner, do not give the same results. We may therefore conclude from these facts, that the principal function of the pancreas is to secrete a liquid able to dissolve feculaceous substances, to allow of their absorption in the intestine by the smaller ramifications of the vena porta, and consequently, to admit of their utilization by the economy.—*Ibid.*

#### ACADEMIE DE MEDICINE, PARIS.

(MARCH, APRIL, MAY, JUNE.)

##### Autoplastic Operation in Cancerous Disease.

M. BLANDIN presented to the Academy a woman on whom he had extirpated an inferior eyelid affected with cancer. The loss of substance thus occasioned was then remedied by a flap taken from the forehead. This operation he considered calculated to prevent the return of the cancerous disease. The operation was successful. The views of M. Blandin, with reference to the influence exercised by autoplasty in preventing the return of cancer, were supported by M. Roux and M. Berard.

M. GERDY stated that he was not a great friend to autoplastic operations, the result of which was seldom or ever satisfactory. In the case of M. Blandin, he thought the operation would have been more successful if the flap had been taken from the cheek. He did not believe that the healthy flap would so modify the parts as to prevent the return of the cancerous affection. Cancer returns either from some of the tissues affected having been left in the wound, or in virtue of a general predisposition, the essential nature of which is unknown, and which autoplasty does not remedy.—*Ibid.*

##### On the Causes of Insanity.

M. BELHOMME, in a communication addressed to the Academy, endeavored to prove that insanity is always, and necessarily, connected with acute or chronic phlegmasia of the brain, or of its membranes. Chronic encephalitis, characterized by the hardening of the cephalic substance, coincides with chronic insanity, and with dementia, accompanied by paralysis, whilst acute inflammation, with softening, gives rise to acute insanity, or to mania with delirium. M. Belhomme supported his views by fifteen cases. The report of the lecture of M. Jolly, who was appointed by the Academy to examine the communication, gave rise to an interesting discussion.

M. JOLLY maintained that the opinions of M. Belhomme were inadmissible. It is possible, he stated, that physical and moral similitudes in families, or individual organization, may constitute the morbid hereditary predisposition so frequently observed in nervous diseases. It is also possible that anomalies in the intellectual functions may depend on some accidental molecular modification in the cerebral fibre. But we are not warranted, on that account, in asserting, in the present state of science, that material lesions—lesions of texture—are necessary to produce insanity. We are not sufficiently acquainted with the normal conditions of the intimate organization of the brain, to appreciate the modifications which may correspond to anomalies of motion, of sensation, of intellect. Microscopical anatomy may some day show us the connexion between the structure of the brain and the acts of the mind; but until this is accomplished, we are not authorized to do more than simply to observe facts. The attentive examination of the causes, the symptoms, and the progress of insanity does not enable us to recognise the characters of insanity in acute or chronic inflammation of the brain. Children and young people are very frequently attacked with inflammatory affections of the brain, but are not insane. Insanity is nearly exclusively experienced by persons of a nervous, irritable temperament. The lesions of the intellect do not require for their manifestation, inflammation, softening, hardening, or any other material lesion. Hereditary predisposition, a bad education, moral commotions, alone suffice to give rise to them.

M. ROCHOUX was ready to admit that it is impossible to attribute insanity to acute or chronic meningo-cerebritis; but, on the other side, he could not allow that lesions of the intellect could take place without a material alteration of the brain. There was no effect without cause. Insanity must depend on a lesion of the brain, or of the mind, and no one had ever attempted to establish the existence of diseases of the mind distinct from the brain. Every functional disturbance presupposes the disturbance of the corresponding organ. To assert that a lesion of the functions of the mind can exist independently of a lesion of the brain, is to assert that the same sounds may be obtained from a violin, whether the strings are tight or slack. The views of M. Belhomme, thus supported by M. Rochoux, were also defended by M. Ferrers in an animated discussion, whilst MM. Gerdy, Prus, and Castell, joined with M. Jolly in strenuously denying the possibility of connecting functional disorders of the brain with material lesions.—*Ibid.*

**Fistula of the Urethra Cured by Autoplasty.**

M. Jobert has again succeeded in curing by autoplasty an urethral fistula. The fistula was situated at the root of the penis, in front of the scrotum, was two centimetres and a half in length, and the result of retention of urine. Two unsuccessful attempts were made, which M. Jobert attributed to the patient's laboring under chronic syphilis. He was treated for this disease, and then he proceeded to operate as follows:—After refreshing the margin of the solution of continuity, and excising the skin around the fistulous orifice to a width of several lines, two incisions, parallel to the axis of the penis, were made on a level with the inferior orifice of the fistula, and prolonged on to the scrotum, so as to comprise a cleftaneous flap as wide as the denuded surfaces on each side of the fistula. This flap was then dissected off, dragged up, applied on the fistulous orifice and the denuded surfaces, and carefully attached by means of interrupted sutures to the surrounding parts. A sound of middle caliber had been previously placed in the urethra, and slight compression was exercised on the flap, in order to maintain it in its place. The adhesion was complete in the five-sixths of the extent of the fistula. There remained, however, a small lateral orifice, which gave considerable trouble. The twisted suture was resorted to several times, the edges having been freshened with the bistoury, but without success. This method of treatment, followed by cauterization with the nitrate of silver, proved at length successful, and the fistula became completely cicatrized.—*Ibid.*

**Relation between the Extent of the Brain and the Intellect.**

M. Baillarger, in a paper on the above subject, states that he has been able to unfold the cerebral substance by a process different from that of Gall. He takes away gradually, and by a long and minute dissection, all the white substance, and when the brain has been thus reduced to a very slight thickness, the peripheric membrane develops itself as it were. Operating as we have stated, he has been able to model with plaster the extended hemisphere, and to take its exact measure. For the brain of man, M. Baillarger has found a medium of one thousand seven hundred square centimetres. The measure of the extent of the surface of the brain has been obtained in the same way.

If we now pass to the physiological application of these researches, we find, in contradistinction to what has been advanced, that the development of the intellect is not

at all in relation to the extent of the brain, for the brain of dogs is smaller than that of sheep. Even in taking into consideration their relative size, the brain of the rabbit is found to present twice and a half as large a surface as that of man, who in this respect is at the bottom of the scale. In order for it to be otherwise, it would be requisite for the circumsolutions to be both more numerous and deeper. The brain follows this mathematical law: the volume is as the cubes of the diameter, whilst the surfaces are as the squares of these same diameters. Thence it follows that the most voluminous brains have, relatively, a very small surface. The cerebellum alone, by the extent of its surface, can bear comparison with the brain of the inferior mammalia. Thus the development of the intellect, far from being in direct proportion to the relative extent of the surface of the brain, appears to be in an inverse proportion.—*Ibid.*

**A new Mode of Treating Spermatorrhœa.**

M. Brachet, of Lyons, stated that he had been induced, accidentally, to try the effect of pressure on the perinæum in spermatorrhœa, and had obtained very advantageous results. He had resorted to this mode of treatment in four instances, in each of which the cause was different, and had been successful in all. Evidently, this means of treatment would not apply to all cases, but he thought it might be useful when the disease was the result of atony, occasioned by the abuse of venereal excitement, or following repeated blennorrhagia. According to M. Brachet, the injurious effects of spermatorrhœa are the result of the too abundant deperdition of the seminal and prostatic fluid. The latter he compares to that which is furnished by the mucous crypts of the vagina. Compression, he says, by keeping the seminal fluid in its natural reservoirs, (the seminal vesicles,) accustoms the latter to retain it during a longer time; compression, also, modifies the physiological state of the urethra, of the prostate, and of the secreting glands. The apparatus by which pressure is applied is very simple. It consists of a leathern belt, from the back part of which descends a band, which is passed between the thighs, and which dividing, so as to leave the genital organs free anteriorly, is attached to the belt on each side. In the middle of the band is a small moveable cushion, which is adapted to the region of the perinæum, where the pressure is to be applied, and which is tightened as much as possible. Pressure thus exercised is very different to the circular compression of the

penis by rings or strings which has been recommended, but which exposes the patient to serious accidents, the least of which is the regurgitation of the spermatic fluid into the bladder.—*Ibid.*

#### *The Operation for Hare Lip in Infants.*

M. Paul Dubois brought forward some interesting data respecting the period at which the operation for hare lip ought to be performed. He does not agree with the generality of surgeons, who think that it should be deferred for several years, or at least several months. He thinks, on the contrary, that great advantages are obtained by performing the operation soon after birth. These views he substantiates by his own practice. In various operations which he has performed, he has merely refreshed the margin of the solution of continuity, and then brought the parts together by means of insect pins and the twisted suture. The wound has always been dressed with the greatest facility, often, indeed, whilst the infant was asleep. The pins were withdrawn on the third or fourth day. Two of M. Dubois's patients swallowed blood: one vomited it; with the other, it followed the course of the intestinal canal, without giving rise to the slightest accident. This circumstance has some importance, as the swallowing of blood by infants has been given as a contra-indication. All the children were fed as before the operation, by means requiring suction—that is, the breast or the feeding boat; so that the early operation cannot be objected to on the plea of its necessitating an abstinence of several days' duration. It has been stated that the cries of the child might derange the dressing, but this objection is likewise unfounded, as it resists the child's cries, as well as suction. The principal advantages of an early operation are the following—the cicatrix is smaller, and more linear: the education of the child becomes much easier; and the anxiety and distress of the parents are calmed.

M. Roux thought that the early operation although occasionally useful, could not be generalized. He had seen serious accidents follow it. One child was found dead in its bed, another was seized with convulsions, which all but proved fatal. Hare lip, in his opinion, offered such a great variety of forms, that it was very difficult to lay down a principle applicable to all cases.—*Ibid.*

#### *Microscopical Anatomy of Tubercle.*

In a communication on the above subject, M. Rochoux reproaches those who have

made microscopical researches in pathological anatomy, with having examined the morbid tissues at too advanced a stage, when their degeneration had modified the characteristic features of the disease. Avoiding this source of error, he has arrived at novel results. If, for instance, a tubercle in its incipient state is placed under the microscope, it presents the form of a rounded, globular, badly circumscribed, production, of a diameter of 0.15 to 0.20 of a millimetre; it is lost, as it were, in the midst of sound pulmonary tissue. In this state, it is impossible to isolate it, to extract it, without tearing numerous filaments, the remains of pulmonary tissue, of vessels and nerves, which form around it a kind of *tomentum*. Its color, which at a later period becomes of a dull, greyish white, is then that of gelatine, with a rosy tinge, the more marked the smaller the tubercle. If, after cutting it in two, the surface of the section is examined with a magnifying power of forty or fifty only, the morbid tissue appears homogeneous, as jelly or gum about to solidify; but under a magnifying power of five or six hundred diameters, it offers a very different aspect. We then perceive that it is formed by the interweaving of filaments nearly as small as those of cellular tissue, and containing no visible fluid in their intersices. The mode of texture is regular enough, and recalls to a certain degree that of the crystalline lens. The incised surface presents a very pale-reddish color, with a metallic reflection.—*Ibid.*

#### *Pellagra in Gascony.*

It appears that within the last few years, pellagra, a disease which has long exercised great ravages in the north of Italy, has been found to exist in the department of La Gironde, in Gascony, and that it is making rapid progress. The central board of health of the department, becoming alarmed at the extension of the disease, has latterly taken every possible means to ascertain its nature, causes, symptoms, and treatment. Every practitioner residing in the affected localities has been applied to, medical conferences have been held, and a vast amount of information has been collected. The board of health of La Gironde, considering that the data which their investigations have brought to light are of importance to humanity, recently addressed the results of its labors to the Minister of Public Instruction, with a request that they might be published under the sanction of government. The Minister having forwarded the document which he received to the Academy of Medicine, requesting its opinion respecting their value,

the committee appointed by the Academy to examine them, has, through the medium of M. Jolly, its reporter, recommended their immediate publication. M. Jolly's report contains the following interesting details with respect to pellagra as observed in France.

The existence of pellagra in the *Landes* of La Gironde was first noticed in print by M. Hameau in 1829. Since then it has been insisted on by various physicians, but more especially by M. Leon Marchand, a recent writer. "The most striking character of this affection," says M. Marchand, "is a squamous erythema, which occupies the uncovered parts of the body, principally the dorsal surface of the hands, and which returns every year, at spring, with the same series of symptoms, the intensity of the latter depending on the duration of the disease." The erythematous eruption, which may successively present itself under a papular, vesicular, or pustular form, disappears at autumn, leaving on the skin shining cicatrices, which assume the appearance of a burn. The general phenomena that accompany the cutaneous affection diminish, at first, along with it, to return again the following spring. As, however, the disease becomes more chronic, they not only assume a severer form, but last during the interval of the disappearance of the erythema. The principal general phenomena of the pellagra proceed from two sources, viz: First, from the digestive apparatus, redness and fissures of the tongue and of the lips, a scorbutic sanguinolent state of the gums, pyalism, dyspepsia, vomiting, and diarrhoea. Secondly, from the cerebro-spinal system; pain and weakness of the limbs, titubation, vertigo, obliteration of the senses of the intellect, mania or dementia, generally presenting the form of suicidal monomania, with a tendency to drowning. In many cases there is progressive marasmus, slow and gradual sinking, often dropsy. The disease invariably terminates by death. Pathological anatomy has not hitherto thrown any light on the intimate nature of pellagra. "Its true nature," says M. Marchand, "must be sought for in the attentive study of the local and topographical influences which favor its development."

The locality in which endemic pellagra appears to exercise its greatest ravages, is the region which borders the Gulf of Gascony. It is the most sterile part of the country—a district exposed to the most depressing and the most debilitating influences; where everything (men, animals, and plants) languishes and dies before its time. The fetid emanations from the marshes, the insalubrity of the habitations, deficient and bad alimen-

tation, the dirtiness and scantiness of clothing—in a word, all the evils to which extreme poverty exposes, are the causes which contribute to the development of this disease. But these causes alone are not sufficient to produce it, otherwise pellagra would be found wherever extreme poverty prevails. There exists, probably, some principle peculiar to the localities which the disease ravages, which has not yet been discovered.—Great stress has been laid on exposure to the sun as a cause of pellagra. M. Jolly does not think that it exercises so great an influence over its production as some writers suppose. Were it the real cause of this disease, the latter would have been observed previous to the commencement of the last century, when it was first described in Italy; moreover, it would be common in warm climates, which is not the case. Nevertheless, it is certain that the heat of the sun performs an important part in the symptomatology of pellagra, as is proved by the constant return of the malady in spring. The opinion of M. Gibert, respecting the mode of action of the sun, is most likely correct. He states, that it burns the skin. The explanation of the lesion which the sun thus produces is to be sought for in the alteration that the skin of the patient affected with pellagra has undergone, along with the entire organization, in its intimate texture. It may be compared to the bark of a tree deprived of sap, which dries and cracks under the influence of the sun's rays.

Whatever may be the cause of the disease it appears to be above the resources of art when once declared. All the means of treatment which have hitherto been employed have proved useless. The plan generally followed is to protect the skin from the direct action of the sun, to combat by regimen and medicinal agents the various accidents which are the result of the general weakness, or of the lesions of the principal viscera; recourse is had to bleeding, baths, astringents, or narcotics, according to the nature of the symptoms and the indications presented. Such being the case, it is evidently principally prophylactic measures which are most needed, and it is to them that the attention of government should be mainly directed. It ought, therefore, to be the endeavor of government, by administrative measures, to improve the hygienic and sanitary state of the poverty-stricken population affected with this fatal disease.

In the course of the debate which followed the reading of M. Jolly's report, M. Gaultier de Claubry stated that he had seen cases of pellagra in the *Landes* and in the *Asturias* as far back as 1809. This fact is

important, as the first cases that were noticed in the Landes occurred in 1818 only. The disease, may indeed, have been long endemic in this part of France as in Italy, although not described until within a recent period. *Id.*

Contagion of Typhoid Fever.

M. Gaultier de Claubry, in a communication read before the Academy, endeavored to prove—First, that typhus and typhoid fever (dothineritis) are identical. Secondly, that typhoid fever, like typhus is contagious. These propositions M. Gaultier de Claubry supported by numerous arguments drawn from his personal experience. He had within the last few years met with eight cases of undoubted contagion in his private practice, the patients being all in easy or wealthy circumstances. In concluding, he reminded the Academy that his views on this subject were also those of MM. Chomel, Louis, Andral, Moreau, Jolly, and many others.

M. Rochoux disagreed in every respect with M. Gaultier de Claubry. In his opinion, the diseases were perfectly distinct, differing in their causes, their symptoms, their pathological anatomy, and their treatment. *Id.*

On the Localization of Speech in the Anterior Lobes of the Brain

M. Belhomme endeavored to prove, by the analysis of ten cases which had occurred under his care, that speech is localized in the anterior lobes of the brain. His summary contains the following propositions: First. Any alteration in the faculty of language depends either on a cerebral affection, or on a lesion of the organs of communication between the brain and the apparatus destined to the articulation of words. Second. The sudden loss of speech depends on an hemorrhagic lesion of one, or more especially of both, of the anterior cerebral lobes. Third. Convulsive and paralytic phenomena which modify language, must not be confounded with the sudden loss of the memory of words and subsequent difficulty of speech. Fourth. In an affection partially destroying the anterior lobes of the brain, and suddenly arresting speech, it is only when a cicatrix has formed in the brain that it recovers more or less its functions.—*Ibid.*

Statistics of Bethlehem Hospital, with remarks on Insanity. Part II.

BY JOHN WEBSTER, M.D., F.R.S., &c.

After referring to his previous paper, published in the 26th vol. of the Society's Transactions, the author makes some re-

marks respecting the period of the year when mental diseases were most prevalent, when the greatest number of patients were cured, and when the larger proportion of deaths occurred at Bethlehem Hospital. These points he illustrates by a table compiled from the official registers, (which shows that most lunatics were admitted into the institution during the second and third quarters of the last twenty-two years, most were cured during the third and fourth quarters, whilst the largest number of deaths were met with in the last, but especially in the first quarter of the above series of years.) The author next alludes to the occupation of insane patients, and states that sixty-six per cent. of the inmates of Bethlehem Hospital are now employed. This employment of the insane is found to have a very beneficial influence in their treatment, and tends materially to diminish the necessity of using personal coercion in the management of lunatics: in proof of which, the author states, that five years ago the weekly average of persons under restraint was thirteen, whereas at present, when the system of employing the insane patients is more developed than formerly, during some weeks only one, and occasionally, not even one individual is in restraint. The author subsequently gives a synopsis of twenty-eight autopsies recently performed at Bethlehem Hospital by Mr. Lawrence, thus making one hundred post-mortem examinations of lunatics, if the seventy-two dissections previously reported are taken into the account. The diseased alterations of structure are succinctly described in the twenty-eight cases now brought before the Society, of which the following may be given as a summary:—In twenty-five, there was infiltration of the pia mater: in twenty-four, turgidity of the bloodvessels; in nineteen, effusion into the ventricles; in twelve, fluid was found at the base of the brain; besides other varieties of morbid appearances. In twenty-two cases, the organs of the chest were diseased; and in thirteen, the abdominal viscera were more or less affected. In conclusion, the author makes some general observations on the facts contained in his paper.

Electro Magnetic Clocks.

Which never run down, and never require winding, have been invented by a Mr. Brain. A writer in the Polytechnic Review says—"he set up a clock in my drawing-room, the pendulum of which is in the hall, and both instruments in a voltaic circuit, as follows: On the N. E. side of my house, two zinc plates, each a foot square, are sunk in

a hole, and suspended to a wire. This is passed through the house, to the pendulum first, and then the clock. On the S. E. side of the house, at a distance of about forty yards, a hole was dug four feet deep, and two sacks of common coke buried in it; among the coke another wire was secured, and passed into the drawing room window, and joined to the former wire at the clock. The ball of the pendulum weighs nine pounds, but it was moved energetically, and has ever since continued to do so with the self same energy.—The time is to perfection, and the cost of the motive power was only 7s. 6d. There are but three little wheels in the clock, and neither weights nor springs, so there is nothing to be wound up. To another friend in Battersea, he has given three clocks, two small ones, and one a hall clock, all moved by one current, and regulated by one and the same pendulum. This is all he has completed in England, having just reached Edinburgh, where he is to establish a manufactory of these clocks, which, for accuracy, cheapness, and utility, will, I believe, surpass every time piece hitherto contrived.

#### Extracting Teeth in the Mesmeric Sleep

The Nantucket Inquirer states that Rev. L. R. Sunderland lately put a woman in that place into the Mesmeric sleep, and that while in that state Dr. Dillingham extracted a tooth in which two physicians had examined and pronounced to be firmly set in her head. The Inquirer says:

“During the cutting of the gums, fastening the forceps upon the tooth, and the actual drawing of the tooth, the patient did not exhibit the slightest consciousness that the keen eyed physicians could detect. She appeared to us (and we were upon the platform, close beside her,) to exhibit about as much sensation, consciousness, feeling as would be exhibited by a stick of wood into which a penknife had been thrust, and not a jot more. It was a successful operation, and the physicians stated to the audience that they were perfectly satisfied that the patient was in a state of perfect unconsciousness, totally insensible to pain; of which fact every fair minded person in the audience was undoubtedly convinced. What the agency was that produced this unnatural state, those who attended the lectures can judge for themselves, without any aid from us. Thursday evening, another tooth was extracted from the same person by the same operator, under the scrutinizing eyes of several additional physicians with similar satisfactory results.”

#### Successful application of Mesmerism to a Surgical operation

Mesmerism, or animal magnetism, is attracting at the present day, no inconsiderable share of attention and investigation from all classes of the community, in both hemispheres. It finds advocates and opponents among the learned and illiterate, the profound and superficial, philosophers and physiologists. By many, its power and influence are doubted, by some denied, and by others derided as imposture. Whilst a cautious remove from that credulity which would swallow with avidity the most ridiculous absurdities, deserves the highest commendation, that scepticism, which closes every avenue to conviction, and discards belief in facts without investigation, because the human mind cannot comprehend them, merits reprobation. Our present knowledge of its nature and power is confined to narrow limits, and the discovery is a goal yet to be reached by some future voyager, that it is subject to the same universal laws that govern matter. To the future belongs the development of its destiny—to the present, scrutinizing investigation into its concealed mysteries. Suffice it for my present purpose, to narrate facts presented to my own observation, without entering the broad field of hypothesis, or ascending into the regions of fiction; to relate in brief and simple phrase, one benign visitation of this incomprehensible agent, which like an angel of mercy from the skies, bore on its mission not only comfort and consolation, but entire immunity from the pain and torture attendant on a severe surgical operation. As the object of this communication is simply to report the fact that animated animal matter has been disintegrated without pain and without the knowledge of the patient, the particulars relating to the nature and progress of the disease will be necessary. Miss Cromett, the well known subject of the operation which has excited a large share of curiosity and interest in this place, possesses an exalted nervous temperament, with the least possible share of fortitude and firmness—acutely sensible to painful impressions, aggravated at the time, by an accumulation of morbid nervous irritability. When first advised by her physician, that excision was the only remedy to arrest the disease and stay the advance of death, so repugnant was the remedy to her feelings, that she avowed her preference for the latter alternative, rather than submit to the tortures of the knife.

In this state of painful anxiety and suspense, three months elapsed, adding vigor to the disease, at the expense of the patient's welfare. Representations of the dangers of



delay, of the certainty of a fatal termination, remonstrance and persuasion, were alike impotent to overcome her opposition and dread of the operation. At this critical juncture, some friends advised and aided her in procuring the services of Dr. Josiah Deane, of Bangor, an experienced and successful operator in Mesmerism. He came, remained five days, and favorably succeeded in magnetically subduing the patient. Untoward circumstances at this time forbade the operation, and a short delay was recommended for the removal of local inflammation.

After an interval of ten days, the local disease beginning to assume a more inauspicious aspect, Dr. Dean was again called in on June 28th, but owing to some adventitious illness, prudential considerations recommended a delay until July 3d, at 10, A. M., when the tumor, involving the whole of the right breast was removed by Dr. H. H. Hill, of this village, in presence of Dr. Hubbard of Hallowell, Doctors Snell, Briggs, Myrick, and Nichols, of this place, Rev. Mr. Burgess of the Episcopal Church, J. L. Child, Esq., Counsellor at Law, Mrs. Smith, and some other ladies.

The urgent solicitation of the patient prevailed over the concealment previously determined on, and she was apprized on the day previous, of the hour appointed for the operation. Notwithstanding her fancied fortitude forsook her, so irresistible was the power of magnetism, that in about ten minutes she was beyond the control of fear, and secure from the influence of pain. The operation was performed by two incisions, measuring on the line of their curvature, twelve inches each, the whole enlarged gland removed, (weighing two and a half pounds,) the arteries secured, the wound carefully examined, the surfaces brought into apposition and partly secured by sutures, without a motion, a groan or sigh, or even the most remote indication of pain or sensibility. It would have appeared to an observer, "that life itself was wanting there," had not respiration given assurance that the spirit had not departed.

At this period, when a few more stitches would have completed the whole operation, the Mesmeriser unintentionally permitted his attention to be withdrawn from the patient, when she awoke to the consciousness of having passed an ordeal without a pang, which, without the oblivion of magnetism, would have severely tried the fortitude of the firmest, and have convulsed with the keenest agony every fibre that had been reposing in softest slumber. The acute sensibility to pain betrayed by the introduction of

the remaining stitches, would, I think, convey conviction to the mind of the most obdurate disbeliever that such a result could be produced by no art of legerdemain, nor by any other known agent. The circulation was slightly accelerated—the respiration natural, and an entire freedom from the faintness, exhaustion and prostration, so often attendant on severe corporeal suffering.

The facilities furnished by this quiescent state, essentially aided the operator in abbreviating the time usually required in such operations. The writer was present during the whole process—has visited and conversed with her since, and up to this date (July 9th) she has been rapidly convalescent—having been visited by no secondary hæmorrhage, no inflammation, pain, sleeplessness, nor inquietude, and with better health than the last two months have afforded.—*Kennebec Journal*.

Augusta, July 9th, 1845.

The case of Miss Cobbett, above described, fell under our observation, and the material facts are truly stated.

JOHN HUBBARD,  
H. H. HILL,  
CYRUS BRIGGS,  
ISSACHAR SNELL,  
LOT MYRICK,  
HENRY L. NICHOLS.

Having been present during a part of the operation, and had an opportunity to verify the facts above stated, I have no hesitation in certifying to their accuracy.

JAMES L. CHILD.

#### *The Wonders of Electricity.*

The Hartford Courant says, that on the 26th ult., Mr. Fowler of Mansfield, took a bed at Nottingham, and in the morning was found apparently dead from poison. The usual remedies were applied without effect, when electricity was resorted to. At the first application of the conducting wire to the chest of the patient, he rose up, but gradually fell back again. At the second shock he rose up, crying out "Oh," and then fell back again; but on the third shock he started up, crying out, "Oh God!" and sat upright with ease. In a short time afterwards, he asked for something to drink, and tea and coffee were administered to him; in three quarters of an hour he dressed himself, and appeared almost entirely recovered. He had purchased two ounces of laudanum, and had taken the whole of it in two doses. Some disagreement with his wife is said to have been the inciting cause.

## Statistics of Insanity.

According to an abstract of returns recently made to the British Parliament, of the number of lunatic and idiot paupers in the 589 unions of England and Wales, the following facts have been developed;—

|           | <i>Population.</i> | <i>Lunatics.</i> | <i>Idiots.</i> | <i>Total.</i> |
|-----------|--------------------|------------------|----------------|---------------|
| England.. | 13,026,664         | 7,274            | 6,882          | 14,153        |
| Wales...  | 884,173            | 379              | 890            | 1,199         |

|            |       |       |        |
|------------|-------|-------|--------|
| 13,910,837 | 7,680 | 7,702 | 15,452 |
|------------|-------|-------|--------|

In addition, there is a population of 1,574,371, not included in these unions, where the returns show the number of lunatics to be 1,086; idiots, 458; total, 1,544.

(Communicated for the Dissector.)

Boston, August 9th, 1845.

DR. SHERWOOD:

I was very glad to see by the last Dissector, that you and Mr. Fowler proposed to start a Mesmeric Journal. I deem it a matter of importance, and only regret, that it is not your plan to associate it with one or the other of the journals already in your care. Periodicals multiply so fast that one cannot reach the whole unless abounding in funds.

Phrenology and Mesmerism are each incomplete without the other; why not have a Journal devoted to the two.\* Both sciences suffer for want of a better knowledge of their principles among those who know a little and *think* they know every thing. Mesmerism, especially, is exposed to much opposition from the pretensions of those Charlatans who think to make their little knowledge and great pretensions a means of playing upon the curious and of obtaining a livelihood. No doubt there are many who honestly think they understand the science, who have read but little and thought less, and who might be induced to read a popular periodical.

Besides these, many are led from curiosity and some, as it were, accidentally to attempt to mesmerize without knowing the power of the agent which they thus tamper with. I will mention some cases in my own experience.

Mr. S., a friend of mine, curious to see the wonders of Mesmerism, magnetised Miss S. F., who was a natural sleep-walker. She was very susceptible, and in a few moments he for the first time saw a person in the Mesmeric sleep. He was elated and

curious, and began to astonish himself and others with wonderful experiments. After an hour or two he awakened her, and she seemed as usual. But there was a great call to see her in the sleep, and he elated at the idea of "showing off."

In a few days the subject was so affected, that as soon as she fell asleep at night, she appeared like a crazy person, could not be confined to the bed, or her room, and it was very difficult to rouse her. In this state of things, S. called on me in great excitement and anxiety of mind, and in the most unfit state possible, for having a subject under his control. I fully believe that if he had not been able to obtain advice, his friend would have become permanently insane. Timely treatment, however, brought her into the control of a calm magnetizer and secured her recovery and entire relief from any tendency to sleep-walking. She has been well for 3 years, and a good subject.

A. R. complained of the headache, and a person present who had seen another mesmerizer attempted to relieve her. He charged her head until it ached no more, and left her in that state for a town some miles distant. The effect of this seemed to increase for a day or two until she could tell whether her mesmerizer was sitting, eating, walking, or talking, and yet she could attend to business. Her friends were compelled after 3 or 4 days to send for her mesmerizer, and with the aid of one who understood it relieve her from this unpleasant and dangerous state.

I was called after meeting one Sunday afternoon to see S. W. who had been several days in the mesmeric state, having occasional intervals when she appeared naturally conscious, and then relapsing into a distinct mesmeric and clairvoyant state. With proper treatment, she was relieved of her unpleasant situation, but I think she had been in the mesmeric state eight days.

B. N. a young man about 18, had been frequently mesmerized by myself and others. One day he came to my study to be mesmerized, having felt quite unwell for a few days. Under the most gentle mesmeric influence I could not prevent his being thrown into distressing spasms. I consulted two somnambulists and found that Mr. L. had magnetised him (the first one he had ever tried,) and then excited different organs of the brain, and left his head in a state of confusion which no one can understand who has not had much experience in Phreno-Mesmeric experiments. The consequences would have been very injurious but for timely attention.

By such facts as these I am more and

\* This is a mistake in supposing Mr. Fowler or myself proposed to commence a new Journal. We only offered to disseminate a knowledge of important facts in mesmerism, &c., through our respective Journals.—Ed.

more impressed with the importance of earnest effort to spread light on this interesting subject.

Many of us have facts of interest to others, and of great importance to those who are every day awakening to an interest, and especially, should it be known that no one is guiltless who ignorantly meddles with an agent so important and powerful.

O. H. W.

Thomasville, Geo., August 25, 1845.

Dr. H. H. Smeewood.

Dear Sir:—I received the lectures of J. Davis on Clairvaintness, by the Rev. Gibson Smith, and am truly obliged to you for the favor. On reading them, I was strongly impressed with the wonderful statements of the clairvoyant, relative to the opening of his spiritual sight;—the correctness of which is fully corroborated by Swedenborg in his experience. As an illustration of this fact, I will cite you to the work "Angelic Wisdom concerning Divine Love and Wisdom," No. 252, where it is declared, "that the natural man is a full man when the spiritual degree with him is opened; for he is then consociated with the angels of heaven, and at the same time consociated with men in the world; also, that his spiritual mind is filled with a thousand arcana of wisdom and a thousand delights of love by the Lord, and that he comes into them after death when he becomes an angel. In No. 267 of the same work, it is further stated: "1. That the natural mind can be elevated even to the light of heaven, in which the angels are, and perceive naturally what the angels do spiritually, thus not so fully; but still the natural mind of man cannot be elevated into angelic light itself. 2. That man, by his natural mind elevated to the light of heaven, can think with angels, yea, speak; but then the thought and speech of the angels flow into the natural thought and speech of the man, and not the reverse: wherefore the angels speak with man in natural language, which is the man's vernacular. 3. That this is done by a spiritual influx into the natural and not by any natural influx into the spiritual. 4. That human wisdom, which is natural so long as a man lives in the world, can in a degree be exalted into angelic wisdom, but only into a certain image of it; the reason is, because the elevation of the human mind is made by continuity, as from shade to light, or from grosser to purer. But still a man with whom the spiritual degree is open, comes into that wisdom when he dies, and may also come into it by the putting asleep of the sensations of the body, and then by influx from above into the spiritual of his mind. 5. The natural mind of man consists of spiritual substances: wherefore that same mind after death, when a man becomes a spirit or an angel, remains in a form similar to that in which it was in the world. 6. The natural substances of that mind, which, as was said, recede by death, make the outaneous envelope of the spiritual body in which spirits and angels are. By such envelope, which is taken from the natural world, their spiritual bodies subsist, for the natural is the containing ultimate. Hence it is that there is not any spirit or angel who was not born a man. The Arcana of Angelic Wisdom are here adduced, that it may be known what the natural mind with man is, and what the spiritual, which is also further treated of in what follows," throughout the work.

The principles laid down in this important work, are but imperfectly known to the world, for they have appeared to transcend the common sphere of human knowledge. Hence the little attention comparatively, which they have attracted, aside from the receiving of the New Church doctrines. But the time is coming, yea, now is, as is fully believed, when a very different estimate will be placed upon them. Another century under the providence of God, and nothing will be found in the old and labored structure of Physick and Metaphysics, but the voice, "he is not here, but is risen."

Very respectfully,

WM. HUNNEWELL, M. D.

## MAGNETIC SLEEP.

*Continued from page 186.*

In the first state of magnetic sleep, persons retain more or less of their intellectual faculties, and are more or less susceptible to external influence.

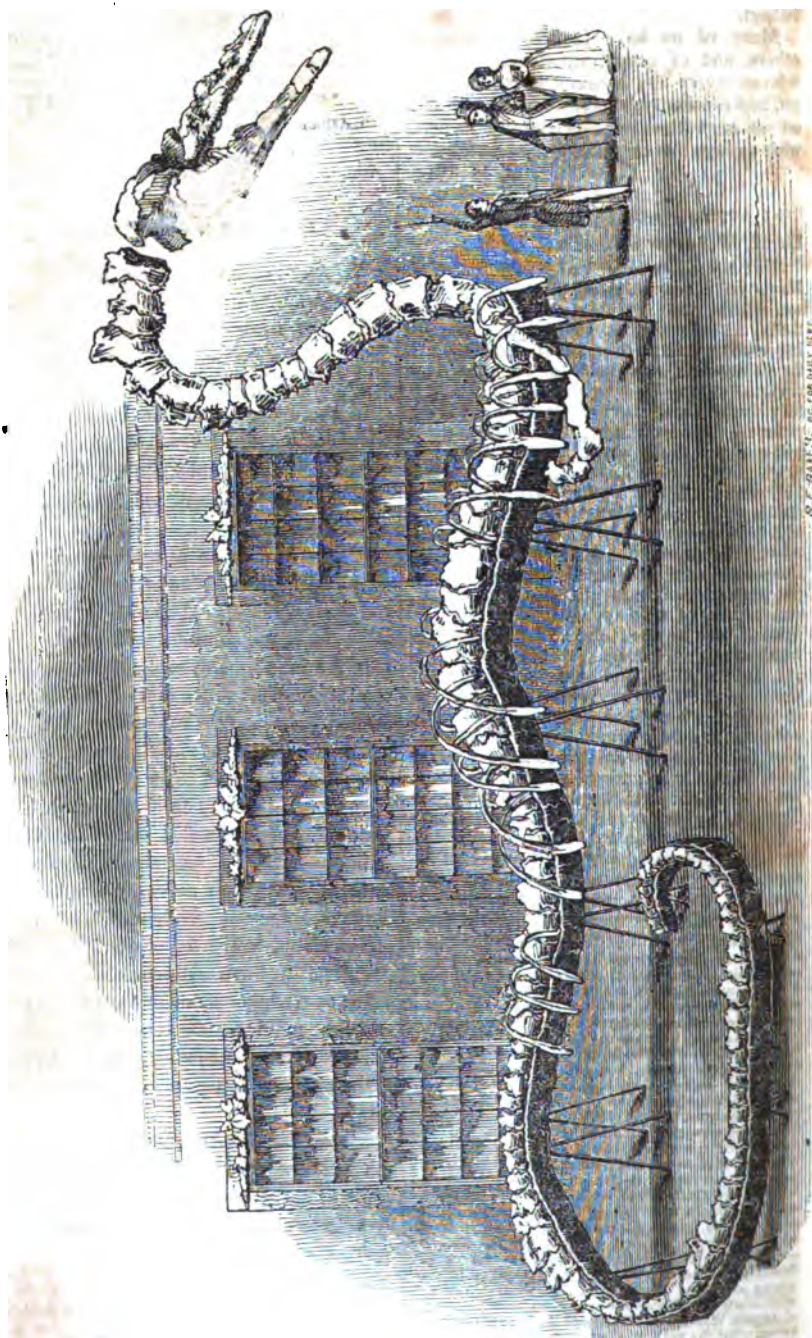
In the second state the paralysis of the muscles, and the insensibility of the skin is complete—the natural sight lost, the hearing more or less impaired, and a muscular attraction established.

In the third state a strong sympathy is established between the mind of the subject and the magnetiser—the mind of the former being under the control of the latter.

In the fourth state the mind of the clairvoyant soars far above that of the magnetiser and becomes free and independent.

These phenomena are the consequence of reversing the natural order of the magnetic or spiritual organization of the body. The negative and insensible forces connected with the inner or mucous membranes or surfaces, and molar nerves, are attracted to the outer or serous membranes, and nerves of sensation, while the positive and sensitive forces in these external surfaces are repelled to the inner or mucous membranes and surfaces, and hence the cause of this reversed order of the sensibility and insensibility of the opposite or serous and mucous surfaces.

In passing into the magnetic state a person feels first a disposition to sleep and then a prickling sensation in the skin, followed by a general numbness—the natural light fading away, when perfect darkness ensues. A glimmering of magnetic light then begins to appear, when a shock ensues, followed by a blaze of light, consciousness and clairvoyance.





tive anatomist, Professor Owen, of the Royal College of Surgeons, who was of the opinion that the animal must have had more resemblance to the whales than the lizards. This opinion Dr. Harlan had the candor to present to the Association of American Geologists, together with the bones, at their meeting in Philadelphia, in April, 1841, where I heard his statements. Not long after, Dr. Bulkley brought to this city, and eventually to Albany, an entire skeleton of the animal, which is between seventy and eighty feet long, and is now in the State Geological Collection at Albany; but I believe it has not as yet been set up. This skeleton was fully described by Dr. Bulkley, in the *American Journal of Science and Arts*.

Dr. Kosch, the proprietor of the skeleton now in this city, made a journey of discovery a few years since into Alabama and other Southern regions, with particular reference to this animal. He had the rare good fortune, as the result of his perseverance, aided by the kind assistance of the inhabitants, to disinter the stupendous skeleton which is now set up for exhibition here.

It has, evidently, been done at great expense and personal toil, and the public, while they owe a debt to Dr. K., will, when paying it, receive a high gratification in contemplating the remains of a race of animals whose length exceeded that of all other creatures hitherto discovered; the spinal column of this skeleton as now arranged measures 114 feet in length. The skeleton having been found entire, enclosed in limestone, evidently belonged to one individual, and there is the fullest ground for confidence in its genuineness. The animal was marine and carnivorous, and at his death was imbedded in the ruins of that ancient sea which once occupied the region where Alabama now is; having myself recently passed 400 miles down the Alabama river, and touched at many places, I have had full opportunity to observe, what many geologists have affirmed, the marine and oceanic character of the country.

Judging from the abundance of the remains (some of which have been several years in my possession) the animals must have been very numerous and doubtless fed upon fishes and other marine creatures—the inhabitants of a region, then probably of more than tropical heat; and it appears probable also, that this animal frequented bays, estuaries and sea coasts, rather than the main ocean. As regards the nature of the animal, we shall doubtless be put in possession of Professor Owen's more mature opinion, after he shall have reviewed the entire skeleton. I would only suggest, that he may find little analogy

with *whales*, and much more with *lizards*, according to Dr. Harlan's original opinion.

Among the fossil lizards and saurians, this resembles most the *Plesiosaurus*, from which however, it differs very decidedly.

Most observers will probably be struck with the snake-like appearance of the skeleton. It differs, however, most essentially, from any existing or fossil serpent, although it may countenance the popular (and I believe well founded) impression, of the existence in our modern seas, of huge animals to which the name of sea-serpent has been attached. For a full and satisfactory statement of the evidence on this subject, see a communication by Dr. Bigelow, of Boston, the 2d volume of the *American Journal*.

Dr. Kosch has committed one error in naming the fossil skeleton now presented here for inspection. By every claim of scientific justice, the epithet—*Harlani*, should be suffixed to whatever other principal name may be finally adopted. It is but simple justice to the memory of our most distinguished comparative anatomist—who first called the attention of the scientific world to the stupendous fossil animal of Alabama: and there can be no propriety (however kindly it may have been intended) in imposing the name of another individual, who can claim no other merit in the case, than the very humble one of endeavouring now, as well as formerly, to awaken the public attention to the most remarkable of our fossil treasures. Dr. K. is therefore bound to recall his new epithet, and restore to Dr. Harlan the honor which is his due. I remain, my dear sir, with great regard, your friend and servant,

BROOKLYN, L. I., Sept. 2d, 1845.

B. SILLIMAN.

P. S.—It should be remarked that Dr. Kosch has also brought to light the most gigantic fossil skeleton of the *Mastodon* family that has ever been found. It was exhibited in our cities, and is now in the British Museum, having been purchased for two thousand pounds sterling, by that institution.

If the bones examined by Professor Owen, in London, and the "entire skeleton, between seventy and eighty feet long," now in the State Geological collection at Albany, be those of a creature identical in kind with the *Hydrarchos*, it is but little complimentary to the anatomical science of the examiners that they should have confounded them with those of any known variety of the saurians. The teeth, at least, should have been taken as evidence of a decisive distinction. None



of the saurian family have teeth of more than one fang, while the incisors of the *Hydrarchos* have two, more and more forked as we proceed from the anterior to the posterior of the jaw. Dr Koch thinks that these incisors, while like those of all the serpent tribe, have also some analogy to those of a marsupial animal—a singular thing enough, if we overlook the fact that all serpents are so far-pouched animals as to swallow, or present an internal receptacle of refuge for their living young. It is evident, moreover, that the *Hydrarchos* did not masticate its food, but gorged it entire, although, says Dr Koch, it was provided with palate bones which might have been used simply to crush its food. "Its greatly elongated snout was armed with fifty or more spear-shaped incisors whose fangs were deeply inserted in spear-shaped sockets. The pivocation is in the extreme anterior ones, and only marked by a groove; the spear-shaped crown of these teeth is divided into more or less minor spear-shaped fronts, which increase or diminish in number according to the situation the tooth occupies in the ramus; the central one of them is the largest, and those nearest the gum are the smallest. These crowns are covered by a thick coating of enamel, which had a rough surface, and are marked by small scale-like elevations which are narrow, lancet-shaped, and elongated, with their points upwards." "All the incisors are so set in the ramus and maxilla, that their extremities have an inclination backwards towards the palate, like the shark, and that the victim caught could easily enter the mouth, but could not possibly escape." The canine teeth correspond with the incisors in this position, while they are from six to eight inches long.

That the creature was an air-breathing reptile, is conclusively inferred from the nasal cavity, in which the posterior vents are at the back part of the mouth, enabling it to respire deeply and freely. It is not improbable that, like the *Plesiosaurus*, this stupendous serpent was a coasting rather than a deep ocean reptile, as indeed are all known marine creatures of a kindred form. Not

only its necessity of breathing, but the prodigious size and muscularity of its cervical vertebræ, indicate its habit of rearing itself above the water; and when we also examine the peculiar structure and marvellous strength of its massive lumbar vertebræ, which may be regarded as the axis of its muscular power, we feel authorized to conclude that it could erect nearly two thirds of its entire length from this basis, in a majestic curve above the surface of the tide—often, doubtless, in tranquil seasons, a glowing mirror of its gorgeous form and stately movements. Its eyes, too, which were from six to eight inches in diameter, were so prominently situated on the forehead as to secure it a vast circle of vision, and render it a vivid object of terror; and when Job says of his leviathan that "his eyes are like the eyelids of the morning," the force and beauty of the poetic hyperbole are as appropriate to the eyes of the *Hydrarchos* as to those of any animal, not purely imaginary, of which we can form an idea.

Upon the general osseous structure of this mighty being, we will quote the description given by Dr Koch:—"The propelling motion of the animal was, like that of all the serpent tribe, dependant upon the action of its powerful vertebræ, and the strong muscles and ligaments acting in harmony with them. The strong and lengthy tail, was more particularly used as a rudder to direct its course, as well as for the purpose of propelling. The transverse processes, which are very large in the whole spinal column, are more especially so in the caudal or tail vertebræ; the canal for the spinal marrow is very much compressed and flat, and the spinous processes have a great inclination backwards, [probably enhancing its springing or ejaculative power]. The dorsal and lumbar vertebræ are greatly elongated, measuring each from fourteen to eighteen inches in length, and having a circumference of from twenty-four to thirty inches. Their construction differs from those of any animal with which I am acquainted, as each body of these vertebræ is composed of five sections. In the centre, we observe the main body to which all the pro-

cesses are attached, and which measures from five to seven inches in length : to both extremities of this is a pelvis. The section is *anglelozed*, measuring from three to four inches in length, and to the extremities of these again we find a pelvis. The whole is *anglelozed* and ossified together in an adult, but will separate in younger animals, as I have had an opportunity of observing personally. [Dr. Koch found several imperfect skeletons of younger specimens of this creature.] The cervicle, or neck, and the *cofyxal*, or tail vertebræ, have powerful processes, but their bodies have not the additional divisions described above, as found in the dorsal and lumbar vertebræ. The ribs are of a very peculiar shape and form ; so much so that I know of no animal to which I might compare them. The greater number are small and remarkably slender on their superior extremities, until we arrive within two thirds of the length toward the inferior extremities, where they begin to increase in thickness most rapidly, so that near the lower parts, where they are flattened, they have three or four times the circumference that they have on the superior extremities, and have very much the curve of the sickle. From the whole of their construction, we may justly form the conclusion that the animal was not only possessed of a fleshy back of great power, but also of remarkable strength in its belly, by which means it was enabled to perform very rapid movements. Notwithstanding its two fore feet, or paddles, are quite small in comparison with the rest of the skeleton, yet they are in proportion with the short and thick humerus and ulna or forearm, which, together with the paddles, must have been concealed under the flesh during the life of the animal, in such a manner as to be only perceptible through muscles and cartilages, similar to the fins of an eel. The humerus and ulna are not unlike those of the *Ichthyosaurus* ; and each paddle is composed of twenty-seven bones which form, in union, nine forward and backward articulating joints."

Upon this description we have only to remark that the peculiar form here correctly as-

signed to the ribs of this ponderous creature, in being so much thicker and stronger at the part of the curve where they turn to bend under the belly, is evidently an admirable provision of nature for sustaining the immense superincumbent weight of its mass, when resting upon a shore, or depositing its bulk for repose, upon the bottom of any other shallow waters ; and as a respiring reptile, this sea-serpent must have often enjoyed the ease of such a position, fearless of every foe. That none of the saurians, nor any other animals, should be found to exhibit this very striking singularity of costal structure, is simply because they were otherwise furnished and did not need it ; while to this creature, devoid of legs, and all pedal points of support, the provision was indispensable, and he accordingly possessed it. After all, the ribs seem exceedingly slight for so bulky a mass, and there can be no doubt that they were strengthened with those well-knit bands of intercostal cartilage and muscle, which supply the place of osseous ribs in the large conger eel, and other varieties of the serpent race.

Concerning the natural habits and capacities of this wonderful animal, comparative anatomy will spread a rich field of beautiful analogy and scientific induction.

Whether he was amphibious, to the extent of our present water snakes, may well be doubted from the evidence afforded by his side fins of a more decidedly piscine character. The last joint of his tail, too, indicates a final bifurcated fin ; and the finding of this termination of the vertebræ, cannot but be regarded as a most felicitous circumstance, for while it tends to determine the animal's distinctive nature, it also proves an admirably tapering symmetry of form, peculiar to the serpent species.

The following is a summary of Dr Koch's unpublished description of the upper and nether stratification of the spot and neighborhood in which these stupendous fossil remains were discovered ; and we have great pleasure in presenting to our readers a matter of so much scientific curiosity :—

A. A stratum of diluvial gravel with shells.



B. A stratum of a blood-red color, from a deposit of clay, highly impregnated with iron, and exhibiting grey veins.

C. A stratum of peculiar lime stone, forming in some places remarkable terraces, in divisions or steps, from five to seven feet high, and from thirty to forty horizontal breadth, exhibiting great regularity. These occur in locations, in the vicinity, where traces of a most violent and rapid current appear, and apparently of diluvial action. This lime-stone is termed "chimney-rock," by the inhabitants of the neighborhood, and is so soft as to be sawed into blocks for building, with a common cross-cut saw.

D. A stratum of volcanic origin, forming an extensive bed of volcanic matter, inclosing and cementing various kinds of fossil wood, some partly in a crystalline state and others reduced to charcoal. These specimens of fossil wood, which increase as we leave Clarksville and approach the Mississippi, prove the existence of dry land vegetation at this epoch; and from the admixture here found of fresh water shells with a large number of beautiful marine fossils, the spot seems to have been connected, at the time it was on the surface, with some shallow sea or bay. In Clark and Washington counties this stratum is frequently laid open, forming, indeed a considerable portion of the present surface, and often appearing like a dark brown vegetable mould, mixed with corroded volcanic substances and calcareous matter. Its volcanic origin is clearly traceable wherever it is laid bare; fragments of lava are thrown for miles around the vicinity of Clarksville, and we frequently find extensive beds, formed of a mixture of sand, iron ore and lava, once in a melted state, but now broken in layer, or smaller sections. Sometimes pieces of pumice stone are found here with bituminous coal, and an extensive bed of the latter is said to exist in the Tallehalla Hills in Clark Co.

E. A stratum of yellowish lime rock, containing fossil remains of myriads of animals and shells. In this stratum, at a spot near a chasm, where it had been lifted to the surface, and where the superincumbent strata were thrown to the right and left, by volcanic

action, was found the skeleton of the Hydrarchos, or as we would have it called, the *Leviathan*. The vertebrae, with the exception of one or two joints that had been turned up by the plough, were found and dug out in the natural order in which they lay, and in which they are again put together in the skeleton as exhibited.

F A stratum of quartose sand, ten or twelve feet thick, which Dr. Koch conceives to be a continuation of the stratum marked "I," (see below.) He says that at Clarksville he found the upper section of this stratum, containing oysters of a large size, while, on the Tombigby side of the dislocated elevation, he found the lower portion of this stratum, containing oysters in quite a young state of growth. He adds that at Coffeerville, the same stratum appears ten or fifteen feet thick, the lower portion as marl, and the upper as laminated lime rock of the same color as at Claiborne.

G. A stratum of rich green sand, containing highly brilliant shells, of a light green color. This stratum is particularly characteristic, having a bed of oysters entirely different from those in the underlying bed (I), and forming a bank which appears never to have been disturbed. Indeed the shells of many of these bivalves still remain united.

H. A stratum of quartose sand, fourteen or fifteen feet thick, containing shells of oysters and other oceanic shells. Here, in the neighborhood of Clarksville, occurs a miniature species of the saw-fish, its saw, although of a similar construction to that of the existing species, being but about three inches long, instead of as many feet. Several species of oysters occur here, which must have originated at this epoch, as they are not found either above or below. "I discovered" says Dr. Koch, "that this last bed is identical with the one of green sand (G) mixed with blue clay, and with an over-lying osseous conglomerate, containing principally the remains of sharks; the first being also mixed with yellow lime stone, and the second with mould of the prairie of Alabama: the latter proving by its numerous fossils to be the upper section of the transi-

tion series, uniting the highest cretaceous with the lowest eocene region. The yellow limestone and the green sand both contain the remains of the largest reptiles; for the Zuylodon, [by some called the basiliosaurus] I discovered at Gay Head, Martha's Vineyard, where it occurs only in the green sand; and in Alabama, where it as exclusively occurs in the yellow lime stone. The remains of extinct crabs occur in both localities, of an identical character; and several species of sharks and saurians, found in the osseous conglomerate of Gay Head, are identical with those of the prairie mould of South Alabama.

I. A stratum of light blue and yellowish limestone, in some places 70 feet thick, as a rich greenish white marl. Where it occurs as a limestone rock, it has strongly the appearance of an uninterrupted bed of the same species of oysters, small and frequently mingled with the casts of oceanic shells, which formed the principal portion of the above mentioned under-lying bed. As we ascend the oysters increase in size, that they may be termed the giants of their race, forming almost a solid bed.

J. A stratum of dark greenish sand, in some places 15 feet thick, containing a great variety of shells, all belonging to those species which we find in deep open seas in tropical latitudes. They are generally in broken fragments, with a few in good condition. We also find a few young oysters, of a kind belonging to the chalk formation. Dr. Koch considers the whole of this bed as the upper part of the secondary formation, and consequently of a far older date than has heretofore been assigned to it.

From this clear and interesting account of the strata among which the Hydrarchos was found, and which in Dr. Koch's exhibition room is illustrated by a sketch on canvass of their present dislocated position, relatively to the perpendicular bluff in the neighborhood where they appear in their original and undisturbed level, it appears that there was one stratum of volcanic origin and formation, and three strata of oceanic deposit, piled above the remains of this animal, upon the surface on which he expired. As the

volcanic stratum D, occurs next above the one E, in which these remains were found, it is not improbable that the immense submarine volcano which then burst forth, was the immediate cause of this creature's destruction. But the strata, C. B. A. above this volcanic one, being oceanic, must have been deposited at three several and distinct periods, or geological epochs, when the ocean arose and overflowed the strata that had previously been formed. Geologists, as yet, have furnished us with no data by which we can determine the length of those periods, nor indeed any chronological key whatever to the stratification of the earth. Thus is geology left without a chronology which alone can harmonize its phenomena, and elevate it to the dignity of a science. That chronology, however, like every other, must be sought for, and, we have long thought can only be found, in an astronomical source, developing and demonstrating the changes in the position of the earth's axis towards the plane of the ecliptic and the sun, under the influence of the spiral motion of the magnetic poles, as calculated and published in our *Astro-Magnetic Almanac for 1843*. From the calculations there given it appears that it requires 2,304,000 years, or one complete sidereal revolution of the earth's axis, for the ocean to deposit two strata; and, consequently, that the period of 3,456,000 has elapsed since the three oceanic strata were deposited over the skeleton of the Hydrarchos. We say nothing of the time during which the volcanic stratum was formed immediately over these remains, because this occurred in the interval between the formation of the yellow limestone stratum in which they were found, and that of the limestone stratum C, next above the volcanic stratum itself. But since the deposit of the third oceanic stratum A, a period has elapsed of 1,008,000 years, during which the ocean has again advanced from the equator towards that latitude, in its progressive formation of a fourth stratum; so that this time must be added to the one before given, to make the total period 4,464,000 years, since the Hydrarchos was destroyed. And immense as this period may seem to those who are unac-

customed to the contemplation of the astronomical causes of stratification, it cannot be bridged without resorting to a succession of miraculous causes to explain the phenomena which undeniably exist. It was sometime in the last intermediate period of 1,008,000 years, that the new subterranean disruption of the strata of that locality occurred which raised these stupendous relics from the place of their protracted oblivion, to become the wonder of the present age.

#### **Motion of the Magnetic Machine.**

In running the vibrating Magnetic machine, we sometimes find a point of about the size of a small needle projecting from the end of the screw, which rests on the vibrating spring and impedes its motion. This should be removed with a penknife or file, when the spring will again vibrate in the best manner.

Experience has also shown that the spring is sometimes bent by pressing the screw so hard upon it so as to prevent it from vibrating. In this case, the spring must be straightened, when it will again vibrate in the usual way.

#### **LE ROY SUNDERLAND.**

The tenth and last lecture of this gentleman on the Human Soul, was delivered, according to previous notice, in Morris Place, to a crowded and highly intelligent audience on Saturday evening last. Long before the appointed hour the house was filled, and "expectation stood tip-toe," to witness the extraordinary phenomena promised for the evening. At half past 7 the lecturer made his appearance, and immediately commenced the experiments, which were brought on while he was in the act of explaining some few things peculiar to his new theory of mind, denominated Pathetism. In the course of some fifteen minutes, about a dozen of the audience were found to be in a state of trance; and six of the number arose, one after another, and walked, in a peculiar unnatural gait, up to the platform, and by the assistance of the lecturer seated themselves upon the sofa. Among those taken upon the platform under the power of

the charm, was Dr. H. G. Payne, Mr. Ketchum, and a young man by the name of Althiser. The other three were ladies. After causing Mr. A. to dance, and a few other results, Mr. S. proceeded to prepare one of the ladies for a surgical operation, and invited the medical faculty, the clergy and gentlemen of the press, present, to the platform, for the purpose of having them inspect the tooth to be drawn, and notice the manner in which it was done. He then took hold of Dr. Payne (who was still under the influence of the spell,) and led him up to the lady seated in the chair. And now occurred a sight upon which, probably, mortal eyes never gazed before! It was to see the somnabulic Dr. in the process of extracting that tooth, while he and the patient were in a state of trance, and neither of them able to open their eyes or move a muscle without consent of the lecturer! The tooth was very firmly set, and it required an extraordinary outlay of strength to extract it. The lady sat, during the operation, without the slightest manifestation of consciousness, though she is well known to be one of the most fearful and timid in her natural state: so much so, that she has been thrown into spasms, it is said, when attempts have been made to draw her teeth when she was awake.

In a few minutes after, the Dr. himself was seated in the front chair, the spell still upon him, and another physician present, (Dr. Lyman,) proceeded to perform a similar operation upon him! It was one of the wisdom teeth, and had grown in such an unnatural manner, as rendered the extraction exceedingly difficult. Five times the key or forceps slipped from the tooth, and the violence done to the jaw was such, that the Dr., we learn, has scarcely been able to open his mouth since: and though he declared that he suffered no pain at all at the time, it would seem that he has since suffered enough to make it up.

This experiment was intensely interesting, and highly satisfactory to the audience; as we suppose it the first and only one of the kind ever performed since old Adam was put into the "deep sleep," for the purpose of having the rib taken from his side.

After the above, Mr. S. informed the audience that another lady was present in a state of trance, who would submit to have two of her teeth drawn, if they had patience or a desire to see any more blood shed. A wish being expressed to see it done, Dr. Payne was now restored to his natural state, and in a few minutes he drew two of her

molar teeth, while she manifested not the slightest knowledge of what was going on. And both ladies operated on declared, after being restored, they had no knowledge whatever of any thing done to them while upon the stage in the state of trance!

What Mr. Sunderland has accomplished during his visit to this city, has abundantly confirmed the newspaper reports we have seen of his wonderful performances in other places; which, in the production of psychological phenomena, especially those peculiar to what are called spells and charms, place him far before all other men of whom history has given us any account. He has evidently left a good impression on the minds of our citizens, as was manifest by the audience, last Saturday evening, when he declared his determination, at some future day, to visit our city again.—*Troy Budget.*

“Clairmativeness.”

DEAR SIR:

The publication containing “All the Mysteries of Human Magnetism and Clairvoyance Explained, by the celebrated Jackson Davis of Poughkeepsie,” promised in the Tribune some time since, by Rev. G. Smith, has just come to my notice; and, as I know many of your readers feel considerable interest in the subject, I beg the privilege of offering a few remarks concerning it. And, I am the more inclined to do so, from knowing, as I do, that many candid persons like Mr. Smith have been so completely carried away with the oracular proofs of young Davis, as to admit and believe most or all he has said without the shadow of a doubt! Had these friends heard as many “revelations” of theories from somnambulists as it has fallen to my lot to listen to within the last seven years, I do believe it would have very much moderated the ardor of their faith in the “Clairmativeness” of Mr. Jackson Davis. Swedenborg was a far more remarkable Somnambulist than Davis, or indeed than many others of the present age who have been thought to be so very extraordinary. More beautiful theories were never conceived, perhaps, in the human brain than were put forth by Swedenborg, while in a state of Somnambulism, or one identical with that to which we now apply this term. Somnambulist revelations of theories have often been made by Mormons, French Prophets, Anabaptists, Methodists, Catholics, Presbyterians, and others. Witness the Trance of Rev. Mr. Tennant of New-Jersey. These visions, or Somnambulist descriptions, may be classed with the phenomena of Dreaming, and are no more to be depended upon as truthful than many cases of dreaming, which are of constant occurrence.

Many of the representations made by Davis, are not only puerile, but they are false in fact, as any one may easily know. See page 34 of his book. “Clairmativeness,” he tells us, “is a compound word, and literally signifies clearly reversed”!!! “Clair,” is a French adjective, and literally signifies “clear,” and not “clearly,” as Mr. D. thought; and, then as to the literal meaning of “mativeness,” who knows?

His stories about the inhabitants of Saturn, may be classed with the visions of Joe Smith. I no more believe them than I do the following, where (page 36) he speaks of himself in the following terms:

“When in the state that I now am, I am master of the general sciences, can speak all languages, impart instructions upon those deep and hidden things in nature, which the world have not been able to solve, as I have done in these lectures (!) can name the different organs in the human system, point out their office and functions—tell the nature, cause and symptoms of disease, and prescribe the remedies that will effect the cure,” &c. &c.

Did that youth ever converse with any intelligent person, in a foreign language? And, into what egregious delusion must that mind have fallen which could utter such language as the above! Many things he affirms about the state denominated the “magnetic sleep,” I know to be untrue, but it would not be worth the space to point them out here. Page 21, he undertakes to prove that “magnetism” is “animal heat,” and the cause of all “feeling or sensation;” and says: “Take for example a limb that has received a paralytic shock—it is entirely insensible to touch, no sensation can be produced in it.”

This is a great mistake as every Pathologist knows, and shows how really ignorant this youth is, notwithstanding his assumption that he is “Master of the general sciences!” I have seen and treated numerous cases of paralysis, where the sensation was far greater than in other parts of the system not affected.

Mr. Davis seems to have borrowed largely from numerous writers in his sleep, and from one he has quoted ideas about the “sympathetic nerves,” page 10, and the effects of manipulation, page 21, without giving credit for them.

The pamphlet is interesting as a Somnambulist performance, though it contains much that amounts to nothing, even if admitted to be true; and still more which may be easily demonstrated to be false in philosophy and unsustained by matter of fact. In saying this much, however, I must not be understood as attaching the least blame to Mr. Davis, or his amanuensis, Rev. Mr. Smith. The former told his somnambulist visions, containing some truth, mixed up with a vast amount of fancy, and the latter gentleman believed the whole. Time will show that they were both deceived, as thousands of others have been before them who have depended upon similar revelations for what they should believe both in science and religion.

LE ROY SUNDERLAND.

Boston, Mass. Sept. 26th 1845.

*Tribune.*

This number completes the second volume of this Journal. The first number of the third volume will be issued on the first of January next.

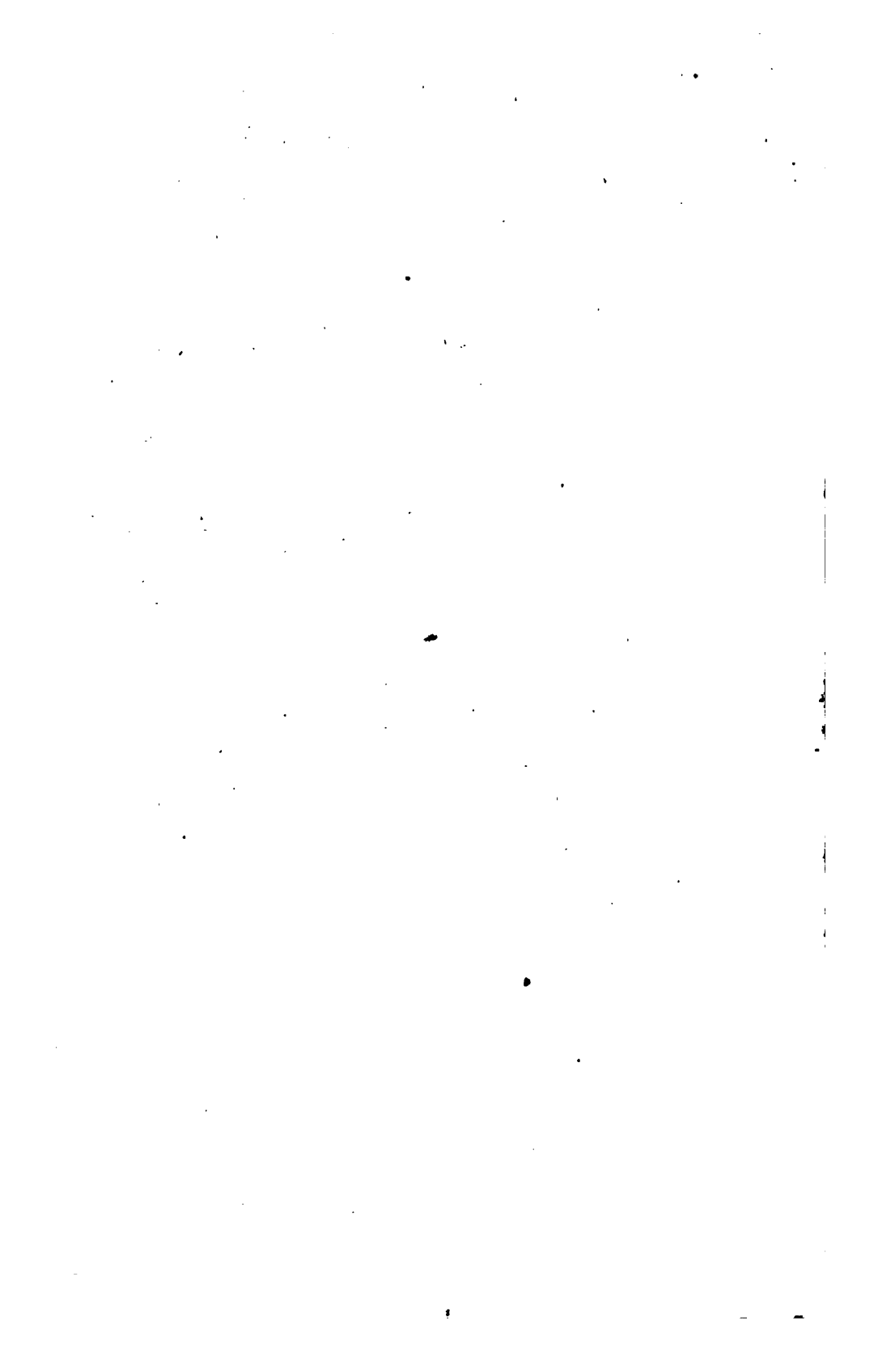
*Erratum.*—Page 215—Article “Magnetic Sleep,” 18 lines from the bottom of the second column, for molar read “molar.”

## INDEX TO VOLUME II.

|                                                                                                                                                                                                                               | PAGE. |                                                                                                                                                                                                                                                    | PAGE. |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| Fallacies of the Faculty. Lectures delivered at the Egyptian Hall, Piccadilly, London, 1840, by S. Dixon, M. D. Lecture IV. Inflammation—Blood Letting—Abstinence . . . . .                                                   | 1     | Camphor, a Preservative of Ergot of Rye                                                                                                                                                                                                            | 40    |
| American Journal of Insanity for October, 1844, Edited by the Officers of the New York State Lunatic Asylum, Utica.—Vol. I. No. 2. Article I. Definition of Insanity—Nature of the Disease . . . . .                          | 19    | Effects of Magnetizing upon the Magnetizer . . . . .                                                                                                                                                                                               | 41    |
| Dr. Stevens' Address at the opening of the Annual Session of the New York Medical College: Crosby-street . . . . .                                                                                                            | 26    | Mesmerism . . . . .                                                                                                                                                                                                                                | 42    |
| Mary Dent and John Garland—Sir James Graham's "Surgery." Mr. Henry Mitchell's History of the Case . . . . .                                                                                                                   | 28    | Effects of the Rotary Magnetic Machine                                                                                                                                                                                                             | 42    |
| Defence by Mr. Garland's Counsel. From the London Lancet . . . . .                                                                                                                                                            | 29    | Magnetic Sleep . . . . .                                                                                                                                                                                                                           | 43    |
| Académie de Médecine, Paris—July. Case of Sus-pubic Lithotomy, high operation . . . . .                                                                                                                                       | 30    | Animal Magnetism . . . . .                                                                                                                                                                                                                         | 45    |
| Excision of the Spleen . . . . .                                                                                                                                                                                              | 30    | Beneficial Effects of Animal Magnetism                                                                                                                                                                                                             | 46    |
| Academy of Sciences, Paris—July. Pseudo-Membranous Inflammation of the Bladder, produced by Blister . . . . .                                                                                                                 | 30    | The Rotary Magnetic Machine, and the Duodynamic Treatment of Disease . . . . .                                                                                                                                                                     | 47    |
| Pathology. A case of Acute Tuberculosis of the Membranes of the Brain, the Lungs, and Lymphatic Glands. Observed by Dr. Brazic, Assistant Physician to Dr. Skoda, of Vienna. From the British Journal of Homœopathy . . . . . | 31    | Effects of the Rotary Magnetic Machine                                                                                                                                                                                                             | 48    |
| The Researches of M. Jobert (De Delamballe) on the Structure of the Uterus                                                                                                                                                    | 32    | Magnetic Survey . . . . .                                                                                                                                                                                                                          | 49    |
| Camphor a Preservative of Ergot of Rye. From the London Lancet . . . . .                                                                                                                                                      | 34    | Mr. Sunderland and the Fairies . . . . .                                                                                                                                                                                                           | 50    |
| The Effects of Tartar Emetic on Young Subjects. From the London Lancet . . . . .                                                                                                                                              | 34    | Pretended Discoveries in Animal Magnetism . . . . .                                                                                                                                                                                                | 51    |
| Practical Observations. Affections of the Spinal Marrow: employment of Ranunculus Bulbosus, By Francis Black, M. D. From the British Journal of Homœopathy . . . . .                                                          | 35    | Colon Strangulated by Meso-colon . . . . .                                                                                                                                                                                                         | 52    |
| Calculus of the Bladder treated by Electricity . . . . .                                                                                                                                                                      | 38    | Organ of Calculation . . . . .                                                                                                                                                                                                                     | 53    |
| Therapeutical application of Cold. From the London Lancet . . . . .                                                                                                                                                           | 39    | Value of Homœopathic Practice . . . . .                                                                                                                                                                                                            | 53    |
| The Causes, Symptoms, and Treatment of Acute founder in the Horse. From the London Lancet . . . . .                                                                                                                           | 39    | Decomposition of Tincture of Opium, by Ammonia . . . . .                                                                                                                                                                                           | 54    |
| Diabetes treated by Alkalies. From the London Lancet . . . . .                                                                                                                                                                | 39    | Medical Miscellany . . . . .                                                                                                                                                                                                                       | 54    |
| Duodynamics . . . . .                                                                                                                                                                                                         | 40    | The Local Pathology of Neuralgia . . . . .                                                                                                                                                                                                         | 54    |
|                                                                                                                                                                                                                               |       | The Symptoms of Abscess of the Prostate Gland. Diagnosis from Gonorrhœa . . . . .                                                                                                                                                                  | 54    |
|                                                                                                                                                                                                                               |       | The Curability of Hydrophobia . . . . .                                                                                                                                                                                                            | 55    |
|                                                                                                                                                                                                                               |       | On the Efficacy of Large Doses of Calomel in Typhus, by J. Burgess, Esq., M. R. C. S. . . . .                                                                                                                                                      | 55    |
|                                                                                                                                                                                                                               |       | Spontaneous Cure of Cataract . . . . .                                                                                                                                                                                                             | 56    |
|                                                                                                                                                                                                                               |       | Plane Trigonometry . . . . .                                                                                                                                                                                                                       | 56    |
|                                                                                                                                                                                                                               |       | Errata . . . . .                                                                                                                                                                                                                                   | 56    |
|                                                                                                                                                                                                                               |       | Fallacies of the Faculty. Lectures delivered at the Egyptian Hall, Piccadilly, London, 1840, by S. Dixon, M. D.—Lecture V. Medical Doctrines, old and new—Gout—Rheumatism—Cutaneous Disease—Small Pox—Plague—Yellow Fever—Dysentery—Dropsy—Cholera | 57    |
|                                                                                                                                                                                                                               |       | Poisoning by Arsenic . . . . .                                                                                                                                                                                                                     | 73    |
|                                                                                                                                                                                                                               |       | Miss Martineau's Letters on Mesmerism                                                                                                                                                                                                              | 74    |
|                                                                                                                                                                                                                               |       | The presence of Animalculæ in the Blood                                                                                                                                                                                                            | 87    |
|                                                                                                                                                                                                                               |       | Means of Arresting Hemorrhage from Leech Bites . . . . .                                                                                                                                                                                           | 88    |
|                                                                                                                                                                                                                               |       | On the Consequence of Insects, or Foreign Bodies gaining admission into the Auditory Passages, and on the best modes of extracting them, by W. Wright, Esq., London . . . . .                                                                      | 88    |
|                                                                                                                                                                                                                               |       | Physiological and Pathological Researches on Tuberculosis, by H. Lebert, M. D.                                                                                                                                                                     | 89    |
|                                                                                                                                                                                                                               |       | On the Cure of Deafness by puncturing the Membrana Tympani . . . . .                                                                                                                                                                               | 93    |

|                                                                                                                                                                                                                                                                                                                             | PAGE. |                                                                                                       | PAGE. |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------------------------------------------------------------------------------------------------------|-------|
| The Scalp Issue in Cerebral Diseases -                                                                                                                                                                                                                                                                                      | 94    | A new preparation of Cinchona Bark                                                                    | 133   |
| Statistics of Obstetric Practice -                                                                                                                                                                                                                                                                                          | 94    | Adulteration of Sulphate of Quinine, and<br>a method of detecting it -                                | 134   |
| The Administration of Medicines in a state<br>of Fluidity -                                                                                                                                                                                                                                                                 | 94    | Epidemic Cholera treated by Transfusion                                                               | 134   |
| On the Method of taking Plaster Casts                                                                                                                                                                                                                                                                                       | 95    | Miss Martineau's Repudiation of Mr.<br>Greenhow's Report -                                            | 135   |
| On the Treatment of Femoral Hernia, by<br>J. Sebastian Wilkinson, Esq., Surgeon,<br>London -                                                                                                                                                                                                                                | 96    | Academie des Sciences—Researches of<br>MM. Andral and Gavarret on the Com-<br>position of the Blood - | 135   |
| Medical Memoranda -                                                                                                                                                                                                                                                                                                         | 96    | On the Degenerescence of Vaccine Matter                                                               | 136   |
| Polypus of the Womb, by M. Lisfranc,<br>Paris -                                                                                                                                                                                                                                                                             | 97    | The Sex of the Child as a Cause of Dif-<br>ficulty and Danger in Human Parturi-<br>tion -             | 136   |
| Symptoms and Pathological Appearances<br>in a Case of Spinal Meningitis -                                                                                                                                                                                                                                                   | 98    | Illustration of the Importance of Ventila-<br>tion -                                                  | 137   |
| A Substitute for Wood Engraving, by<br>Richard Lewis Bean, Esq., M. R. C. S.,<br>London -                                                                                                                                                                                                                                   | 99    | On the Use of the Thymus Gland -                                                                      | 137   |
| Reciprocal Influence of the Nervous and<br>Sanguiferous Systems -                                                                                                                                                                                                                                                           | 99    | Galvanism applied to the Treatment of<br>Uterine Hemorrhage, etc -                                    | 138   |
| Prestat's Adhesive Plaster -                                                                                                                                                                                                                                                                                                | 99    | Use of Chloride of Lime in Diseases at-<br>tended with Contagious Discharge -                         | 138   |
| Scrofula, by M. Lugol, Paris -                                                                                                                                                                                                                                                                                              | 99    | Contributions in the Diagnosis and Pa-<br>thology of Chest Diseases -                                 | 138   |
| Clairvoyance -                                                                                                                                                                                                                                                                                                              | 101   | Elegant Extract—Mesmerism and Miss<br>Martineau -                                                     | 139   |
| Bursal Swelling of the Wrist and Palm<br>of the Hand, by James Syme, Esq. -                                                                                                                                                                                                                                                 | 102   | Removal of a Coin from the Larynx by<br>Inversion of the Body -                                       | 139   |
| Caoutchouc as a Remedy for Toothache                                                                                                                                                                                                                                                                                        | 102   | Curious Case of Mesmeric Detection of<br>Crime -                                                      | 140   |
| An Extraordinary Fact -                                                                                                                                                                                                                                                                                                     | 102   | The Relation of a Physician to a Col-<br>league -                                                     | 141   |
| General Laws Regulating the Displace-<br>ment of Fractures -                                                                                                                                                                                                                                                                | 103   | A Doctor and his Lizards -                                                                            | 141   |
| Variocoele Treated by Compression -                                                                                                                                                                                                                                                                                         | 103   | Extraordinary Facts relating to Combustion -                                                          | 142   |
| Inoculation with Strychnia in Amauro-<br>sis -                                                                                                                                                                                                                                                                              | 103   | Medical Society of London—Effects of<br>Counter Irritation—Incubation of In-<br>sanity -              | 142   |
| The Styptic Power of Ergot -                                                                                                                                                                                                                                                                                                | 104   | Imbecility of Medical Colleges -                                                                      | 145   |
| Extirpation of the Mamma of a Female<br>in the Mesmeric Sleep, by L. A. Du-<br>gas, M. D. -                                                                                                                                                                                                                                 | 104   | Swedenborg's Animal Kingdom -                                                                         | 146   |
| Magnetic Sleep -                                                                                                                                                                                                                                                                                                            | 106   | —Principles of Motion -                                                                               | 147   |
| Vibrating Magnetic Machine -                                                                                                                                                                                                                                                                                                | 106   | Magnetizing in Lateral Curvatures of the<br>Spine -                                                   | 148   |
| Anatomy and Physiology -                                                                                                                                                                                                                                                                                                    | 108   | Greenland -                                                                                           | 148   |
| Letter to the Editor -                                                                                                                                                                                                                                                                                                      | 109   | Lord Rosse's Two Great Telescopes -                                                                   | 152   |
| John Wesley and Electricity -                                                                                                                                                                                                                                                                                               | 109   | Magnetic Sleep -                                                                                      | 156   |
| Letter to the Editor -                                                                                                                                                                                                                                                                                                      | 111   | Galvanic Rings -                                                                                      | 158   |
| Magnetic Miscellany -                                                                                                                                                                                                                                                                                                       | 111   | Magnetized Rings -                                                                                    | 158   |
| Ulcerated Ears -                                                                                                                                                                                                                                                                                                            | 112   | Medical Duodynamics -                                                                                 | 159   |
| Rheumatism -                                                                                                                                                                                                                                                                                                                | 112   | Ganglions of the Spinal Nerves in the<br>Intervertebral Spaces -                                      | 160   |
| Fallacies of the Faculty, Lectures deli-<br>vered at the Egyptian Hall, Piccadilly,<br>London, 1840, by S. Dixon, M. D.—<br>Lecture VI. Present State of Medical<br>Practice in England. Dyspepsia—Hys-<br>teria and Hypochondria—Insanity—Ef-<br>fect of Ligatures—Faint—Congestion,<br>its Nature—Infantile Convulsions - | 113   | Diseases of the Mucous Surfaces -                                                                     | 160   |
| Suggestions Relative to the Cause of<br>Sleep, by William Smith, Esq., Sur-<br>geon, Clifton -                                                                                                                                                                                                                              | 130   | Letter to the Editor—Electrical Pills, etc -                                                          | 160   |
| Surgical Diseases -                                                                                                                                                                                                                                                                                                         | 131   | Important Proposal -                                                                                  | 161   |
| The Gastric Fluid, its Nature and Proper-<br>ties -                                                                                                                                                                                                                                                                         | 132   | Magnetic Miscellany -                                                                                 | 161   |
| Indian Hemp in Traumatic Tetanus, by<br>H. G. Potter, F. L. S., Surgeon to the<br>Newcastle Infirmary, and Lecturer on<br>Surgery at the Newcastle-on-Tyne<br>School of Medicine and Surgery -                                                                                                                              | 133   | Homœopathy -                                                                                          | 162   |
|                                                                                                                                                                                                                                                                                                                             |       | Animal Magnetism -                                                                                    | 162   |
|                                                                                                                                                                                                                                                                                                                             |       | Magnetic Machine -                                                                                    | 162   |
|                                                                                                                                                                                                                                                                                                                             |       | Letters to the Editor -                                                                               | 163   |
|                                                                                                                                                                                                                                                                                                                             |       | Antiquities of America -                                                                              | 163   |
|                                                                                                                                                                                                                                                                                                                             |       | Clairvoyance -                                                                                        | 164   |
|                                                                                                                                                                                                                                                                                                                             |       | Swedenborg's Animal Kingdom -                                                                         | 164   |
|                                                                                                                                                                                                                                                                                                                             |       | Fallacies of the Faculty. Lectures deli-<br>vered at the Egyptian Hall, Piccadilly,                   |       |

|                                         | PAGE. |                                          | PAGE. |
|-----------------------------------------|-------|------------------------------------------|-------|
| London, 1840. By S. Dixon, M. D.        |       | Swedenborg's Animal Kingdom. Intro-      |       |
| Lecture VII. Unity of all Things.—      |       | ductory Remarks by the Translator,       |       |
| Diseases of Women—Cancer—Tumour         |       | James John Garth Wilkinson, Member       |       |
| —Pregnancy—Parturition—Abortion         |       | of the Royal College of Surgeons of      |       |
| —Teething—Hereditary Periodicity        | 169   | London                                   | 199   |
| Diseases Incidental to Women            | 171   | Digestion of Saccharine and Amylaceous   |       |
| Cancer of the Breast                    | 173   | Matters                                  | 204   |
| Tumours                                 | 176   | Academie des Sciences, Paris, 1845. Re-  |       |
| Pregnancy                               | 177   | searches on Generation                   | 205   |
| Parturition                             | 178   | Mr. Bonjean on the Poisonous Effects of  |       |
| Abortion or Miscarriage                 | 179   | the Scæla Cornutum                       | 205   |
| Teething                                | 179   | On the Value of Vaccination and Revac-   |       |
| Hereditary Periodicity                  | 181   | cination                                 | 205   |
| Nausea, or Sickness of the Stomach      | 187   | On the Anatomy of the Sympathetic        |       |
| Tracts on Consumption. No. 1. On a      |       | Nerve                                    | 206   |
| New Diagnostic Symptom in Tubercu-      |       | The Functions of the Pancreas            | 206   |
| lar Phthisis. By J— G—, M. D.           | 187   | Academie de Medicine, Paris. March,      |       |
| Diagnosis                               | 188   | April, May, June. Autoplastic Opera-     |       |
| Nosological Symptoms                    | 189   | tion in Cancerous Disease                | 207   |
| Cough                                   | 189   | On the Causes of Insanity                | 207   |
| Dyspnoea                                | 189   | Fistula of the Urethra Cured by Auto-    |       |
| Expectoration                           | 190   | plasty                                   | 208   |
| Hæmoptysis                              | 190   | Relation between the Extent of the Brain |       |
| Hectic Fever                            | 190   | and the Intellect                        | 208   |
| Emaciation                              | 190   | A New Mode of Treating Spermatorrhœa     | 208   |
| Aphthæ                                  | 190   | The Operation for Hare Lip in Infants    | 209   |
| Physical Signs                          | 191   | Microscopical Anatomy of Tubercle        | 209   |
| Respiratory Movements                   | 191   | Pennsylv. in Gascony                     | 209   |
| Percussion                              | 191   | Contagion of Typhoid Fever               | 211   |
| Auscultation                            | 191   | On the Localization of Speech in the An- |       |
| The Sympathetic Nerve                   | 192   | terior Lobes of the Brain                | 211   |
| Missions in Greenland                   | 194   | Statistics of Bethlem Hospital, with Re- |       |
| Dislocation of the Long Head of the Bi- |       | marks on Insanity. Part II. By John      |       |
| ceps. By Henry Hancock, Esq., Sur-      |       | Webster, M. D., F. R. S., &c.            | 211   |
| geon to Charing-Cross Hospital          | 195   | Electro Magnetic Clocks                  | 211   |
| Rupture of the Tendon of the Long Head  |       | Extracting Teeth in the Mesmeric Sleep   | 212   |
| of the Biceps. By Henry Hancock,        |       | Successful Application of Mesmerism to   |       |
| Esq., Surgeon to the Charing-Cross      |       | a Surgical Operation                     | 212   |
| Hospital. Treatment                     | 196   | The Wonders of Electricity               | 213   |
| Reduction of Dislocation of the Scalpu- |       | Statistics of Insanity                   | 214   |
| la. By Jonathan Toogood, Esq., M.       |       | Letter to the Editor                     | 214   |
| D., Bridgewater                         | 197   | Letter to the Editor                     | 215   |
| On the Cure of Hydrocele Encysted Tu-   |       | Magnetic Sleep                           | 215   |
| mours, and Fistula in Ano, without      |       | The Hydrarchos, or Great Fossil Sea-     |       |
| Operation. By Dr. Alfred A. Harvey,     |       | Serpent                                  | 216   |
| Bristol                                 | 198   | Motion of the Magnetic Machine           | 223   |
| New Method of Introducing the Catheter  | 198   | Le Roy Sunderland                        | 223   |
| Creosote in Næus Maternus               | 198   | Claimativeness                           | 224   |





# THE DISSECTOR.

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NO. I.

## FALLACIES OF THE FACULTY.

*Lectures delivered at the Egyptian Hall,  
Piccadilly, London, 1840.*

BY S. DIXON, M. D.

## LECTURE VIII.

### THE SENSES.

*Animal Magnetism, The Passions, Baths, Exercise,  
Homoeopathy.*

GENTLEMEN,

The Causes of Disease, we have already said and shown, can only affect the body through one or more of the various modifications of nervous perception. No disease can arise independent of this—no disease can be cured without it. Who ever heard of a corpse taking the Small-pox? or of a tumor or a sore being healed in a dead body? A dreamer or a German novelist might imagine such things. Even in the living subject, when nerves have been accidentally paralysed, the most potent agents have not their usual influence over the parts which such nerves supply. If you divide the pneumo-gastric nerves of a living dog—nerves which, as their name imports, connect the Brain with the Lungs and Stomach—arsenic will not produce its accustomed effect on either of these organs. Is not this one of many proofs that an external agent can only influence internal parts banefully, at least, by means of its electric power over the nerves leading to them? Through the same medium, and in the same manner, do the greater number of our remedial forces exert their salutary influence on the human frame. But whether applied for good or for evil, all the forces of nature act simply by attraction or repulsion. The Brain and Spinal Column—the latter a prolongation of the former—are the grand centres upon which every medicine sooner or later tells, and many are the avenues by which these centres may be approached. Through each of

## THE FIVE SENSES.

the Brain may be either beneficially or banefully influenced. Indeed, take away these, where would be the joys, sorrows, and more than half the diseases of mankind?

We shall first speak of Sight. The view of a varied and pleasant country may, of itself, improve the condition of many invalids—while a gloomy situation has too often had the reverse effect. There are cases, nevertheless, in which pleasant objects only pain and distract the patient by their multiplicity or brightness. Night and darkness, in such circumstances, have afforded both mental and bodily tranquility. The presence of a strong light affects certain people with headache; and there are persons to whom the first burst of sunshine is troublesome, on account of the fit of sneezing it excites. A flash of lightning has caused and cured the palsy. Laennec mentions the case of a gentleman who, when pursuing a journey on horseback suddenly arrived at an extensive plain. The view of this apparently interminable waste affected him with such a sense of suffocation that he was forced to turn back. Finding himself relieved, he again attempted to proceed; but the return of the suffocative feeling forced him to abandon his journey. The common effects of gazing from a great height are giddiness, dimness of sight, with a sense of sickness and terror; yet there are individuals who experience a gloomy joy upon such occasions; and some become seized with a feeling like what we suppose inspiration to be—a prophetic feeling, that leads them to the utterance and prediction of extravagant and impossible things. Others again, under such circumstances, have an involuntary disposition to hurl themselves from the precipice upon which they stand. Sir Walter Scott, in his Count Robert of Paris, makes Ursel say, “Guard me, then, from myself, and save me from the reeling and insane desire which I feel to plunge myself in the abyss, to the edge of which you have guided me.” Every kind of motion

upon the body may affect the brain for good or for evil; and through the medium of the eye, novel motion acts upon it sometimes very curiously. You have all experienced giddiness from a few rapid gyrations. Every thing, in the room then appears to the eye, to turn around. If you look from the window of a coach in rapid motion for any length of time, you will become dizzy. The same thing produces sickness with some. Many people become giddy, and even epileptic, from looking for a length of time on a running stream; with others, this very stream gazing induces a pleasurable reverie, or a disposition to sleep. Apply these facts to Animal Magnetism—compare them with the effects of the manipulations so called, and you will have little difficulty in arriving at a just estimate of their nature and mode of action. What is animal magnetism? It consists in passing the hands up and down before the eyes of another slowly, and with a certain air of pomp and mystery; now moving them this way, now that. You must, of course, assume a very imperturbable gravity, and keep your eye firmly fixed upon the patient, in order to maintain your mental ascendancy. On no account must you allow your features to relax into a smile. If you perform your tricks slowly and silently in a dimly-lit chamber, you will be sure to make an impression. What impression?—Oh! as in the case of the stream gazer, one person will become dreamy and entranced; another, sleepy; a third, fidgety or convulsed. Who are the persons that, for the most part, submit themselves to this mummer?—Dyspeptic men, and hysteric women—weak, curious, credulous persons, whom you may move at any time by a straw or a feather. Hold up your finger to them and they will laugh; depress it, and they will cry! So far from being astonished at anything I hear of these people, I only wonder it has not killed some of them outright—poor fragile things! A few years ago I took it into my head to try this kind of pawing in a case of epilepsy. It certainly had the effect of keeping off the fit; but what hocus-pocus has not done that? I have often done the same thing with a stamp of my foot. In a case of cancer upon which I tried the “passes,” as these manipulations are called, the lady got so fidgety, I verily believe, if I had continued them longer, she would have become hysterical or convulsed! That effects remedial and the reverse, however, may be obtained from them, I am perfectly satisfied. Nor do I mean to deny that in a few—a very few instances, these, or any other monotonous motions, may produce some extraordinary effects

—effects which, however, are the rare exception instead of the general rule. Whatever any other cause of Disease may produce on the human body, these manipulations may by possibility occasion—Somnambulism, Catalepsy, or what you please. There is no more difficulty in believing this than there is difficulty in believing that the odor of a rose, or the sight of a cat will make certain people swoon away. This much then I am disposed to admit.—But when the animal magnetizers assert that the senses may be transposed,—that the stomach may take the office of the eye, and render that beautiful organ with all the perfect but complex machinery by which it conveys light and shadow to the Brain, a work of supererogation on the part of the Creator, I turn from the subject with feelings of invincible disgust. If it be objected that the magnetizers have produced persons of both sexes who with their eyes closed and bandaged read a book placed upon their stomach by means of that organ, through waistcoat, boddice, and heaven knows what all!—I reply, that the charlatans of all countries every day perform their tricks with a swiftness that altogether eludes the unpractised eye. Thousands of persons have seen the Indian juggler plant a mango-stone in the ground; and in the course of a few minutes do what nature can only do in the course of years, make it successively produce a plant with leaves, blossoms, and lastly fruit! How this trick is done, the witnesses who describe it know no more than I how the magnetizers perform their juggleries; but few who have seen the Indian trick believe in the reality of any one of the various transformations with which their eyes have been cheated. Gentlemen, the transposition of the senses, is only an old whimsey, newly dressed up under the name of “clairvoyance.” We read in Hudibras of

———Rostriercian virtuosis  
Who see with Ears and hear with Noes!

The greater part of the influence of external impressions upon the eye, as upon other organs, depends upon novelty solely, for pomp and pageantry affect the actors and the spectators in exactly opposite ways. With what different feelings, for example, the courtier approaches his Sovereign, from a person “newly presented.” The one, all coolness, looks only for an opportunity of improving his advantages, while the other’s only care is not to make a fool of himself. How different the effect of a punishment parade upon the raw recruit and the old soldier! In a regiment of veterans, a thousand strong, not a man will move from his place—not a countenance shall change its cast or hue.

while lash follows lash, and the blood flows in streams from the back of the culprit. The same scene enacted before a body of newly enlisted lads of equal numerical strength, will alter the expression of every face; nay, a dozen or more will drop, some fainting, some vomiting, some convulsed and epileptic. A medical student of my acquaintance, the first time he saw an amputation, not only fainted, but lost his sight for nearly half-an-hour; yet the same student afterwards became celebrated for his manual dexterity, and the coolness and steadiness with which he performed his amputations. To use a vulgar phrase—familiarity breeds contempt. How awkward most persons feel when, for the first time, they experience a ship's motion at sea. The young sailor, like the young surgeon, soon gets cured of his squeamishness; for the disposition to be sea-sick vanishes after a voyage or two. Now all this ought to convince you of the necessity of changing your remedies in disease; for what will produce a particular effect one day will not always do it another. With the body, as with the mind, novelty and surprise work wonders.

Do you require to be told that you can influence the whole corporeal motions through the organ of Hearing? I have stopped the commencing epileptic fit by simply vociferating in the ear of the patient. The atoms of the brain, like the atoms of other parts, cannot do two things at once; they cannot, at one and the same moment of time, maintain the state of arrest which constitutes attention and the state of motion on which the epileptic convulsions depend. Produce cerebral attention in any way you please, and there can be no epilepsy. In this way a word may be as efficacious as a medicine. Certain sounds, on the contrary, set the teeth on edge.

The influence of melody upon the diseases of mankind was so fully believed by the ancients, that they made Apollo the god both of medicine and music; but sweet sounds, like other sweets, are not sweet to every body. Nicano, Hippocrates tells us, swooned at the sound of a flute; what would he have done had he been obliged to sit out an opera? Many people are melancholy when they hear a harp; yet the melancholy of Saul was assuaged by David's harping. Some persons become furious when a fiddle plays,

And others when the bagpipe sings 'p' the nose,  
Cannot contain their urine,—for Affection,  
Mistress of Passion, sways it to the mood,  
Of what it likes or loathes.—SHAKESPEARE.

Everybody has heard of the wonderful effects of the Ranz des Vaches—that air

which, according to circumstances, may either rouse the Switzer to the combat, or stretch him hopeless and helpless upon the sick-bed from which he shall rise no more. Oh! these national airs have marvellous effects with many people! I have known them produce and cure almost every disease you can name; but their influence in this case greatly depends upon association. Captain Owen had more faith in an old song as a remedy for the tropical fever, from which his crew suffered, than in all the physic prescribed for them by the ship's surgeon. The singing of a long remembered stanza, he assures us, would, in a minute, completely change for the better the chances of the most desperate cases. Upon what apparently trifling things does not Life itself often turn!—

—It may be a sound,  
A tone of music, summer's eve or spring—  
A flower, the wind, the ocean, which shall wound,  
Striking the Electric Chain with which we are dark-  
ly bound.—BYRON.

How strangely some people are affected by Smell. Who that had never seen or experienced it, would believe that the odor of the rose could produce Fainting? or that the heliotrope and the tuberoses have made some men asthmatical? There are persons who cannot breathe the air of a room containing ipecacuan, without suffering from asthma. The smell of musk, so grateful to many people, sickens some. An odor in certain cases may be as good a cordial as wine: every old woman knows the virtue of hartshorn and burnt feathers.

I am almost afraid to speak of Taste, for, you know, *de gustibus non est disputandum*. Might not the Red Indian, when taunted for devouring vermin, retort upon the "Pale Face" for his mite-eating propensity? The Esquimaux, who rejects sugar with disgust, esteems train-oil a luxury; but though he prefers a tallow candle to butter, he has as perfect a taste for whiskey as any Irishman among us—that is, before Father Matthew and Temperance Societies became the rage. How you would stare if you saw a man in his senses, chewing quick-lime; yet I have seen some hundreds at a time doing that. I allude to the practice of the Asiatics, who first wrap up a little portion of lime in a betel-leaf, and chew both, as our sailors do tobacco. Now, that very tobacco chewing has always seemed to me an odd taste, and I do not wonder that fine ladies have sickened at the sight of a quid. Was there ever such a fancy as that of the Chinese, who eat soup made of birds nests! Morbid in the first instance, such tastes, like other diseases spread by imitation or contagion. In the

West Indies, the negro is liable to a peculiar fever, called from the avidity with which he devours clay, *Mal d'Estomac*. His whole sensations then are, doubtless, more or less deranged. What extraordinary likings and longings ladies in the family way occasionally take! Some will eat cinders, some have a fancy for rats and mice, and some, like Frenchmen, take to frog-eating! I remember reading of a lady who paid fifty pounds for a bite of a handsome baker's shoulder; the same lady went into hysterics because the poor fellow would not permit her to take another bite, at any price. If you smile, and look incredulous at this, how will you receive what I am now going to tell you? While I was myself studying at Paris, some fourteen or fifteen years ago, a woman was tried for decapitating a child. When asked her motive for a crime so horrible, she replied, "*l'envie d'une femme grosse*."

Well now, I think we have had quite enough of Tastes—we shall therefore say something of Touch. You will tell me, perhaps, not to trouble you on that subject;—no great good or ill can happen from a touch, you will say. But here you are mistaken: many curious and even dangerous affections may originate in touch simply, provided it be of a novel or unusual kind. Touch the white of the eye, however lightly with your finger, or a feather, and you shall have pain that may last an hour. The application of either the one or the other to the throat or fauces may vomit you as effectually as tartar emetic or ipecacuan; every nurse knows that. A bristle introduced, in the softest manner, into the nose or ear, has thrown some people into fits. Then what extraordinary effects may sometimes follow the most painless touch of the bladder by a catheter or a bougie. I do not know what other medical men have seen, but I have over and over again witnessed ague, epilepsy, faint, vomit, and diarrhoea all from the mere introduction of the catheter or bougie; and I have even traced rheumatism and eruptions to the same operation. You all know the effect of tickling. Now what is tickling but a succession of short touches? And see how wonderfully it affects most people!—oh, you may drive some men mad by it. Though it has been carried so far, in some cases, as to have produced convulsions and even death itself, Mr. Wardrop actually found it efficacious in some convulsive affections. I have already given you instances where the mere application of a ligature to the arm or leg arrested the fit of mania, epilepsy, &c. Now the influence of that apparently trifling application depends upon the

cerebral attention which it excites through the double influence of sight and touch. As I hinted to you before, the lancet has often got the credit for the good effects produced by the bandage. Fear of the operation may also, on some occasions, have aided its efficacy. How many virtues, were at one time attributed to a king's touch!—how many more are still believed to attach to the touch of relics—the bones, rags, and other rattletaps of saints! Priests and Princes, you have by turus governed mankind—justly and well, sometimes—more frequently you have deluded and deceived them. If the credulity and weakness of the masses have in most cases, been your strength, here at least the dupe has not always been a loser by the deceptions you practised. The emotions of Faith and Hope, which your nummery inspired, by exciting new revolutions in the matter of the brain, have assuredly alleviated and even cured the sufferings of the sick. Strange infatuation of mankind,—with whom, where truth fails, imposture may succeed! In what does the adult differ from the infant—gullible man, who gives his gold for an echo, from the child who caresses its nurse when telling lies to please it? Ignorance in degree makes the only difference. Gentlemen, let us now inquire into the manner in which the human frame may be influenced through the medium of

#### THE PASSIONS.

What are the passions? Grief, Fear and Joy—what are these?—are they entities or actions—the workings of demons within, or corporeal variations caused by impressions from without? Have not the Passions all something in common, some features or shades of feature so precisely the same as to form a bond of unity by which they may be all linked together? Are not the resemblances, in many instances, so very close that you could not tell one from another? A person is pale in the face, his lip quivers, his whole frame trembles or becomes convulsed. Is this fear, rage, love, or hate? May it not be the effect of a change of temperature simply? Bailly when on the scaffold, was taunted by the bystanders for trembling. Yes he replied, "but it is with Cold." "You are pale, Sir, your fears betray you." "If I am pale, it is with astonishment at being accused of such a crime?" "You blush, Madam, you are ashamed of yourself." "Pardon me, Sir, it is your audacity brings the redness of rage to my cheek." You see then, how like the passions are to each other, and how difficult it is to guess at the causes of them from mere appearance.

Like the various diseases of which we

have had occasion to speak, the Mental Emotions, or rather the corporeal actions so called, have all been associated with particular organs and secretions. Their very names have changed with the changes in medical doctrine. Who among you would dream of placing grief in the liver? That the ancients did so, is evident by the name they gave it. Melancholy literally signifies "black bile." Envy or Spite we still call the "Spleen," and when a person is enraged we say "his Bile is up." Europeans place courage, benevolence and fear in the heart—the heart which has quite enough to do in the performance of its own proper office, namely, that of a vessel to circulate the blood through the system!—The Persians and Arabs associate fear, courage, and benevolence with the liver: "White-liver" is their term for a coward. Shakspeare uses the word lily-livered in the same sense.

People often speak of Temperament, and professors of philosophy tell us there are four kinds. If a man is hasty or violent, his temperament is said to be choleric or bilious; if mentally depressed, melancholic or black bilious; if of a joyful and happy turn of mind, he is of a sanguineous, or full-blooded temperament; if apathetic or listless, the temperament is phlegmatic—a word somewhat difficult to translate, inasmuch as it originated in a fanciful phantom, which the ancients believed to be an element of the body, and which they termed "phlegm." Some add another temperament which they call lenco-phlegmatic, or white phlegm. I wonder they never took the saliva to distinguish a temperament; surely the "salivous temperament" would be quite as rational as the "bilious." What then are all these temperaments—so far at least as their nomenclature goes, but pretty gibberish?—mere sounds, in fact, invented by ignorant knavery, to cheat still more ignorant folly; or in the words of Horne Tooke, "an exemplar of the subtle art of saving appearances and of discoursing deeply and learnedly on a subject with which we are perfectly unacquainted." It never occurred to the sophists of the schools that man's mental dispositions, like his corporeal attributes, are every day altered by time and circumstance. Need I tell you, that disease has made the bravest man quake at his own shadow, and turned the most joyous person into a moody and moping wretch? When the doctrines of the Humoral School prevailed, the word temperament gave way to humor, and good and bad humor took the place of cheerful and sulky temper. We are in the daily habit of speaking of "the spirits." We say "low spirits," and "high spirits;" which

forms of expression may be traced to the period when physicians were so ignorant as to suppose that the arteries, instead of carrying blood, contained air or "spirits," from Spiritus the Latin for breath or air. That was the reason why these blood-vessels were first called aer-teries. The confusion which pervades all language has materially impeded our knowledge both of the physical and moral man. Locke must have felt this when he said, "Vague and insignificant forms of speech, and abuse of language, have so long passed for mysteries of science, and hard or misapplied words, with little or no meaning, have, by prescription, such a right to be mistaken for deep learning and height of speculation, that it will not be easy to persuade either those who speak or those who hear them, that they are but the covers of ignorance and hindrances of true knowledge."

"We cannot entertain a doubt," says Sir H. Davy, "but that every change in our sensations and ideas must be accompanied with some corresponding change in the organic matter of the body. Through the medium of one or more of the five senses must some external circumstance first operate on that part of it called the BRAIN, so as to change the existing relations and revolutions of its atoms, before there can be what we term a Passion. Whatever shall alter the cerebral atoms must alter the actions of every part of the body—some more, some less. According to the prominence and locality of one set of actions or another, do we, for the most part name the passion. The jest that will make one man laugh may enrage another. What are the features common to all passions?—Tremor, change of temperature, change of secretion. Do not these constitute an ague-fit? Shakspeare, with his accustomed penetration, "speaks of this ague-fit of fear," and he stretched the analogy even to the world around him:—

"Some say the earth was fever'd and did shake."

HATE and LOVE are equally remarkable for their ague-like changes. You remember what Hudibras says of Love—that it is only an ague-fit "reversed." The same may be said of Hope, Joy, and Rage; for in all these passions the "hot fit takes the patient first." That at least is the general effect of them, but in particular instances, as in the real ague, coldness and pallor usher in every one of those passionate fits. I care not what be the nature of the Passion, joy, grief, or fear—the constitutional circle of actions is still the same; differing, where they do differ, in shade, place, and prominence solely—but in

no greater degree than one fever differs from another. Moreover, there is no constitutional affection which these passions may not excise or cure. In this respect, also, they resemble the *Ague*, that type of every disturbed state, whether of man the microcosm, or the globe he inhabits. We have already, to a certain extent, demonstrated the influence of particular passions in the production of certain diseases. We have further proved that the same morbid actions which we recognize under so many different names, when arising from a blow or a poison, may be equally the result of a mental impression: we have established their absolute identity by curing them with the same physical agents. The history of medicine, on the other hand, presents us with innumerable instances of the beneficial agency of these very passions in every kind of disorder, whatever may have been the nature of the primary cause. Faith, Confidence, Enthusiasm, Hope, or rather the causes of them, are as powerful agents in the cure of the sick, as any remedies we possess. Not only, like *Rark* or *Wine*, do they often produce a salutary excitement, or mild fever, sufficient to prevent the access of the most malignant diseases—but, like these agents, they have actually arrested and cured such diseases after they had fairly and fully commenced. A stone, or ring with a history real or supposed, a verse of the *Koran* or the *Bible* sewn in a piece of silk—these worn, now on one part of the body, now on another, have inspired a mental firmness and induced a corporeal steadiness which have enabled the wearer to defy the united influence of *Epidemic* and *Contagion*. If the *Arabs* have still their talismans, and the *Indians* their amulets, the *Western* nations have not ceased to vaunt the cures and other miracles effected by their relics, their holy wells and holy water. When we boast of the success of a particular measure, we say it acted like a *Charm*. What is a charm?—whence its origin? It is a corruption of the Latin word *Carmen*—song or verse. In all times and in all countries, there have been men who have found their advantage in playing upon the ignorance of their fellow-men; he that would appear wiser than another has always had recourse to some kind of imposture; and as priest, poet, prophet and physician were often united in one person, it was not wonderful that such person should clothe his mummery and mysticism in verse. To be able to read or spell was, at one time, a mark of superior wisdom, and he who could do so, had only to mutter his “spell” to cure or kill. From the earliest antiquity, we find charms a part of medical practice; *Homer* in his *Odyssey*, introduces the sons of *Autoly-*

*cus* charming to stanch blood; the physicians of *Egypt* and *India* are to this day charmers; the *Northmen* composed *Rhunic* rhymes to charm away disease. Indeed, with the *Norwegians* and *Icelanders* verse or song was supposed to be all-powerful: one of their poets thus expresses the belief of his time and country in this respect. “I know a song by which I can soften and Enchant the arms of my enemies, and render their weapons harmless. I know a song which I need only to sing when men have loaded me with bonds; for the moment I sing it, my chains fall in pieces, and I walk forth at liberty. I know a song useful to all the children of men; for as soon as hatred inflames them I sing it, and their hate ceases. I know a song of such virtue, that I can hush the winds with it, and subdue the storm to a breath.” Such, *Gentlemen*, was the origin of *Enchantment*, or *Incantation*, terms borrowed from the Latin verb, *Canto*, I sing. With the *Jews*, the simple enunciation of their mystical word *Abracadab*, was sufficient to inspire the confidence that baffled disease; nay, *Quintus Severinus Simonides* vaunted his success in the cure of the *hemitritic* fever, by pronouncing mysteriously the word, *Abacadabra*, a phonic combination of his own invention! At this very hour, the *Caffree* rain-maker, the *Cingalese* devil-dancer, and the *Copper Indian* sorcerer, with their charms and chaunts, are enabled to work changes in the bodies of their several countrymen that put the boasted science of the schoolmen to shame. That these act by inspiring Confidence simply, may be seen from what took place in 1625, at the *Siege of Breda*. “That city, from a long siege, suffered all the miseries that fatigue, bad provisions, and distress of mind could bring upon its inhabitants. Among other misfortunes, the scurvy made its appearance, and carried off great numbers. This, added to other calamities, induced the garrison to incline towards a surrender of the place, when the *Prince of Orange*, anxious to prevent its loss, and unable to relieve the garrison, contrived, however, to introduce letters to the men, promising them the most speedy assistance. These were accompanied with medicines against the scurvy, said to be of great price, but of still greater efficacy; many more were to be sent them. The effects of the deceit were truly astonishing. Three small vials of medicine were given to each physician. It was publicly given out that three or four drops were sufficient to impart a healing virtue to a gallon of water [*Mark this, Homœopaths!*] We now displayed our wonder-working balsams. Nor even were the commanders let into the secret of the cheat upon the soldiers. They flocked

in crowds about us, every one soliciting that part may be reserved for his use. Cheerfulness again appears in every countenance, and an universal faith prevails in the sovereign virtues of the remedies. The effect of this delusion was truly astonishing; for many were quickly and perfectly recovered. Such as had not moved their limbs for a month before, were seen walking the streets with their limbs sound, straight, and whole! They boasted of their cure by the Prince's remedy."—[Ives' Journal, 1744.] And what was this remedy?—a mere sham medicine, Gentlemen! After this, do I require to caution you, when you visit your patients, not to put on a lugubrious or desponding look before them. Such conduct, on the part of a medical man, is unpardonable; yet there are practitioners so base and sordid as to make it a part of their policy to represent the malady of every patient as dangerous. These find their profit in croaking; for it is a course of conduct that almost infallibly contributes to keep up disease. To God and their consciences I leave these men.

Such of you as might be disposed to question the depressing influence of a long face upon the sick, may read the history of Lord Anson's voyages with profit. There you will find it recorded, "that whatever discouraged the seamen, or at any time damped their hopes, never failed to add new vigor to the distemper, (the scurvy), for it usually killed those who were in the last stages of it, and confined those to their hammocks who were before capable of some kind of duty." And this is in perfect accordance with the observation of Solomon, that "a merry heart doeth good like medicine, but a broken spirit drieth the bones."

Let me, therefore, counsel you not only to assume a cheerful look in the presence of the sick, but endeavor at the same time in Byron's words,

To render with your Precepts less  
The sum of human wretchedness,  
And strengthen man with his own mind.

What are all your trumpery Pathology and Dissecting-Room knowledge compared with this? You may dissect dead bodies for twenty years and never be one whit the wiser on the mode of influencing the motions of the living. Now, this brings to my mind certain lines of a contemporary poet, the celebrated Beranger; but as some of you may not understand the French language, I shall offer no apology for giving you his sentiments in my own not over poetical English:

Was ever such an ass as that  
Who hoped by slicing mutton-fat,  
And pulling candle wicks to pieces,  
To tell why *Light* should spring from *Greases*?  
Yes, one—that still more precious fool,

Who in the anatomic school  
Expected with dissecting knife  
To learn from *Death* the laws of *Life*!  
Ha! ha! I'd rather beg some old  
Domestic nurse to cure my cold,  
Than trust to such pedantic brain  
To wake my lamp's low flame again!

But seriously, gentlemen, I have known a great many first-rate anatomists in my time; yet there are old women who never saw the inside of a dead body, whom I would sooner consult in my own case than any of these hair-splitting gentry. These men are mere geographers, who will point out rivers and towns, if I may say so,—corporeal hills, dales, and plains,—but who know nothing of the manners, customs, or mode of influencing the animated atoms constantly entering into and departing from them. If any such mechanical-minded creature presume hereafter to mystify you on this point, tell him to watch the wounded of contending armies, and ask him to explain to you why the same description of injuries which heal with rapidity when occurring in the persons of the victors, too often prove intractable, or even fatal, to the vanquished! He might dissect their dead *nerves* as clean as he pleased, and never find out that the living body of man may be either weakened or strengthened through the medium of his own mind.

The depressing power of GRIEF is familiar to every body; but there are cases where a reverse effect may take place from it—and Shakspeare, with his usual accuracy, explains the reason of this.

\* In Poison there is Physic—and these news,  
Having been WELL, that would have made me sick,  
Being Sick, have in some measure made me Well;  
And as the wretch whose fever-weakened limbs,  
Like strengthless hinges buckle under life,  
Impatient of his fit, breaks like a fire  
Out of his keeper's arms, even so my limbs,  
Weakened with Grief, being now Enraged with Grief,  
Are THIERO THEMSELVES.\*

The strength imparted to the constitution in cases of this nature, has a relation to the novel atomic revolutions caused by DESPERATION; or that determination to act in an energetic manner, which so often comes upon a man in his extremity. Such reaction resembles the glow that succeeds the sudden shock of a cold shower-bath. There are persons whom a slow succession of petty misfortunes would worry to death; but who, on sudden and apparently overwhelming occasions, become heroes.

It will be readily admitted, by all who have profited by their experience of life, that one half the world live by taking advantage of the passions and prejudices of the other half. The parent of prejudice is Ignorance; yet there is no man so ignorant but who knows something which you or I may not know. The wisest judges have played the fool sometimes from ignorance; they have

allowed themselves to be gulled by individuals of a class they despise. Poor, decrepid, ill-educated females, calling themselves Witches, have imposed upon the ablest and most learned men of a nation. Lord Bacon and Sir Matthew Hale, for example, believed in witchcraft; nay, the latter judge went so far as to sentence to death wretches supposed to be convicted of it, and they were executed accordingly. Samuel Johnson was a believer in ghosts and the second-sight. Where, then, is the country so enlightened that, upon some points the wisest and best may not be mystified? If such a country exists, it must be England at the present moment; if there is a profession in which deception is never practised, it must be Medicine. Happy England! happy Medicine! where all is perfect and pure—where the public are neither cheated by an echo, nor led by a party for party interests. Here collegiate corruption is unknown, and corporate collusion a mere name; here we have no diplomas or certificates to buy—no reviewers to bribe—no humbug schools—no venal professors: here, having no mote in our medical eye, we can the better distinguish and pluck out that of our neighbors. Who will doubt our superiority in this respect over all the other nations of the earth? Or who will question me in what that excellence principally consists? Scapegrace, sceptic, read Dr. Hawkins—read Dr. Bisset Hawkins' *Continental Travels*—and you will there find it recorded, that the brightest feature of British medicine—the most distinguishing point of excellence in English treatment—is the copious blood-lettings we practise. "The neglect of copious blood-lettings," quoth Hawkins, "is the great error of the continental Hospitals!" Let us laugh, then, at the do-little "medecine expectante" of the French, ridicule the do-nothing homœopathy of the Germans, and turn up our lip in derision at the counter-stimulant doctrine of the Italians. What are the greatest medical professors of the Continent, in comparison with our own meanest apothecaries even—to say nothing of our leading surgeons and physicians—presidents and vice-presidents of learned societies; Only look at the number of scientific bodies to which these little great men belong—you will find their names enrolled in every (so called!) Literary and Scientific institution throughout the country—Astronomical—Botanical—Geological—Antiquarian—Royal! Amiable and respectable persons! worthy of the carriages in which you ride, and the arms you bear: you are gentlemen—friendly and disinterested gentlemen; you owe your elevation to your own industry; you preserve your position by your

incorruptible honesty; you recommend yourselves, and each other, neither by letter nor affection, but upon the score of talent and integrity solely; you are all honorable men. Unlike the "honorable members" of a certain honorable place, who have been purchased, you, the members of an equally "honorable" profession, are unpurchaseable? This, your colleges and coteries declare—this, the discriminating world believes and echoes. Who but the reptiles—the few that never think, never reflect—would answer, "all is not gold that glitters!" Gentlemen, what is the difference betwixt a guinea and its counterfeit? Do not both sparkle with equal brightness? Have they not the same metallic impress, the same form, the same exterior color? Can the eye detect the imposture? No! it is only by a comparative trial of their respective weight and ring that you can make out the difference. Do you think mankind are to be judged in any other way than this? Is it not as necessary for a person to be a successful cheat, that he should borrow the exterior of worth and integrity, as it is for the counterfeit guinea to bear the name and livery of the coin it purposes to be, before it can pass for genuine. Be not, then, satisfied with fine names and appearances only; do not take men for what they pretend to be solely by their manner or title—because they are doctors of this college, or professors of that university. What is a professorship but a Place? "He who has the best talents for getting the office, has most commonly the least for filling it; and men are made moral, [medical] and mathematical teachers by the same trick and filthiness with which they are made tide-waiters and clerks of the kitchen."—*Sydney Smith*. Depend upon it, professors thus elected will always stand by each other—right or wrong, they will always support the same system. In this, they do no more than the members of the swell-mob, who work together by coterie and collusion. Like these professors too, they are all very respectable in their appearance, some of them doing business in a carriage even!

Where is the individual that has not his moral as well as his physical weakness? Upon this point, at least, we are all liable to be overreached. Here we are every one of us imbecile as the infant; for we are placed as completely at the mercy of the Charlatan, as the child is at the disposal of the parent, whose mental ascendancy he acknowledges. Speak to the prattler of the "haunted chamber," his countenance instantly falls. With the adult, assume an air of mystery, mutter darkly and indefinitely, and mark how his brain will reel. Is he sane? he becomes



your tool. Has he come to you in his sickness? you gull him and guide him at your pleasure. But how can you wonder at the effect of this kind of agency on individuals, when you have seen a whole nation similarly hood-winked by a coterie of doctors? I allude to what was done when the Cholera first appeared in England. The influence of Fear, in disposing to spread an epidemic, you know; the effect of Confidence in strengthening the body against its attacks, you also know. What was the conduct of the College of Physicians when the Cholera broke out? Did they try to allay the alarm of the masses? did they endeavor to inspire them with confidence and hope, that their bodies might be strengthened through their minds? No! they publicly, and by proclamation, declared the disease to be Contagious; without a particle of proof, or the shadow of a shade of evidence, they solemnly announced that, like the small pox, it was communicable from man to man! That was the signal to get up their Cholera Boards; and Cholera bulletins, forsooth, must be published. I had just then returned from India, where, though I had seen more cases of Cholera than all the Fellows of the College put together, I never heard of Cholera-Contagion; no, nor Cholera-Boards. In the barbaric East, the authorities, civil, military, and medical, acted with firmness; what they could not arrest they awaited with fortitude; they placed themselves and those committed to their care at the mercy of the great Disposer of events; while in England, enlightened England, the leading law-givers, under the influence of the leading medical men, introduced acts that disgrace the Statute Book, and permitted medical jobs to be got up that did any thing but honor to the medical profession. A new tax was actually levied to defray the salaries of their Cholera-Boards! The consequences of these measures might have been foreseen. Throughout the country universal panic was spread, and universal gloom prevailed. The rich shut themselves up in their houses, each in terror of his neighbor's touch; the middling classes suffered from the general stagnation which ensued in consequence, for every trade, but the drug-trade, languished or stood still; and the poor, when taken ill—for the disease was chiefly confined to that class—were, by act of Parliament, dragged from their homes, and conveyed to Cholera Hospitals,—where, if they did not perish of the prostration induced by their removal, they had salt and water injected into their veins by the medical madmen in charge! Debarred the society of their nearest and dearest relatives, and tortured in every possible way by their pedantic

doctors, was it wonderful that few of these unfortunates should escape from the pest-houses in which they had been so inhumanly immured? All this, the leading men of the country, Peers, Judges, and Members of Parliament, saw and permitted, from a puerile dread of the phantom Contagion, which the ignorance or cupidity of the College of Physicians had conjured up. When acted upon by intimidation, to what miseries will not the feeble submit, if

Even the wisest and the hardest quail  
To any goblin hid behind a veil.

Is not this a subject for deep reflection! To some it may suggest a feeling like shame. Let me speak of SHAME. Generally speaking, this is a depressing passion, and under its influence men sometimes, and women daily, commit suicide. I will give you an instance where it had the reverse effect. The girls of Miletus, a town in Greece, were seized with a mania that led them to believe self-destruction an act of heroism; and many accordingly destroyed themselves. Physic and argument having been alike ineffectually tried, the authorities, to prevent the spread of this fatal rage, ordered the bodies of the suicides to be dragged naked through the streets of the city. From that moment the mania ceased. But everything depends upon a contingency, whether a particular passion act as a depressant or a tonic in disease. In the case of Shame, the past and the future make a great deal of difference.

Some of you may, perhaps, feel inclined to remind me of the efficacy of Fear in the Cure of diseases; but in this case the fear must neither be a dread of the disease nor its event, but a dread of some circumstance completely unconnected with it. Thus, Sir John Malcom, in his History of Persia, tells us of a certain Hukeem who cured ague by the bastinado. In this case the Persian doctor availed himself of the double influence of fear and pain, neither of which were contingent upon the disease. The effect of Terror in removing tooth-ache is familiar to many who have knocked at a dentist's door. The gout, too, has been cured and caused by every passion you can name. There does not pass a day but we hear of people being frightened into epileptic fits; yet Boerhaave terrified away an epilepsy from a school where it prevailed, by threatening to burn with a red-hot poker the first boy that should have another paroxysm. I have known asthma cured by Rage, and also by Grief; yet, if we may believe what we hear, people occasionally choke of both! Few medical men will dispute the influence of a passion in the cure of Ague. Mention any mental

impression, such as Faith, Fear, Rage, or Joy, as having succeeded in this affection, and they doubt it not; but superadd to the patient's state a palpable change of volume or structure, such as an enlarged gland or ulcer, and they smile in derision at the efficacy of a charm. Extremes in scepticism and credulity are equally diseases of the mind. The healthy brain is ever open to conviction, and he who can believe that the Obi-charm, or the magic of a monarch's touch, can so operate on the nervous system as to interrupt or avert the mutations of motion and temperature constituting an *ague-fit*, should pause before he denies their influence over an ulcer or a tumor, which can only be developed or removed by or with change of temperature. Indeed, from what we have already said, it is impossible for any individual to be the subject of any mental impression without experiencing a chill or a heat, a tremor or a spasm, with a greater or less change in the atomic relations of every organ and secretion. Baron Alibert gives the case of a Parisian lady, who had a large wen in the neck—a *goitre*—which, from its deformity, occasioned her much annoyance. That tumor, which had resisted every variety of medical treatment, disappeared during the Reign of Terror—a period when this lady, like many others of her rank, experienced the greatest mental agony and suspense. The agony and suspense in that case referred to a contingency altogether unconnected with her disease. The mere act of dwelling upon sickness will keep it up; while whatever withdraws the mind from it is beneficial. In my own experience, abscesses of considerable magnitude have been cured both by fear and joy. Few surgeons in much practice have been without the opportunity of satisfying themselves that purulent swellings may recede under the influence of fear. They have assured themselves of the presence of matter—they propose to open the tumor—the frightened patient begs another day, but on the morrow it has vanished.

Akin to Terror is Disgust, or that feeling which a person naturally entertains when, for the first time, he handles a toad or an asp. This passion has worked wonders in disease. The older physicians took advantage of it in their prescriptions; for they were very particular in their directions how to make broth of the flesh of puppies, vipers, snails, and milipedes. The celebrated Mohawk Chief, Joseph Brandt, while on a march, cured himself of a tertian *ague*, by eating broth made from the flesh of a rattle-snake! Here the cure must have been altogether the effect of Disgust, for in reality,

the flesh of a rattle-snake is as perfectly innocuous, and quite as nutritious as the flesh of an eel. Mr Catlin, in his *Letters and Notes on the North American Indians*, tells us that when properly broiled and dressed he found the rattle-snake to be "the most delicious food of the land." But when you come to think of the living reptile and the venom of his fang, who among you could at first feed upon such fare without shuddering, shivering, shaking—without in a word, experiencing the horrors and horripulations of *ague*! Spider-web, scot, moes from the dead man's skull, the touch of a dead malefactor's hand, are at this very hour remedies with the English vulgar for many diseases. With the Romans the yet warm blood of the newly slain gladiator was esteemed for its virtues in epilepsy. Even at this day, in some countries of Europe, the lower orders cure the same disorder by drinking the blood as it flows from the neck of the decapitated criminal. In the last century, a live toad hung round the neck was much esteemed, by the same class of people, for its efficacy in stopping bleeding at the nose. Now that the toad is known to be free from venom, it might not be so successful as it once was in this instance. Any temporary benefit, real or supposed, which has accrued from the employment of the Leech has appeared to me to be in many instances the effect of the Horror the patient very naturally entertained for the reptile.

A consideration of the power by which the Passions cure and cause diseases, affords at once the best refutation of medical error, and the most perfect test of medical truth. By this test, I am willing that my doctrines should stand or fall. Take the influence of Fear simply—what disease has not this passion caused?—what has it not cured? The mode of its action, then, establishes beyond cavil not only the unity of disease, but the unity of action of remedy and cause. What does the proper treatment of all diseases come to at last, but to the common principle of reversing the existing motion and temperature of various parts of the body? Do this in a diseased body, and you have health—do the same in health, and you reproduce disease. Whatever will alter motion will cure or cause disease. This, then, is the mode in which all our remedies act. Just observe the effect of

#### BATHS.

In what disease have not Baths been recommended?—and in what manner can they cure or ameliorate, but by change of temperature—by change of motion? Put your hand into ice-water—does it not shrink and become diminished in size? Place it in wa-

ter as hot as you can bear—how it swells and enlarges. You see, then, that change of temperature necessarily implies change of motion;—and that change of motion produces change of temperature, you have only to run a certain distance to be satisfied; or you may save yourself the trouble, by looking out of your window in a winter morning, when you will see the hackney coachmen striking their breasts with their arms to warm themselves. Depend upon it, they would not do that for nothing. Heat, then, so far from being itself a material substance, as Black, and other chemists assert, is a mere condition of matter in motion—it is no more a substance than colour, sound, or fluidity. Like all these, it is a motive condition merely, or an association of matter. What can be greater nonsense than an imponderable substance—as heat and light have been sometimes called? That only is matter or substance which can be weighed and measured—and this may be done with invisible as well as visible things,—in the case of a Gas for example.

I am often asked, what baths are safest, as if every thing by its fitness or unfitness is not safe, or the reverse. The value of all baths depends upon their fitness; and that, in many instances, can only be known by trial. It depends upon constitution, more than upon the name of a disease, whether particular patients shall be benefited by one bath or another. Generally speaking, when the skin is hot and dry, a cold bath will do good; and when chilly, a hot bath. But the reverse sometimes happens. For example, I have seen a shivering hypochondriac dash into the cold plunge bath, and come out, in a minute or two, perfectly cured of all his aches and whimsies. But in cases of this nature, every thing depends upon the glow or reaction, which the bath produces; and that has as much to do with surprise or shock as with the temperature of the bath. I have seen a person, with a hot dry skin, go into a warm bath, and come out just as refreshed as if he had taken a cold one. In that case, the perspiration which it excited must have been the principal means of relief.

So far as my own experience goes, I prefer the cold and tepid shower-baths, and the cold plunge-bath to any other; but there are cases in which these disagree, and I, therefore, occasionally order the warm or vapor bath instead.

In diseases termed "inflammatory," what measure so ready or so efficacious as to dash a few pitchers of cold water over the patient—Cold Affusion, as it is called? When I served in the Army, I cut short, in

this manner, hundreds of inflammatory fevers—fevers that, in the higher ranks of society, and under the bleeding and starving systems, would have kept an apothecary, and physician—to say nothing of nurses and cuppers—visiting the patient twice or thrice a-day for a month, if he happened to live so long.

Gentlemen, with the cold dash, you also may easily,

"While others meanly take whole months to slay,"  
Produce a cure in half a summer's day."

That being the case, do you wonder that prejudices should still continue to be artfully fostered against so unprofitable a mode of practice? Why do not the gullible public examine for themselves? Why will they continue to bribe their medical men to keep them ill? In their shops and out of their shops, the people of this world generally enact two very different characters. There they take advantage of their customers in every possible way; but the moment they leave their counters, the same persons drop the knave, and become the dupe. The merchant and shop-keeper, who buy cheap and sell dear—the landowner and farmer, who keep up the corn-laws by every possible sophistry,—the barrister and attorney, who rejoice and grow fat on the imperfections and mazes of the law—the clergyman and his clerk, whose gospel knowledge and psalm-singing, are generally in juxtaposition with tithes and burial fees—become all perfect lambs when they leave their respective vocations—each giving the others credit for a probity and disinterestedness in their particular line, which himself would laugh at as sheer weakness, were any body to practise in his own! With the most childish simplicity, people ask their doctor what he thinks of this practice, and what he thinks of the other—never for a moment dreaming that the man of medicines answer, like the answer of every other man in business, will be sure to square with his own interests. Instead of using the Eyes that God has given them, they shut them in the most determined manner, that their Ears may be the more surely abused. "What a delightful person Dr Such-a-one is," you will hear persons say; "he is so very kind, so very anxious about me." Just as if all that affected solicitude, and all that pretty manner of

\* I have stated in a former note that "Hydro-rathy," on a right principle, is an excellent Chrono-thermal remedy. But in spite of the wrong principle on which it is practised by Priesnitz, I am bound to declare that I think some of the modifications of his application of cold water, not only original and ingenious, but also exceedingly serviceable in many diseases. There is no question of their utility in particular cases.

his, were not part and parcel of the good doctor's stock in trade. Silly, simple John Bull! why will you pin your faith to fallible or fallacious Authority, when you may get the truth so easily by a little personal Examination!—To be able to discriminate in the choice of a physician, and to guard against medical imposture, would not cost you half the time, or any thing like the trouble, of mastering the inflections of *verbero*, or *Amo*, *amare*! Which kind of knowledge is of most use in life I leave to pedants and philosophers to settle between them. Meantime, I shall beg your attention to the subject of

#### EXERCISE.

The effects of mere motion upon the body are sometimes very surprising. Only think of Horse-exercise curing people of Consumption! A case of this kind, you remember, I gave you, on the authority of Darwin. I knew a gentleman who was affected with habitual asthma, but who breathed freely when in his gig. I know, at this moment, another, afflicted with giddiness, who is immediately "himself again," when on horseback. A dropsical female, who came many miles to consult me, not only felt corporeally better when she got into the coach, but her kidneys acted so powerfully as to be a source of much inconvenience to her during the journey. This corporeal change she experienced every time she came to see me. The motion of the circular swing has cured mania and epilepsy. But what, as we have repeatedly shown, is good for one patient is bad for another. You will not, therefore, be astonished to find cases of all these various diseases, where aggravation may have been the result of horse exercise, and the other motions we have mentioned.

Exercise of the muscles, in any manner calculated to occupy the patient's whole attention, will often greatly alleviate every kind of chronic disease. Dr. Cheyne was not above taking a useful hint on this point from an Irish charlatan. "This person," says Dr. Cheyne, "ordered his (epileptic) patients to walk, those who were not enfeebled, twelve, fifteen, or even twenty miles a-day. They were to begin walking a moderate distance, and they were gradually to extend their walks, according to their ability. In some of the patients, a great improvement took place, both with respect to digestion and muscular strength; and this was so apparent in a short time, that ever since this luminary shone upon the metropolis of Ireland, most of our patients affected with epilepsy, have been with our advice peripatetics." Exercise, then, is one of our

best remedial means. Moreover, it may be turned to very great advantage in our common domestic matters. Were I to tell you all at once, that you might keep yourselves warm by a single log of wood all the winter over, you would think I was jesting, but really the thing may be done. I believe we owe the discovery to our friends across the water, the Americans; and I may as well give you the recipe:—"Take a log of wood of moderate size, carry it to the upper garret, and throw it from the window into the street, taking care, of course, not to knock any body on the head; this done, run down stairs as fast as you can; take it up again to the garret, and do as before. Repeat the process until you are sufficiently warm—when—you may lay by the log for another occasion!"

"One of our reverend bishops (who Sydenham tells us, was) famous for prudence and learning, having studied too hard a long while, fell at length into a Hypochondriacal disease; which afflicted him a long time, vitiated all the ferments of the body, and wholly subverted the concoctions. [Such, Gentlemen, was the jargon of the eminent of Sydenham's time.] He (the bishop) had passed through long steel courses more than once, and had tried almost all sorts of mineral waters, with often repeated purges and antiscorbutics of all kinds, and a great many testacious powders which are reckoned proper to sweeten the Blood (?) and so being in a manner worn out, partly by the disease, and partly by Physic used continually for so many years, he was at last seized with a colliquative looseness which is wont to be the forerunner of death in consumption and other chronic diseases when the digestions are wholly destroyed. At length he consulted me; I presently considered that there was no more room for medicine, he having taken so much already without any benefit: for which reason I advised him to ride on horseback, and that first he should take such a small journey as was agreeable to his weak condition. Had he not been a judicious man, and one that considered things well, he would not have been persuaded so much as to try such a kind of exercise. I entreated him to persist in it daily, till in his own opinion he was well, going daily farther and farther, till at length he went so many miles, as prudent and moderate travellers that go a long journey upon business, use to do, without any regard to meat or drink, or the weather, but that he should take everything as it happens like a traveller. To be short, he continued this method, increasing his journey by degrees, till at length he rode twenty or thirty

miles daily, and when he found he was much better in a few days, being encouraged by such a wonderful success, he followed this course for a pretty many months, in which, as he told me, he rode many thousand miles; so that at length he not only recovered, but also regained a strong and brisk habit of body. Nor is this kind of exercise more beneficial to hypochondriacal people than to those that are in a Consumption; whereof some of my relations have been cured by riding long journeys by my advice; for I knew I could not cure them better by medicines of what value soever, or by any other method. Nor is this remedy proper only in small indispositions, accompanied with a frequent cough and leanness, but also in consumptions that are almost deplorable when the looseness above mentioned accompanies the night sweats, which are wont to be the forerunners of death in those that die of a consumption. To be short, how deadly soever a consumption is, and is said to be—two-thirds of it dying who are spoiled by chronic diseases—yet I sincerely assert that mercury in the French pox, and the Jesuits bark in agues, are not more effectual than the exercise above mentioned in curing a consumption, if the patient be careful and the sheets well aired, and that his journeys are long enough. But this must be noted, that those who are past the flower of their age, must use this exercise much longer than those that have not yet arrived at it; and this I have learned by long experience which scarce ever failed me. And though riding on horseback is chiefly beneficial to people that have a consumption, yet riding journeys in a Coach is sometimes very beneficial."

The poet Coleridge, while at Malta, was in the habit of attending much to those about him, and particularly those who were sent there for pulmonary disease. "He frequently observed how much the invalid, at first landing, was relieved by the climate, and the stimulus of change, but when the novelty arising from that change had ceased the monotonous sameness of the blue sky, accompanied by the summer heat of the clime, acted powerfully as a sedative, ending in speedy dissolution." Is not this a proof of the correctness of my previous observation, that in chronic disorder remedies require to be frequently changed? The benefit to be derived from Travelling, often great in chronic disorders, is partly to be ascribed to the change of motion, and partly to change of air and scene. Like every mode of treatment presenting frequent novelty, travelling therefore offers many advantages to the invalid in every kind of chronic or ha-

bitual disease. How often, alas! do we find it recommended, as a last resource, under circumstances where it must inevitably hasten the fatal catastrophe. The breath that might otherwise have fanned the flame, now only contributes to its more rapid dissolution. How much the success of a measure depends upon time and season!

I must say a few words about

#### PLASTERS, OINTMENTS, &c.

The beneficial influence obtained from all such local applications depends upon the change of temperature they are capable of producing. Their results will vary with constitutions. Most patients, who suffer from chronic disease, will point to a particular spot as the locality where they are most incommoded with "cold 'chills." This is the point for the application of the galbanum or other "warm plaster." A plaster of this kind to the loins has enabled me to cure a host of diseases that had previously resisted every other mode of treatment. The same application to the chest, when the patient complained of chilliness in that particular part, has materially aided me in the treatment of many cases of phthisis. In both instances, where heat was the more general complaint, cold sponging has been followed by an equally beneficial effect.

The ingredients of plasters, ointments, lotions, &c.—what are they but combinations of the agents with which we combat fever? Their beneficial influence depends upon the change of motion and temperature which they produce by their electrical action on the nerves of the part to which they are directed. Every one of the chrono-thermal agents may be locally employed in certain cases,—sometimes with more and sometimes with less advantage than when given internally.

Gentlemen, I shall employ what remains of our time to-day in a brief notice of the doctrines of Hahnemann, the founder of the Homœopathic School. His pamphlet, entitled, "The Spirit of the Homœopathic Doctrine," commences thus:—"To know the essence of Diseases, and the hidden changes which they effect in the body, is beyond the reach of the human understanding."—Which proposition he contradicts by the following paragraph: "It is necessary that our senses should be able clearly to discern what it is in each malady that must be removed in order to restore health, and that each medicine should express, in a distinct and appreciable manner, what it can cure with certainty, before we can be in a condition to employ it against any disease whatever." From this you perceive that Hahnemann,

like Dr. Holland and the humoral schoolmen, looks upon disease as a fanciful something to be "removed," instead of a state to change; and as he uses the phrase, to "expel disease" in another part of his work, it is evident he does not know in what Disorder consists. Again,—“The material substances of which the human organism is composed, no longer follow, in their living combination, the laws to which matter is subject in the state of non-life; and they acknowledge only the laws proper to vitality—they are then animated and living, as the whole is animated and living. In the organism reigns a fundamental power, indefinable yet every where dominant, which destroys every tendency in the constituent parts of the body to conform themselves to the laws of pressure, of concussion, of vis inertiae, of fermentation, of putrefaction, &c., which subjects them exclusively to the wonderful laws of life, that is to say, maintains them in the state of sensibility and activity necessary to the conservation of the living whole—in a dynamic, almost spiritual state.” Gentlemen, what is the sum of all this? Nothing more nor less than that if you press the soft parts of the body, they will not yield to a resisting substance—that you cannot be shaken by concussion, or have the bone of the leg or arm broken by external agency—that you are in a “dynamic state”—a state “almost spiritual!” What is the meaning of the word dynamic? It signifies “moving power.” This you can understand; but when our author, apparently dissatisfied with his own term, would further explain it by the words “almost spiritual,” a phrase perfectly indefinite, you see he has only a vague conception that the various parts of the body are in motion. But that the material atoms of the living frame do follow the laws to which all Matter is subject, under the particular circumstances in which the matter composing them is placed, is undoubted. A piece of amber or sealing wax when rubbed, first attracts silk and then repels it, producing alternate motion altogether independent of mechanics. Though not life, this phenomenon is at least, a type of it; for the organic and other motions of an organism termed life, even in the highest grade of animals, when analyzed, will be found to be only modifications of alternate attraction and repulsion. What are the successive conversion of the food into blood, of the blood into the matter of tissue and secretion, but so many instances illustrative of this proposition?—what the alternate inspiration and expiration of the lungs?—the equally alternate contraction and dilation of the heart—sleep and wakeful-

ness, love and hate, ambition, and worldly disgust, but so many modifications or effects of attractive and repulsive influences! When the magnet attracts iron, it does that not contrary to the law of Gravitation, but in obedience to the more comprehensive law of which gravitation is a part—namely, Electricity or Galvanism. But Electricity, like Elective Attraction, is only a fragment of the great doctrine of LIFE. The word LIFE, when applied to animals in their healthy condition, is an abstract term expressive of the sum total of effects produced by the principal forces in nature, when acting together with a perfect harmony of movement in one body. Gentlemen, galvanism, or electricity, chemistry, magnetism, mechanics, play all periodically their respective parts in the happy combination of forces we call life. Life, then, is Electricity in its highest sense, even as the attraction of gravitation is electricity in its lowest sense. The attraction of the magnet is an electrical step in advance of gravitation,—chemical change one step more,—the alternate attraction and repulsion of amber is a still higher link in the electrical chain. Galvanism and Electricity, strictly so called, embrace all the subordinate links, while LIFE or VITAL ELECTRICITY, comprehends the whole. Mere mechanical motion, though it belongs to all animal life, in reality only grows out of it. There is no mechanical movement in the foetal germ, nor is such movement necessary to the life of the plant. VITAL ELECTRICITY, then, produces changes in every way analogous to the changes that take place in organic bodies, but not the same changes,—for no electricity short of the highest or VITAL kind can produce the electrical and chemical changes constantly going on in a living body, no more than the power of gravitation or the magnet could produce the higher movements of common chemistry. The chemist who, like Liebig, expects by the destructive chemical analysis of dead organs in his laboratory, to be able to produce or explain the very opposite transformations that take place in the organs of the living, will no more improve medicine than the mere anatomist who separates them tissue by tissue with his scalpel. However similar his chemistry and his electricity may be to vital electricity and vital chemistry, however analogous the results of both be to the attractive and repulsive motions that constitute vitality, yet are the transformations not identical,—curiously resembling them certainly, but still so different that they never even approach to organism. The electricity and chemistry of man no more could produce a worm, or a leaf even, than the inferior intellectual power of the

dog or the elephant could produce the Iliad. The same harmony of motion that we behold in animal life we equally find in the life of the vegetable; but the forces employed are fewer in number, and more feeble in their action. The extremes of vegetable and animal life approach each other. In the zoophyte or plant-animal we have the connecting link of both. Both are made up of inorganic matter,—metals, minerals, air, earth, and every other material thing successively become anatomically organized and living in their turn. Man, who stands highest in the scale of animated beings, is a microcosm or little world in himself; yet what is he but a Parasite on the globe's surface—the globe itself but an Atom in the LIFE of the UNIVERSE! But listen to Hahnemann: “The Life of man, and its two conditions, health and sickness, cannot be explained by any of the principles which serve to explain other objects. Life cannot be COMPARED to any thing in the world except itself—no relation subsists between it and an hydraulic or other machine—a chemical operation—a decomposition and production of gas, or a galvanic battery. In a word, it resembles nothing which does not live. Human life, in no respect obeys laws which are purely physical, which are of force only with inorganic substances.” We apprehend, gentlemen, that the whole, or nearly the whole, of this statement is assumption, and if there be truth in nature, that this assumption is a fallacy. If you COMPARE the ossification of the skull with mechanical inventions, you will find it to be an exemplification of the most perfect Carpentry. The joints of the body embrace every principle of the Hinge;—the muscles, tendons, and bones, are so many Ropes, Pulleys, and Levers; the lungs act in Bellows-fashion, alternately taking in and giving out Gas;—the intestinal canal is a containing Tube. Then, in regard to the vascular system, the heart and blood-vessels are to a great extent a Hydraulic apparatus, as you may prove, by tying an artery or compressing a vein; the blood, in the first instance, being arrested in its course from the left chamber of the heart; in the second, being stopped in its progress to the right side of it. What are assimilation, secretion, absorption, the change of the matter of one organ into another—of the fluids into the solids, and vice versa, but operations of vital Chemistry, and the Brain and Nervous System but the Vital Galvanic or Electric apparatus by which these operations are effected? That the human body obeys laws purely physical, is still further exemplified by the fracture of a bone or the rupture of a tendon—and the reunion of both is the result of

secretion under the influence of this Electricity through the nerves supplying those parts. If, during childhood, the great nerve of a limb be paralyzed, the growth of that limb becomes arrested, not only in its breadth, but length. The nerves, then, are the moving powers, and if you cut or divide them, neither a broken bone nor a ruptured tendon can re-unite, so as to become useful. And do we not see analogous effects taking place in every kind of matter under the influence of the galvanic wire? By that we produce the decomposition and recomposition of bodies—various changes of motion and temperature—of attraction and repulsion of atoms—which, if we break the chain of the wire's continuity, immediately cease to take place, but which re-commence the moment the wires are again brought into contact. That a living man can in an oven defy a degree of heat that would broil a piece of dead flesh, is perfectly true; but to what is this owing, but to the greater power of attraction which the particles of his body maintain to themselves in their living than dead state. Nevertheless, the degree of heat may be so raised as to decompose portions even of the living body, and finally reduce the whole to a state incompatible with life. And may not the electric state of all bodies, gold and silver for example, be similarly influenced and altered? How, then, can the phenomena embraced by the term LIFE be said to “resemble nothing which does not live!” They resemble everything of which our senses can take cognizance—we can destroy but we cannot imitate them. “There is no agent or power in nature,” says Hahnemann, “capable of morbidly affecting man in health, which does not, at the same time, possess the power of curing certain morbid states,” But what is this but another mode of expressing Shakspeare's words: “In poison there is physic?” “Now,” continues Hahnemann, “since the power of curing a disease and that of producing a morbid affection in persons in health, are inseparable from each other in all medicines, and that these two powers proceed manifestly from one and the same source, that is to say, from the property which medicines have of modifying dynamically the state of man; and that consequently also, these cannot act on the diseased after any other inherent natural law than that which presides over their action on individuals in health; it follows from this, that the power of the medicine which cures the disease in the sick is the same as that which causes it to excite morbid symptoms in the healthy.” That the strictly Medicinal substances all kill and cure upon one and the same principle few will dispute who have

listened to these Lectures. But "the property which medicines have of modifying dynamically the "state of man" is merely a Greek expression, signifying that they possess a moving principle. In this there is nothing new, for Shakspeare, as we have seen, said the same thing in good English two centuries before Hahnemann was born. In the course of my next lecture, gentlemen, I shall have the pleasure of demonstrating to you that medicinal substances can only disturb the existing temperature and motion of any organ or atom of the body, by the electrical or galvanic force which they exert upon it through a nervous medium. Of this truth Shakspeare and Hahnemann were equally ignorant.

"As soon," proceeds Hahnemann, "as we have under our eyes the table of the particular morbid symptoms produced in a healthy man by different medicinal substances, it only remains to us to have recourse to pure experiments, which alone are capable of determining what are the medicinal symptoms (or the symptoms produced by the medicine in the healthy subject) which always arrest and cure certain morbid symptoms (i. e. diseases) in a rapid and durable manner, in order to know beforehand which of these medicines, the particular symptoms of which have been studied, is the surest method of cure in each given case of disease."

So here we have only over again the exploded doctrine of SPECIFICS or remedies "which always arrest and cure" certain morbid symptoms! The whole sentence is somewhat confused and paranthetical, but from it and other passages you may nevertheless see that while Hahnemann obtained a glimpse and a glimpse only, of the principle of unity upon which remedies act, not only was he ignorant of the real nature of their power, but also of the utter impossibility of predicated in any one case of disease, what remedy would certainly achieve amelioration, far less a cure. This sentence he never could have written, had he known that every medicinal power being a repulsive force in one individual and an attractive force in another, may act inversely in any two cases of the same disease. If there be a truth more sure than another in physic, then, it is this, that until we have absolutely tried a medicinal agent in an individual case, we cannot possibly tell whether it be a remedy or an aggravant in that particular case. No, gentlemen, the ague-patient may come before you; but whether arsenic or bark, opium or prussic acid, shall arrest his disease, you can no more with certainty predicate than you can determine beforehand whether harsh or soft measures, or either, will re-

claim a refractory child, or subdue an ungovernable steed. Trial and experience are your only guides. This much, however, you may, in the majority of cases of any given disease, predict, that such agents as have generally a definite power for good or for evil over definite parts of the body, are the class from which you are to expect most benefit in a disease of such parts—but which of them, the experience of that case itself can only tell you; for how can you know without such experience that opium will vomit, rhubarb excite epilepsy, or ipecacuan cause asthma in particular cases? all of which you are aware they sometimes do. When you order cold bathing, can you tell beforehand whether your patient shall come out all in a glow, happy and comfortable, or chilly and shivering, and not to be comforted? Till you can do this, you cannot with certainty tell by what given means you are to achieve a cure in any given case of disease. So far the art of physic is, and ever will, I fear, remain imperfect.

The principle, *Similia similibus curentur*, or *like cures like*, which Hahnemann assumes as his own discovery, was known not only to medical men long before he was born, but was acted upon by the vulgar time immemorial. A passage which Shakspeare puts in the mouth of Benvolio in *Romeo and Juliet*, is a proof that it was practised in his days.

Tut man! one fire burns out another's burning,  
One pain is lessened by another's anguish,  
Turn giddy, and be helped by backward turning,  
One desperate grief cures with another's languish;  
Take thou some new infection to thine Eye,  
And the rank poison of the old will die.  
To the same purpose he says in *Hamlet*:—

— Diseases desperate grown,  
By desperate appliances are relieved.

What is all this but *similia similibus curentur*? You see, then, that Hahnemann, instead of being a great discoverer, as he wishes to make out, is only at the most a Reviver of an old principle. Yet upon this principle, strange to say, neither he nor his followers act! They say one thing and do another; for while they declare their readiness to cure by powers having precisely the same action as the causes, how can they reconcile with that statement their practice of treating grave disease—disease proceeding from a grave agency, by the dissimilar agency of infinitesimal physic! What is infinitesimal physic? It is the division of a grain of opium, not into quarters, sixteens, or sixties—no, nor into hundreds nor thousands even,—but into millions and ten millions! And rules and regulations for its proper divisions into such parts are actually given in Homœopathic books! A grain of opium, or the common dose of this drug, is to be converted, forsooth, into medicine



enough for ten thousand men; and upon the same principle, doubtless, a loaf of bread may be made a dinner for an army! Gravely to argue the case—if grave disease could be caused by the millionth or decillionth part of a grain of our common medicinal substances, what apothecary's apprentice, who must be constantly rubbing, shaking, and inhaling medicines in this comminuted state, could possibly enjoy a day's health?—and yet it is by such doses—if opaque matter reduced to invisible minuteness can be termed such—that diseases are to be cured! Where, then, is the Similarity of remedy to cause in the Homœopathic treatment?

In his "*Organon*," Hahnemann tells us, that almost all chronic diseases are the result of a morbidic miasm, which he calls the Psoric, or the itch principle, and this, he says, and two other evil miasms, the Syphilitic and the Scrofulous, may be looked upon as the parents of all the diseases of man!—Mere phantoms, Gentlemen, of an excited imagination—mere crotchets of a mind clouded with the ghosts and goblins of those nurseries for grown-up children,—the German Universities. Of his utter ignorance of the true motions and changes of the organic matter of the body, whether in health or disease, and of the thousand morbidic causes visible and invisible that daily occur in life, there could be no greater proof than this announcement;—you who are no longer in the dark have only to hold up the torch of truth to dash his day-dream to the dust.

When I first heard of the Homœopathic doctrine of infinitesimal physic, I felt tempted to believe that the whole was a weak invention of those enemies to medical truth, the medical reviewers,—knowing as I do the trickery and misrepresentation in which these gentry indulge when acting on behalf of the professional tradesmen, whose mercenaries they are. His own volume has, however, undeceived me; his own *Organon* develops the number of shakes and rubs by which the millionth part of a grain of quinine may become one of the deadliest poisons, and the ten millionth part of a grain of opium, a medicine to cause you to sleep your last sleep! But Hahnemann is a disciple of Mesmer—and he tells you to watch the miracles effected by Animal Magnetism. Do that, he says, and you will no longer doubt the cures which may be achieved by infinitesimal physic. Now, so perfectly ready am I to believe what he or his disciples may tell me upon this point, that it is a medical maxim of mine, "Any thing may do any thing," according to the ignorance and credulity of the patient, if it be a charm;—or according to the constitution and exigencies of

the case, if it be a physical agent. In which light infinitesimal physic is to be viewed, you, Gentlemen, may decide at your leisure.

What but Faith or a Fancy to try could induce people to put themselves under the hands of a homœopathic practitioner? The influence which Confidence, simply, may produce on the body, we have proved by what took place at Breda in 1625. During the siege of that city, three or four drops of a hocuspocus medicine were said to be sufficiently powerful to impart a healing virtue to a gallon of water! The thing was believed, and the sick immediately took up their beds and walked. To tell the sensible part of mankind that you can cure any disease with the millionth or decillionth part of a grain of opium, bark, or aconite, would only excite their ridicule; but you know how little will influence the minds of the multitude, who, being ignorant, are naturally weak and credulous. You remember what I told you at my last lecture. The same reparative power of nature by which a cut finger is healed, will cure nineteen out of twenty cases of most diseases, without the assistance of any physic at all. Such cases, when treated homœopathically, that is, with hope and humbug, are of course set down as wonderful cures; and wonderful they are, indeed, when compared with the results of the apothecary-system,—a system by which every similar disorder, for the most part, is aggravated through the interference of the routinists, who, partly by playing on the fears of the patient, and partly by making his stomach an apothecary's shop, generally contrive to prolong the case so long as the subject of it will continue to act according to their rules. Here the homœopathic doctor may safely retort on the old practitioner. With the mass of mankind the homœopathic has only to affect a superior knowledge of the visible and invisible world, speak confidently of the cures, real or supposed, effected by his treatment, and talk mysteriously of the rubs and shakes by which he imparts a magical or magnetic virtue to his infinitesimal physic. Should a doubt remain, he may hint at the wonders of Electricity or Galvanism, for a little mixture of truth will make his mummery go down better—just as a little apparent candour will make you more readily give credence to a calumny or a scandal. In both cases a complete want of principle is the chief element of success on the part of the impostor—and faith the weakness or strength of the dupe. If the former on your part the latter to listen to him, he may inoculate him with a fancy to try—that of itself implies faith. However small at first, it will be sure to increase by thinking and taking

about the new method. A little opposition is a good thing sometimes—the patient gets heated up by it. If he has a tendency to improve, he will improve the faster—if he finds himself deceived, he will conceal the fact, as he would be sorry that others should not be as great fools as himself. Patients of the class who consult Homœopathic practitioners, generally collect together, talk, discuss, and theorize till they work themselves into a kind of fever—such fever, or rage, by exciting and animating them, will, in many cases, be infinitely more beneficial to their constitution, than the draughts and mixtures inflicted, usually not so much on account of the necessities of the patient as the needy condition of the routine practitioner. Having once become partizans and disciples, they next find a pleasure in making converts. they have now what they had not previously—an object before them; and they work body and mind in the cause. Can you wonder they should, in many cases, get well by the new mode of life to which they have taken? This, Gentlemen, is the secret of any success obtained in the course of the Homœopathic treatment. Like the French “*medicine expectante*,” it is a system of placebo. What is new in it is not true; what is true is not new. Savage Landor says rightly, “most disputants drive by truth or over it.” In the case of *similia similibus*, Hahnemann has done both—he adopts it as his motto, but practises on a principle the reverse. What does it mean? Power opposes power. Did we require to be told this by Hahnemann? The doctrine, like cures like, was so obvious as to be a popular axiom in every age—but it is only the minor of a major proposition, or a fragment of the great Abstract Law—ANY GIVEN POWER APPLIED IN A PARTICULAR DEGREE AND AT PARTICULAR PERIODS, MAY CURE, AGGRAVATE, OR ALLEVIATE ANY GIVEN FORM OF DISEASE, ACCORDING TO THE CONSTITUTION OF THE PARTICULAR PATIENT.

[On the publication of the first edition of this work, the Homœopaths accused me of not understanding their principles. My answer to that was, that I had at least read their own books, and if I was such a fool as not to be able to understand their writings, they were greater fools not to write more intelligibly.

“Your true no-meaning puzzles more than sense!”

Since the publication of the second edition they have changed their tune, and say I have borrowed from Hahnemann—to which I reply—the rich seldom borrow, and I have never myself done so without acknowledgment. If the homœopaths will be so good as to put in print the instances in which I have neglected this, I will very much thank them for reminding me of what is right.]

#### **The Late Epidemic of Puerperal Metritis in the Paris Hospitals.**

The *Gazette Medicale* contains an interesting account, by M. M. BIDAULT and ARNOULT, internes, of a very fatal epidemic of puerperal fever, which reigned in the Paris hospitals in 1843 and 1844. The opportunities for observation, of these gentlemen, extended over three hospitals, those of Saint Louis, the Hotel Dieu, and the Hotel Dieu Annexe, in each of which there is a small ward devoted to midwifery. Epidemics of puerperal fever have been common of late years in Paris, in the midwifery establishments, especially at the Maternite, the large obstetric hospital, at which it reigned with great violence at the time that it was observed by MM. BIDAULT and ARNOULT. At the Hotel Dieu, the epidemic reigned in January, February and March, 1843. There were eleven deaths in forty-five deliveries, in the three months, whereas there had not been one death in the hundred and forty deliveries which had occurred during the previous nine months of the preceding year; at the Hotel Dieu Annexe, out of sixty-seven women delivered, sixteen were attacked, and fourteen died. The epidemic occurred in the months of November and December of the same year, (1843.) The patients had been drafted from the Maternite, on account of the existence in that hospital of a very fatal epidemic. The Saint Louis epidemic took place in the months of September, October and November 1844. Some isolated cases had occurred in the year, but it was only during the period mentioned, that the fever assumed the epidemic form. Out of forty-four deliveries, there were nine deaths.

Generally speaking, the morbid symptoms manifested themselves at the period of the milk fever, from the second to the third day. In one case, they appeared a few hours only after delivery; in some few, only four or five days after. Nearly always, the attack commenced by rigors, of greater or less duration, followed by febrile reaction. In some instances, the rigors were absent. febrile heat of the skin, frequency of pulse, restlessness, and abdominal pain, opening the scene. The pulse always became very frequent, its pulsations rising to 110 or 120, and its strength depending on the freedom of the general reaction after the rigors. At the same time, there was cephalalgia, redness and injection of the face, brilliancy of the eyes, anorexia, frequent and laborious breathing, a loaded state of the tongue, which rapidly became dry, bilious vomiting, diarrhoea, or constipation. At Saint Louis obstinate constipation was present in every case, and no intestinal lesions were found after death. At the Ho-

tel Dieu, diarrhœa was, on the contrary, equally universal, and the follicles of Brunner were constantly found hypertrophied. There was generally abdominal pain from the commencement; sometimes the pain was slight, sometimes very severe. The uterus remained voluminous, and there was more or less abdominal tympanitis, especially when the affection assumed at an early period the typhoid character. The lochial discharge was nearly always diminished, but seldom entirely suspended. The breasts became flaccid if the milk had previously appeared, if not, it was not secreted. The urinary secretion was diminished, and the excretion was sometimes difficult. Indeed, in some cases, the bladder had to be emptied occasionally by means of the catheter.

The second period of the disease was characterized by symptoms of still greater gravity. All reaction ceased. The face became deeply altered, the eyes were sunk in the orbits, and surrounded by a black circle, the lips livid, the nostrils dry, and filled with particles of dust. Extreme prostration of strength accompanied these symptoms, along with great anxiety of countenance. The abdominal pains disappeared, the tympanitis, at the same time, increasing considerably. The respiration was difficult and laborious, as many as forty-five or fifty respirations being made in a minute; pulse 140 or 150, small, irregular, depressible; alvine evacuations, involuntary; fluids rejected by ingurgitation; tongue dry, and covered with a dark fur; breath fœtid; extremities cyanosed. Death generally followed on the fifth or sixth day of the attack, the patients retaining their intellectual faculties to the last.

In some few cases, there was an apparent remission, which, however, lasted, generally speaking, for a short time only. In the course of a few hours, the disease resumed its fatal progression. With the small number of patients who recovered, the symptoms continued gradually to improve. The respiration became easier, the pulse fuller and slower, the thirst less intense, &c. The convalescence was tedious, and necessitated several months' residence in the hospital. In some patients at the Hotel Dieu Annexe, and with all at Saint Louis, there was an intense bronchial catarrh.

The body of the uterus was always found more voluminous than it ought naturally to have been at the period of death. Its cavity contained grey, sanious, fœtid false membranes; on washing them away, the surface which they covered was, however, found white and apparently healthy. The implantation of the placenta was marked by small cragula. The tissue of the uterus was firm

and healthy. There was none of the gangrene or putrescence (*putrescentia uteri*) which has been described by German writers. There were not, either, any abscesses. The peritoneum covering the uterus was often inflamed and covered with false membranes. No uterine veins were ever found diseased, but the uterine lymphatics were inflamed and filled with pus, in a great proportion of the cases. At the Hotel Dieu Annexe, the inflammation did not extend beyond the lymphatics of the uterus. At the Hotel Dieu, in some cases, and at Saint Louis in all, a great number of inflamed lymphatics, filled with pus, were found in the lateral ligaments, and on the surface of the ovaries. These inflamed lymphatics terminated in the pelvic ganglions, which were sometimes themselves softened and filled with pus; the efferent vessels, however, were never found diseased. The lateral ligaments were covered with false membranes; the ovaries, also, were enlarged, and infiltrated with pus; the Graafian vesicles on being incised were often found filled with pus. At the Hotel Dieu, and at the Hotel Dieu Annexe, where the symptoms of peritoneal inflammation were more marked from the onset than at Saint Louis, the peritoneum was also found more extensively inflamed. The peritoneal cavity contained a considerable quantity of purulent serosity, in which floated detached false membranes, and the intestinal folds and lateral ligaments were united by false membranes. In some cases, there was a subserous injection on the intestinal folds. At Saint Louis, where the typhoid symptoms predominated, the peritoneum merely contained a white lactescent effusion, without false membranes or adhesion of the intestines. The peritoneum was pale, without any inflammatory injection. In these cases, there was purulent infiltration of the sub-peritoneal cellular tissue of the pelvis, and suppuration of the lymphatics of the lumbar region. The stomach contained an enormous quantity of a greenish fluid, but presented neither inflammation nor softening. The follicles of Brunner, to the alteration of which, in puerperal fever, much attention has been paid of late, were only found diseased at the Hotel Dieu. They presented the appearance of a papular eruption, with a white apex. Whenever they were met with, diarrhœa had existed. At Saint Louis where the intestinal mucous membrane always appeared healthy, there was no diarrhœa, but, on the contrary, obstinate constipation. The liver was never diseased. The spleen was sometimes larger and softer than usual, but not otherwise affected. The parenchyma of the lungs was generally healthy; hypostatic engorgement

was sometimes met with, and appeared to be similar to that of typhus fever. There were no partial pneumoniz or metastatic abscesses. At Saint Louis, the small bronchi were obstructed by mucus in some cases. At the Hotel Dieu Annexe, pleuritic effusions, single or double, were common. No lesions were met with in the heart or pericardium. In a few instances in which delirium had been present, the membranes of the brain were found slightly injected, as also the surface of some few cerebral convolutions; otherwise, there were no lesions of the nervous system.

These epidemics manifested themselves, as is usually the case, without any appreciable cause. It may be remarked, however, that they all three occurred during the cold months of the year. It would appear, that it is generally during the cold season that epidemics of puerperal fevers manifest themselves in Paris. The fever cannot have been occasioned by unusual crowding of the patients, as, at Saint Louis, the number delivered was smaller than usual, and at the Hotel Dieu, not greater. A circumstance worth noticing is, that of sixty-seven women delivered in the special midwifery ward at the Hotel Dieu Annexe, fourteen died; whereas, out of twenty-one women dispersed in the medical wards, and therein delivered, during the same interval of time, only one died. It must, however, be mentioned, that the sixty-seven females alluded to, had been drafted from the Maternite, where puerperal fever existed, and there they had resided for some time. They may therefore have brought with them a kind of predisposition. Various circumstances occurred during the epidemic which seem to favor the idea of contagion. Thus, at Saint Louis, for some time, all the women placed into two small rooms were attacked. A woman operated upon for uterine polypus, and placed in one of the midwifery rooms, was seized two days after the operation with the same symptoms as the other women, and died. On examination, the only lesion found was the lactescent effusion into the peritoneum. The uterus, as also the veins and lymphatics, were perfectly healthy. Ancient authors—Van Swieten, for instance, considers non-lactation as a predisposing cause. Most of the women attacked during these epidemics were not suckling.

The principal means resorted to, were bleeding, general and local, mercury, administered internally and externally, the essential oil of turpentine, ipecacuanha, and the tincture of aconitum. General bleeding which was tried when the reaction was energetic, the pulse full and resisting, was not attended with beneficial results. The pulse soon fell, and extreme prostration followed. Lo-

cal bleeding, by leeches applied to the parietes of the abdomen, always gave relief, but the amelioration was only momentary, the pains were returning. Calomel was administered internally twenty or thirty grains being given in six doses in the course of the day. It nearly always acted on the bowels, but did not occasion salivation. As, however, it was seldom possible to continue its use more than two or three days owing to the short duration of the disease, this is not surprising. At the same time, mercurial ointment was rubbed into the thigh in some cases. In two instances, two pounds were rubbed in within twenty-four hours without preventing a fatal termination. Turpentine was given to three patients without success. Ipecacuanha, which was administered, apparently with great success, by Douchet in an epidemic of puerperal fever at the Hotel Dieu, at the end of the last century, was also resorted to in the first stage. It appeared, in some few cases, to produce slight amelioration for a few hours, but the disease soon resumed its former intensity. In the only two cases that were saved at the Hotel Dieu Annexe, the treatment consisted, at the onset in antiphlogistic measures, and subsequently, in the use of mercury, internally and externally, and in the administration of the tincture of aconitum; at first, one drachm, and afterwards two, in a four ounce mixture during the twenty-four hours. *Lond. Lan.*

(For the Dissector.)

## TRACTS ON CONSUMPTION.

NUMBER TWO.

On some New Pathological Views of Tubercular Phthisis.

By J— G—, M. D.

The literary history of consumption, during the last thirty years, presents many important acquisitions to our knowledge of its pathology, which, whether of value or not to the sufferers from this destructive disease, have been highly interesting to the profession. If it be decided, as it must be, that their utility has not kept pace with the largeness of their promise, it must seem extraordinary that, notwithstanding their supposed perfection, the treatment of consumption could derive little more advantage from them than when its contributory aids were purely conjectural. The reason for this unfortunate anomaly must either be, that these improvements are less perfect than they are commonly considered, or that they have not been properly connected with practical medicine. It is quite obvious that if there be error in either of these respects, it is impossible that the treatment of such a disease as Tubercular Consumption can be successful; and it is

highly probable, indeed, it may be said to be certain, that both of them present phenomena that are not in accordance with a philosophical view of the injury, or the rational means of remedying it.

The progress of medical science begins clearly to indicate that the whole of the facts connected with it must, sooner or later, be included in some high and simple generalization in place of the complex hypotheses, by which they are at present grouped together. It points to the identity of the vital, chemical, electrical and general physical forces; and though it is not sufficiently clear and distinct to command the assent of all those who are competent to consider the subject, it is equal to the purpose of producing a general impression of its truth.

Influenced by this glimmering view of a fundamental truth, it has become fashionable, with hasty and ambitious generalizers, to form elaborate but crude hypotheses of life and disease, and to attempt to identify them with the fixed laws of physical science:

— for ever striving to attain,  
By shadowing out the unattainable."

The temporary duration of the vast majority of these conjectures is sufficient evidence of the slender foundation on which they are constructed; while they authorize the inference that it will be many years before we shall be justified in dispensing with the props and supports by the assistance of which the fabric of medical science has been elevated to its present height and dimensions. Convinced of this truth, I have continued to apply the term tubercular phthisis to consumption; and though I consider the importance that has been attached to the existence of tubercles may have no real existence, I have endeavored to speak of them in conformity with the common theories regarding them, and as if they produced the phenomena which have proved so destructive in this disease. But it is impossible to resist or to avoid acting upon the belief, that in proportion as facts have accumulated in this disease, have we been able to diminish the number, and to simplify the explanation of its theories. Towards this simplification it has received much aid from the labors of Dr. Sherwood: and, thus, by comports with our observations of facts in every science, it has been enabled to concur in advancing the prospect of connecting with one general origin all physiological and physical science, not excepting the vital functions and the universal force of gravity itself.

Consumption is generally recognized, at the present day, as having its origin in a morbid state of the whole animal system. Its external symptoms, though variously influenced by the age, temperament, texture of

the skin, and other circumstances of the individual, are distinct and sufficiently recognizable by the experienced practitioner. But in what the internal diseased condition consists is not understood; and yet it exerts so important an influence over the disease, that accurate knowledge of it is indispensable to its treatment on sound principles. Whatever may be the light in which we may look at the character of its remote or predisposing cause, it may be safely alleged that its phenomena are explicable only by regarding them as dependent on general morbid changes of the whole animal economy. The universality of this peculiar condition, necessarily modifies the structure of every part, the nature of every fluid, and the qualities of every secretion; but it is reasonable to believe that one part is affected more than another. Of all the constituents of the human body the blood, from its quantity, from its complicated formation, and from its pervading and entering into the composition of every part of the frame must be considered not only most liable to morbid change, but as necessarily exerting the greatest reciprocating influence over the other tissues of the system. This important fluid has been subjected to many laborious chemical analyses with a view to ascertain the secondary and ultimate elements into which it may be divided; and enquired into pathologically to determine its quantity and composition as it exists in the different parts of the arterial and venous systems under various circumstances of disease. Examined according to these modes, it is stated by Andral to be redundant in serum, and deficient in fibrin and coloring matter, and to exist in a congested state in tubercular phthisis. Other physiological chemists represent it as abounding in fibrin as well as in serum, and to be deficient in power to transfer nutriment to the tissues.

It is probably very difficult to fix on any state of the blood which is absolutely essential to the pathological condition constituting the phthisical diathesis; yet there is one point of view, both in its healthy and diseased state, from which it has hitherto escaped observation, from which it ought to be examined, and which is unquestionably of importance enough to demand our special attention. I allude to the different electrical states which venous and arterial blood invariably bear towards each other. That these fluids should stand in a negative and positive electrical relation to each other, is in conformity with the universal law, so far as examined, that all bodies possessing different qualities, bear this relation, and it is easily determinable by experiment. From the nature of the subject, as well as the disadvantage of

residence and otherwise under which the writer labors, he has been able to prove this fact, by direct experiment, only on healthy blood; but as the effect of remedies is an acknowledged criterion for aiding in ascertaining pathological conditions, it will be shown, hereafter, from this source, that the electrical relations of venous and arterial blood are more exalted in phthises than in health. Although I readily admit that this is an indirect, and may seem a far fetched mode of ascertaining a fact, yet it must be conceded, that the progress of physic as a science, as well as its advancement as a practical art, is materially dependant upon our knowledge of the effects of remedies.

To demonstrate this fact experimentally, I, in the presence of another physician, poured (in the absence of more appropriate apparatus) into two leyden jars, mounted as usual, equal quantities of fresh venous and arterial blood, obtained from the jugular vein and carotid artery of a lamb. Upon bringing the lalls of the connecting rods in proximity to a galvanometer, it was found to be sensibly affected. When to each of the fluids an equal weight of common salt was added, so as to increase their energy without altering their relative properties, a much greater deflection of the needle took place. Which of these is the negative fluid, and which the positive, it would not be difficult, by a suitable modification of the apparatus, to determine; but which, from the inadequacy of means within my power, I am compelled for the present, to leave a subject of inference. If in resting on the conclusion I have drawn, I should seem to deviate from the strict path of demonstrable fact, I must repeat, what in a future communication will be more dwelt upon and explained, that I am borne out by a practical experience of the result of remedies. The experiment advances us one step in physiological science, and affords ground for the hope that by this, and other processes conjoined, we may be able to detect in the blood those changes which indicate the tubercular diathesis, and through them a certain remedy for consumption.

The most prominent phenomenon in phthisis pulmonalis is the production of the morbid growth termed tubercle. The pathology of this extraordinary substance has so often, of late years, been investigated and brought under notice that detailed enquiry into the subject, except so far as it may seem to require views different from those generally adopted, would be quite superfluous. But careful and minute as here been the researches into the morbid nature of tubercle, it is still a subject on which there appears to be a great diversity of opinion, and to offer

much light for further elucidation. Notwithstanding the ambiguity, and, indeed, obscurity which involves their origin, I am of the opinion of a large number of pathologists from Sylvius de la Bœ to Broussais, that they commonly arise in phthisis, in a strumous degeneration of the minute lymphatic glands of the lungs. Considered in a general point of view this origin is in conformity with analogy; for it is far more in accordance with morbid actions in the animal system to enlarge natural bodies than to create new growths. The opinion is supported by the character and state of the constitution in which tubercular consumption and scrofula occur; which seem to be not simply congenereous but identical. Like the strumous knots on the lymphatics, which may so frequently be felt on the side of the neck of scrofulous subjects, the tubercles of consumption do not, at commencement, necessarily produce any symptoms of disease; nor is their subsidence or removal a check to the course of either disease. The analogy of the morbid process in both maladies is likewise, in favour of the view that both diseases belong to one class. Finally, the position is strengthened by recurring to that process of reasoning deducible from the effects of remedies, and indispensable to a perfect knowledge of many departments of pathology; by which we find that the most successful treatment of scrofula is that which has been found to have the most salutary effect in controlling consumption.

Tubercles, though a disease of the glandular system, seem to arise in those of the serous membranes far more frequently than in those of any other tissue. They are sometimes found in mucous membranes; but in this case, it would seem that, in the majority of instances, their formation is connected with and dependent upon the serous envelopes of the lymphatic glands pervading the tissue. It is not intended to deny that the peculiar matter constituting tubercles may be poured out upon the free surfaces of both serous and mucous membranes; but we should say that its deposition on these membranes is always the result of some extraordinary exciting cause, such as bronchitis, pneumonia, pleurisy, rheumatism, or sometimes common inflammation. Under such circumstances, occurring in a tubercular diathesis, it is possible for either tissue to become the seat of the deposition. Its general prevalence in serous, and its occasional occurrence in mucous tissues may form a ground for a new division of phthisis into two kinds—the one with tubercles of serous tissues, the other with tubercles of mucous membranes—each with a different origin and requiring a differ-

ent mode of treatment. If as is probable the tubercular matter is separated from the blood, and deposited in the glands, as also in the free surfaces of serous and mucous membranes, may it not follow that its presence in one tissue, and its absence in another depends on the attraction induced by the electrical states of these tissues? That there should be a distinction in disease based upon this condition of these membranes is rendered probable from the curious researches of M. Donne, who states, as the result of experiment, that mucous membranes are decidedly electro-negative, and serous membranes electro-positive, and that these relations are sometimes changed by disease.\* According to this view the chemical nature of the secretions may alter in the same tissue, and in consequence must necessarily react on and modify the different functions of the system. In the tubercular diathesis when the one membrane, which is commonly the serous, is in the state most favorable for attracting from the blood tubercular matter it will be deposited upon it; when the other is in this state it will equally command the preference. Considered merely in this electrical point of view, it is not impossible that we may find the only explanation that the subject admits for the localization of the disease in one tissue, and its absence in the others. Certainly if M. Donne's experiments are correct there is unquestionable ground for supposing that foreign matter in the blood, may be more readily determined to and precipitated upon one membrane than another, while peculiar electrical states of the membrane or the blood may reverse the operation. Remote from ordinary apprehension as this explanation may seem, it is one of many phenomena in phthisis that can be made clear only on physical principles, while it will be seen hereafter, that this mode of explanation affords important practical indications.

In whatever organ tubercles originate, the serous tissue occupies, in our experience, the prevailing situation, both as regards the extent and the frequency of their deposition. I have dwelt upon this fact because it forms a circumstance which is of great value in a diagnostic and therapeutic point of view. It must not be overlooked that the minute ramifications and the frequent proximity of both serous and mucous membranes, may and do render it difficult to determine anatomically to which of the tissues the presence of tubercular matter belongs; or, if there are occasional complications, in which it preponderates. To be able to decide between them is of importance, because the influence of

our peculiar therapeutic agents is limited to tubercles and the serous tissue, and the evidence of disease of these structures is the only indication for their employment. This decision, we have shown, in our preceding number, can be made with unerring accuracy by means of the diagnostic symptom afforded by painful sensibility to pressure in the spinal region when serous membranes are diseased, and its absence in all affections of the mucous membranes.

Tubercles, then, to which so much importance has been attached that they have given name and character to Consumption, are but a secondary effect—the result of a certain diseased, and, in all probability, fixed electrical condition of the system, in which a peculiar matter, forming them, is repelled from the extreme vessels, and attracted to the glands of the organs, the serous and sometimes mucous tissues of the body. Though their remote or predisposing cause is, manifestly, a diseased state of the general system, their immediate production is as certainly dependent on some abnormal action of the vessels of the part in which they are deposited. The nature of this action, like the condition of the general system, can in the present state of our knowledge only be conjectured, and yet they are both so important that the first steps towards treating the disease upon sound principles should be to ascertain their precise state. In a strictly pathological view, few or no diseases can be apparent without an evident implication of the capillary vessels; and it is, therefore, impossible without a knowledge of their condition to establish any principle on which ought to be based the application of therapeutic means. This knowledge is not easily attained in phthisis; but much that is accurate may be deduced from the appearances in morbid dissections contrasted with the phenomena connected with the functions of the parts in health.

In order to understand, with an approach to truth, a subject so remote from the illustrations of common experience, as the actions of a capillary vessel, whether in a healthy or diseased tissue, it is necessary to adopt some hypothesis with regard to the nature of its powers, or the subtle influence by which it manifests its vital properties. Nearly all physiologists, acting upon this necessity, have adopted, as a clue to guide them in an explanation of the phenomena of capillaries, the opinion that they are endowed with the power of contracting on and expelling their contents; and have as generally denied to them any opposing force, such as that of expansion, &c. The condition which enables them to be refilled with their natural fluid, is considered one of simple relaxation. Now,

\* See Motive Power of the Human System. By H. H. Sherwood, M. D. Page 36, and Dissector, Vol. 1st, Page 164.

it is quite obvious that the latter condition as applied to capillary vessels, cannot exist: and if it could, it is highly probable that, even conjoined with contraction, it would not present us with the real process, or mechanism of capillary action.

In this instance, as in so many others of a similar nature, the human mind, in its effort after knowledge has overstepped the true point of wisdom, by attempting to refine too much on the supposed simplicity of nature. The physical axiom that in reasoning upon natural causes, we are to assign no more than are sufficient to explain the phenomena is undoubtedly true; but from its tendency to make us take too limited a view of causes, it has, in many instances, acted in retarding instead of advancing knowledge. Recent researches have rendered it highly probable that Newton himself was misled by the overweening propensity of human nature to simplify.\* Though Brewster, in his life of this illustrious man, has furnished some evidence that he shrewdly suspected motion must be the result of two constantly acting forces—the attractive and repulsive—this error of our nature led him to a general explanation of its phenomena by the supposed laws of one. It is true, that in accounting for his centrifugal motion, it presented such difficulties, that he was compelled to call in the aid of a primary impulsion, and that of so wildly conjectural a character as scarcely to entitle it to be classed with the emanations of a philosophical mind. In an analogous department of physical science, Franklin was led aside from the true path of knowledge, by an over effort at simplicity in reducing the two forces of electricity to one—in a plus or minus state. The idea of a single fluid or force which, when accumulated in excess in bodies, tends constantly to escape, and seek a restoration of equilibrium, by communicating itself to any others where there may be a deficiency, is that which occurs most naturally to a mind charged with the notion that cause is necessarily a unit, and the natural condition of bodies a state of rest. But the phenomena accompanying the motion of electricity from body to body, and the state of equilibrium it affects under various circumstances appear to require the admission of two distinct forces antagonist to each other, each attracting the other and repelling itself. This view of electricity, it has been proved by M. M. Coulomb and Poisson, admits the application of strict mathematical reasoning to the conclusions we would draw from it—a character which must give superior value to every theory, and indispensable to the perfect

proof of one in any department of physical science. On the other hand M. Prevost's theory of the radiation of heat, which conceives that this effect of caloric goes on at all times, and from all substances, whether their temperature be the same or different from that of surrounding objects, has avoided the error of Newton and Franklin, while it affords a beautiful illustration of the constant operation of the two forces of repulsion and attraction. Though the peculiar actions which we are called upon to contemplate, by an examination of the above theories, may be referable to other powers inherent in matter, yet M. Prevost's theory furnishes a far better explanation of the action of attraction and repulsion on matter, as well as all the phenomena connected with the radiation of heat, than the supposition of a single force, whether attractive or repulsive.

If the most profound philosophers have been led into doubt or error in regard to the primary laws of a department of science which is considered so simple and comprehensive as that of natural philosophy, how much more difficult must it be to trace with accuracy the operation of those apparently subtle mysterious principles of motion which regulate the actions of animal life. Living matter exhibits all the physical properties which are found in inanimate substances, and pays implicit obedience to the same laws; but in addition to them, it is superadded, they are endowed with a set of properties too complicated and intangible to admit of the principles of inductive philosophy being applied to their investigation. To these properties have been applied the vague terms, vital principles, vital actions, powers, faculties or forces. In a simply philosophical point of view the chief difference between organized and inorganic bodies is, that the laws of the former have never been subjected to the rules of calculation—a process to which the latter have been, or are susceptible of being. Obscure and inexact as the subject unquestionably is, the philosophical mind cannot doubt but that, if it could be divested of the intricacy with which, from our confused method of looking at it, it appears endowed, it would be found as dependent on precise and comprehensive laws as those of gravitation, heat, electricity or galvanism. Indeed, the late rapid advance of physiological science seems to countenance the opinion that our ability to take this simple view of the subject is fast approaching. In conformity with this view it is expected that vital laws will be found to be nothing more than a combination of those that give motion to matter in general. If we can once trace a connection between the vital principles and

\* See Dissertor. Vol. 1st, Page 136, et Sequens.



physical and chemical laws, we shall have attained data by which we may arrive at sufficiently accurate knowledge of circumstances to predict a result, subject the phenomena of the functions to calculation, and thus subvert the only important difference between the laws of organized and unorganized matter. It would be essential to the solution of the question this enquiry involves, to determine whether vital motion consists in the simple principle of contractility, or depends upon two forces—the centripetal and centrifugal, contraction and expansion, attraction and repulsion *quocunque nominibus gaudeat*.

On the ground of mere probability it is certainly as reasonable to suppose that there is a vital expanding force as that there is a vital contracting one, while it receives as much support from every known fact connected with the motions of a living body. Nor am I aware that there are any in opposition to a function which afford an easier explanation of, and seems to be necessary for fulfilling the duties of the living state. If it be said that there are thus two theories by which physiologists may explain the facts connected with living phenomena with equal probability, and that consequently neither of them can be true, we must then direct our attention to the discovery of some other and probably more simple law, by which without the intervention of either media, the actions of the animal functions may be understood. But until this is discovered we must continue to employ the ideas and use the terms which constitute, at present, the science of physiology.

The evidence of the operation of a vital expanding force is perhaps most apparent in the motions of the heart. It is, indeed, so evident that the laws of expansion and contraction act upon this organ, that many physiologists, who are otherwise advocates for a unity in vital action, have been compelled to acknowledge their existence. A number of physiologists have shown, by direct experiment on living animals, that positive effort, and not simple relaxation, is exerted at the time of the dilatation of the cavities. Who that has taken into his hands the heart of an ox, after removal from the body, and felt it dilate under his pressure, can doubt that it has an active power of expansion? In a case of monstrosity, reported by Dr Robinson, the evidence of this force was strikingly shown in the human system; for he found that the power exerted in the diastole of the heart was equal to if not greater than that of the systole.\*

(To be continued.)

(Communicated for the Dissector.)

Thomasville, Geo, Nov. 27th, 1845.

DR. SHERWOOD,

In the October number of the N. Y. Dissector, a letter to the Editor was noticed from De Roy Sunderland, containing an assertion relative to the *alleged Revelations of Emanuel Swedenborg*, so entirely opposed to the real opinions of all receivers of his doctrines, that it would seem to require, that a fair statement should follow, containing some of the views of this class of christians on the subject, which are undoubtedly entitled to respect. W. H.

#### SWEDENBORG NOT A CLAIRVOYANT.

That many even among the learned, should have considered the illustrious Swedenborg as a gifted *Clairvoyant*, is the natural consequence of imperfect knowledge or unjust appreciation of the real nature of his mission.

Hence it is, that the extraordinary claims of that great and good man have been so disregarded, and his wonderful relations of Heaven and Hell classed in the same category with the *dreaming delusions of French Prophets, Mormons* and other impostors of a like character.

But with those who are more deeply imbued with the spirit of his writings, who have felt the force of the truth of his "beautiful theories," among whom are to be found several of the profoundest thinkers of the age, a wide distinction between the state of his mind, and that of a mere *clairvoyant* or *seamanabulist*, is clearly perceived. For, the duties of the station, which his followers from the evidences afforded, are induced to believe he was called to fulfil, as the herald of a new dispensation of Divine Truth, are seen to require a far more exalted state than it is possible for a mere *clairvoyant* ever to arrive at.

'Tis true, that a conviction of the truth of Swedenborg's statements, as to the source from which he claims to have derived his knowledge of Spiritual and Divine things, (the possibility of which disclosure will not here be touched upon,) requires to be rationally admitted, in order to obtain a full and perfect understanding of his doctrine. It being of importance that as correct an idea as possible, should be entertained of the psychological state into which Swedenborg was brought, in order to his reception of the disclosures vouchsafed him, a few extracts from his writings shall here be appended, containing his own statements on this head, which have never been disproved, and are undoubtedly entitled to attention.—"I am well aware that many who read the following pages, and the *Memorable Relations* annexed to the

\* Dunglison's Physiology, Vol. 2, Page 163.

chapters, will believe that they are fictions of the imagination: but I protest in truth that they are not fictions, but were truly done and seen; not seen in any state of the mind asleep, but in a state of full wakefulness; for it has pleased the Lord to manifest himself to me, and to send me to teach the things relating to the New Church, which is meant by the New Jerusalem in the Revelation; for which purpose he has opened the interiors or my mind and spirit; by virtue of which privilege it has been granted to me to be in the spiritual world with angels, and at the same time in the natural world with men, and this now for twenty-five years." Congugal Love, 1.

Again, in a letter to the King,—"The Lord our Saviour manifested himself to me in a sensible personal appearance, and has commanded me to write what has already been done, and what I have still to do: and he was afterwards graciously pleased to endow me with the privilege of conversing with spirits and angels, and to be in fellowship with them. It is not in my power to place others in the same state in which God has placed me, so as to be able to convince them, by their own eyes and ears, of the truth of those deeds and things I publicly have made known. I have no ability to capacitate them to converse with angels and spirits, neither to work miracles to dispose or force their understandings to comprehend what I say. When my writings are read with attention and cool reflection (in which many things are to be met with as hitherto unknown,) it is easy enough to conclude, that I could not come to such knowledge but by a real vision, and by conversing with those who are in the spiritual world. This knowledge is given to me from our Saviour, not from any particular merit of mine, but for the great concern of all christians' salvation and happiness."

One extract from the work on Heaven and Hell shall be given. "For the sake of illustrating the fact of man's being a spirit as to his interiors, I will relate a case from experience, as to the manner in which man is withdrawn from the body, while in the natural world. The case is this: Man is brought into a certain state, which is a middle state, between sleep and waking, and when he is in this state he cannot know any other than that he is altogether awake, all his senses being awake as in the highest wakefulness of the body, both the sight and hearing, and what is wonderful, the touch, which, on this occasion, is more exquisite than it is possible to be in the wakefulness of the body; in this state also spirits and angels are seen altogether: as to the life; they are likewise heard, and, what is won-

derful, touched, as in this case, scarcely any thing of the body intervenes: this is the state which is called being *withdrawn from the body*, and of which it is said by one who experienced it, *that he knew not whether he was in the body or out of the body*. Into this state I have been let only three or four times, that I might just know what was its quality, and at the same time that spirits and angels enjoy every sense, as doth man also as to his spirit when he is withdrawn from the body." H. & H. N. 439.—'40.

Hence says a distinguished writer, "The state above described, is so strikingly analogous with that produced by Mesmerism, that it can scarcely be regarded otherwise than as an actual development of the interior condition brought about by that mysterious agency. This, however, is merely one of hundreds of intimations scattered through the writings of Swedenborg, going to show that he was well acquainted with the *philosophy* of that remarkable class of phenomena, though the name was of course unknown to him, as he died several years before Mesmer went to Paris to divulge his discoveries. The coincidence referred to has led many to suppose that Swedenborg's own state was merely that of a gifted *clairvoyant*, and thus implied nothing supernatural. But his own words assert a clear distinction, as this was a state into which he was only occasionally "*let*," that he might learn its nature, his ordinary state being altogether of a higher character. Such an imputation is a virtual disparagement of his claims, which his followers unanimously repudiate. At the same time they readily admit that the Mesmeric trance is a sufficiently near approximation to his to prove its possibility as a psychological fact, and they gratefully accept the evidence which the Lord's divine providence is thus unexpectedly affording, to the very senses of men, that neither they nor their illustrious teacher are merely *dreaming* of an impossible intercourse with the spiritual world. If multitudes are so staggered by the simple *facts* of Mesmerism, what will be their surprise should the truth finally turn out to be, that the *design* of these marvellous manifestations is no other than to pave the way for the universal admission of Swedenborg's claims?"

"In their structure, warts differ altogether from corns, as they arise directly from the true skin, and appear to be composed of an elongated bundle of its papillæ, enclosed in sheaths of cuticle, whereas corns are a disorder of the epidermis alone."

## On the Coincidence of Tubercle and Cancer.

It has been stated that tubercle and cancer mutually exclude each other. LIBERT, however, has not only met with a certain number of cases where the two diseases existed together, but has convinced himself that one in no way arrests the march of the other. In proof of this he communicates the following facts:—

1 A child, aged four years had encephaloid tumours in the right kidney, and was also affected with cerebral and pulmonary tubercles.

2. A woman, sixty years of age, had schirrhous tumours in the mammary glands, in the liver, and in the lungs. At the same time she had softened tubercles at the summit of the left lung.

3. The lungs of a woman, aged sixty-two years, contained tumours in various stages, and even several cavities in the superior lobe of the right lung. In the peritoneum existed encephaloid masses, together with numerous tubercles. The cancer had all the form of encephaloma. The tubercle had, throughout, the form of the yellow or caseous infiltration. The microscope enabled him readily to distinguish the corpuscles of tubercle from those of the encephaloma, and to determine the evidence of their existence.—*Muller's Archives*, 1844, Hift. 2.

Dr. MARTIN, of Munich, has more recently related the following case:—A woman, aged fifty-four, died in the Poly-Clinic, of ascites. The summit of the right lung was occupied by a tubercular cavern. The apex of the left lung contained several calcareous tubercles, the size of peas and beans. The cavity of the abdomen was distended with a turbid flocculent serum; the omentum was thickened. Externally, it was covered with masses, of exudation; internally, it was yellowish, pultaceous, and, under the microscope, it presented the characteristic appearance of tubercle in its different stages. The intestines and walls of the abdomen were more or less united together; the greatest portion of the uterus was composed of a whitish mass, the size of a man's fist; some portions of it were of cartilaginous consistence, others soft and fungoid, and its centre was more or less diffuent. Under the microscope, it presented caudated cells, with nuclei and nucleoli, numerous oil globules, round cells with and without nuclei, and crystals of cholesterine.—*Allgemeine Zeitung für Chirurgie, &c.*, 1844, No. 51.

These are examples of tuberculosis in which the disease of the lymphatic system has in some places, extended to the contiguous tissues and developed the cancerous degeneration.—*Ed. Dis.*

## SWEDENBERG'S ANIMAL KINGDOM.

## Introductory Remarks by the Translator,

JAMES JOHN GARTH WILKINSON,

Member of the Royal College of Surgeons of London.

[Continued from page 204.]

Thus in the living body sense and motion are universal, and mutually suppose each other, just as is the case in the mind with the will and the understanding. The deprivation of anyone of these predicates in any part of its own sphere, amounts to the death of that part, and either involves its elimination, or the death of the whole system.

But as every part of the body is a free individual, dependent upon the whole, and yet independent in its own sphere, so the body itself, although sustained generally by the external universe, in its interiors is altogether exempt from the power and jurisdiction of the latter. It is so far under the mundane law of gravitation, that we are forced to make our dwelling-place, build up our abodes, and institute our communities, upon the soil of the earth: but intrinsically the microcosm dominates over the macrocosm. The substances and fluids in its interiors do in fact gravitate, although not to the centre of the planet, but to that of the particular motion in whose current they are involved. This centre of motion may be either upward or downward, speaking according to those relations as existing in the surrounding world; for in the body the centre of motion is always the upward; for the body itself is nothing but a stupendous series of motions, in whose everlasting currents its solids are ranged and its fluids are fluent. When any substance has attained one centre of motion, it is then at rest in the viscus or organ in whose sphere it was moving; but that very centre is only a point in the circumference of another sphere, to the centre of which the substance is now again drawn and impelled; and so forth. In short, all things in the bodily system are tending from centre to centre, and do not begin to tend to the centre of the planet, until they arrive in the last, lowest, and most general centre of motion of the microcosm, where a mixed action commences between it and the macrocosm, as is the case in the bladder and the rectum. In illustration of this multiple centripetency, the fluids in the gyrating intestines tend first to their parietes, and then into their cellular coat, which is their centre of motion: this centre of motion is the circumference of the mesentery, which now, by its attraction, draws the fluids to

its most quiet station or centre of motion, namely, to the receptaculum chyli. Here again, in reasoning from the external world to the internal, we may see the use of cultivating in the mind a principle of flexibility, which will enable us to modulate from the order of one sphere into that of another; for each individual subject has its own essence and peculiarities which must never be overlooked, and although formed on the model of the universe, derives its determinations from its own principles, as much as the universe does from its own principles. All things are under the law of gravitation, but the gravitation of one is not the gravitation of another, because the motion is not the same, nor the end for which the motion is instituted.

Thus in the body we have a perpetual illustration of the law, that fluids always tend from unquiet to more quiet stations; analogous to the rule in physics, that fluids always find their level; and to the principle in the spiritual world, that every man gravitates, "per varios casus, per tot discrimina rerum," to the final state of his ruling love.

This may give us some idea of the body as a machine of ends, in which there is not the least point but flows from a use, and tends to a use, and so through perpetual revolutions. For every part of the organism is a centre in itself, in that the whole body conspires to supply and maintain it; and a circumference, since being only a part, it yields its uses primarily to the whole, and only secondarily to itself. The external universe, in all its spheres, communicates with the body by a similar law. These centres, arranged according to the laws of forms, order, degrees, and series, constitute diameters and circumferences, in a word, make up the human frame, which therefore is a world of centres, or speaking generally, is the central work of creation. For there is nothing in nature but man, to which all things can minister a use.

The body is exempt not only from the gravitation but from the chemistry of the circumambient world. It has its own heat, of which there are various degrees, and which is as distinct from the heat that vivifies external nature, as its gravitation is distinct from the gravitation of nature. It has its own distinct imponderable fluids, its own atmospheric elements, its own fluids, and its own solids. It has its own complete organic chemistry, in which organization is the only end. No chemical changes that occur in the extremes of the system, (where a mixed action commences, of the microcosm and the macrocosm,) no chemical analysis of the excrements or the excretions, no experiments on the dead fluids or tissues, empowers us in

the slightest degree to reason to similar chemical effects in the interiors of the body. The organs of the body themselves are the only workmen, appliances, and laboratories, by which and in which organic chemistry is performed; the contemplation of those organs and their products by the rational mind is the only path to the knowledge of such chemistry. In this chemistry there is indeed decomposition or decombination, but instead of a destruction of form and series, a purification from those elements that mar their harmony, and in the decombination, an evolution of higher forces, and an elevation into a more perfect order similar to that of the compound; and last of all, invariably a recombination. But to take a part or product of an organic being, and subject it to destructive analysis,—such a procedure can only be termed disorganic chemistry, as expressing that it is the very reverse of what goes on in the body. For this process is analogous to putrefaction, and not to formation.

Throughout nature every general is made up of its own particulars. These particulars are its unities, and constitute the limits of its series. For instance, the pulmonary vesicles are the unities of the lungs, or the essential parts from which the pulmonary series commences: the vessels and nerves that consurt these vesicles are not the unities of the lungs, because they are not peculiar to the lungs, but form the groundwork of the whole body. Men and women are the unities or atoms of human society, not that they are indivisible, but that they are the simplest forms of their own series. The unities of each organ in the body are so many little organs homogeneous with their compound: the unities of the tongue are little tongues; those of the stomach are little stomachs; those of the liver are little livers; and so forth. These leasts or unities are not necessarily identical with their compounds in form, but only in function; for in the field of leasts (in campo minimorum), similitude of use determines homogeneity, and similitude of shape is of no consequence. As every general is the sum of its particulars as a form, so it is also as a power, force or cause. The function represented by an organ is performed more freely, perfectly, and efficiently, by its unities or leasts, than by its common form. For the leasts are the subjects of higher influences, they are more proximately related to the series above them from which the power of the whole is derived, more easily exempted from the laws of gravity, and more gently and distinctly recipient of external forces. They are nearer to the substance of substances, and as it were more divine. They are the all in all of their own series; the essences of which the general is the

form; the actives of which the compound is the passive. In the expressive language of Swedenborg, "all power resides in the least things," and again, "nature is greatest in what is least, and least in what is greatest." The field of leasts is the field of universality, where an action communicated pervades the entire sphere as though it were but a point of space; for the more internal the sphere, the more intense the association. The stream of creative influx enters the compound through the gate of its leasts. The difference between the latter and the former is as between the ideal and the real; the ideal being represented in the leasts; the real, with its complications, and subservience to secondary laws and external circumstances, in the compound. Let us recur for an example to the highest and simplest instance; to the case as existing between an individual man, and a society or a nation. In the individual, the body is the very manifestation of the mind; the servant is the obedient and accurate image of the master. The will, as the ground of activity, flows through a series of intellectual means evoked from itself, with the smallest diminution of force and efficiency into the bodily actions, there being no separate or self interest to absorb it either in the understanding or the body; and thus the monarchy of the first principle is pervading, absolute, and complete. But how different are the actions of a society or compound individual; its interests how divided; its instruments how insubordinate; how great the distance between its legislative and executive, its will and its actions; through what inept meditations the former must pass into the latter; what an absorption is there of the first force in the passage; what a refraction and dispersion of the intentions of the government before they can ultimately be applied to the governed. Now the same is true with the simples and compounds of every series in creation, as with the simples and compounds of humanity.

We come now to speak of the formation of the body, which takes place by a gradual descent from the higher to the lower forms, or by the perpetual derivation, composition, and convolution of simples. Speaking in generals, the spiral form may illustrate the progression. For this purpose let us assume the primary fibre of the brain, without going deeper, or to the spherules of which that first fibre is composed. This fibre, named by Swedenborg the fibre of the soul, involves the spiral form and force, and carries the animal spirit. By its evolution, or what amounts to the same thing, its circumvolution into a new spiral, it forms the nervous fibre, which carries the true purer blood; or nervous fluid; and this again (for it likewise is

a spiral force), by its circumvolution generates the blood-vessel, which carries the fluid of the third degree or sphere, namely, the red blood. Hence every artery involves a triple series of circulations, wonderfully alternating with each other. For the nervous fibre, in its expansion and constriction, is precisely alternate with, or the inverse of, the primary fibre; and the same relation of harmonious discord subsists again between the blood-vessel and the nervous fibre. Thus the cause of expansion in the one sphere, is the cause of constriction in the sphere above it: to convert the expansion of the blood-vessels into constriction, the nerves are approached by an expansile agent adapted to their own subtle and active nature; for by the law of inversion, the expansion of the one—the constriction of the other. The play of this inversion, in its perfect form, is a condition of health; but in man's present state the equilibrium is too often lost, there being, in the words of Swedenborg, "a perpetual battle and collision between the three spheres of the body, namely, between the blood and the spirits, and between the spirits and the soul."

The last subject on which it will be necessary to say a few words in this department of our remarks, is the distinction between the life before birth, and the life after birth. In the fœtus, nature, that is to say, the soul, as an end and formative power, alone rules, and all things proceed in natural order, from the highest or innermost sphere to the lowest or outermost, by the synthetic way, or *a priori ad posteriora*. But after birth, the will rules over nature, and drives her from her throne, and all operations proceed in inverse order, by the analytic way, or *a posteriori ad priora*. These opposite states require a medium to reconcile between them, which medium is supplied by the opening of the lungs; the animations of the brains being synchronous with the respirations after birth, but with the pulsations of the heart during uterine life. In the fœtus, the higher sphere's act, and the lower react; whereas after birth the lower act, and the higher only react. In the former case all operations are universal and most individual, conspiring by intrinsic harmony, and in perfect freedom, and proceed outwards from the brains; in the latter they are in the first place general, and proceed inwards to the sphere of particulars through the coverings, membranes, or bonds, of the body and its organs. But the reader will not acquire a satisfactory understanding of this wonderful doctrine by anything short of an attentive study of Swedenborg himself.

There are certain organs in the body which have always been looked upon as the appro-

bria of physiologists, who indeed appear to fail wherever nature does not speak by an ultimate fact; that is to say, wherever there is a clear field for the understanding as apart from and above the senses. The absence of an excretory duct is sufficient to consign an organ in perpetuity to the limbo of doubt. Surmise indeed respecting its functions is still allowed, but proof is considered impossible. We might as well pretend to know the nature of the world of spirits as to know the functions of the spleen. We should be as rank visionaries in the one case as in the other, since we should be placing an implicit dependence upon reason, in a matter where the bodily senses give no direct information. Swedenborg did pretend to know both, and ill he fared in consequence with the scientific world, and with the first reviewer of his "Animal Kingdom" in the "*Acta Eruditorum Lipsiensia*." They said he was "a happy fellow," and laughed outright. Without stopping to do more than direct the reader's particular attention to his doctrine of the spleen, the suprarenal capsules, and the thymus gland, as being satisfactory and irrefragable, it may be wondered why the physiologists should single out those organs as especial subjects whereon to make confession of ignorance. There is modesty in their confession, but it ought in justice to have embraced more. These organs are closely connected to others, and ignorance respecting them involves ignorance respecting the others also. Connexion of structures in the body is also connexion of functions, forces, modes, and accidents. If the function of the spleen be unknown, so precisely to the same extent are the functions of the pancreas, the stomach, the omentum, and the liver; if the functions of the succentrate kidneys be unknown, so are the functions of the diaphragm, the kidneys, the peritonæum, and indeed of the whole body; for the body is a continuous tissue, woven without a break in nature's loom. To be ignorant of a part, is to be ignorant of something that pervades the whole. The disease that affects the spleen, affects the whole, for the spleen is in all things, and all things are in the spleen. To recur to the liver: what is the amount of knowledge respecting its functions? Precisely this, that the hepatic duct proceeds from it, and carries bile into the duodenum. The bile and the duct are the sum and substance of the modern physiology of the liver; it is *prorsus* in occulto why either bile or duct should exist. The truth then is, that there is as much known about the liver as about the spleen, and no more; in the one case it is known that there is an excretory duct, in the other that there is none. Alas!

the scientific mind is steeped in the senses, and is the drudge of their limited sphere.

Swedenborg's analysis is professedly supported upon the foundation of the old anatomists, who flourished in the Augustan age of the science. At his time nearly all the great and certain facts of anatomy were already known; such for example as the circulation of the blood, and the existence of the lymphatics and the lacteals. Anatomy, too, had long been cultivated distinctly in the human subject, and was to a great extent purified of the errors that crept into it at first from the habit of dissecting the lower animals. Many of the old anatomists were men of a philosophic spirit, who proposed to themselves the problem of the universe, and solved it in their own way, or tried to solve it. They were the first observers of nature's speaking marvels in the organic sphere, and described them with feelings of delight, which shewed that they were receptive of instruction from the great fountain of truth. They worked at once with the mind and the senses in the field of observation. There was a certain superior manner and artistic form in their treatises. They believed instinctively in the doctrine of use. They expected nature to be wonderful, and supposed therefore that the human body involved much which it required the distinct exercise of the mind to discover. Hence their belief in the existence of the animal spirits; a belief which they based upon common sense, or what amounts to the same thing, upon the general experience of effects; at the same time that they recognized its object as beyond sensual experience, and not to be confirmed directly by sight.\* They used the microscope to assist and fortify the eye, and not to substitute it, or dissipate its objective sphere. Even the greatest among them, who addicted himself to the bare study of structure and the making of illustrative preparations, expressed a noble hope that others would complete his labors, by making as distinct a study of uses.†

But the picture is not without its darker side. Although they had strong instincts and vivid glimpses of truth, yet when they attempted to carry their perceptions out, they degenerated into mere hypotheses, and systems of hypotheses. They did not ascend high enough before they again descended, nor did they explore nature by an integral method; and hence they had no means of pursuing analogies without destroying the everlasting distinctions of things. They stopped in that midway where scepticism easily overtook them, and where, when that

\* See Heather.

† Royce.

enemy of the human intellect had once penetrated, there was no possibility of maintaining themselves, but the fall to the sensual sphere was inevitable. The reason of this was, that they had not conceived the laws of order, and therefore could not claim the support which nature gives to all her truths. Nay, it was so impossible that they should proceed further without the tincture of a universal method, that their minds came to a stand still; the truths already elicited were rendered unsatisfactory, and mere progress demanded their fall. They fell therefore, and a race which knows them not is dwelling now in tent and hut among their mighty ruins.

At the very crisis of their fate, Swedenborg took the field for the end that has been already mentioned, and at once declared, that unless matters were carried higher, experimental knowledge itself would perish, and the arts and sciences be carried to the tomb, adding that he was much mistaken if the world's destinies were not tending thitherwards. The task that he undertook was, to build the heaps of experience into a palace in which the human mind might dwell, and enjoy security from without, and spiritual prosperity from within. He brought to that task requisites, both external and internal, of an extraordinary kind. He was a naturalized subject in all the kingdom of human thought, and yet was born at the same time to another order and a better country. To the various classes of schoolmen he appears never to have attached himself, excepting for different purposes from theirs. He pursued mathematics for a distinctly extraneous end. As a student of physiology he belonged to no clique or school, and had no class prejudices to encounter. In theology he was almost as free mentally, as though not a single commentator had written, or system been formed, but as though his hands were the first in which the Word of God was placed in its virgin purity. Add to this that he by no means disregarded the works of others, but was learned in all useful learning. He had a sound practical education, and was employed daily in the actual business of life for a series of years. He was thoroughly acquainted with mechanics, chemistry, mathematics, astronomy, and the other sciences known in his time, and had elicited universal truths in the sphere of each. From the beginning he perceived that there was an order in nature. This enabled him to pursue his own studies with a view to order. He ascended from the theory of earthy substances to the theory of the atmospheres and from both to the theory of cosmogony, and came gradually to man as the crowning ob-

ject of nature. He brought the order of macrocosm to illustrate the order of the microcosm. His dominant end, which he never lost sight of for a moment, was spiritual and moral, which preserved his mind alive in a long course of physical studies, and empowered him to see life and substance in the otherwise dead machinery of the creation. He was a man of uncommon humbleness, and never once looked back, to gratify self-complacency, upon past achievements, but travelled onwards and still onwards, "without fatigue and without repose," to a home in the fruition of the infinite and eternal. Such was the competitor who now entered the arena of what had, until this time, been exclusively medical science; truly a man of whom it is not too much to say, that he possessed the kindest, broadest, highest, most theoretical and most practical genius that it has yet pleased God to bestow on the weary ages of civilization.

Swedenborg perceived that the permanence of nature depends upon the excellence of its order; that all creation exists and subsists as one thing from God; that divine love is its end: divine wisdom, its cause; and divine order, in the theatre of use, the simultaneous, or ultimate form of that wisdom and love. He also perceived, that the permanence of any human system, whether a philosophy or a society, depends upon the coincidence between its order and the order of creation; and that when this coincidence exists, the perceptions of reason have a fixed place and habitation on the earth, from which it will be impossible to dislodge them by anything short of a crumbling down of all the faculties, both rational and sensual; a result which, if the human heart be improving, the belief in a God forbids us to anticipate. But Swedenborg did not rest, as the philosophers do, in a mere algebraical perception of the truth, or in recognizing a want without supplying it; but like a good and faithful servant he actually expounded a system of principles at one with nature herself, and which will attest their order and their real Author by standing for ages of ages.

But his still small voice commanded no attention, and what he predicted took place: the sciences were carried to the tomb, where they are now buried, with the mind their subject, in the small dust of modern experience. This brings us to say a few words of the physiology of the day.

Facts are the grand quest of the present time, and these, particular facts: general facts are less recognized now than they were at the beginning of the last century; for short-sightedness has so increased upon us, that we must look close in order to see dis-

tinctly, and hence extended surfaces do not fall under our vision. The physiologist defers reasoning until the accumulation of facts is sufficiently great, to suggest reasons out of its own bosom. This is a step beyond ordinary materialism. The individual materialist considers that matter must be organized into the form of a brain before it can think and will; but that compound materialist, the scientific world, expects dead matter to open its mouth and utter wisdom, without any such previous process. It thinks that at present there is not matter enough, or this result would ensue; little dreaming that there is a fault in itself, and that the larger the stores it possesses, the more impossible it will be to evolve their principles, or to marshal them under a theory. The common facts of the body having been pretty well explored, the physiologists go inwards, and gather further facts. Without waiting to ascertain the import of these, they submit them to the microscope, and again decompose them; and so on, to the limits prescribed by nature to the optician, and by the optician to the scientific enquirer. But this is the field of least, more easy to discern than that of compounds; or if we cannot read nature's secret in her countenance, can we expect to divine it from her very brains? The truth is, that the modern state of physiology is a universal dispersion of even sensual knowledge: its pretended respect for facts is not real; otherwise it would enquire into their general significance before resolving them into further elements. It perpetually illustrates the principle that facts cannot be duly respected unless they are seen as agents of uses, and results of ends and causes; and that if they are not so regarded, they become mere playthings, to which novelty itself can lend scarcely a momentary charm.

But as every end progresses through more means than one, so science is undergoing dispersion in another direction also. Not only are the generals of anatomy forgotten for its particulars, but the human frame itself is in a great measure deserted for comparative anatomy. The so called human physiologist pursues his diffuse circle from animal to animal, from insect to insect, and from plant to plant. Man is confounded with the lower and lowest things, as if all the spheres of creation were in one plane of order. The consummation of this tendency is already more than indicated above the horizon, when the lowest range of existence will be the standard of all, and then the chaos of organic nature will become the legitimate property of the chemists, to be by them resolved into gases and dead materials of the earth.

Another characteristic of the times is the almost total breach of continuity between the present and the past. The terminology of science is so much altered that it is impossible to read the older works with benefit, unless after a course of study something like that requisite for learning a dead language. In consequence, the mere anatomical value of the fathers of anatomy is not at all understood; their rich mines of observation are no longer worked, and their forgotten discoveries are now and then again discovered, with all the pains of a first attempt, by their ill-informed successors. Can anything be less human than this,—that the parents should transmit so little to the children, or rather that the children should be willing to receive so little from the parents? It exchanges the high destiny of man for the fate that attends the races of animals, in which each generation lives for itself alone, and again and again repeats the same limited series, without improvement or the possibility of evolution.

In the midst of this humiliating condition, what loud sounds do we not hear of "march of intellect" and "progress of the species,"—so many discharges from the impotent artillery of self-conceit. This indeed is the last and worst sign of a decadent science. The poor sick sufferer is delirious, and possesses for a moment superhuman strength in his own exhaustion.

The present cultivators of science boast themselves followers of Bacon in the inductive method, apparently grounding their claim on the fact, that they dwell in effects or in proximate causes to the exclusion of final causes. It is a remarkable circumstance, that each age since Bacon's time has considered itself especially as his follower, and that the present age, besides laying this union to its soul, denies the genuineness of the Baconianism of all preceding ages. Meanwhile there can be no doubt, that if Bacon himself were to publish his works now for the first time, he would be ranked among the mesmerists, the phrenologists, and the other poor gentiles who are banished by common consent to the far islands of the scientific world, and would be exterminated from it altogether if they were not preserved in some mysterious way,—perhaps by having the truth on their side. Bacon himself would belong to these gentiles; but would their antagonists then lay an exclusive claim to his philosophy? We apprehend not. The inductive method would be far from fashionable if its larger tendencies were seen, or if the scientific beliefs to which Bacon himself was led by it, could be currently reported.



Would it not freeze a Royal Society to the very marrow, to be identified in any way with a man who believed, as the great Lord Bacon did, in witchcraft, and the medicinal virtues of precious stones?

Notwithstanding the unpromising state of things in science, the natural theologians have adventured to deduce from it "the power, wisdom, and goodness of God as manifested in the creation." Truly the creation is an effluence and argument of divine wisdom. But in the present range of scientific insight, it is not seen to do more than approximate to the works human skill. The mechanics of the watch are more wonderful to man than the mechanics of the ear or eye; the arch is the antetype of which the convex skull is but the type. Natural theology based on such science, can attribute nothing to God which does not belong in a superior degree to man. Its discoveries are not worth making, because they are so infinitely transcended by the perceptions of common sense in all nations and ages. Now Swedenborg, in his scientific works, was a natural theologian, but he began where human skill terminates, and by the application of guiding doctrines, followed the ever-expanding order of creation inwards to the point where mechanics and geometry are realized in more universal laws of wisdom and providence; and where at last the human mind itself recognizes the very source of life in its humiliation before the throne of God.

But it would be far from the present line of argument, to maintain that the moderns are performing no useful function in the "progress of the species." Such a proposition would be incompatible with what we know of the divine economy, in which human degeneracy itself is converted into a new point in the circle of uses. Nay, the moderns have their direct value; in the first place, they have enlarged the catena of observation in many departments. In the second, they have corrected innumerable minute errors in their predecessors, who were more intent upon general than particular accuracy. And thirdly and chiefly, although in this respect no credit attaches to them, they have gone so low in their enquiries, that as it is even physically impossible to go lower, so by the law of the contact of extremes a revolution may now take place, and the ascending passage be commenced, as it were from the skin to the brain, or from the lowest sphere to the highest.

It would be interesting to trace the successive stages by which the physiology of the ancients declined into that of the moderns, to review the grounds on which great doctrines were given up, and to test the suffi-

ciency of the reasons which were adduced for the change. The state delineated in the well-known lines—

"I do not like thee, Doctor Fell,  
The reason why, I cannot tell;  
But this alone I know full well,  
I do not like thee, Doctor Fell,"

—this state was the moving cause of it. In short, it was a change in the human will, and not primarily in the understanding, which faculty appears to have been called upon subsequently, to confirm the new turn of the inclinations. Such at any rate we know to be the case with the doctrine of the animal spirits, which, as Glisson said, was in his time believed in "by nearly all physicians, and by all philosophers." It might have been supposed that the animal spirits were demonstrated out of existence by some beneficent genius who substituted something better in their place; at least that they fell honorably in a well fought field of argument. No such thing; they fell by the treachery of the human heart loving the sensual sphere more than the intellectual. Is such mere waywardness as this a part of the "progress of the species?" The ancients believed in the existence of the animal spirits without pretending that they could become objects of sight. "Tam subtile sit concipiendum [fluidum hoc subtilissimum]," says Heister, "... ut instar lucis velocissime se diffundat; quod profecto non oculis, sed ex effectibus et phænomenis, ... ope judicii sive mentis oculis cognoscendum ... Ita aerem, animam, et multa non videmus, quæ tamen ex effectibus, quemadmodum spiritus animales, esse et existere intelligimus." But the moderns reject whatever they do not see, and will credit the existence of nothing that absolutely outlies, and must in its conditions for ever outlie, the senses. It is needless to say that a state like this is based upon neither reasons nor sensations, but is purely negative or sceptical, and must be referred to sheer will without any admixture of wisdom.

#### The Radical Cure of Hernia by Injection.

We find, in the *British and Foreign Review*, as an extract from Dr. Pancoast's *Operative Surgery*, the following description of an operation, which, if not altogether new, is not practised in this country. The results are such as to claim for it the attention of our operative surgeons:—

"The contents of the hernia must be completely returned into the cavity of the abdomen, for the process is only appropriate to cases of reducible hernia, and those which are not of large size. The apparatus re-

quired is a minute trocar and canula, a small graduated syringe, capable of containing a drachm of fluid, well fitted to the end of the canula, and a good-fitting truss for the purpose of making compression. The patient is to be placed on his back; the viscera are then to be reduced, and the truss applied over the external ring for the purpose of keeping them up, as well as to prevent the possibility of the small quantity of fluid thrown in from getting into the cavity of the abdomen. The surgeon then presses with the finger at the external ring so as to displace the cord inwards and bring the pulpy end of the finger on the spine of the pubis. At the outer side of the finger he now enters with a drilling motion the trocar and canula till he feels the point strike the horizontal portion of the pubis just to the inner side of the spine of that bone. The point is then to be slightly retracted and turned upwards or downwards; the instrument is then to be further introduced till the point moves freely in all directions, showing it to be fairly lodged in the cavity of the sac. The point of the instrument should now be turned into the inguinal canal, for the purpose of scarifying freely the inner surface of the upper part of the sac, as well as that just below the internal ring. The trocar is now to be withdrawn, and the surgeon, again ascertaining that the canula has not been displaced from the cavity of the sac, throws in slowly and cautiously with the syringe, which should be held nearly vertical, half a drachm of Lugol's solution of iodine, or half a drachm of the tincture of cantharides, which should be lodged as nearly as may be at the orifice of the external ring. The canula is now to be removed, and the operation is completed. A compress should be laid above the upper margin of the external ring, pressed down firmly with the finger, and the truss slid down upon it. The patient is to be kept from changing his position during the application of the truss, and should be confined for a week or ten days to his bed, with his thighs and thorax flexed, keeping up steadily as much pressure with the truss as can be borne without increasing the pain, in order to prevent the viscera from descending and breaking up the new adhesions while they are yet in the forming state, or avoiding the risk of their becoming strangulated or being rendered irreducible by the lymph effused into the cavity of the sac.

"The author has practised this operation in thirteen different cases, in but one of which there was any peritoneal soreness developed that excited the slightest apprehension, and in this case it subsided under the application of leeches and fomentations. In several of these cases a single operation appeared to be

perfectly successful. In others—where the sac was larger, or the patient was less careful in keeping the truss steadily applied during the first week, or from a cautiousness in introducing in the first cases a more limited amount of fluid—the effect was merely to narrow the sac, rendering a repetition of the process necessary for the cure. Of the permanency of the cure, during *several years after the operation*, the author is unable to speak, most of the patients operated on being temporary residents of the Philadelphia Hospital, and passing after a few months beyond the reach of enquiry. While under the cognisance of the author, they were employed without a truss as labourers on the farm attached to the institution, and in no one of the cases, during this period, had the hernial tumour recurred."

#### Phosphorus Paste for the Destruction of Rats and Mice.

By M. SIMON, of Berlin

The Prussian government issued an ordinance on the 27th of April, 1843, directing the following composition to be substituted for arsenic, for destroying rats and mice, enjoining the authorities of the different provinces to communicate, at the expiration of a year, the results of the trials made with it, with the view of framing a law on this subject.

The following is the formula for this paste, as published in the *Berliner Medicinische Zeitung*:—

Take of phosphorus, eight parts, liquify it in 180 parts of luke-warm water, pour the whole into a mortar, and add immediately 180 parts of rye-meal; when cold, mix in 180 parts of butter melted, and 125 parts of sugar.

If the phosphorus is in a finely-divided state, the ingredients may be all mixed at once, without melting them.

This mixture will retain its efficacy for many years, for the phosphorus is preserved by the butter, and only becomes oxydized on the surface.

Rats and mice eat this mixture with avidity, after which they swell out and soon die.

M. Simon has employed this mixture for many years, with constant success, by placing it in places frequented by those animals. According to him, the phosphorus is less dangerous than arsenic, for supposing the mixture to be badly made, and the phosphorus imperfectly divided, the oxydation which would take place in a few days would render it nearly inactive; and it would be almost impossible to employ it for the intentional poisoning of human beings.—*Journal de Chimie Medicale*.

**PUBLIC REWARDS FOR NEW MEDICINES.**

To the Editor of THE LANCET.

SIR,—In connection with those portions of medical polity which require reform, there is one point yet unnoticed, which, though it may be considered of minor import, should not, I think, escape attention.

According to the present state of the law, any discovery, or special improvement in the arts, may be protected and secured for the advantage of the individual from whom it has emanated. It has been attempted to extend the same principle to medicines, but in a different, and erroneous, manner; pretended discoveries in the shape of medicinal compositions being at once protected and recommended by a government stamp, without regard to intrinsic merits. Thus the public is cursed with the monstrous evil of quack medicines, of varied denominations; and ignorant and unprincipled individuals fatten on the credulity and misery of their victims. But, on the other hand, if a new and useful simple remedy is to be introduced to the profession, or any important modification of an old one suggested, what will it avail the originator? A chemist may fairly retain his secret, though perchance he can turn it to little advantage; but odium and discredit will accrue to the professional man who attempts to retain the fruit of his mental labour to his own benefit. Philanthropy is compulsory on him, and he must give up the produce of his mind with but little chance of any return accruing to him, in the shape of emolument, or even of reputation, which may be filched from him by those whose position, or fictitious professional rank, enable them to turn the discovery to advantage, and who, themselves, possessing no original ideas, are apt to make free with those of others, and kindly adopt them as their own.

Should a Board of Health constitute an element in the future re-organization of the profession, might it not be empowered to recognise and reward such medicinal discoveries as should be deemed of sufficient value.

I am, Sir, Your obedient servant,

BUTLER LANE, Surgeon.

**FROM A CORRESPONDENT.**

Mr. Power, dentist, Stephen's Green, Dublin, has found it desirable, in the course of his professional duties, after the extraction of a tooth, that the gum should not be closed, as the natural spreading of the adjoining teeth on either side of the tooth which has been extracted is thereby prevented. When the jaw has received injury, in the course of a rude operation, it is judicious to bring the parts into contract.

**PROF. MOTTS CLINIQUE.**

*At the Medical Department of the University of N. Y., Saturday, Sept 6th, 1845.*

**SPINAL IRRITATION.**

1st Case was a female, ætat 30, unmarried, said that about sixteen years ago, when walking very fast, she suddenly felt a severe pain in her back, (lumbar region,) down the thighs, and about the public region, which has continued ever since. Her general health is pretty good most of the time. There appeared to be no uterine derangement. The case seemed to partake more of spinal irritation than any thing else, although the diagnosis was rather obscure. Recommended counter irritants to the spine.

**ANGULAR PROJECTION OF THE SPINE.**

II Boy, ætat 4, general health pretty good, has had disease of the spine about three years, angular projection, *Maladie de Pott* of the French. The Professor gave an interesting history of the disease, and of Dr. Potts' discovering the mode of treating it by issues, by mere accident, in observing a case in which there was a spontaneous issue formed by nature, whereby the patient recovered. He spoke very much against the practice which some physicians are in, of applying pressure on the angular projection, a disease totally different from curvature of the spine, and hence a different mode of treatment must be pursued. Spoke of the importance of explaining fully the nature of the disease to parents of such children, as are afflicted with this most tedious and troublesome disease; never promise too much.

In the present case he recommended a generous diet, and keeping the patient, as much as possible, lying on his abdomen, and a pea issue to be applied on one side of the projection at first, and in a little time, put one on both sides and keep them constantly discharging. All patients having this disease are of a scrofulous diathesis, which must always be kept in view in the treatment.

**HIP JOINT DISEASE.**

III. Little girl, ætat 6, -has incipient morbus coxalgia. She first complained of a pain in her right knee, some two or three weeks since, which has been so severe at times, that she could not stand or walk on that limb; she said nothing of any ailment of the hip, which is usual in such cases. The affected thigh appears longer at first, and by pressing on the anterior part of the capsular ligament, by raising up the limb, causes pain. Prognosis rather uncertain. Recommended three leeches to be applied just back of the trochanter major, and three near the groin. R. Mag. Sulph. Mag. Cal.

in small doses, and counter irritants hereafter about the hip joint.

**Prof. Parker's Clinique.**

*At the College of Physicians and Surgeons,  
Monday, Sept. 8th, 1845.*

BEFORE commencing, the Doctor exhibited a truss, which he said possessed some advantages over most others, it having a ball and socket joint to hold the pad, which was convex. The truss was invented in New Orleans, quite recently, and has not got into general use yet.

**SCROFULOUS ABSCESS.**

II. Female, aetat. 23, married,—has an abscess in the calf of the leg, of one year's standing. Patient is of a scrofulous habit, general health delicate, has considerable irritation of the stomach, enlarged lymphatic glands, &c., with the usual symptoms of scrofula.

The sore presents something of a syphilitic taint,—indurated and ragged edges, and partakes a little of a cancerous appearance, but the Professor thought it was neither; it being merely a scrofulous abscess in the skin and cellular tissue, about the size of the top of a tea-cup. There was a similar one on the other leg, although it had never softened down like this. She has taken a great variety of medicine. The Professor recommended constitutional and alterative treatment, but if there was any tendency to disease of the lungs, avoid the use of mercurials; use Iod, potass, Iod. ferri., rumex. and taraxacum. He does not think there is much virtue in sarsaparilla. Use as a lotion either black or yellow wash. Exercise by riding, but avoid walking as much as possible,—use a generous diet. The prognosis was somewhat doubtful.

**FISTULO INANO.**

III. Boy, aet. 7,—has been troubled with it since he was two years old. The Professor made an examination, but could not detect any ulceration into the gut; concluded to defer an operation; and recommended keeping the bowels free. The Professor made some remarks about S'r Benj. Brodie's paper of a few years since, which says that such cases always commence from an ulcer on the inside of the gut.

**ABSCESS OF THE RIGHT MAMMA.**

IV. This was a very interesting case, in as much as such cases are exceedingly rare. The subject is nearly forty years of age, and is now in her sixth month of pregnancy. About two years since, she had an abscess in the axilla of that side, which she refers to having sawed wood; it opened of itself

and discharged, after which, she says there came a "lump in her breast," which was opened and healed up. Now since there has been a new action excited in the parts by her present condition, the former difficulty returns. Treatment; recommended poulticing for a few days and then open it, and after a little time, he thought best to draw in a seton. He thought that by careful treatment, she might be enabled to get along without further difficulty of the kind.

**OSTEO. SARCOMA.**

V. Patient, aet 28,—has been a man of intemperate habits, had the venereal disease two or three times, and has been troubled with pains in the different joints for two years, but for the last fifteen months the pain has settled down into his left knee. Patient has thought his disease rheumatic, and resorted to various kinds of treatment for it, none of which has done him any good. The pain has been so intense for a short time past, that he has been obliged to take large doses of laudanum. There is no discoloration of the skin about the knee, although there appears to be some little effusion about the joint. The line of demarcation could be distinctly felt about two inches from the knee joint on the femur; the bone being a little enlarged. The Professor advised the patient to have the limb amputated; but as he declined that, the doctor recommended the free application of Tinct. iodidi, daily, but gave it as his opinion, that the leg would have to be amputated sooner or later.

**DOUBLE INGUINAL HERNIA.**

VI. Double inguinal hernia in a child eight months old. Professor deferred the case for a while, on account of age.

There were several other cases, but as they were of so little importance, we will not give them. A large number of patients were in waiting to take their turns, but as the hour had expired, they were prescribed for in the back room.

**Prof. Mott's Clinique.**

*Saturday, Sept. 27th, 1845.*

**HÆMOPTYSIS.**

1ST CASE. Patient was born in Canada, aet. 22,—has had shooting pains through the chest, and some cough, for four or five years past, but quite recently he has had several attacks of bleeding from the lungs, followed by an increase of cough. His general health appears quite good. Professor recommended him to go south if he could make it advantageous, in a pecuniary way,—use a generous vegetable diet, to sustain the

general system, and have an issue applied to the chest. He spoke of the old American practice of using calomel, squill and opium, in such cases where there was much bronchial affection. The practice is peculiar to this country, although the English are beginning to adopt it. In this case, he advises small doses of calomel, to be given as an alternative, but not to go so far as to salivate him.

### CONJUNCTIVITIS.

II. A little girl, aet. 8,—has had the disease for some weeks past. Ordered three leeches to be applied to each temple, and an effusion of poppy-heads to bathe the eyes daily. Keep the bowels free by the use of *Mag. Sulph.*

### STAMMERING.

III. A boy was brought from the country to be operated on for stammering, but after hearing an explanation of the operation, and not receiving much encouragement as to the result, he declined it.

It may be well for us to state that the Doctor does not perform the operation for stammering, as often as he did soon after his return from Paris. The operation does not prove as successful as was thought at first, although there have never been any bad results from it to our knowledge.—Ed.

### AN UNUSUAL ENLARGEMENT OF THE LYMPHATIC GLANDS.

IV. Patient, aet. 47, blacksmith by trade,—has been a very hard working man, but sometimes indulged in intemperate habits. The disease commenced about five years ago, and the glands of the neck, axilla, and groin, have continued to enlarge gradually up to the present time; they are now about the size of a hen's egg, on an average, but some are larger, particularly those of the axilla and groins.

There has been of late, a little tendency to anasarca, although the general health is pretty good. Patient said he had always been remarkably healthy, and his children also were very healthy. The Doctor thought it a scrofulous affection. Recommended the external use of *Tinc. Iodi*, and *Iod. potass.*, to be taken internally, in a decoction of yellow dock. The disease was quite too extensive to think of operating.

### SPONTANEOUS PARAPLEGIA.

V. Patient, aet. 57, born in Scotland,—in the early part of his life, followed mining. The disease came on about eight years ago, and has remained about the same ever since; he has no use of the legs: bowels costive, and the usual inconvenience, attendant on such cases. Recommended an issue in the

lumbar region, electro-magnetism, and the use of the *Rhus toxicodendron*.

The use of this remedy seems lately to have been revived in the treatment of paralysis.—Ed.

### ENLARGEMENT OF THE LYMPHATIC GLANDS

VI. Female, aet. 25, married,—has enlargement of the lymphatic glands of the neck, which commenced about two years ago, during her accouchment, and have somewhat increased since. The disease is purely scrofulous. Recommended generous living, and a tonic course to be pursued.

*R. Tinct. cinchon. f. ʒ viij.*

*Hydrar. bichlorid. gr. iv.*

Dose, a tea-spoon full three times a day.

*R. Hydrar. bichlorid, gr. vj.*

*Adipis, ʒ j.*

*M. ft. ung.*

Rub the enlarged glands morning and evening, with the ung., and apply oiled silk.

### STRABISMUS.

VII. Patient, female, aet. about 20,—she has had converging squint since she was a year and a half old. The Professor operated successfully.

—  
*Prof. Parker's Clinique.*

*Mooday, Sep', 29, 1845.*

### SPINA BIFIDA.

1ST CASE. An infant, four weeks old, well formed and healthy; has a tumor about the size of a large hen's egg, situated in the upper part of the dorsal vertebrae. The base of the tumor is of the natural color of the skin, but the top has a diaphanous appearance. The Professor made some remarks about the disease in general. It is called, *spina bifida*, because the vertebrae are not able to unite on account of the watery tumor. We more frequently see them in the sacral or lumbar region, but they do occur at all parts of the spine, and sometimes in the whole length at once; but very seldom in the cervical region. The pathology of the disease is a hydropic condition of the parts, arising from congenital hydrocephalus. The water, descending from the brain, along the spinal canal, before the arches of the vertebrae are formed, accumulates, and thus a tumor is produced. The foetus is subject to many other diseases in utero, among which may be mentioned convulsions which are probably the cause of congenital club foot.

Treatment: various kinds of treatment have been tried in the disease, but commonly they all fail; compression would cause convulsions and kill the patient; ligation has

been tried, and sometimes successfully, but there is a great objection to it on account of the bundle of nerves which is always present, and is liable to be involved in the ligature. Acupuncture is another mode of treating them, which is the most approved of, now-a-days; it is done by taking a fine needle and puncturing the tumor thirty or forty times, and letting the water off, which causes inflammation and thickening of the walls. The operation must be repeated several times, or as often as the water accumulates.

#### STRABISMUS.

II Patient, boy, æt. 7,—Professor operated successfully. He made some remarks about the operation having been brought into disrepute, by being done by those who do not understand it fully,—it is much more of an operation, than many suppose. The operation may fail, if done in the best manner, owing to the paralysis of the opposite recti muscle. The operation sometimes, has to be repeated several times before the eye is fully straightened.

#### TUBERCULATED TONSILS.

III. Patient, female, ætat. 28,—general health good. On first examining the tonsils, they presented the appearance of having had nitrate of silver applied to them, but upon a more close examination, they were found to contain hard cheesy matter. The Professor took away a portion of the matter with the forceps, and ordered the throat to be gargled with some of the mineral acids, either the nitric or muriatic diluted.

#### SECONDARY SYPHILIS.

IV. Patient, æt. 41,—been married nineteen years, has not had the primary disease since he was married. About two years ago, he had pains, which he thought were rheumatic, and have continued since they first begun, in the shafts of the bones instead of the joints, and across the forehead. There is an eruption about the nose, and ulcers about the ankles.

Syphilitic rheumatism may be distinguished from common rheumatism, by the pains coming on in the afternoon between three and five o'clock, and also, from its being in the shafts of the bones instead of the joints; whereas, in the latter disease, the pain generally comes on after the patient goes to bed, and is confined to the joints generally. Prescribed good full diet, keep the bowels free, and put him on the use of Hydriod. potass., cicutæ, rumex and taraxicum.

#### DISLOCATION OF THE SHOULDER.

V. Patient, æt. 34,—is a carpenter by trade, and is a strong athletic man; says he

has had it out of place an hundred times within a year past; it slips out frequently when he is at work at his trade. He very commonly secures the arm in his work vice, and puts the bone in the place. There is considerable soreness about the joint, which is owing to some inflammation; probably a portion of the lower part of the capsular ligament is torn away, and hence the head of the bone slips out of the socket so easily. The Professor put it out and in its place, two or three times, to fully satisfy himself as to its nature. Ordered: cupping over the joint, and bathing it in warm water for a few days, and then use the cold douche.

#### ENLARGEMENT OF THE TONSILS.

VI. Patient, æt. 12,—constitution delicate, has had enlargement of the tonsils for a year or more, without much diminution in size from the first. Enlarged tonsils in children should always be attended to early—the enlargement obstructs the breathing, and often gives rise to pulmonary disease. Such children frequently are “pigeon breasted,” owing to their position in sleeping, throwing the thorax forward, head back, and mouth open. The Professor removed a part of the gland, with an instrument for that purpose. It is always better to use the tonsil instrument in children; but in an adult, a common bistoury and hook, will do equally as well.

#### NECROSIS AND SEPARATION OF THE LOWER JAW.

VII. Patient, æt. 50,—had been in the Hospital in Montreal, Canada, three months, where he was profusely salivated, but did not seem to know for what purpose, or even why he went to the hospital at all,—appears to be a very worthless fellow. He came out of the Hospital in Montreal, about six weeks since, and is now suffering from the effects of ptyalism.

The inferior maxilla is divided at the symphysis, and one of the incisor teeth has been taken out at this point. The Professor recommended him to go to the hospital, as he had no home; but said he should merely have the fissure injected with some of the diluted mineral acids.

#### The New York Hospital.

Attendance of Dr. John H. Driscoll.

#### VIOLENT CHOREA ST. VITI,—CURED BY STRICHRINE.

THE subject of the following history, presented the most violent case of St. Vitus' Dance we have ever seen. It will be recollected by many students, and others who witnessed it, as having been characterized by the peculiar jactitation of the extremities,

particularly the lower, when walking, from which it was called the "Polka case."

Eliza Holstappen, aged 19, born in Germany, single. Entered July 24, 1845. Is of large frame and robust appearance. Has had amenorrhœa four months, but otherwise has enjoyed good health, until about three weeks since her friends noticed a twitching of muscles. This increased until there was involuntary motion of all her limbs. Upon admission, she was unable to remain in bed, so that she was obliged to be kept on the floor. Her bowels being opened, she was put upon Fowler's Solution, gr. iv. ter in die. This was increased to every two hours by the fourth day, but her motions became more frequent and strong, so that she could not be restrained on the mattress, and tore her clothes from her body. Her nights were sleepless, and she constantly screamed, although perfectly sensible.

On the 2d of August, she was put upon Carb. Ferri, which was continued for three days, the patient being at the same time freely purged with Croton and Castor Oil. This did not produce much benefit. As soon as evening came on, her motions became more and more convulsive, and her screams loud and incessant. For several nights in succession, she was obliged to be tied hand and foot to the bedstead, perfectly naked, as no covering could be kept on her. During the day, she was more pacific.

On the 12th, we began the use of Pil. Strychnine, gr. 1-16, ter in die. The effect of this was almost immediate and very marked. It was continued four days, in the above quantity with evident improvement, her nights being more quiet, and some sleep obtained.

On the 16th, the pill was increased to 1-12 gr. This night she slept for an hour or more together, in a chair.

17th, Last night she slept in bed quietly for several hours, and this morning was able to *seu*. She walks about, although her motions are still violent. Has been on the use of the medicine just one week.

19th, The last two nights the patient has slept perfectly well during the whole night, without any noise; walks now tolerably straight; and visits the other wards. Her appetite is very great. During the whole of the attack, her mind has been entirely free from any delusion. She still continues the Strychnine 3 gr. ter in die, with progressive improvement. During the last two days she has occasionally complained of headache.

Sept. 1st. Our patient rapidly improved under this treatment, continued until within a few days, when she being apparently well, it was stopped, and no symptom of a relapse

appearing, she was to day discharged cured.

The pathology of Chorea, is among the mysteries of the science. The arsenical and ferruginous preparations, and drastic purgatives, which have either one or the other, generally succeeded in relieving the symptoms, having in this case entirely failed, the determination to try the Strychnine was made on the supposition of the condition of the nerves in this disease being analogous to that in Paralysis. In the latter case, there is a total loss of power over the muscles, in the other a partial loss only. If the rapid and felicitous result of the use of Strychnine in this case should lead to its further administration in Chorea, some light may perhaps be thrown on the pathology of the disease.

Chorea St. Viti is tubercular disease of the Cerebellum as determined by the magnetic symptoms, in which the processus vermicularis or organ of motion in the median line of the cerebellum, and consequently the muscles are involved.

The above case is interesting from the fact that the disease was acute or inflammatory, or one that is rarely seen. If it had been one of chronic disease, the strichnine would have had little or no effect, as its power has been often tested in these cases.

#### PROF. PARKER'S CLINIQUE.

At the College of Physicians and Surgeons, Monday, Nov. 8th, 1845.

REPORTED BY GEO. A. PETERS.

On Thursday of last week, the Doctor removed two large polypi from the nasal fossæ of a young man who presented himself before the class. He remarked at the time, that nasal polypi, when they exist, will always be found attached to the turbinated bones and never to the vomer; this fact should be borne in mind, and a proper direction given to the forceps when introduced. The patient was much relieved by the operation.

CASE I. This was the young man from whose neck a tumor was removed last Monday, before the class. Union by first intention had taken place to a considerable extent. The sutures were removed, and adhesive straps re-applied.

II. Male, æt 35, (Ireland.) This patient has been suffering from a severe attack of gonorrhœal ophthalmia, from which he has but just recovered. The power of vision is not at all impaired in the left eye, but upon examining the right eye, we find that fibrin has been extravasated somewhat deeply into

the substance of the cornea, constituting that variety of opacity known as albugo. We often observe this condition, as a sequence of violent acute ophthalmia.

Gonorrheal ophthalmia is one of the most violent forms of inflammation to which the eye is subject, often destroying it entirely in twenty-four or forty-eight hours. It requires the most active anti-phlogistic treatment.

Albugo is more difficult to cure in proportion to its duration and to the age of the individual; the activity of the absorbents being greater in youth.

As there seemed to be no inflammation existing in this case, the Doctor recommended the use of gentle stimulants to excite absorption. A solution of argent nit. iv., to  $\frac{3}{4}$  j, of water, or the insufflation into the eye, of calomel and loaf sugar finely levigated. If these should fail, he recommended that trial should be made of the solution of the sulphate of cadmium, in the quantity of a grain to two grains to an ounce of water,

III. Female, æt. 42, widow, (Ireland.)

This was a well marked case of carcinoma of the right mamma. Has had two children, the youngest is now fifteen years of age. Has been in this country thirteen years. Her husband died about two years since. Her courses are regular, and she says that she has never suffered from any disorder of the menstrual function. She is not aware that any of her relatives have ever suffered from cancer. Several years since she received a blow upon the breast from a rocking chair, which caused at the time a little pain and uneasiness in the part. About a year after this she first observed the tumor, the pain became more severe, accompanied by an occasional slight discharge of blood, from the nipple.

Upon examining the part you will feel a globular tumor, occupying the right mamma, of stony hardness, and irregular and unequal in its surface. It has now passed into the second stage of the disease, the superimposed integument has assumed a dusky or livid hue; the nipple is also retracted. The glands in the axilla are enlarged and hardened, thus showing that they have become involved in the disease.

Cancer of the breast is a disease more frequently occurring among women who have never borne children, than among mothers, who are more likely to suffer from that disease attacking the uterus.

The only hope of a radical cure in cancer, consists in extirpation with the knife, or by destroying the part by cauterization. The knife is by far the least painful of the two remedies. I can by no means promise a radical cure, even if the breast be extirpated,

but as in this case the disease appears to be of local, and not constitutional origin, I should consider the prognosis favorable, if she would submit to an operation. At any rate, it would probably prolong her life for several years.

Patients frequently live several years after the operation, and then the disease returns in the cicatrix, or attacks some other organ. In one case in which I operated, the woman lived ten years, when the disease returned, attacked the liver and she died. The suffering attending its attack upon internal organs is not so severe as when it exists externally. The Doctor strongly urged upon the woman the importance of an operation, as her only hope of cure, and advised her by no means to resort to external applications, except those of the mildest kind. The patient was not prepared to submit to the operation to-day, but promised to come again.

IV. Male, æt. 40. Fistula in ano. This person is a mason by trade;—has at various times suffered much from constipation of the bowels. He suffered for three weeks in the month of July last, from dysentery, following which attack, he first observed a small abscess pointing a short distance to the left of the anus, this was opened with a lancet, its contents discharged, and the opening still remains fistulous. A probe was passed into it, and it was found to communicate with the rectum. Patient says that gas from the bowel frequently passes through it. An operation is the only treatment which offers any prospect of success. The man is poor and does not reside in the city, and as it is important that it should be properly dressed at suitable intervals, after the operation, he was advised to apply for admission into the Hospital.

V. Girl, æt. 3. This was a case of scrofulous synovitis, affecting the left knee, which commenced about five months ago. The joint was not injured by external violence. Child evidently ~~not~~ of a scrofulous diathesis, her mother is said to be affected with tubercles in the lungs.

Upon exposing the limb, the knee was found to be evidently increased in size, the muscles above and below the joint were atrophied, and the temperature was much higher than that of the other joint. Complained bitterly when motion of the part was attempted.

The child has been reared in an ill-ventilated apartment, situated in a crowded part of the city, its appetite for candies and other sweets, also for gravy, has been gratified. The Professor remarked, that so long as this course of life was followed, the child would never recover. He would allow the child



bread and milk for breakfast, meat, potatoes, and other vegetables for dinner, and bread and milk again at evening. Tea and coffee, also sweets of all kinds, should be interdicted. By furnishing the stomach with nutritious food, good healthy chyle would be elaborated, and thus the blood would be supplied with plenty of fibrin. The child ought also to be removed to the country. Abtution with salt water night and morning, followed by friction all over the surface of the body, should also be resorted to. Rhubarb, the bicarbonate of soda, and blue mass in small doses, should be administered occasionally at night, to be followed, if necessary, by castor oil in the morning. Decoct. sarsa. comp. will also be found of advantage. As there still exists considerable heat in the part, the scarificator should be applied freely, and the bleeding encouraged by warm poultices. After heat and pain has subsided, three or four issues should be established about the joint.

The joint should be kept perfectly at rest by means of the tin splint, which I have so often recommended to you in such cases.

VI. Boy. Enlargement of both tonsils of one year's standing.—The Doctor removed them by means of the forceps and bistoury.

VII. Child, *æt* 2. Talipes varus affecting both feet. Doctor P. divided the tendo-Achillis and the tendon of the tibialis anticus. The child is to wear Scarpa's shoe.

VIII. Boy *æt* 9. The patient had strabismus convergens affecting the right eye. The internal rectus muscle was divided, and the eye came into good position; he was directed to apply cold water freely, and present himself for inspection next Monday. Dr. Parker operated for strabismus upon a sister of this boy two weeks ago;—she presented herself before the class to-day;—the operation has proved successful, her eye now being perfectly straight. A small fungus growth has appeared in the situation where the wound was made through the conjunctiva, this the Doctor snipped off with the scissors, and applied stick of nitrate of silver. It will probably give her no farther trouble.

IX. Female, *æt* 17. This girl has been laboring under spinal irritation for several months, for which she has been blistered along the spine, and had a seton introduced, but without experiencing much relief. Upon questioning the mother of the girl, we learn that her daughter commenced to menstruate at the age of thirteen years and that her courses are now regular as to the period of their return, but are accompanied by great pain, and that there is a paucity of the discharge. For several years past she has resided in the country and been accustomed to hard work, during which time she never

experienced any of this spinal irritation from which she now suffers. Last May she removed to the city, since which time she has been attending school and leading a sedentary life. Upon examination, you will observe that she complains when pressure is made over any point of the spinal column; indeed, by merely passing the fingers lightly along its course, you perceive how she shrinks from the touch. There is no curvature existing, neither is she at all emaciated. She suffers much from palpitation, and complains of cold hands and feet. The tongue is somewhat furred, and the papillæ are very long and prominent, indicating a high degree of nervous excitation.

*From the history of the case, and from the examination which we have made, we must conclude that there is no disease existing in the spine, but that this irritation is merely sympathetic, depending upon disease existing in some other organ. The girl evidently affected with dysmenorrhœa, and this irritation is merely sympathetic with that disease. The connection between the uterus and spinal marrow, is established through the medium of those nerves which are of spinal origin, and indirectly through the filaments derived from the sacral ganglia which insinuate with the anterior branches of the sacral nerves.*

In the treatment of this case, we find that she has experienced but little, if any relief, from the counter irritation which has been employed. *The true way is to treat the disease upon which the irritation depends, and when you have removed the cause the effect will cease. Several years ago it was much the fashion to treat all cases of spinal irritation, by friction along the spine with ung. ant. tart., but this practice is now pretty much abandoned.*

The cold bath, night and morning, would be found serviceable in this case, also the warm douche and friction to the spine. She should be warmly clothed with flannel. The bowels should be kept in a soluble state; leeches applied to the vulva or upon the inside of the thighs. In fact, she should be treated for dysmenorrhœa.

X. Female. This was a case of hard tuberculous swelling upon the calf of the right leg, involving the skin and cellular tissue beneath, which had existed about four years. She was advised to try the emp. hydrarg. ammon. with compress and roller bandage.

NEW METHOD OF FILLING TEETH.—Mix thirteen parts of finely powdered caustic lime, with twelve parts of anhydrous phosphoric acid. This powder is moist during the mixing, and while in that condition is to be introduced into the decayed tooth.

Dr. Mott's Clinical Lecture.

Saturday, Dec. 6, 1845.

Dr. Mott remarked at the commencement of the Lecture, that unless more of his friends came in during its progress, than had yet made their appearance, he should be able to experience the delightful reflection that he had cured them almost all, if it was not the cold weather that had done it. Before the close of the usual hour, however, he had to acknowledge that neither himself nor the cold had cured all the ailing, for a sufficient number came in to supply the occasion with its usual interest.

The first case was that of a woman who has already been several times before the class, and has been meantime subjected to successful treatment for foul ulcers of the nose, and caries of the roof of the mouth from syphilitic disease. Dr. M. remarked that it was a case of never ceasing interest, from various circumstances; among them, from the frequently baffling obstinacy of this disease in its secondary forms, and the variety of treatment which it may require in the different stages of its progress, and for the different success which different practitioners of equal skill, or the same one at different times, will meet with. Thus, one may direct the remedies that are employed as specifics, and which are most relied upon for its cure, when from the action of those remedies, as causes of irritation upon an already debilitated system, the disease is rather aggravated than benefitted, and the general debility is increased. A second practitioner, of no greater skill or ability than the first, when consulted in such a case—and these cases are apt to pass through the hands of a variety of doctors—and learning the history of the case and its previous treatment, advises to omit the medicine that has been used—although it is the remedy of all others—the “Samson” of the *Materia Medica*—in the control of these diseases, and to resort to tonics; and this change in the course of treatment is followed by immediate amendment. In such a case, by no means an unfrequent one, though they may be equally worthy, the last doctor gets all the credit and the first all the blame; and from such we must learn to shift our course, when any particular one fails of its object, from specifics to tonics and perhaps anodynes, and from these back again to specifics, keeping up the strength and the patience, till time shall have wrought a cure.

II. Girl. Strumous disease of the Meibomian glands, causing the eye lashes to fall off, &c. Dr Mott prescribed an article which he said he would designate by its old familiar name without any chemical elucidation,

viz: “tutty,” to be applied to the edges of the lids in the form of an ointment. Let the “tutty” be finely pulverized and mixed with spermaceti ointment, two scruples to the half ounce.

III. Man, age 45: has the appearance of being much older. Has two or three abscesses, evidently containing a fluid, upon the chest, probably from the pouting, painful apertures of an open ulcer there, connected with a portion of dead bone. It has exceedingly the appearance of syphilitic disease, but from his statement with the appearance of honesty that he never had the “disease of gentleman at large,” it is concluded to be scrofulous: and it is certain that in some of their forms the fruits of these two *cachexiæ* are wonderfully alike. As there is fluid here it should be early discharged by an artificial opening; for if retained it can do no good, and may do harm. He should be put upon a nutritious diet; for I do not believe that strumous disease was ever cured or even benefitted by depletion, or even by the antiphlogistic regimen. For medicine let him have the hydriodate of potass, and yellow dock root tea.

I have alluded to the similarity there is between *struma* and *syphilis*; there is also another disease which is intimately connected with the latter. I mean the present terrible disease of the East, leprosy. If this is not identical with *lues venerea*, it certainly has a monstrous similarity to it. When travelling in those countries as an invalid, or rather as a convalescent, I was greatly interested in every thing pertaining to the profession, and therefore zealously availed myself of the abundant opportunities which I enjoyed of observing the Grecian leprosy and the Arabian leprosy on their own ground, in Greece and Egypt; and as the result of that observation I have to declare my full conviction of their complete identity. The leprosy sore throat has the same character, the ulcers have the same thickened, hardened, and everted edges, as the syphilitic sore throat with which we have to deal, and I must declare myself utterly unable to distinguish between them. The pretended histories of *lues*, assigning to it a comparatively recent origin, are idle tales. I believe it has always existed, and every where, even since the human family peopled the earth. How soon it was introduced after our first parents were driven from their supposed residence in the Garden of Eden, I cannot tell; but I think it may be conclusively shown from the sacred volume itself, that some of the patriarchs, even good old Jacob, if they had not it, at least had something very bad. I look upon it as the great progenitor of all

these forms of disease. They have also in the East along with the leprosy, other and mild—and they are wonderfully mild—forms of syphilitic disease.

4. Little girl. Strumous Conjuunctivitis of several months continuance. The obstinacy of the disease, and the extreme intolerance of light, which causes her to keep her eyes constantly covered, and pertinaciously to resist every attempt to examine them, indicate with sufficient distinctness the character of the disease. It will be the best combatted by remedies addressed to the constitution; for example, two grs. perchloride of mercury dissolved in three ounces tincture of Peruvian bark: dose, a teaspoonful twice or three times a day.

5. Man. Syphilitic *pericranitis*: remedy, hydriodate of potassa.

6. Young man, native of Ireland. Has strumous enlargement of the glands of the neck, which have been three years in progress. Complaints also of difficulty of breathing by turns about an hour every night, loss of appetite, night sweats, and pains in the lower part of his back. He may be considered as a fair candidate for consumption—for strumous disease of the lungs. The pains in the back however indicate a tendency of the disease to locate in that region, in which case it would assume the form of *psoas* or lumbar abscess. The difficulty of breathing, supposing it to be caused by the incipient disease in the *psoas* muscles, may be explained by the anatomy of relation. Those muscles lie directly upon the *crura* of the diaphragm. When the latter through its proximity, partakes of the disorder of the former, the function of respiration which is dependant upon it, is necessarily impeded. This case has been treated by cupping and leeches, which were all wrong; he requires tonics, not depletion. Revulsion however, by issues, would be proper; and a course of the hydriodate of potassa, with a view rather to give tone to the system than to operate directly on the disease. As for the tumors on the neck, cover them with a piece of oil silk, and let them alone: it will do injury rather than good to attempt to disperse them; therefore put nothing on, unless you can find a seventh son; let him rub them as much as you please.

7. Girl. Hip-joint disease. Commenced with pain in the knee, which has abated since the hip began to swell, a good illustration of the truth that suppuration, which is now evident by fluctuation, is the most efficient means to relieve the prominent symptoms, and the same holds true whether the suppuration be natural or artificial. The case has been neglected, it is now in the se-

cond stage, and has not been medically treated at all. Revulsion would now do no good, for the suppuration which that measure is designed to divert from within outwards, has already taken place in the joint, and its progress cannot now be arrested. All that we can do at present is to support her strength, and let the process go on. Give her plenty of food and that which is good, and the following medicine: Super sulphate of quinine one drachm, aromatic sulphuric acid two drachms, water or ginger syrup two ounces. Take a teaspoonful twice a day.

8. Young man. Palsey of the left wrist from lead. Has had lead cholic three times, and now exhibits the blue line on the gums—the recently discovered symptom of this disease. We will try Dr. Pemberton's plan of support by means of splints, and at the same time rub the palsied muscles with an ointment of strychnine ten grs. to the ounce, and administer the same remedy in doses of one twelfth of a grain internally.

9. Man. Syphilitic and varicose ulceration of the leg. Directed to be treated with the yellow wash externally, and the hydriodate of potassa internally, and to abstain from intoxicating liquors.

10. Girl. Tonsils very much enlarged. One of them was removed by the bistoury, which, Dr. M. remarked, was the quickest and best mode of operation in adults and in children who are large enough to hold still. In smaller children, an instrument devised for the purpose, and so contrived as not to inflict any wounds in consequence of their struggles, must be employed. Such an instrument—the invention of a surgical instrument maker of this city, in all respects very well got up—I now exhibit before you; but, I must say, that an operation performed with any instrument of this kind will be very likely to prove an unsatisfactory one. In operating with the bistoury, care must be taken not to cut too deep: the carotid artery lies close on the outer side of the gland, and I have heard of its having been cut. The gland must be well pulled out from the *pharynx* while it is cut.

12. Man. Lost one eye seven years ago, from a blow with a pound weight. The sight of the remaining eye began to fail about two years since, and is now lost for all valuable purposes. The peculiar features principally to be noticed are, that the pupil is small and irregular; the cornea is preternaturally convex, and he has a good deal of headache and dizziness. On the whole, it is a very unpromising case. Insert an issue in the back of the neck.

13. Girl. Nebulosity of the cornea. She has been here before, and, as directed then,

has applied molasses to the eye, from which she has derived benefit. The direction is, to go on with the treatment—a very sweet case. Molasses, used in this way, in slight opacities of the cornea, is often attended with decided benefit. and I had rather trust to it than to the nitrate of silver. Let a single drop be put into the outer canthus of the eye, morning and evening.

14. Infant. *Pemphigus*. First appeared two weeks since. Make no external application whatever, but give internally one twenty-fourth of a grain of the perchloride of mercury in tincture of bark, twice a day.

15. Man. An anomalous state of the elbow joint, the result of injury, in which he is unable to rotate the hand, or to flex or extend the fore arm, except to a very limited extent. As it was not ascertained what the precise difficulty was, no remedy was proposed but the using the arm actively, laboriously and perseveringly.

#### Dr. Parker's Clinical Lecture.

Monday, Dec. 8th, 1845.

1. Man. Age 26 years. Had a small abscess gather and break on the inside of the cheek six months ago, gradually extending downwards to the corner of the mouth, and involving the lips, particularly the upper one, which is much thickened and has several ulcers upon it, of a phagadonic character—The disease was preceded by no injury that he recollects, and his health was previously good. He has been treated with Sarsaparilla, and locally the caustic potash. The edges of the ulcers are hard, irregular, and everted; attended with no pain in the part itself but excessive pain in the region of the temple and side of the face, sympathetic, from the implication of some branches of the fifth pair of nerves in the disease. Now we have to determine the character of the disease, both with reference to the treatment and to the prognosis. The lip may be the seat of either of the following; cancer, lupus, scrofula, syphilis and *holi-me-tangere*; one of these it must be; let us see which. In cancer, the most dreaded and the most formidable of them, there is a burning, stinging pain, which he has not experienced; the lymphatic glands in the vicinity are enlarged, but here they are not; it makes its appearance at a more advanced period of life, at 40, 50, or 70 years, and seldom or never so early as thirty. The probability is then that it is not cancerous. It has not the scabby appearance of *lupus*, and moreover, parts that were destroyed by the caustic have been restored. He has not the slightest taint of syphilis, so far as can be discovered,

nor have the ulcers the syphilitic character. In *holi-me-tangere*, as its name implies, there is very great sensibility, which is wanting here. The conclusion is forced upon us then that it must be scrofulous, for that alone remains. Why scrofula should fix upon this particular part, and develop itself in this manner, I confess myself unable to say; we have the fact before us. It is better to have this than cancer, and it is worthy of note that the two never co-exist; a person cannot have both; the patient who is suffering from either one of them is bullet-proof against the other. It should be treated with the wood decoctions and small doses of the puchloride of mercury or hydriodate of potash, and locally with superficial scarifications.

2. Man: here last week with inflammation of the wrist; has since been in the care of one of the class. The limb was scarified, and poulticed; the patient himself subjected to the anti-phlogistic regimen, low diet, &c., and this treatment has been attended with very great improvement. It should now be showered with warm water morning and evening, and rubbed with a liniment of soap, opium, spirits of turpentine and origanum. It should also be kept at rest for a fortnight longer.

3. Boy—Enlarged tonsils removed.

4. A Man, aged 33 years—Complete amaurosis of the right eye, and obscuration of the left, proceeding from suppuration of the *antem highmorianum*, states that he had bad cholic, from working in white lead mills two years; that he then took a good deal of medicine, had his mouth made sore, and his teeth loose. He recovered his health and continued well till last April, when he took a severe cold in the head, which settled principally in the right side. This was followed by a severe pain in his teeth and gums, and extending thence to all that side of the head, leaving the left side entirely free. It was a beating pain, and was particularly severe at night. In May he had two teeth extracted which were loose, but perfectly sound, without relief, since that time, two more. The eye began to be affected about three months since, with an obscurity of the vision which steadily increased till he became entirely blind. The left eye began to be affected in the same way six weeks since. Two weeks since an opening was made into the cavity by Dr. Wallace, and a large quantity of foetid purulent matter discharged, with immediate relief. Matter continues to be discharged through the opening which is maintained for that purpose, and through the adjoining nostril. He continues to have pain in the head and occasionally has had deep-seated pain in

the eye, and the visual sense of clouds floating before it. The treatment has been eyering the cavity daily with soap and water, and every other day with nitrate of silver; and the eye plied with aconitine. The treatment is judicious, let it be continued. There is some hope to be entertained of the restoration of the sight.

5. Young woman. Epiphorce. She received a blow upon the cheek bone last April, which is the only cause she can assign to the complaint. Probably the increased secretion of tears is the result of sympathy of those branches of the fifth nerve distributed upon the eye, with those upon the part which received the injury. There is no appearance of fistula lachrymalis, except the flow of tears upon the cheek, from which it would be very likely to be pronounced that disease. No operation is required. Electricity, or showering with cold water would probably benefit by strengthening the debilitated nerves. The veratrine ointment would also be useful.

7. Woman, aged 70 years. Came here three weeks ago with two large wens upon the head, one of which had ulcerated, and wore the appearance of a large rose cancer, or bloody fungus—that has been removed by ligature. The other remains to be removed by the knife. It is to be especially remarked that the scalp will not yield, like the skin of other parts of the body, so as to supply the place of any that has been removed. Another consideration of general application and of great importance, is to be noted in regard to encysted tumours; that every portion of their sac must be removed, or the reputation of the operator will suffer,

17. It is first gravely described as a case of "spinal irritation," with the latitudinarianism of which favorite and convenient but unmeaning phrase, our readers are too familiar not to be highly amused. But it appears very speedily, from the Professor's own showing and admissions, to have been an organic disease of which the tenderness along the spine was merely symptomatic and indicative. Nevertheless this poor girl had been blistered and cupped and setoned along the spine, as all others have been and still are, under the old practice and theory. What then led this astute and learned Professor to discover, in advance of the whole array of the profession, from the examination which he had made, and which merely consisted in detecting a general irritation along the spine, that "there is no disease existing along the spine, but that this irritation is merely sympathetic, and dependent upon disease existing in some other organ?" What led him to arrive at so novel a conclusion, and one not only palpably a *non sequitur* from the facts as stated, but flatly opposite to the whole theory and practice of his predecessors and contemporaries? We are somewhat curious to know what would be his honest answer to this plain question. Certainly he has afforded us no clue to it, in stating, as he subsequently does, that "the connection between the uterus and spinal marrow is established through the medium of those nerves which are of spinal origin, and indirectly through the filaments derived from the sacral ganglia which inosculate with the anterior branches of the sacral nerves:" for this single fact is not better known or received by the profession in general, than the foregone conclusion which this admission evidently involves, of the existence of a similar connection between all the organs, inclusive of the muscles, and the ganglia of the posterior spinal nerves. What then becomes of the present theory and practice? And again we ask how comes Professor Parker in possession of such an immensity of superior illumination? But for the modesty to be sacrificed in such a solution, we might, to be sure, explain the whole mystery by merely adverting to the

## THE DISSECTOR.

JANUARY 1, 1846.

### MEDICAL SCIENCE IN NEW YORK.

We publish in this number of our Journal several of the recent Clinical Lectures of Professor MOTT, at the University Medical College, and of Professor PARKER, at the Old Medical College, because they afford as full and fair a view of the theory and practice taught in these schools, especially in chronic diseases, as can probably be presented within a compendious compass.

The first point in them that will strike a reader of this Journal, protrudes very prominently in the lecture of Professor Parker, delivered November 24th, commencing page 41, being the 9th case—that of a female aged

notorious fact that this is the doctrine which we have published, and the one upon which we have practiced for the last thirty years—during the last ten of which, under the very noses of those professors, in this city.

Now we presume that Professor Parker, even under the zeal of a new convert, would scarcely claim a connection between the uterus and the ganglia of the dorsal or cervical vertebræ, but would very properly rest content with the irritation of the ganglia of the lumbar, or what he is pleased to call the sacral vertebræ, as indicative of uterine disease. What then becomes of the irritation which he describes as existing, in this case, along the whole extent of the spinal column? What was the meaning of all this? If the irritation of the lumbar ganglia were indicative of uterine disease, of what was the irritation of the dorsal, and the cervical ganglia indicative? Taking the statement as strictly correct, that the patient "complained when pressure was made over any point of the spinal column;" indeed, that she shrunk from the touch even when the fingers were passed lightly along its course—we are forced to the conclusion that all the organs of this patient were more or less diseased, including the muscles. Making all allowance, however, for a probably hasty and imperfect examination of all the ganglia in regular and distinctive order, we may safely conclude, from this general account of the case, that organic disease prevailed extensively, and was by no means limited to the uterus, and dysmenorrhœa. Indeed, from the palpitation mentioned, and the coldness of the hands and feet, it is evident that the heart was affected as well as the muscles. In short, from the statement before us, it admits of no doubt that the case was one of *tuberculosis*, or tubercular disease, in which all the organs, as well as the muscles, were more or less involved.

Thus much for the theory, and now for the practice of Professor Parker, in cases of this kind. He says, "In the treatment of this case, we find that she has experienced but little if any relief from the counter irritation which has been employed." Of course not; but he ought to have added, from his

own observation, that such cruel and barbarous applications invariably tend to prostrate the nervous energy of those on whom they are inflicted, and ultimately to aggravate the disease. He pithily proceeds to say, that "the true way is to treat the disease upon which the irritation depends, and when you have removed the cause the effect will cease." We refrain, for a moment, from adverting to the treatment by which he proposes to accomplish this most laudable object, to quote his very noticeable remark given in connection with the above oracular maxim.

It is this—"Several years ago it was much the fashion to treat all cases of spinal irritation by friction along the spine with *ung. ant. tart.* but this practice is now pretty much abandoned." Now, we must take the liberty to say that we consider this one of the severest thrusts at the profession in general, and at Professor Mott in particular, that could have been dealt by any hand, however hostile. Upon Dr. Mott it is like the poignard of Brutus, for in the lecture of this celebrated Professor, delivered at the University September 6, which we give at page 35, there is a case exactly similar to the one which called forth Professor Parker's fratricidal steel, in which Dr. Mott directly recommends precisely the very treatment which Dr. Parker condemns—condemns! do we say!—nay, worse than that pronounces *unfashionable*! What! is it come to this? Dr. Mott an *unfashionable* physician?

*Amissa podicitia, quid erit saluum mulieri!*

Dr. Mott briefly describes the case as one "which seemed to partake more of spinal irritation than any thing else, although the diagnosis was rather obscure. Recommended *counter irritants* to the spine."

We leave these learned gentlemen to settle this dispute about the fashions between themselves; but we think it due to Professor Parker to say, that, whencesoever he may have derived his new light upon this important subject, and however ungenerous and disingenuous we may deem his neglect to acknowledge its true source, we think him entitled to great commendation and encouragement for the moral courage he has displayed

in promulgating so vitally momentous a doctrine, in the midst of so high and so highly prejudiced a medical school. It is at the same time equally due to others to state that he is not the first among the medical Professors of this country who have shown an exalted intrepidity in this matter; many distinguished medical men, in this and other states having for some time past openly adopted both the doctrine and treatment which, for many years, was advocated and practiced exclusively by the conductor of this Journal. In fact the Professors have been driven rather than led into these reluctant admissions and avowals, by the numerous examples which have arisen around them, in an attitude bordering upon derision.

By way of an amusing conclusion to this too serious commentary, we must not omit to mention Professor Parker's proclaimed treatment of the case upon which we have remarked. The readers of the lecture will perceive that it is limited to bathing, friction, flannel, and the application of leeches! The habitual readers of this Journal, however, are too well instructed upon this subject not to know that such treatment of this or of any other of the cases of *tuberculosis* occurring in these lectures, must be utterly futile, and that the patients must inevitably go to their graves unless the appropriate remedies for tubercular disease are applied.

#### "BEHIND THE AGE."

The students of Medicine who come to this city, from all parts of the Union, to pursue their studies in our Medical Colleges, have an undoubted and reasonable right to expect from their Professors and Lecturers, such information concerning the progress of medical science and discovery as will at least enable them to keep pace, in the general march of intelligence, with unprofessional readers of medical literature. Otherwise, on their visits to home in vacation, they are very likely to find their fathers and brothers, and perchance even their mothers and sisters, much better informed on such matters than themselves. How far this is likely to be the case under the inveterately conservative system of

instruction still predominant in our medical schools, may be judged from the following example, quoted from Professor Parker's Lecture at the Old Medical College, December 8th, which we publish at page 43. Speaking of a case of *tuberculosis*, manifesting itself in a scrofulous tumefaction of the upper lip, he reiterates the following venerable but decrepid dogma:

"It is better to have this than Cancer, and it is worthy of note that *the two never co-exist*; a person cannot have both; the patient who is suffering from either one of these is bullet proof against the other."

It is unnecessary to say how perniciously delusive this maxim may become among medical students, in case it be falacious and contrary to fact; and it requires but a brief notice to prove that it is as erroneous as any one of the thousand other absolute *dicta* of medical authorities long since exploded.

In the course of our own practice, we have found scrofula and cancer to co-exist, in the same person, in a great number of palpable and unequivocal cases; and we challenge the projection of any rational theory why both may not exist at the same time. But besides our own repeated observations of the stubborn fact, we have that of LIBERT, in *Mullers Archives*, Nos. 2 and 3, 1844, as quoted in a late number of the *London Lancet*, in the April number of this Journal, (page 92,) and in various other works. LIBERT there says, "Tubercles and cancer *do not exclude one another*, or even interfere with their separate march. Both morbid processes can, at the same, run through their stages of development in the same person."

In further evidence of the vulnerability of Professor Parker's "bullet-proof" protection, we beg to refer the reader to the article "On the Coincidence of Tubercle and Cancer," page 27 of this number of the *Dissector*, which we quote from the *Allgemeine Zeitung fur chirurgie*. No. 51, 1844.

In truth it has long been the doctrine of the ablest medical men of this country, if not of Europe, that scrofula and cancer may and do co-exist, as now asserted and proved by these eminent German authorities. In our work on the "Motive Power of the Human

System," 8th edition, page 87, (Wiley and Putnam, N. Y.) the reader will find a case, strictly similar to the one adduced by Professor Parker, which occurred in our own practice so early as the year 1817, and in which the knife was about to be applied. We shall be excused for republishing it here, because it is directly pertinent to the question which Professor Parker has revived, and calculated to be useful to patients similarly affected:—

#### Cancer of the Lip.

Miss M. H——, of —, aged 17 years. Called early in the morning to see her, in April, 1817; and was requested to examine her under lip, which was swollen and ulcerated, and to give my opinion of its character, and after examining it and the lymphatic glands of the neck, which were tuberculated on both sides, I pronounced it a case of scrofulous cancer. I was then requested to say whether I "could cure it without cutting it out," and readily answered in the affirmative, and was then told by the female attendant, that, that was all they wanted of me, and that I was at liberty to return home as soon as I pleased. Accordingly I bade her good morning, and returned home, perfectly in the dark, however, as regarded what was meant by this quixotic adventure. The next day, I was called again, and informed, in explanation, that a celebrated surgeon had been attending the patient about two months, and as the lip continued to get worse, and had become very painful, he had advised them, a few days before, of the futility of all remedies, but the knife, and had set the time of ten o'clock of the day before to perform the operation; but they had dismissed him, and sent for me to perform the cure without it.

She was of the middling size, light and ruddy complexion, eyes rather large and prominent, and form of face approaching that of the Roman, and with perfect symmetry of body and limbs, was what may be called a scrofulous beauty, bating only this horrible lip. Prescribed, magnetic pills and plaster. In five weeks from this time the cure was perfect, and the tuberculated glands in the neck had gradually become smaller, and soon after disappeared.

This case, and the following one of the uterus, were apparently cases of scrofulous cancer. I have had a few other cases of the lip of the same character, and many of a similar nature, affecting the uterus, which

were cured with these remedies, but which have apparently little or no effect on the disease in this form, when affecting any other part of the body. I have imputed their effects, in the cases of the lip and uterus, to the strong power of contraction which they possess, from the fact that the same results are obtained in cases where strong compression can be applied at the same time as in the case given of Mrs. H., of Union, Butler Co., Ohio.

The case here referred to is the following:

#### Tubercula of the Uterus, terminating in Cancer.

##### *Menorrhagia terminating in Cancer.*

Miss P. F——, of —, of full habit and light complexion, aged 22 years; called to see her, May 16, 1812. She has menorrhagia, which commenced four months ago. I prescribed the usual remedies for many months, during which time, as before, she had been constantly confined to her bed: but all to no purpose, and it now became necessary to abandon the patient or commence a new treatment.

She had from the first complained much of pain and weakness in the small of the back; which was attended with leucorrhœa. I proposed now to examine her back, and applied pressure on and around the lumbar vertebræ, and this produced violent pain, which, on every repetition of the pressure, darted into the uterus, and they appeared to be the same darting pains we find in cancer of the breast.

I now prescribed the magnetic pills and plaster. The plaster over the small of the back, or lumbar vertebræ, with injections into the uterus of a strong solution of acetate of iron, by means of a catheter and small pointed syringe.

Her symptoms began to improve slowly from this time, and in about three months, a very thick membrane separated from the inside of the uterus, and was discharged from it, rolled up—round—half an inch in diameter, and two inches in length, which was presented to me in a paper, and on unrolling and spreading it out on a stand, it presented two tumors or bunches, of dark colored fungi near the middle or centre of it,—one of which was near the size and shape of a pea, and flattened on the sides that adhered to the membrane, and at a distance from each other of half an inch.



These fungi were on the outside of the membrane, or that next the uterus, and adhered to and sunk deeply into it; and there arose out of their tops and sides small white or light colored substances of the size and appearance of small threads, and from a line to a fourth of an inch in length. On examining the other side of this membrane, small holes or chinks were found opposite to these fungi.

In a few weeks after this, her health was restored. She married about a year after, but has had no children.

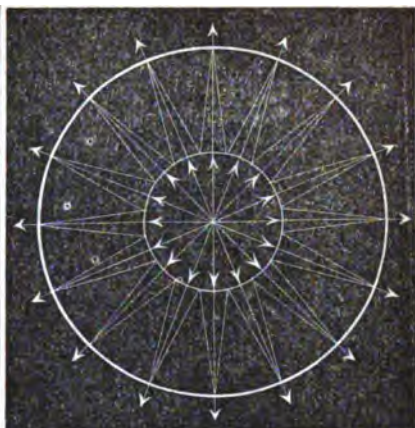
#### "MAGNETIC SLEEP."

Among the extraordinary phenomena of magnetic sleep, is the insensibility of the skin, or external surface of the body, and the establishment and exaltation of sensibility in the mucous or internal surfaces, in which the natural order of the magnetism of the human system is reversed.

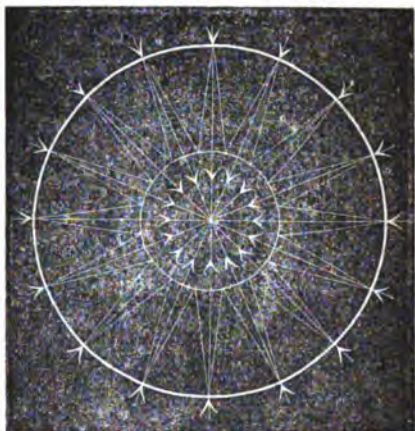
A solution of these phenomena is found in the fact, that, in the natural state, the skin or external surface of the body, as well as the external surfaces of the organs and facia of the muscles, excrete a serous or negative matter that gives out the positive force which attracts and contracts, and is consequently endowed with sensation; while the mucous or internal surfaces of these structures excrete a mucous or positive matter that gives out the negative force which repels and expands, and is consequently destitute of sensation.

Now the magnetiser reverses this order unconsciously, in the process of magnetising, by repelling the positive forces from the surface to the centre, and attracting the negative forces to the surface, and this reversal of the order of the magnetism of bodies is according to a law of these forces, and is therefore founded in nature and easily imitated.

If a round iron or steel plate, or disk, with a hole in the centre, representing a middle horizontal section of the body, is placed on the positive pole of a Galvanic Battery, under a moderate power, it presents the phenomena represented in the following figure



or a negative internal and a positive external surface; but if we now place the plate on the negative pole of the same battery, the order of the magnetism of the plate will be reversed as represented in this figure.



showing in the first figure the natural order of the magnetism of the body, and in the second, the induced order, in the magnetic sleep.

#### PARALYSIS IN MAGNETIC SLEEP.

On a Sunday evening in August last, a young woman, named Emma W—, about 24 years of age, who had long been a Clairvoyant, and who had at length acquired the power of putting herself into the magnetic sleep, without the aid of a magnetizer, was at the office of the Editor of this work, during his absence on professional duties, await-

ing his return. A friend of his who was also staying to see him, thinking this a good opportunity to elicit the phenomena of clairvoyance with less liability of interruption than might have been afforded on a business day, requested the lady to put herself into that state, and inform him concerning the nature of the luminous atmosphere, spots, and opaque body of the sun. She replied that she feared it was rather a dangerous experiment, and had heard of several clairvoyants who had suffered severely in attempting it. She nevertheless consented, saying that she would endeavor not to venture too far.

In the course of five or six minutes, she manifested all the usual symptoms of a complete magnetic sleep, and apprised her interrogator, with some slight degree of irresolution, that she was ready to attempt an inspection of the solar orb. Shortly afterwards, she evinced a highly nervous shrinking, as if from a sense of awe, and said, in answer to an enquiry, that she felt the solar influence to be too powerful for her to persist, and was afraid she would lose her senses—in her own words, she feared “that her whole mind would be consumed.” She was accordingly requested to venture no farther, but remain if possible, in the position she had acquired, and describe what she saw. She then said that she had now a view of the dark body of the sun—that it was black, but highly lustrous, like “black shining melted metal;” she was confident it was highly metallic, though she could look at it no longer, as it was again closing up in a degree of brightness which she could not endure.

Whilst obtaining these answers, the gentleman in communication with her, perceived that her left arm was greatly paralyzed, and the hand became so tightly clinched that he could with difficulty rescue his fingers from the painful grasp. Speedily she announced that she was absolutely paralyzed on the whole of her left side, and was fearful that she would be convulsed all over. She added that “if she had continued so near the sun a minute longer, the influence would have killed her;” and, as it was, she knew not how she could recover from the convulsions

she felt approaching, unless some powerful magnetizer could be obtained to awaken her. Shortly after this, her convulsions became so violent and alarming as to induce the gentleman who was with her to call for assistance to hold her in the chair. She became unable to speak or hear; she breathed only at long intervals and with great labor; her right hand was kept so forcibly on her heart that it could not be moved with the united strength of two or three persons; and the action of the heart itself seemed to be almost entirely suspended. The pulse were frightfully intermittent, and, for long intervals, wholly imperceptible; the eyes were open, with the pupils half buried beneath the lower lids, and greatly dilated.

In this state, varied only by convulsive paroxysms of greater or less intensity, she continued nearly four hours, when the writer, who had been detained much beyond his usual time, returned. He found her surrounded by his family and medical assistants, together with a magnetizer and a male clairvoyant who had been sent for to relieve her. Their efforts, however, had produced only slight and transient effects in mitigating her condition, and the writer judged it proper to attempt to establish a communication with her, as the only means of awakening her, and with this view commenced making the long magnetic passes, and then reversed them. The effect of these was very striking, even from the first: producing sudden starts, followed by greater freedom of respiration, and some degree of relaxation of the muscles. The male clairvoyant present being in a magnetic state, recommended that as soon as her arms became sufficiently relaxed, her hands should be kept in a basin of cold water, and the passes continued; adding that, under this process she would awake in twenty-five minutes, although it would require a much longer time for her to recover from what he described as her “rash attempt,” the effects of which upon her brain and nervous system he minutely and lucidly described.

As soon as her hands could be placed in the water, several watches were observed, and the assigned twenty-five-minutes cautiously awaited by the spectators. Precise-

ly at the end of this period, she awoke and spoke, her whole left side, however, which had first been attacked, still remaining perfectly paralyzed, not excepting even the left arm which had been so directed as to reach the basin of water. To remove this state of paralysis, the writer found it necessary to resort to the Magnetic Machine. It was used three times a day, and on the third day the paralysis disappeared, and she was able to return to her home.

We publish this case as a caution to magnetizers and clairvoyants against gratifying the curiosity, so frequently evinced by persons ignorant of the dangerous nature of the experiment, of instituting clairvoyant explorations of the sun. This is but one out of many well authenticated instances which we might report, in which the attempt has nearly proved fatal. The planets, however, may be, and frequently are examined by good clairvoyants, with perfect safety and success.

*A Word on Magnetic Machines.*

The Magnetic Machines first generally introduced among the medical profession in this country, accompanied with careful directions for their use in a scientific and effectual manner, were manufactured under the inspection of the editor of this Journal, and those directions were in accordance with personal observations and experiments, made in the course of an extensive and various practice. We were induced to commence the manufacture of them, not only because we saw that we could make those improvements in their construction and efficiency which we have introduced, and by which our instruments immediately became strikingly distinguished, but also because we deeply felt the importance of the consideration that those who might be induced to try this new curative influence, and, among these, medical men, in particular, should be in possession of an instrument upon which they could rely, and not become discouraged or prejudiced with regard to the influence itself, on account of the defectiveness or inadequacy of the machinery employed.

We soon had the happiness to observe

that the improved machines of our own manufacture, accompanied by a Manual of Directions for Use, gave great satisfaction, and accomplished our highest expectations, both in professional and domestic practice.

Their superiority and efficiency, however, soon incited a host of merely mercenary imitators, and a multitude of miserable imitations, the distribution of which, unaccompanied by experienced and scientific instructions, has already caused great disappointment, and thus, to a certain extent, superinduced the very mischief which it was our first and strongest motive to prevent. We are thus compelled, in self-defence, as well as in defence of a source of human relief and health, demonstrably of inestimable value, to continue the manufacture of our own instruments, and to caution the public against the worthless imitations to which we have referred, and the unscrupulous quackery with which they are accompanied. One of the most barefaced (though not on that account the most pernicious) of these examples, is the following, which we copy from a Philadelphia paper:—

*Professor Grant's Premium Electro Magnetic Machines.*



These Machines have this year obtained the **HIGHEST PREMIUM** awarded to Electro Magnetic Machines, at the Fair of the Franklin Institute; and to show that this award is a test of the high merit of these Machines, it may be mentioned that there were placed in competition with them the First Premium Machines by Dr. Smith, recently from the Fair of the American Institute in New York, which there took the Premium over Sherwood's, Pike's, and others, and also Machines from the best manufacturers in Philadelphia.

The peculiar merit of these Machines, consists in the intensity of the Electro Magnetic current exhibited. That this intensity is a quality essential to the utility of the Machine, may be proved by the fact that more cures have been accomplished by these instruments, than by all other Machines conjointly.

More than four hundred references and certificates of cures performed within the past year, can be produced, where cures have been accomplished by these Machines, when all other medical appliances have utterly failed. All kinds of Chronic Diseases are removed by these applications, when perseveringly continued. Every Physician should be supplied with one, and also every Family, who wish to avail themselves of this invaluable specific for all the ills that flesh is heir to.

They are put up in neat mahogany boxes, at a price varying from \$10 to \$15. The \$10 Machines are warranted to act as efficiently as those sold elsewhere at \$15. They may be obtained at JOHN C. FARR'S Jewelry Establishment, No 112 Chestnut street, Philadelphia, and at the Manufactory of MR. BRIGHAM, fourth story of the same building. Sole Agents and Manufacturers for the United States.

They will be sent for a cash order to any part of the World, neatly packed up, and accompanied by a pamphlet, with full directions for their use.

It is here most impudently asserted that "Sherwood's," meaning our Magnetic Machine, was placed in competition with those of Mr. (not Dr.) Smith, and Mr. Pike, at the late Fair of the American Institute of this city; and that as the said Mr. Smith's Machine took the First Premium over ours and Mr. Pike's, on that occasion, so this Professor Grant's Machine took the First Premium over all, at the subsequent Fair of the Franklin Institute, in Philadelphia. It is unfortunate for this arrant climax of pretension that it rests entirely upon an unscrupulous falsehood; the exposure of which, must throw the whole fabric to the ground. No machine of ours was at that Fair of the American Institute; and consequently no other took the Premium over it. We are content that it should continue to be considered as the best by the medical profession, who are the best judges, and have never sought to endow it with a factitious and mere clap-trap notoriety. We are thoroughly acquainted with the several machines of Messrs. Smith and Pike, and also with this boasted one of Grant's; and have not a moment's hesitation in saying that either of the two former is infinitely superior to the latter—although inferior to our own. It will be seen, that the above advertisement, claims it as the "peculiar merit" of Grant's Machine that it exhibits a greater intensity of power: and this merit will certainly appear to be "very peculiar" when we state that two of these self-same machines have been sent to us, direct from Philadelphia to increase their power, and to substitute our metallic buttons for the sponges with which the forces of this kind of machine are applied. One of these machines, in fact, is now in our office, and open for comparative inspection and trial.

And here we deem it proper to remark, in reference to this machine of Grant's, and to all others in which sponges are used instead of metallic buttons, that the sponge is highly objectionable on account of its evident liability to communicate disease from one patient to another, and from one part of the body to another. It is evident that a moist sponge, under any circumstances, after being used

on a sore, or any diseased part, is well calculated to convey disease from part to part, or person to person; and that this liability is greatly enhanced by its connexion with a magnetic wire, and the forces which pass through it, is but too obvious. It is well known that water is one of the best conductors of these forces, and that the sensible power of the machine is greatly increased by the medium of a wet sponge; hence the use of this material, and hence also the opportunity afforded of passing off machines of really inferior power and cost of manufacture as equal or superior to others of incomparably greater real force and substantial value. If a patient, under any peculiar fancy, should wish to try how much of the sensible force of a machine he can bear, he can readily be accommodated, if not exactly gratified, by wetting the metallic buttons, or the part to which they are applied, with pure water, and thus dispense with the offensive and very possibly dangerous use of the sponge; besides avoiding the imposition upon himself of a bad Magnetic Machine for a good one.

#### New Discovery in Medicine.

The newspapers have given, within the last few days, some eloquent descriptions of a new and wonderful medicine, invented or discovered by an Italian chemist, and called after his name. If all the accounts are correct which have been given of this new discovery, it is a perfect philosopher's stone—the long looked for elixir of life.

According to these accounts, this newly discovered medicine consists of a liquid extracted from vegetable products, which, being applied to wounds or cuts, even of the carotid artery, causes an immediate suspension of hemorrhage, and heals the parts in a few minutes. It is said to be a perfect cure for all sorts of disorders, from the beginning of the alphabet to the end. The accounts given of experiments made in Paris, before the whole circle of physicians and surgeons there, are of a remarkable character. These experiments were made upon certain innocent sheep, whose throats were inhumanly cut to test the efficacy of the medicine, and were probably afterwards eaten, as very good mutton, by those who made the experiment.

The first account of this extraordinary discovery in the art of healing, has been given to the world by a certain Chevalier attached to the French newspaper published in this city. Whether he is a lineal descendant of Baron Munchausen we do not know; but certainly the story looks very much like it. The famous Moon hoax was not more improbable than this story of the *Eau Breckneri*.—*New York Herald*, January 6, 1846.

## REVIEWS.

*Animal Chemistry, or Organic Chemistry in its application to Physiology and Pathology.* By JUSTUS LIEBIG, M. D. &c. London: Taylor and Watson, 1842, pp. 354.

The position which Liebig now holds as a European chemist may certainly be said to be the highest; even Sir Humphrey Davy, lauded and caressed as he was on all sides, did not enjoy a greater share of popularity with scientific men in general, and more particularly with the public in this country, than does the present Professor of Chemistry in a hitherto obscure German university. Nor will this be wondered at, if we look back upon the history of this extraordinary man. Whilst yet a youth of nineteen years of age, he published his paper on the Cyanic and Fulminic Acids, a work which bore upon it the stamp of genius, and proved incontestably that the author was then not only a good practical chemist, but also endowed with great acumen and uncommon powers of analysis. From that time until the present, he has never ceased to pursue his researches with most praiseworthy zeal, and year after year, nay, month after month, has borne testimony to the successful research and patient industry of our author. His papers, several of them written in conjunction with Wohler, merit the highest praise. We need only mention his celebrated one on the radical of the oil of bitter almonds, to remind our chemical readers of the impulse given to the investigation of the compound radicals by its publication, which indeed now bears its fruit by the hands of previously eminent chemists, and of others formerly unknown to science, but who now, reared in the school of Giessen, enjoy a reputation more than respectable, amongst the cultivators of the science of chemistry. The work now before us has been in the hands of our readers for a considerable time, and none, we may safely say, of modern authorship has produced a more vivid excitement in the scientific world. Its publication has effected immense good, by directing the attention of medical men, previously too little devoted to chemistry, to a careful study of that science. Medical journals, which ten years ago teemed with papers the most puerile, and which often indicated the grossest ignorance of chemistry, are now, following the general rule of running into extremes, filled with papers so *recherche*, that we have chemical explanations not only of the processes through which the aliment we swallow passes, but even of the action of the condiments and medicinal substances consumed along with it,—the whole confirmed by a chemical

analysis, of course not to be disputed, of *tenths of grains*, and of the ratio that the constituents of these bear to some important secretion weighing *ounces*!

These are circumstances that give us infinite pleasure; and we sincerely trust that the authors of these multifarious papers will hold us in no disesteem, if, in the course of the following remarks, which our duty, as journalists, compel us to make on the work of their master, we should appear to hold a doubtful opinion as to the merits, importance, and even scientific truth of what he and they have asserted. The consideration of the organic chemistry is, however, to be approached in no light spirit, but merits our attentive perusal and careful examination. Some of the doctrines enumerated by Liebig and his disciples are so startling, and are apparently supported by facts so incontrovertible, that the whole work wears an air of plausibility, and engages the attention by a pleasing simplicity of arrangement, which must prove exceedingly captivating to all who are desirous of information on the chemistry of physiology. It is not our intention to attempt a minute critique on the whole work of the author, as, to do justice, in all its details, to a subject of this nature, would require a space which our limits cannot allow. We would, however, as much as possible direct the attention of our readers to those parts of it most intimately connected with medicine; and as these, if not entirely new, are at least for the first time brought forward in a formal manner, they are well deserving of it.

The organic chemistry is divided into three parts,—the *first*, is devoted to the examination of the chemistry of nutrition;—the *second*, to the subject of the metamorphosis of the tissues;—and the *third*, to the phenomena of motion, &c. The first part commences with some very judicious remarks on the subject of vitality; but at the second page we find a statement which we cannot conceive to express well what the author means. It runs thus;—"The animal organism requires, for its support and development, highly organized atoms." This is a very loose and inaccurate manner of saying that animals require for nutrition a more complex class of chemical compounds than those formed by the ordinary inorganic reactions. We may infer from this, and many similar oversights, that Liebig has not very clear notions of the terms of vitality and life; for a few pages farther on, we find expressions which plainly show that these are, in his opinion, identical. P. 11:—"Certain phenomena of motion and activity," says he, "are perceived; and these we call life or vitality." This, we confess, appears

to us to sound rather contradictory when placed in juxtaposition with the first sentence in the book, where vitality is distinctly stated to be the force which, acted on by external stimuli, produces the above described phenomena of motion. We find, in the succeeding pages, some interesting general remarks on the proportion of oxygen consumed at different temperatures, and on the necessity of an increased amount of carbonaceous aliments at low degrees of heat; with illustrations from the fact, that natives of northern districts can consume with impunity much larger quantities of flesh and stimulating drinks, than inhabitants of the tropics. Without denying, *in toto*, what Liebig has said on this subject, we would merely throw out a hint as to how far these so called carbonaceous articles of diet of northern people do act in the manner he describes; and would ask, whether the desire for such food is not to be ascribed as much to its stimulating nature, as to its merely chemical constitution? Can here be any doubt that the natives of India, thrive well on a most carbonaceous diet whilst European residents die from various causes, and amongst them, from the abuse of highly azotized and stimulating articles of aliment? It requires that a person should have seen but once the enormous quantity of rice and *ghee* consumed by a Hindoo at a single meal, to satisfy himself, that the conclusions of our author, however plausible they may appear, are still to be received with caution. The experiments of Pepys, made many years ago, were conclusive to the point, that the same person under the influence of intoxicating liquors, exhaled less carbonic acid than when not subjected to it,—a result directly the reverse of what we should, according to our author's views, have expected to take place. In stating this, however, we quite agree with the general conclusion to which he has come, that there is no support to the opinion that there exists in the animal body any other unknown source of heat, besides the mutual chemical action between the element of the food and the oxygen of the air.

Glancing hurriedly at the many topics which engage the attention of our author in this the first part of his work, we have only space to call attention to some statements more marked than others; and we cannot pass over the one at p. 39, without expressing our doubt of its correctness. "Exercise and labour," says he, "cause a diminution in the quantity of the menstrual discharge; and when it is suppressed in consequence of disease, the vegetative life is manifested in a morbid deposition of fat." Now, as far as our experience goes, and we should say that

of most practical medical men, it will be found that the suppression of this important secretion, symptomatic as it for the most part is of a derangement of the very functions which constitute the so-called vegetative life, is inimical to the deposition of fat. That increased bulk frequently results from it we do not deny; but that this depends on serous deposits in the cellular tissue, &c., is too obvious to require more than a mere comment on the circumstance. The chapter which has given rise to these remarks, is exceedingly interesting, and concludes with a classification of the articles of diet in a twofold division; i. e. plastic elements of nutrition, and the elements of respiration. For further information on these points, we must, however, refer our readers to the work itself.

The Second Chapter is headed, "On the Metamorphosis of the Tissues;" and here the extensive practical knowledge of our author is exhibited. But here facts are so mixed up with hypotheses, that we are frequently at a loss to know what statements are true, and what merely assumptions. At page 114, in speaking of the quantities of air which reach the stomach with the saliva, he states,—“The fact, that nitrogen is given out by the skin and lungs, is explained by the property which animal membranes possess, of allowing all gases to permeate them, a property which can be shewn to exist by the most simple experiments.” Then follows an account of the well-known fact of the permeability of dead animal membrane to gases: “and that it is a mechanical property common to all animal tissues, and is formed in the same degree in the living as in the dead tissue.” Now, we are all perfectly aware, that such permeability, as a mechanical property, exists in the dead tissues but, as physiologists, we are compelled to hesitate before we can designate it as *exactly* such in the living membrane. A fact militating strongly against this doctrine is, that different gases when introduced into a tissue are not absorbed with the same rapidity; for, in cases of emphysema, the oxygen disappears long before the nitrogen, and this fact of itself is sufficient, were others wanting, to shew that this is something more than a merely mechanical cause in operation, being, indeed, but a result in conformity with the general law, that, within certain limits, the more stimulating the substance the more rapidly is it absorbed.

The paragraph immediately succeeding gives an explanation of the mode of the production of traumatic emphysema, which confirms our impression of the vagueness of Liebig's ideas on subjects apart from chem-

try. It runs thus:—"It is known that in cases of wounds of the lungs a peculiar condition is produced, in which, by the act of inspiration, not only oxygen, but atmospheric air, with its whole amount, four-fifths of nitrogen penetrates into the cells of the lungs. The air is carried by the circulation to every part of the body, so that every part is inflated or puffed up with the air, as with water in dropay." To assume that the air is absorbed by the blood, and again deposited in the tissues, is most illogical, besides being quite opposed to all fact. The air, as all surgeons know, is forced into the cellular tissue surrounding the wounded costal pleura, and is in the ratio of the size of the wound of the pleura and of the force of the inspirations. Were the explanation given by Liebig correct, we should find emphysema as one of the results of the poisoning of the feather white wine, the noxious qualities of which he explains on the supposition that the carbonic acid, so abundantly generated in the stomach after drinking it, permeates the stomach, the diaphragm, and both the layers of the pleura, although it seems to make no stay between these, but proceeds at once to the air-cells, to suffocate the unfortunate drunkard; and the proof that this is the fact, is found in the circumstance, that the inhalation of ammonia is recognized as the best antidote against this kind of poisoning. This hasty conclusion is not, however, at all justifiable. Such a mode of procedure on the part of the carbonic acid is open to numerous objections: and although it is not easy to say what is the cause of death in the poisoning by this wine, it is much more rational to suppose that it may be produced by such a rapid accumulation of gas as to produce asphyxia, by suspension of the action of the diaphragm, knowing, as we do, the effects that result from spasm of this muscle in *angina pectoris*; or, again, supposing the gas is eructated with great force and rapidity, it may cause, what carbonic acid when pure immediately does, spasm of the glottis, which must be rapidly fatal. The relief afforded by the ammonia may be explained on grounds other than chemical, and is much more likely to arise from its stimulant effects on the nervous system, than from its forming a salt in the air tubes and cells, as poisonous in that situation as the original carbonic acid would have proved.

The whole of this part of the chapter is in the same style, consisting, for the most part, of assumptions without proof, and contortions of phenomena to suit particular hypotheses of the author.

In the opinion of Liebig, theine, caffeine, theobromine, may be considered as the food of

the liver; for, by the addition of oxygen and water to the two former, a constituent of the bile—taurine—may be formed; and, by the same addition to the elements of theobromine, taurine and urea, or taurine and uric acids may be produced. Two and eight-tenths of a grain of caffeine can give to an ounce of bile the nitrogen it contains in the form of taurine. And he infers from this, that the reason of these substances having become in their use so universal, as articles of diet, is, that those who chiefly live on vegetables take them instinctively, as it were, for the purpose of supplying azote to the bile, which must otherwise have come from the waste of the tissues. The quantity of theine and caffeine, contained in the infusions we drink, is, however, so extremely small, that, although we may admit their action to be as he describes, yet, practically speaking, it is as *nil*, compared to the amount of biliary secretion. We must look for an explanation of the desire for these articles, other than any dietetic purpose they can serve, in the properties they possess of acting as stimulants on the nervous system. In no other way can we understand how green tea acts with such energy, compared with coffee, when the quantity of caffeine in the latter far exceeds that in the former, than by assuming that the action is dynamic, and not, as Liebig would infer, chemical.

The attempt to explain the mode of action of organic medical agents, on the hypothesis that these, being azotized bodies, produce a peculiar change in the chemical constitution of the nervous tissue, is exceedingly unsatisfactory; for, were it so, the objection which Liebig himself states is fatal, seeing that the poisonous properties of these bodies is not in the ratio of the quantity of nitrogen they contain; picrotoxine, which, if it contains any, at all events very little, of that element, being exceedingly poisonous, whilst caffeine, quinine, &c., are not so.

"The action," he says, "of these bodies is commonly said to be dynamic, that is, it accelerates, or retards, or alters, in some manner, the phenomena of motion in animal life. If we reflect that this action is exerted by substances which are material, tangible, and ponderable;—that they disappear in the organism;—that a double dose acts more powerfully than a single one;—that, after a time, a fresh dose must be given if we wish to produce the action a second time; all these considerations, viewed chemically, permit only one form of explanation,—the supposition, namely, that these compounds, by means of their elements, take a share in the formation of new, or the transformation of existing, brain and nervous matter."



The common view, that the action is dynamic, is in want of other proof, quite as probable as the chemical view taken of the matter by Liebig, and explains, equally satisfactorily, the necessity of increased dose to produce the previous effect; and, in the present state of chemical analysis, is likely to hold its ground against the doctrines here inculcated. The dynamic theory renders quite clear to our mind the effect of immaterial agencies in disturbing, exciting, or exhausting, the susceptibilities of the nervous tissue, which the chemical one of adding to, or abstracting from, the inorganic components of the tissue cannot do.

We shall, in our next, resume the subject, and examine the contents of the Third Chapter, which contains "The Phenomena of Motion in the Animal Organism,—the Theory of Respiration,—and the Theory of Disease

#### HEREDITARY DISEASE.

One of the families of this village, (Truman Judson, by name,) consisting of nine members, have all been sick with a malignant form of typhus fever. Out of this number five have died—the father and mother, one son and two daughters. It has been remarkable that the sickness has been confined exclusively to this house, and although apparently of the most malignant character, and for weeks there have been from four to six watchers day and night, no other person in the town has taken the disease. But the most peculiar fact is, that just twenty-one years ago this same sickness appeared in the family of the mother of this household, which family, as this, was composed of nine members, and out of these nine the same number as now, five, were carried to their graves. As now, no other persons of the town then took the fever. Perhaps this fact might be considered by physicians in some way instructive.

*Letter from Woodbury, Ct.*

**THE GIANT AGAIN.**—The skeleton found 50 feet below the surface of the earth, jammed between the rocks, is now exhibiting in Nashville, having been put together as well as could be with several bones broken. It presents the appearance of a human skeleton measuring 16 feet from the top of the skull bone to the bottom of the ankle bones. Such wonderful men must have been formed to match the extraordinary mastadon found in that neighborhood. It is impossible to say when they existed.

*N. Y. Sun.*

#### On Incision of the Tunica Albuginea in cases of Inflammation of the Substance of the Testicle.

Inflammation of the substance of the testicle is often attended by intense pain, which it seems rational to attribute to a kind of strangulation produced by the unyielding nature of the *tunica albuginea*. When this pain continues long, is of an intense nature, and obstinately resists the usual therapeutic means, suppuration of the testicle is to be dreaded. With the view of relieving these intense pains, and preventing the termination in suppuration, M. Vidal exposes the testicle and carefully divides the *tunica albuginea* by a longitudinal incision. He has already performed this operation fifteen times successfully: and in answer to any supposed permanent injury which the testicle might be supposed to receive from injury of the seminiferous canals by the incision, or from the testicle becoming fixed in consequence of union with the cicatrix, M. Vidal answers.—  
1. The inflammation of the testicle ends in resolution after the operation. 2. The wound of the *tunica albuginea* becomes confounded with that of the serous and other membranes, and the whole form a single cicatrix. 3. The cicatrix becomes linear, and then the testicle is found to be but slightly adhering to the other membranes. 4. Lastly, the testicle recovers its entire freedom, its ordinary volume, and normal consistence.—*Edin. Med. and Surg. Jour.*

#### The Debris furnished by Pavements.

It is stated by Mr. Thorn, a contractor, that the mud on a *Macadamised* road is three times as much as on ordinary pavement; whilst the accumulation on a *wooden* road is not more than one-third of that on pavement. Mr. Whitworth, the inventor of the machine for cleansing streets, and which has been for some time used in a few districts in London, and generally in Manchester, states that at Manchester, he has agreed to sweep the street twice as often as under the old system, and at a saving to the town of £500 per annum. Some idea of the efficiency of this plan, which is applicable to every kind of street surface, may be formed from the fact, that whilst a man can on the average sweep not more than 1500 square yards daily, the machine worked by one horse, sweeps from 16,000 to 24,000 square yards per diem. The economy of labor on the whole is so great, that one machine will do the work of 36 men. Mr. Whitworth states that he is engaged in preparing a hand-sweeping machine for courts and alleys, an amelioration which, if properly carried out by the authorities, will be an unspeakable benefit.—*Med. Chir. Rev.*



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## FALLACIES OF THE FAULTY.

*Lectures delivered at the Egyptian Hall, Piccadilly,  
London, 1840.*

By S. DIXON, M. D.

### LECTURE IX.

PHYSIC AND POISON IDENTICAL—REMEDIAL  
MEANS INCLUDE EVERY THING IN NATURE—ACTION OF MEDICINAL SUBSTANCES  
PROVED TO BE ELECTRICAL—PARTICULAR  
REMEDIES, AND WHY THEY EFFECT PARTI-  
CULAR PARTS.

#### GENTLEMEN,

From the History of Medicine we learn, that after Charms came Simples. To the list of our remedial means, chance and experience successively added Poisons.—“W. herefore” asked Pliny, “has our mother, the Earth, brought forth so many deadly drugs, but, that when wearied with suffering, we may employ them for suicide?” If such was the opinion of the polished Roman, can you wonder at the belief of the rude Carib, and the still ruder Boschman, that poisons were sent them for the destruction of their national enemies? The friends of the Chrono-thermal system see the matter in another light. In common with the believers of the Christian creed, they assume, that the beneficent Creator of all things sent nothing into the world for the destruction of his creatures. By the motion of men's hands the Pyramids were produced. The same motion, acting reversely, might make them vanish from the plains where they have stood, the wonder of centuries. If the identical power, then, which may render a temple or a tower a heap of ruins, applied in another fashion to the materials composing it, first erected the fabric—why may not the motive power of a physical agent, which wrongly administered, has destroyed the life of man, be em-

ployed, in a right direction, to preserve his existence?

“Philosophy, wisdom and liberty support each other;—he who will not reason is a bigot—he who cannot is a fool—and he who dares not is a slave!”—[Sir Willham Drummond.] The base and selfish, of all ages have ruled mankind by terror. By this the priest has trampled down reason; the despot, the rights of a people. To this passion the charlatan appeals, when he sneeringly speaks of particular substances as poisons, the better to distinguish them from his own nostrum of universal and absolute safety? What is the real meaning of the word poison? In its popular sense, it signifies any thing in nature, that, in a comparatively small quantity, can shorten, or otherwise prove injurious to life. It is, then a term of relation—a term depending entirely on degree, volume, or scale. But what is there under heaven, when tried by this test, that may not become a poison? Food, fire, water, air, are these absolutely innocuous? The glutton dies of the meal that gorged him; is that a reason why we should never eat? The child is accidentally involved in the flames of a furnace; must we, on that account, deny ourselves the warmth of the winter-hearth?—Air has chilled and water drowned; must we, therefore, abandon air and water?—Yet, this is the mode in which certain wiseacres reason on medicine! We must cease, according to these praters, to use opium medicinally—opium which, in one degree, has so often given relief to suffering; because the suicide, in another, has settled his earthly account with it! We must repudiate the curative effects of arsenic in Ague; because, with a thousand times the quantity adequate to that desirable end, the cut-throat and the poisoner have despatched their victims by arsenic! We must linger life away in the agonies of gout and rheumatism, instead of resorting to colchicum,

which has so often cured both; because people have been accidentally destroyed by colchicum in a volume, never given for either rheumatism or gout! How many diseases has not prussic acid cured or alleviated; yet we must abjure its benign influence in this way, forsooth; because lovesick maidens, and men maddened by misfortune, have ended their lives with prussic acid, in a quantity which no body ever dreamt of giving for any disease whatever! By the same enlightened Philosophy, we must not pat a child's head, because a blow might knock it down! Gentlemen, need I tell you, that the whole of these agents, in their medicinal doses, are as safe as rhubarb in its medicinal dose; and safer than wine to some people, in the quantity usually taken at table. But granting that, even in their medicinal doses, they all, in common with every thing in existence, occasionally produce the temporary inconvenience of disagreeable feeling—is that any reason why we should abandon their use, in the cure of diseases attended with feelings for the most part more sensibly disagreeable! What on earth, worth accomplishing, was ever accomplished without a similar risk? We cannot cross a thoroughfare without the risk of being jostled—ergo, we must never cross a thoroughfare! Gentlemen, *ubi virus ibi virtus*, is as true in most things as in medicine! Poison and physic are, in truth, ONE and IDENTICAL for any earthly agent may become both, by turns, according as it is used or abused. A German poet rightly observes—

Divide the THUNDER into single notes,  
And it is but a lullaby for children;  
But, pour it in one volume on the air,  
And the intensity makes heaven to shake.

The same rule holds good in physic.—Everything depends on the scale or degree in which you apply a given substance to the body, and the particular circumstances and condition of the body at the time, whether such substance be a remedy or a poison.—What is there that pertains to earth or air, that we may not usefully employ? If Man, in his ignorance or depravity, turn a particular power to evil account instead of to good, shall blame be imputed to the Almighty, who bestowed it on him as a boon? Let babblers beware how they commit themselves in this matter;—let them fully understand, that when they decry any agent in nature as being, in the abstract, a dangerous medicine, or a poison, they not only arraign God for his goodness, but expose, at the same time, their utter ignorance of his laws. Where

men have not examined, surely it were only policy to be silent. Do medical practitioners ever prate in this language of imbecility? Too frequently, Gentlemen:—but in their case, it generally proceeds less from a want of knowledge of the subject, than from a wish to disparage a professional competitor. Sordid practitioners know that there is no readier mode of influencing the sick, than by playing upon their fears. Not a week passes, but I am told by some patient—“Oh, I showed your prescription to Dr. So-and-so and he said it contains poison!”—Bless my life! I generally answer, what a wonderful thing. Why, then, does not Dr. So-and-so get the College of Physicians indicted for the introduction of such substances into their medicinal pharmacopeia? Why does he not gravely arraign them for the processes which they have devised for the preparation of “medicinal” arsenic, “medicinal” opium, “medicinal” prussic acid,—and tell them boldly and at once that these are all so many concentrated essences of death and destruction, which no skill can render valuable, no scale of diminution adapt to the relief or cure of their suffering fellow-creatures.—Only let Dr. So-and-so put down, in writing, that any of these substances ever poisoned any body, in the dose and at the age for which I and others prescribe it, and I shall have the pleasure of publishing the fact to the professional world, for their future edification. To whisper away an honorable man's reputation in a corner where he has no opportunity of reply, though a pitiful thing to do, is nevertheless a thing very often and very successfully done;—to write or reason down the same man's character unfairly, on paper, is more difficult. Cautions—doubts—insinuations—these are the weapons by which you will be secretly supplanted in practice. Yes, Gentlemen, individuals who call themselves physicians, and who, without a scruple, would pour out a pint of your heart's blood at a time, will effect to start at the sixteenth part of a grain of strychnine, and shrug their shoulders significantly, at two drops of prussic acid! “How easy to put such men down,” I have been told. You have only to ask them, if they ever knew an adult die of either medicine in these doses?—and dare them to say, that they have not themselves killed hundreds, by taking away a less quantity of blood than a pint!” Both of these I have certainly done—but *cui bono*?—Reason and sense were on my side, it is true!—but what will either reason or sense avail him who stands, as I stand, ALONE—when his enemies have a party to back them, with the patient's prejudices and fears in their favor besides?

The practitioners of whom I speak, are all so many links of an extensive chain of secret and systematic collusion; they are all bound to support and keep by each other;—they have signs and counter-signs, and a common story to tell; these men, like false dicers, do deeds “never dreamt of in your philosophy.” In a word, so far as medicine and medical practice are concerned, the English public are, at this moment, very much in the same blissful state of ignorance as the Emperor Constantine was with the doings of his guards—“But still—but still,” said Sebastos of Mytilene, “were the Emperor to discover—” “Ass!” replied Harpax, “he cannot discover, if he had all the eyes of Argus’s tail! Here are twelve of us, sworn, according to the rules of our watch, to abide in the same story”—[*Count Robert of Paris*] If such and similarly constituted, be the medical coteries of England, what honorable physician can hope to rise in his profession, until the eyes of the public be opened. Sir James Mackintosh was not the only man of talent who left it in disgust—Locke, Crabbe, Sir Humphrey Davy, the present Master of the Rolls Lord Langdale, and hundreds of others, have done the same.—Depend upon it, in these days, it is only the quack and the unprincipled practitioner who makes fortunes by physic.

But to return to medicines and their doses. What substance in the *Materia Medica* would be worth a rush, if it were absolutely innocuous in every dose and degree? You all know, that rhubarb and magnesia may each be given medicinally, to the extent of many grains;—but, may not both be so advanced in the scale of quantity, as to become equally fatal as strychnine or arsenic—were strychnine or arsenic to be taken in the usual dose of rhubarb or magnesia? May not our deadliest drugs, on the other hand, be so reduced in volume as to become as innocuous, to an adult at least, as twenty grains of rhubarb would be to an infant? Surely, there is not one of you, whether sick or well, would object to an infinitesimal dose of arsenic—the millionth or dicillionth part of a grain, for example! Ah, these homeopaths! I question if they always keep to such doses; for, when a man makes up his own medicines, he may gull his patients as he pleases. But, be that as it may, there can be no surer test of imposture, than to be told you may take any medicine in any quantity? Can food itself be thus taken? If it could, where would be the necessity of cautioning gluttons about their diet? In truth you can scarcely mention any one edible substance, that will agree, even in a moderate quantity, with all patients. One

person cannot eat oysters, without becoming the subject of a rash. Another, the moment he eats poultry or veal, gets sick at stomach, though mutton and beef have no such effect on him. See, then, the truth of the old proverb.—What is one man’s meat is another man’s poison.” Chesterfield says it is vulgar to quote proverbs; but Chesterfield was a lord, and a man of fashion—and as I have no ambition to be either, you will pardon me for preferring, with Cervantes, to strengthen my argument with their pith and point—not only because there is no proverb that is not true, but, because they are all sentences drawn from Experience, the mother of the sciences.

In further illustration of this subject, I pass to the lower animals; and here again you will find that no earthly agent has been given us for absolute evil, inasmuch as substances which, in comparatively small quantities, may poison one class of beings, are food to another, in a volume comparatively large. The sweet almond, for example, so nutritious to man, is deleterious to the fox, the dog, and domestic fowl. The hog may be poisoned by pepper, the parrot by parsley, stramonium, or thorn-apple, which, when we prescribe it in physic, we do cautiously, and in small quantities, is greedily devoured by the pheasant with impunity; fowl enjoy the darnal—hogs, the deadly night-shade.—The water-hemlock, which is poison to all three, in common with man, is a most nutritious food to the stork, sheep, and goat.—And the wolf is reported to take without inconvenience a quantity of arsenic which would destroy the horse. You see, then, how completely the word poison is a term of relation.

The infinity of substances which have been successfully applied to remedial purposes, whether derived from the animal, vegetable, or mineral kingdom, like the various Causes of the Diseases for which we administer them, will all, upon investigation, be found to have the most perfect unity in their mode of action. Their influence relates solely to their motive power, differing from each other, where they do differ, merely in their capability of changing in this way, the atomic relations of a particular locality or tissue rather than another, but in no other way presenting a doubt or difficulty as to their modus operandi. What John Hunter said of poisons, applies of course to remedies; they “take their place in the body as if allotted to them.” Thus, Mercury and Iodine, in whatever manner introduced into the system, will still manifest their action, chiefly by changes in the motion of the glands and their secretions; while Strychnine

and Brucine, on the other hand, will as constantly produce their effects on the motive condition of the muscles. Through the medium of the nerves of a part, the greater number of medicinal substances, even when directly introduced into the veins, will produce their particular effects, good or bad, according to circumstances, upon that part. When thus administered, Antimony will prove equally emetic, as when introduced into the stomach, Rhubarb equally purgative and Opium as certainly soporific. Is not this the best of all proofs, how surely these agents were intended by the Deity for the use of man?

If you ask a teacher of medicine, why opium sets you to sleep, his answer will be—"from its Narcotic power." What can be more satisfactory? Nineteen out of twenty students at least, are satisfied with it—they are delighted when told in Greek, that it does set them to sleep! Why does rhubarb purge? "From its Cathartic power," you will be told;—what does that mean? simply that it purges! Again you demand how does antimony vomit—again you get the Greek reply, "from its Emetic power;" in plain English it vomits! Such is the mode in which the schoolmen juggle: instead of an answer they give you an echo! Had these logomachists—these word-mongers, been as well acquainted with the motions of living things as with the inflections of dead languages, and the anatomy of dead bodies, they would long ago have preferred reasoning to mystification. But for the last ten centuries at least, professors have been doing little else but splitting straws, blowing bubbles, and giving a mighty great degree of gravity to feathers! We shall endeavor to develop what their answers show they are utterly ignorant of—the Unity of Action of all Remedies.

What are the forces which, by their harmonious movement in a material body, make the sum total of the economy of the life of that body? Vital chemistry, electricity, magnetism, mechanics. By these forces are all the internal movements of a man periodically produced, and by the analogous external forces only, can the material of all animal life be sustained, and otherwise influenced from without. When rightly considered, every force in nature will be found to resolve itself into a cause of motion simply—motion forward, or motion backward—motion outward, or motion inward. Chemistry, Electricity, Magnetism, Mechanics, can each of them do no more than, by their attractive power, bring things or their atoms into closer proximity; or place them, by the force of repulsion, at a greater distance from

each other. Attraction and Repulsion then, are the two grand forces by which, not the motions of man only, but the motions of the Universe, are kept in control; and by these forces, and no other, can animal life be influenced either for good or for evil, whatever be the nature of the material agent by which they may be called into play.

#### REMEDIAL MEANS.

may include every description of force: The Bandage, Splint, and Tooth-forceps are familiar examples of the Mechanical kind; while to Chemistry, among other things, medical men owe the Alkalies and Earths they use as palliatives in the treatment of acidity of the stomach. But the purely Medicinal agents—what is the mode of action of these? How do opium, strychnine, arsenic, and prussic acid act? Chemically it cannot be,—for they produce no chemical change,—no visible decomposition of the various parts of the body over which they exert their respective influences. What, then, is their action? no man in his senses would suppose it to be Mechanical. One of two things it must be then, Electrical or Magnetic—for these are the only other forces in nature to which we can apply for an explanation. But, Gentlemen, are not these two forces one? nay, under the term Electricity, do not practical philosophers include chemistry also? No person in the least conversant with the physical sciences would now dispute, what Mr Faraday was the first to prove, that all three are in reality mere modifications of one great source of power. For not only can the electrical force be so managed as to produce attraction and repulsion in all bodies, without in any way altering their constituent nature, but it can also, in most cases, be so applied to every compound body as to cause a true chemical decomposition of its ultimate principles. By the same universal power we can either make iron magnetic, or deprive it of the magnetic virtue. We can, moreover, reverse by its means the polarity of the needle of a ship's compass. Is electricity, then the source of Medicinal agency—the source of power by which opium and arsenic kill and cure? Before the question can be satisfactorily answered, we must first know the effect of the direct application of electricity to animal life. What is its action when directly applied to living man? Gentlemen, it has caused, cured, and aggravated almost every disease you can name,—whether it has come in the shape of the thunder-storm, or been artificially induced by the far less energetic combinations of human invention. If, as in the case of the magnetic phenom-

na, it can produce, take away, and reverse the polarity or motive power of the needle, so also can it give, take away, and reverse every one of the particular functional motions of the various parts of the living body to which it may, under peculiar circumstances, be applied. It has cured palsy, and caused it also; but has not strychnia done the same? In common with arsenic, it has made the stoutest and bravest shake in every limb; and like the same agent, it has cured the ague. In what, then, does its action differ from arsenic here? If it has set one man to sleep and kept another wakeful, opium has done both. Electricity has cured cramp and caused it; so have prussic acid and nitrate of silver. Do we not prove then, beyond the possibility of question, that the action of these medicinal substances is purely electrical? By precisely the same power, mercury salivates, antimony vomits, and rhubarb purges. By the very same power they may all produce reverse effects. The primitive agency of the purely Medicinal substances, then, is one and the same, namely, the power of electrically moving the body in some of its various parts or atoms, inwards or outwards, according to the previous state of the vital electricity of the brain of the different individuals to whom they may be administered. For, through the medium of the Brain and Nerves, do all such substances primarily act. The ultimate and apparently unlike results of the action of different substances, depend entirely on the apparent dissimilarity of the functions of the organs they respectively influence. As already stated, the temperature of the part or organ of a living body thus motively influenced, becomes in every case correspondingly altered. If it be asked in what manner opium or antimony can alter the temperature or motion of any organ through its nerves, I can only refer to the analogous changes which take place in chemistry, through the medium of the electric chain or galvanic wire. When acted upon by either, bodies which were previously cold become instantaneously heated, and vice versa, motion being the equally instantaneous effect in both cases. And, according to the degree and duration of the electrical force applied, do such bodies become simply electrified—preserving still their usual appearance and nature,—or chemically decomposed in some of their constituent principles—their atoms in either case being repelled or attracted in a novel manner. In a manner perfectly analogous, do every and all of our purely Medicinal substances act on the living organism. On the dead, if they exercise any influence at all, it can only be by preventing the putre-

factive process, or by chemically decomposing the various parts. The older writers were right when they said "*Medicina non agit in cadaver*"

If you again demand how a given substance shall influence one part of the system rather than another, I must again recur to chemistry. Have we not elective affinity, or a disposition in inorganic bodies to combine with, and alter the motions or modes of particular bodies rather than others? By an elective vital affinity precisely similar, do opium and strychnia, when introduced into the living system, produce their respective effects; they manifest a similar choice of parts—the elective power of the one substance being shown by its influence on the nerves of sense, and that of the other by its effect on the nerves of the muscular apparatus. But here again, you may, with the most perfect propriety, ask, why the influence of opium on the brain should set one man to sleep, and keep another from sleeping? and why strychnia, by a similar difference of cerebral action, should paralyze the nerves of motion in one case, and wake to motion the nerves of the paralytic in another? The answer is simple, and it affords a fresh illustration of the truth of this Electrical doctrine. The atoms of the specific portion of brain of any two individuals thus oppositely influenced in either case, must be in opposite conditions of vital electricity—negative in one, and positive in the other. And what but opposite results could possibly be the effect of any agent acting electrically on any two similar bodies, whether living or dead, when placed under electrical circumstances so diametrically opposite? In common with all medicinal substances, opium and strychnia may produce inverse motions—motions outward or motions inward, according to the particular electrical condition of the living body to which they may be applied. And in this instance again, they only harmonize with everything we know of the great universal force to which we ascribe their medicinal influence. Their ultimate agency depends on attraction and repulsion. Here then, Gentlemen, you have the most satisfactory explanation of an infinity of facts

\* Arsenic, oxy muriate of mercury, and alcohol in minute doses, act electrically on the living stomach, whether for good or for evil. In large doses all three act chemically upon the same organ; for they then invariably decompose it; but the same doses applied to the dead stomach preserve it from (the putrefactive) decomposition. The mineral acids, when properly diluted, act electrically upon the living economy. In their concentrated state they decompose every part of the body, whether living or dead, to which they may be applied. The poisons of the cobra and rattlesnake, so deadly to other animals, have no visible effect upon their respective species. What but electricity in its various modifications, can explain all this?

which, from their supposed confiction, have up to this hour, puzzled every teacher and professor that ever endeavored to grapple with the subject. The merit of this explanation I exclusively claim; and I state my right to it thus distinctly, that no F. R. S., no Queen's Physician Extraordinary, or other great official, may hereafter have any excuse for attempting to snatch it from me—whether through ignorance or forgetfulness of my name and writings he venture to predict its future discovery, or deal it out bit by bit to his readers, in the equally novel shape of question and suggestion! Yes, Gentlemen, I exclusively claim the electrical doctrine of medicinal agency as mine—a doctrine which affords an easy solution of the greater number of difficulties by which our art has hitherto been surrounded. By following out its principles, you see at once why colchicum, mercury, and turpentine, can all three cause and cure rheumatism—why acetate of lead can produce and relieve salivation—why cubeb and copaiba have relieved gonorrhœa in one man, and aggravated the same disease in another—why musk may excite and stop palpitation of the heart—why the Fevers of puberty, pregnancy, and small-pox, have each cured and caused every species of disorder incident to the respective subjects of them—and why the Passions have done the same. Now, what better proof could you have of the real nature of the passions than this? What better evidence that rage, terror, joy, surprise, are each and all of them indubitable fevers, than that each and all of them have cured, caused, aggravated, and alleviated almost every human disease—every ache and ailment to which man is liable, from ague to epilepsy—from toothache to the gout! Like opium and quinine, every one of these passions has a double electrical agency—in one case reversing the particular cerebral movements on which existing symptoms depend—in which case it alleviates or cures;—in another, calling them up, or only adding to their rapidity when present—in which case it causes and aggravates simply.

But we have yet to account for certain apparently anomalous effects of all medicines—we have still to explain to you why opium for example, instead of producing its usual somnolent or insomnolent influence upon particular individuals, acts upon him in the same manner as antimony or ipecacuan—and why these particular medicines, instead of producing their usual emetic effect in individual cases, only purge the patient:—or, (as I have occasionally found them do) set him to sleep more surely than henbane or opium. Gentlemen, did opium or antimony uniformly affect the identical portion of brain in all

persons, either medicine could never do more than one of two things in any person, namely aggravate or ameliorate the particular symptoms which, in all healthy persons, it then most certainly could never fail of producing. But in common with all medicines, the elective affinity of each of these particular substances may be different in different persons, from difference of constitution. The same medicines, then, do not always influence the same cerebral parts. The usual elective affinity of opium and antimony may be quite reversed in particular patients. Now, as all medicinal agents act solely by changing the cerebral movements of the part over which they exercise their respective influence, antimony and opium, by changing their usual places in the system, change their respective characters accordingly. Antimony, then, either becomes a narcotic, or keeps the patient wakeful. Opium in like manner, either becomes an emetic, or the reverse of an emetic—whatever that be. See then, how cautious you ought to be in every new case of disease for which you may be consulted,—and how necessary it is to exercise all your powers of circumspection in practice. When you prescribe medicine of any kind, you ought to feel your way with the smallest available dose—the smallest dose from which you might, from your experience, expect an appreciable effect whether for good or for evil—for, remember, not only do all medicines occasionally manifest a different elective affinity from that which they usually exercise; but, even when they act in their more ordinary course, they have still the double power of attraction and repulsion—the power of aggravating or alleviating the symptoms for which you prescribe. Indeed, by these two powers and no other—attraction and repulsion,—we are compelled to explain every variety of change which the body assumes, whether in health or disease. By attraction, the fluid matter of a secretion becomes consistent and organised, again to be thrown off, by the same organ, in the fluid form of secretion by repulsion.

If this be true, Gentlemen, change of temperature, of itself, ought to produce, in living bodies, every constitutional and local change—every vitiation and variation, whether in gland or muscle, nerve or blood-vessel, that ever formed the subject of medical investigation. That it can do so, might be proved from every thing we know of life, and the laws of life. What disease have not cold and heat produced?—What, in the shape of the warm and cold baths, have they not cured? Look, again at the effect of heat upon the egg. Even when artificially applied, we see this apparently inert

body converted, by thermal influence, into bone, skin, and muscle, with their proper apparatus of blood-vessels and nerves! You will tell me, the egg was predisposed to such changes. True; and change of temperature can only act upon all things, according to their original predisposition. Is not this the reason why a chill will produce rheumatism in one man, and consumption in another? Through thermal influence, the wool of the sheep and the feathers of the hen, may in successive generations be replaced with hair;—certain viviparous animals may even be made oviparous in this manner. The aphid and the wool-louse, for example, may be made to bring forth either eggs or live young at the pleasure of the experimenter, by simply varying the temperature in which he keeps them. Then again, look at the effects of temperature upon the vegetable world! If, in the middle of winter, you introduce the branch of a vine, which happens to grow by your window, into your warm chamber, and keep it there a few weeks, it will put forth leaves and blossoms. See, then, the wide and omnipotent influence of temperature on every living thing, from man, who only attains the maturity of his growth in the course of successive summers, to the gourd, that springs up and perishes in a night!

Having premised this much, we shall now Gentlemen, enter upon a consideration of particular medicines. And first, let us speak of such as have a general constitutional influence, with an affinity, more or less marked, for particular organs.—Of these, the most important are—

**EMETICS.**—When the various doctrines, which attributed all diseases to acrimonies, peccant humors, crudities, &c., prevailed in the schools, Emetics were among the principal remedies to which physicians very naturally resorted, as a preliminary means of cure. The beneficial effect observed to take place after vomiting, in the early stage of almost all disorders, was, of course, urged in confirmation of theories, which, even in the present day, are not without their influence on the minds of medical men. The primary action of emetics we hold to be Cerebral, and the act of vomiting, not so much a cause of the other constitutional symptoms which accompany it, as one of many effects produced by change in the atomic revolutions of the Brain. Whatever will suddenly influence the brain, in any unusual or novel manner, by changing its temperature and atomic motion, must necessarily change the whole corporeal state, whether it be, at the time, in health or disease. Have we not this familiarly exemplified, in the motion which causes sea-sickness—in the sickness produced

by the rotatory chair, and in the morning vomitings of early pregnancy? Anything that can withdraw the brain's attention from the stomach, such as a passion, a blow on the head, loss of blood, or a division of the nerves that supply it, may produce vomiting. Experience every day shows us, that the shivering or shudder liable to be occasioned by one cause, may be averted or cut short by agents, which, under different circumstances, can of themselves produce such muscular tremor. It is thus that the emetic exerts its salutary influence in disease. No man can take a vomit, without every part of the body undergoing some change during its operation. A creeping sensation is immediately felt in every part—a sensation, demonstrative of the rapid revolution and change of relation of every corporeal atom. Under the influence of such an agency, you may see the reddened and swollen eye, or testis, become, in a few minutes, of nearly its natural appearance,—nay, a complete abatement of pain in either organ, may be an equally rapid result. Who, then, will tell me, that the same effect may not take place from the employment of an emetic, in what are termed inflammations of the lungs or bowels? Oh, “all experience is against it,” I have been told—All experience!—whose experience? I have asked; but I never got an answer, for nobody had ever tried!

But, for a period now of five years, Staff Surgeon Hume, in his Military Hospital, has treated his pleuritic and enteritic patients in this manner: during all that time he has not bled or leeches one patient for any disease—he has used emetics instead—and his practice has been beyond all precedent successful. Now, that I call a Fact—a fact worth all the hypothetical assumptions of all these doctors, whose gains depend, not so much on speedy cure, as on protracted sickness! There is no part of the body that you may not influence by an emetic;—the old physicians knew it—the physicians of an age gone by. They gave emetics in the case of Typhus even—Typhus in a royal patient. “Louis XIV.,” says Mr. James, “was seized with symptoms of illness, and all the marks of Typhus Fever, of the most malignant kind, soon discovered themselves. The whole court was in consternation, the queen in despair, and Mazarin in a state of anxiety and apprehension, which deprived him of all the resources of that art which usually concealed his emotions. Foreseeing that his rule would terminate with the life of Louis, he took every precaution for the purpose of carrying his treasures out of France; but he began to pay court also to those who were about the person of the king's younger

brother, and even to several of that prince's attendants whom he had mal-treated on former occasions. The young king was carried to Calais in his carriage, as to a more healthy spot; but the disease only became worse every hour: the physicians declared that the case was beyond hope; and Bussy assures us that a number of the courtiers even went and congratulated the young Duke of Anjou on his accession to the throne. Louis himself does not seem to have lost his senses or his presence of mind; he spoke with calmness of his approaching fate; and sending for Mazarin, he said to him, 'You have always been one of my best friends: the queen, my mother, loves me too much to tell me the danger in which I am; do not flatter me in the least; speak to me only, in order that I may look into my own conscience, and make preparation for death.' He spoke in the same strain several times, showing no weak clinging to the temporal crown that seemed about to pass away, but looking forward from the brink of the grave into eternity with that calm firmness which might well do honor to a king. Mazarin was too much agitated and terrified to use any concealment; with fears and sighs, he acknowledged to Louis at once the danger in which he was; and the young monarch openly seemed grateful to him for not having concealed his situation. A physician of great repute, however, was at length brought from Abbeville, and declaring that the King's case was by no means hopeless, he obtained permission to administer to him a remedy, which there is every reason to believe was merely antimonial wine. Louis was so much relieved by the first emetic, that he willingly took a second dose, and, from that day, the fever abated, and health gradually returned. Joy and satisfaction spread throughout France."—[*Jame's Life and Times of Louis XIV.*]

A medical officer, of the East India Company's service, sent for me at midnight, and you may imagine the pain he was suffering, when I tell you that I heard his groans before I reached his chamber. Shortly after leaving a crowded theatre, he had imprudently taken his place on the top of one of the night coaches, where he had not been long seated before he was seized with repeated shivering, followed by fever, and exquisite pain in the back and loins—in medical phrase, *lumbago*. When I saw him he had all the symptoms which, in the Schools, are termed high inflammatory fever, and he complained of agonizing pain in his back. His wish was to be bled, but I prescribed an emetic instead, and this relieved him in the briefest space imaginable. From the mo-

ment he vomited, his back became easier, and in a few minutes he was quite free from pain—a result equally pleasing and astonishing to the patient, who, on a previous occasion, had been confined six weeks to bed with a similar attack, notwithstanding repeated bleedings, leechings, and blisters. Another gentleman who shortly after came under my care, experienced a like relief from the use of an emetic in nearly the same circumstances. In the first case, I followed up the emetic with hydrocyanic acid; in the second, I prescribed quinine and sulphuric acid—the latter, my more general mode of treatment in acute disease. Cases without number could I give of the beneficial influence of this practice in acute ophthalmia, sore-throat, pleurisy, rheumatism, &c.,—diseases which, under the usual or orthodox measures, would have kept the physician in attendance for weeks, and then, perhaps, have defied both his aid and his art. With the same practice, I have had equal success in the treatment of hæmorrhages, eruptive fevers, &c.; and I might here give cases corroborative of my assertion, were I not borne out by many of the older writers, particularly Heberden and Parr, who found emetics, followed by Bark, to be the best primary treatment of disorder generally. John Hueter says, he has "seen Buboës (collections of matter in the groin) cured by a vomit, after suppuration had been considerably advanced,"—and he has "known a large bubo, which was just ready to break, absorbed from a few days' sickness at sea." He attests the cure of "White-swelling" or knee consumption by emetics—and the value of the same class of medicines in pulmonary consumption, has been strongly insisted upon by many writers. In physic, as in everything else, there is a fashion; but the "great men" of our day, notwithstanding their reiterated assertions to the contrary, would do well, in more instances than these, to imitate the old practice.

The principal substances used as emetics are Antimony, Ipecacuan, Zinc, and Copper,—but a great many others might be added,—tobacco, squill, and colchicum in large doses, to say nothing of luke-warm water, which last, from its relation to temperature, will readily occur to you as the best exponent of the mode of action of all. With some people opium will vomit, where ipecacuan would fail. There are individuals whom no known agent can vomit, and others, in whom the common emetics act always as purgatives. This you cannot, of course, know before-hand; so that the experience of every individual case, is the only rule by which such case is to be treated. We must now speak of



**PURGATIVES**, or those medicines which influence the intestinal secretions. Like most remedies these all act through the medium of the Brain—but, from ignorance of their mode of action, practitioners have too frequently converted them into a cause of disease and death. The man who proceeds, day by day, to purge away "morbid secretions," "peccant humours," &c., is a mere humoralist, who neither knows the manner in which his medicines operate, nor understands the nature of the wonderful machine, whose disordered springs he pretends to rectify. Do not let me be understood to deprecate purgative medicines—As a remedial means they are inferior to emetics;—when combined with these, they are amongst the best medicines with which to commence the treatment of disease generally,—that is, where the patient has not been previously reduced by protracted suffering. It has been my fate to witness no inconsiderable amount of mischief induced by a mistaken perseverance in purgative measures. Will nothing open the eyes of gentlemen of the humoral school? Surely they will be staggered when told, that in an evil hour the exhibition of a purge has been followed by a paroxysm of gout! Yet nothing is more true or better avouched. "Reasoning upon this simple fact," Dr. Parr says, "the humoral theory of gout is altogether untenable." And so is Dr. Holland's hypothesis of its being caused by a "morbid ingredient in the blood." When I say I have known fatal fevers produced by medicines of this class, some may be sceptical; but few will doubt their power to produce Dysentery, which, in the words of Cullen, is an "inward fever."—"A dose of rhubarb," says Dr. Thomson, "has produced every symptom of epilepsy, and, in an instance within my own observation, the smallest dose of calomel has caused the most alarming syncope" or faint. —Let us use, not abuse, purgative medicines!

**MERCURY.**—The frequency with which mercury and its preparation Calomel, enter into medical prescription—its beneficial and baneful influence in the practice of our art, render a knowledge of the true action of this metal, and the proper mode of its exhibition, matters of no ordinary importance.

What are the forms of disorder in which mercury is supposed to be most useful? The records of the profession answer, fever, iritis, erysipelas, dysentery, rheumatism, cutaneous, osseous, and glandular disturbances. To the same records. I appeal for testimony to the truth of my statement, that it has too frequently produced those very maladies in all and every of their forms and variations. Its influence extends principally over the glandular and assimilative systems; it has

consequently a great effect on secretion. I have known mercury in small doses cure what is termed scrofula hundreds of times; yet according to Sir. Charles Bell, and I can bear him out in the fact, when wrongly applied mercury has set up "a scrofulous diathesis in the very best constitutions." "I have seen a person," says Dr. Graves, "labouring under mercurial irritation, seized with common fever, which afterwards became Typhus, and proved fatal in five days. Still you will hear persons say, that if you get a fever-patient under the influence of mercury, you will cure the disease, and that mercurial irritation will protect a man against fever. I have known Jaundice to appear during a course of mercury"—Jaundice, for which some say it is a specific! When you hear a man talking of specifics you may well laugh at him! The value of all medicines has more or less relation to the quantity prescribed. Upon this subject, I think it material to speak regarding mercury; for in consequence of the enormous doses which have been exhibited by certain pseudo-physicians—certain writers on Infantile and Tropical disease—this substance, instead of being a blessing to humanity, has recently become one of the chief agents in man's destruction! You daily see medical men—men who never reflect upon the effect of any medicine—prescribing four, five, and six grains of calomel to children—to infants! Can you wonder at the frightful number of deaths that take place under seven years of age? Look at the bills of infantile mortality; and if you consider the quantity of calomel that children take, you will assuredly be compelled to declare, not how little medicine has done for the prolongation of life—but how much it has done to shorten it! Oh! you may depend upon it, there is a great deal of mischief done by the profession; that is the reason why the people go to the quacks and the Homœopaths. The latter are the least mischievous, for—if they actually give their medicines in the ridiculous doses they pretend—they do little more than hocus their patients with words, while the quacks and the medical men kill them wholesale by physic—physic wrongly applied. Many years have now passed since Mr. Abernethy first advocated the employment of mercury in moderate doses. More recent writers have demonstrated the value of calomel in doses so minute as the twelfth and even sixteenth part of a grain. Combined with equally minute quantities of quinine, I have been for years in the habit of prescribing it in such doses, in all diseases of children, and I have found it invaluable in most. If, with such minute doses of mercury, then, the practi-

tioner may obtain the most excellent effects: what shall we say to the exhibition of four and five-grain doses of calomel to infants? What language can be sufficiently strong to denounce the equally daring practice of ordering scruple-doses of the same powerful mercurial for adults? That individuals occasionally recover from serious disease, after the unsparing use of calomel in such doses, is no more an argument in favor of such a mode of treatment, than that many a man has been knocked down by a blow, and lived to laugh at a description of accident to which others have succumbed.—To reason in this manner is to argue that blows are good things. In saying this much I do not mean to raise objections to calomel as a purgative, —in which case a larger dose is necessary. But how often do you see this mercurial given in enormous and repeated doses, with the view of correcting morbid secretions, which inquiry might have satisfactorily traced to the previous mal-administration of calomel itself. Calomel, like every other remedial means, is a medicine or a poison, according to the quantity of the agent, and its fitness or unfitness for the constitution of the patient. This last, as we have previously hinted, depends upon the electrical state of the individual body, and can only be known by trial. You cannot tell that a given piece of steel is magnetic or not till you try; no more can you tell the electrical state of the living body. It is only by experience you can know it. Calomel, then, has no exclusive relation to nomenclature; yet you will hear practitioners say, "It is not proper for this disease, but it is proper for that;"—"it is good for jaundice, but bad for consumption. All this is mere scholastic folly, based upon "the baseless fabric" of a hypothesis! There is no disease, however named, where the administration of mercury, in some of its preparations, may not be advantageously employed or the reverse, according to particular doses and constitutions. How is it that the oxymuriate of mercury, formerly so much extolled by physicians, is now so seldom prescribed? A more effective remedy for numerous forms of disease is scarcely to be found in the *Materia Medica*. I have more particularly experienced its valuable aid in the treatment of dropsy, dyspepsia, paralysis, and eruptions. Very analogous to mercury in its mode of action is

**IODINE.**—Its influence on glandular parts, and consequently upon secretion, is very remarkable. But, Gentlemen, like every other remedial agent Iodine cuts two ways—atomically attracting or lessening volume and secretion in one case, atomically repelling or increasing both in another—according to the

electric state of the individual body for which it may be prescribed. Now, the fact that iodine can cause as well as cure glandular diseases is not known to the profession; at least, I have not seen it noticed in the course of my reading. It behoves me therefore to state, that I have been frequently obliged to countermand its exhibition in the treatment of bronchocele and other enlarged glands, from the obvious increase of these tumours under its use. In such cases, patients have told me they were not so well in themselves, that they had shivering fits or suffered from inward fever; for, like mercury, iodine has also a general febrile effect upon the system, for good in one case, for evil in another. As regards my own practice, I have found quinine more generally successful in the treatment of glandular affections than iodine. In a case of goitre that resisted both, a very great diminution of the swelling took place after a short trial of arsenic. But here I may observe, that a remedy which may be found to be generally well adapted to the treatment of a particular type of disorder in one locality may be found to be as generally prejudicial when applied to the same type in another. This, to a certain extent, may account for the encomiums which individual medicines receive from the profession one day, and the contempt with which they are very often treated the next. With iodine I have cured osseous and cutaneous complaints; and I have also found it useful in the treatment of phthisis and dropsy.

**LEAD.**—The acetate of Lead is a valuable agent in good humors, and was long celebrated as a remedy for consumption. I have cured eruptions by it, eruptions that resisted everything else I could think of. "One effect of the continued use of acetate of lead," says Dr. A. T. Thomson, "is the excitement of ptyalism (salivation,) but notwithstanding this effect it has been recommended by Mr. Daniels for the purpose of allaying violent salivation, in doses of ten grains to a scruple, in conjunction with ten grains of compound powder of ipecacuan; how," asks Dr. Thomson, "are these contending opinions to be reconciled?" How, but by the rule that the power which can move one way, may move the other, according to the electrical condition of the individual brain. This question, coming from a professor of *materia medica*, shows you how much professors have yet to learn about the action of medicines.

**TAR—CREOSOTE.**—From innumerable trials of Tar, and its preparation Creosote, I am enabled to speak satisfactorily of the remedial power of both. In small doses, creosote produces a mild fever, often beneficial in dyspeptic and hysteric cases, though

in some instances, like every other agent in nature, it occasionally disagrees. I have been obliged sometimes to discontinue its use from the vomiting of which the patient complained after taking it, though where vomiting was a previous symptom, I have succeeded in stopping it by creosote. Generally speaking, I have found creosote an excellent remedy in dropsy, rheumatism, and cutaneous disorders. I once cured with it a case of amaurotic blindness of both eyes, where the disease was of considerable standing. The remedy was pushed as high as twenty drops for a dose; I commenced with two drops. The efficacy of tar-water in the treatment of all kinds of disease was the universal belief of the latter half of the last century. The celebrated Bishop Berkley wrote a treatise which contributed greatly to bring it into fashion. "From my representing tar-water," he says, "as good for so many things, some perhaps may conclude it is good for nothing; but charity obligeth me to say what I know and what I think, howsoever it may be taken. Men may censure and object as much as they please, but I appeal to time and experiment:—effects misimputed—cases wrong told—circumstances overlooked—perhaps, too, prejudices and partialities against truth may, for a time, prevail and keep her at the bottom of her well, from whence, nevertheless, she emerges sooner or later, and strikes the eyes of all who do not keep them shut." The Bishop sums up the catalogue of its virtues, by saying, "It is of admirable use in **FEVERS**."

**SULPHUR**—though now seldom used, except for diseases of the skin, was long extensively employed in physic. With the vulgar, it is still a remedy for ague. Like creosote, it produces a mild febrile effect, which may be turned to account in numerous disorders, especially in dyspepsia, hysteria, and also in rheumatism, which last I have often cured with it, after every other remedy usually employed for that distemper had successively failed. The most generally influential agent in rheumatism, is

**COLCHICUM, OR MEADOW SAFFRON**, the medicinal principle of which is an alkali, termed *veratria*, or veratrine, and an admirable medicine it is, when carefully and cautiously administered. Now colchicum, like sulphur, has cured the ague; and its efficacy in this case depends upon the mild febrile action, which, like hope, or joy, it has the power of producing. If it has relieved pain and swelling in many cases, so also can it produce both; a reason why you should watch its effects, for where it fails to improve, it commonly aggravates. Like all other medicinal agents, it is a motive power, and

if it fail to move matter the right way, it must occasionally move it the wrong. The mildest remedial substance, when taken by a person in perfect health, if it act at all, must act prejudicial. What is the action of colchicum, in such cases? According to the journals of the day, pains of the joints and feet were among the symptoms produced by it when accidentally taken in poisonous quantities by previously healthy persons—the very pains for which we find it available in practice!

**SQUILL, DIGITALIS**.—Are physicians aware that both of these substances have the power of suspending as well as of increasing the secretion from the kidneys? They are often continued too long in dropsy, to the prejudice of the patient, from practitioners being ignorant of their double action. But in this respect they only harmonize with all known agents. The electrical state of the body, which cannot be known but by an experience of their effects upon it, determines whether squill or digitalis prove aggravant or remedial.

**STRAMONIUM, OR THORNAPPLE** is used by the Asiatics, in their treatment of mania—a disease which it has produced. It can also produce eruptions in the skin, a fact which led me to try its effect in cutaneous disease. Combined with *belladonna*, I have cured some very obstinate eruptions with stramonium. I have also employed the same combination advantageously in pulmonary consumption. The general action of both remedies in small doses, is mildly febrile. Their use sometimes produces a temporary dimness of sight, which goes off when the remedies are stopped.

**TOBACCO, LOBELIA INFLATA**.—Tobacco is a valuable remedy, when properly prescribed, and it may be administered internally, as well as externally. I have found its internal use, in the shape of tincture, efficacious in dropsy and asthma. Heberden cured a case of epilepsy, by applying a cataplasm of tobacco to the pit of the stomach. The *lobelia inflata*, or American tobacco, is a good diuretic, and has cured asthma. Like the common tobacco, it produces sickness, in large doses.

**THE BALSAMS AND GUMS**.—Copaiba, turpentine, and guaiac, powerfully influence mucous surfaces, in one case increasing secretion, in another suspending it. They have all produced and cured rheumatism. With turpentine, I have cured cases of Iritis, which resisted mercury and quinine. Copaiba in some constitutions produces cuticular eruption so like small-pox, that even medical men have supposed it to be that disease. Others putting this rash down to a fanciful cause called Syphilis, have gravely proceeded

to ruin their patients' constitutions with mercury, to cure what they were pleased to call "secondary symptoms!"

**CANTHARIDES OR SPANISH FLY**—This is principally used as a blister; but the tincture of Spanish fly is an admirable internal remedy for gleet and leucorrhœa, and it is also among our best diuretics; remember, however, it can produce strangury, an opposite effect. I am in the habit of combining it with quinine and prussic acid, in the treatment of dyspeptic cases, and I find it useful also in cuticular disease; though in the case of a gentleman—a colonel of the army—a blister to the side had twice the effect of blistering him all over!

**THE EARTHS AND ALKALIS** have all particular effects upon the body, according to the mode and degree in which they are administered. Besides their constitutional influence, each has more or less affinity to special organs. Lime and Barytes influence the secretions of the stomach; Soda and Potash those of the lungs, kidney, and bladder; Ammonia or hartshorn affects the salivary glands—each for good or for evil, according to its dose and fitness for particular constitutions. The earth called Alum is a favorite with the common people, in the cure of ague. What is its mode of action? Its power of astringency or attraction simply—the same power by which it arrests the morbid increase of secretion, called leucorrhœa. How does it do that? By its attractive influence over the atoms of the spine and the nerves proceeding from the spine. Well, then, that is the way in which it cures the ague. The greater number of

**THE ACIDS** have been usefully employed in medicine. Acetic acid, or vinegar, is an old remedy for hiccup, and might be efficacious in other spasmodic diseases. Dilute sulphuric acid has cured the ague, among other disorders. With dilute nitric acid, I have arrested and increased almost every secretion of the body, according to varying circumstances. For a gentleman who was affected with vertigo and tremor, I prescribed dilute nitric acid, which cured him; his wife, by mistake, took his medicine for her own, and in a few minutes after she was affected with a tremor, that lasted for nearly an hour! You see, as a general rule, then, that whatever can move one way, can move the other.

Gentlemen, the medicines of which I have given you some account to-day, are the principal SYMPTOMATIC medicines which I employ in my own practice, combining or alternating them, as I have already stated, with the chrono-thermal remedies. But there are thousands of other agents, which may be usefully employed in this manner, and a great

number are mentioned in our books of *Materia Medica*. What I have said on the action of remedies generally, will apply to all. At our next lecture, I shall give you some account of the principal chrono-thermal agents—and conclude the course, by a general summary of the chrono-thermal doctrine.

#### SWEDENBORG'S ANIMAL KINGDOM.

*Introductory Remarks by the Translator,*

JAMES JOHN GARTH WILKINSON,

Member of the Royal College of Surgeons of London.

[Continued from page 33.]

We promised at the outset to speak of the relation in which Swedenborg's philosophy stands to the science of the day, but it will now be seen that there is no direct relation between the two, but a plenary repugnancy. For the one is order, the other is chaos; the one is concentration, the other is infinite division; the one enlarges its limits in that interior world where creation exists in all its spiritual amplitude, the other loses its limits, and its distinct life along with them, in the great vacuities of space and time; the one is a rod and staff giving the mind a practical support in the exploration of nature's fields; the other is a mist of hypotheses crawling along the ground, and making every step uncertain and perilous.

The science of the moderns tends to bury physiology more and more within the schools; that of Swedenborg will ultimately shed it abroad as a universal light which like that of the sun belongs in justness to all mankind. In this respect science is situated precisely as theology. There is no difficulty in either but what man himself induces. The whole scheme of true theology is so simple that the humblest capacity may understand it; and so coherent, that the memory may retain even its details without the slightest difficulty. So in a measure will it be with a true science. The appointed professors of the true theology must be amenable to a common knowledge thereof existing in the understandings of their flocks and congregations. So must it be at last with the professional bodies appointed to preside over a true science. In a word, under the influence of the New Church, a protestant state must come over science itself; the bible of nature must be opened to the public as well as to the professions; and the professions themselves must be content to accept their position, from standing in a

clear and recognized connexion with the common sense of mankind, as brought into play upon their own subjects.

The relation in which Swedenborg stands to the philosophers may be briefly characterized. The analysis and classification of the conditions and states of the mind is a subject which he has only touched on incidentally in the "Animal Kingdom." He maintains that the influx of the soul into the body is truly synthetic, or *a priori ad posteriora*, but that the instruction and information of the rational mind is necessarily analytic, *a posteriori ad priora*; not that the senses generate the mind, but that they supply it with materials, and externally excite it to activity; the soul similarly exciting it internally. With respect to that mentalism which has been introduced since Swedenborg's time by Kant and his followers, the writings of Swedenborg distinctly involve it, but then our author adds to its forms life and substance, and displays a world co-ordinate with each plane of the human faculties, without which man would not exist in nature. By virtue of this, what are mere abstract categories and ideas in the one, are organic causes in the other, (Swedenborg says, "all causes must be formed organically.") and the mind is allied to the body through the whole scale of its ascent. But there is one department of metaphysics or ontology which finds no countenance in Swedenborg; viz., the two schemes of materialism, and immaterialism, or as it is falsely called, spiritualism, as opposed to, and opposing, each other. The controversy between these two he declares to be "a battle of words," a play of "shadowy sophisms," a "game at chess in the high city of literature;" and he refers the whole misunderstanding to ignorance of the doctrines of forms and degrees.\* For this war respecting the substance of which things are made, tends to divert the mind from the successive order of nature, and to plunge it at one leap in the occult; consequently to induce it to omit all the series of forms that intermediate between the body and the soul. The words mind and matter in this case stand for two substances under one form, and it is not easy to see how the one can be preferable to the other, or how thought can be influenced by either of them. As systems of causation therefore, the rule of use protests against them both. The main argument of Bishop Berkeley, that his hypothesis causes no difference to our sensations,

must be admitted, and it is conclusive against immaterialism. Why introduce an element that confessedly plays no part in our affairs?† Both these schemes are essentially controversial or negative, and if either of them could be subtracted, the other would no longer be capable of an ex-

† If it be alleged that immaterialism produces philosophical results, and is capable of being expanded into a system, we reply to this, that wherever such results appear to follow it, they arise in reality from the tacit intermingling of some organic element of thought in the premises, the presence of which element is not perceived. It would be easy to illustrate this by a criticism of any of the philosophical and religious consequences which are supposed to flow from immaterialism, and to prove that those consequences are not the fruits of the immaterialism, but of other grounds co existing with it in the mind. But the demonstration would carry us beyond the design of the present remarks. With respect to substance, it may be expedient to observe, that the word is commonly used in two meanings, both of which are true, and must concur to a complete idea of the thing. Firstly, it is used in a universal, generative and active sense, as the elemental ground of matter, and as the spiritual ground of the natural world, in which partial sense, substance is spiritual, and its operation purely synthetic. Secondly, it is used in a general, formative, and passive sense, as the complex, continent, and basis of interiors and universals, in which partial sense, substance is material, and its operation purely separative or analytic. But the complete idea of substance is the result of the union of these two senses; in other words, of the ordinary notions of both substance and form; which although two elements in thought, are not two in reality, but "distinctly one." Swedenborg clearly shows both in his philosophical and religious works, (which indeed are perfectly at one on this subject,) that we must take a bodily as well as a mental view of substance. It may be sufficient to cite the following passage from his work on "Heaven and Hell." "Man," says he "cannot exercise thought and will at all unless there be a subject, which is a substance, from and in which he exerts those faculties. Whatever is imagined to exist, and yet to be destitute of a substantial subject, is nothing at all. This may be known from the fact, that man cannot see without an organ as the subject of sight, nor hear without an organ as the subject of hearing. Without such organ, sight and hearing are nothing, and have no existence. It is the same with thought, which is internal sight, and with apprehension, which is internal hearing; unless these existed in, and from, substances, which are organic forms,—they could not exist at all," &c. (n. 434.)

\* See the "Economy of the Animal Kingdom," tr. ii. n. 311; and the "Worship and Love of God," n. 53, note (p.)

pression. Both of them tacitly deny the order of nature, and therefore they can never minister at the altar of true science.—Matter and substance may be opposites, but this has nothing to do with the question of the existence of matter. The mind is a substance, but this likewise in no way touches the existence of matter. The question of the existence of matter is perfectly distinct from the question of its substance. What then is the definition of a substance? It is evident that a substance is the ground of a particular existence; and equally so, that the only ground for which anything exists is the end or use that it will subserve in the creation. The particular end or use, then, of each thing is its substance. But ends and uses in themselves are spiritual. In order, therefore, that this end or use may institute a series in nature, it must put on a natural form; and the first form that it so assumes, the form of the first degree, is the substance or unit of the whole series, as being all and all throughout the subsequent degrees: it is the universal of the series, as being, by virtue of the properties of its form, universally present, potent, active, &c., in the entire progression of the thing that it constitutes. It is the relation that this unit bears to order, degrees and series, that makes it into a substance and not into an accident. Hence it is order that determines substance, and hence too every substance is an organic form, as being the initiation of all the forms of its series. Mental admissions of substance which do not involve forms analogous to those of the natural creation, are mere terms without ideas: views of mind, thought or affection, which contemplate these subjects otherwise than as prototypes of the human body, are vacant of meaning; metaphysics without they rest upon the order of physics, are a soul without a body, and belong neither to this world nor to the next. Whatever deflects the understanding from order, as the question of questions, deflects it equally from both mind and matter, and consigns it proportionably to the "shallow sophisms" of materialism or immaterialism. In the highest sense God is the only substance, and yet in a true sense, each degree is a substance to that proximately below it. All finite differences are in reality variations of form determined by uses in their order. Each degree involves the repetition in itself of all the three degrees, of end, cause, and effect; and hence nature itself is full of substances—of bodies possessing real trine dimension,—and matter also involves as many substances as it has distinct forms. If we suppose that nature is a mere surface, we manifestly dispose the mind for admitting a doctrine of

forms, consequently we detain it in the last degree, and in the lowest plane of imagery, and when this is the case we must look upon science as something which exists by courtesy, a record of appearances and superficialities which are only presented to us to be negated. Thus the spiritual violates the natural, instead of leaning upon it, as a house upon its foundation. But let no logic disturb our foundations thus: the principle of use, and the test of results, furnish a more conclusive experiment of ideas than any syllogistic process; for they scrutinize the end, and not only the means. This principle and test declare to us, that in the investigation of nature, we are to keep our minds in the idea of order, as manifested in successive degrees of forms, forces, operations and uses, and that then we are legitimately studying the nature of substance in the only meaning that it has for finite beings. Other substance than this is a figment, which is rendered necessary by nothing in the theory of causation, because it will legitimately account for nothing. It has no function in the new state of things but belongs essentially to the scholasticism of a past church.

Having now briefly indicated the relation between Swedenborg's science and philosophy, and that of his own and the present time, we have still to speak of a few points which more particularly belong to the *Work* before us.

The reader may probably be led to enquire, how far the "*Animal Kingdom*" embodies doctrines which were current at Swedenborg's day, and how far its deductions are peculiar to our author. To this it may be answered, that many doctrines to be met with in the *Work* are by no means peculiar to Swedenborg, but were the common intellectual property of his contemporaries and predecessors. We have seen that a host of writers held the doctrine of the animal spirits. It was also no uncommon belief that they were elaborated by the cortical substances of the brain, and circulated through the nerves. Vieussens held that there were distinct degrees of them. Brunn propounded the same doctrine as Swedenborg respecting the pituitary gland; and numerous instances to the same effect might readily be adduced from other writers. Perhaps the best means to be certified on this head, will be by the perusal of Boerhaave's "*Institutiones Medice*,"—a work where the theories of ages are condensed into an eclectic system. It appears as though Swedenborg freely availed himself of the treasures that were accumulated around him and before him, and was altogether destitute of that passion for originality which has been the besetting sin of so many

of the learned. He distinctly states that he has relied upon his own experience to but a small extent, and that he has deemed it wiser, for the most part, to "borrow from others." So also where he found true doctrines and deductions,—these likewise he borrowed, and this, with generously grateful acknowledgment. But what he really brought to the task were those great principles of order to which we have before alluded, and which touched nothing they did not universalize and adorn; nay, which built the materials of experience and the deductions of reason into a glorious palace that truths could inhabit. It is as the architect of this edifice that Swedenborg is to be viewed, and his merits are to be sought for not so much in its separate stones, as in the grand harmonies and colossal proportions of the whole.

After this statement it is scarcely necessary to observe, that Swedenborg is not to be resorted to as an authority for anatomical facts. It is said, indeed, that he has made various discoveries in anatomy, and the canal named the "foramen of Monro" is instanced among these.† Supposing that it were so, it would be dishonoring Swedenborg to lay any stress upon a circumstance so trivial. Whoever discovered this foramen was most probably led to it by the lucky slip of a probe. But other claims are made for our author by his injudicious friends. It is said that he anticipated some of the most valuable novelties of more recent date, such as the phrenological doctrine of the great Gall, and the newly practised art of animal magnetism. This is not quite fair: let every benefactor to mankind have his own honorable wreath, nor let one leaf be stolen from it for the already laureled brow of Swedenborg. True it is that all these things, and many more, lie in ovo in the universal principles made known through him, but they were not developed by him in that order which constitutes all their novelty, and in fact their distinct existence. For in the first place it is impossible for the human mind to anticipate facts; these must always be learnt by the senses: and secondly, Swedenborg was too much a man of business to turn aside from the direct means to his end, or to attempt to develop anything beyond those means. His philosophy is the high road from the natural world to the spiritual, and of course has innumerable lateral branches leading to the several fair regions of human knowledge: but through none of these by-ways had Swedenborg time to travel; nay, could he have done

so, there is nothing to shew that he would there have discovered what his successors have done. He had his mission, and they have theirs. His views are at harmony with all that is new and true, simply because they are universal, but in no fair sense do they anticipate, much less supersede, the scientific peculium of the present century. Swedenborg, therefore, is not to be regarded as an Aristotle governing the human mind, and indisposing it to the instruction designed to be gained from nature; but as a propounder of principles the result of analysis, and of a method that is to excite us to a perpetual study in the field of effects, as a condition of the progress of science,

The anatomical knowledge possessed by Swedenborg was undoubtedly very extensive. He appears to have studied more by plates than by actual dissection, as almost any one would do who had in view the same end as himself. This will be regarded as an unpardonable vice by physiologists. But why should the knowledge of the human frame be limited to the dissecting-room? Why should it be the appendage of one craft, and not an inheritance of universal humanity? Why should the truths of the body be the exclusive property of physicians, any more than the truths of the soul the exclusive property of the clergy? Have we not all souls, have we not all bodies? Now good and accurate plates, corrected and generalized during several ages, are far more valuable and available as a basis of general education, such as the New Church must ultimately desire, than either dissections or preparations. It is something that they carry none of the adjuncts of death, disease, or putrefaction; that they do not hinder the mind from recollecting that life and motion are the import and lesson of the body. It is something that they may be placed within the reach of all. Swedenborg has set the example of what may be done by studying them, and his readers must follow the same course if they wish to profit by his instructions.\*

The professional reader of the "Animal Kingdom" will not fail to discover that the author has fallen into various anatomical errors of minor importance, and that there are occasionally marks of haste in his performance. This may be conceded without in any degree detracting from the character of the work. These errors do not involve matters of principle. The course which

\* "Economy of the Animal Kingdom" tr. 1., n. 18.

† See "Animal Kingdom," vol. 1, p. 250, n. 190, note (r.)

\* The beautiful little book by Erasmus Wilson, entitled, "The Anatomist's Vade Mecum," may be recommended to the readers of the "Animal Kingdom," for the number, of excellent plates that it contains.

Swedenborg adopted, of founding his theory upon general experience, and of only resorting to particular facts as confirmations, so equilibrates and compensates all mistatements of the kind, that they may be rejected from the result as unimportant. To dwell upon them as serious, and still more to make the merit of the theory hinge upon them, is worthy only of a "minute philosopher," who has some low rule whereby to judge a truth, instead of the law of use. Such unhappily was the rule adopted by the reviewer of the "Animal Kingdom" in the "Acta Eruditorum Lipsiensia" (1747, pp. 507-514); the book was despised by this critic because Swedenborg had committed an error in describing the muscles of the tongue, and because he had cited the plates of Bidloo and Verheyen, which Heister and Morgagni had then made it a fashion to disparage; and for other equally inconclusive reasons. All they amounted to was, that Swedenborg had not accomplished the reviewer's end, however thoroughly he had performed his own.

But fortunately such criticisms are never decisive; a single truth can outlive ten thousand of them. The "Animal Kingdom" appeals to the world at this time, a hundred years since the publication of the original, as a new production, having all the claims of an unjudged book upon our regards. For during that hundred years not a single writer has appeared in the learned world, who has in the slightest degree comprehended its design, or mastered its principles and details. The reviewer to whom we have more than once alluded, judged it by a standard which was suited only to an anatomical manual and text-book. Haller bestowed a few words upon it in his invaluable "Bibliotheca Anatomica," but he knew nothing of Swedenborg's views; and his notice of the "Economy of the Animal Kingdom," contains errors too numerous not to invalidate his censure, had he bestowed it, which however he has not done directly. Sprengel in his "History of Medicine," has offered a few lines upon the work, but these merely of a bibliographical import. The past therefore has found no fault in it, and it comes before the reader with an uninjured character, and demands as a good, true, and useful book to be taken into his service, and to receive a full trial at his hands. The modern physiologists have no theory of their own, have no reference to it, nor until they quit their present ground can they be allowed to have an opinion on the subject. Their censure would not be more relevant than would the opposition of a Red Indian to the problems of the mathematics.

But it may fairly be asked, what are the

prospects that the "Animal Kingdom," and the scientific works of Swedenborg generally, will be received at this day, when they refer to an order of facts almost forgotten, when they involve a scientific terminology which has become partially obsolete, and especially when it is considered that there never perhaps was an age so well satisfied with itself and its own achievements as the present one; Their prospects in the high places of science are not indeed encouraging: it would be vain to build up hopes in that quarter, or to address expostulations to it. A commission of any Royal Academy in christendom would soon decide our claims in the negative. But fortunately there are abundant signs of a breaking up.

The scientific world, and specifically the medical world, which is always the highest exponent of the state of science, is in a state of intestine revolution; nay, what is saying much, it is nearly as full of disension as the church itself. It would be exceedingly unpalatable to dwell upon its divisions, to specify the sects which have separated from the maternal body, and to shew the irreconcilable nature of the differences that subsist between orthodox medicine and her refractory children. The future historian, standing upon the grave of once venerated institutions may do this with impartiality, and not without a feeling of pity. Meanwhile it is our privilege to rejoice, that amid the decadence of science new ground is being broken, and new spirits raised up, to some of whom the new truth may be accommodated and delightful.

We use the phrase "new truth," although the works which contain it have been buried in the dust for a whole century; but in so doing we simply allude to the principles involved in those works. The confirmatory facts by which these principles were brought into relation with the science of Swedenborg's day, may doubtless from time to time be superseded by better attestations: particular facts are but the crutches of a new theory, and are not strictly speaking its basis; for the basis itself is spiritual, since it is the order and tenor of effects that form it, and not the matter. The principles themselves are eternal truths,—the same yesterday, to-day, and for ever. They are not attached for more than a time, or for any end but necessity of use, to any one range of facts, or to the books of any one author,—no, not even of a Swedenborg.

There are cycles in all things, and even now there are some indications of a revival of medical learning. The weakness of the present state of things is perceived by those who have no appreciation of its barrenness; the temper of the public is an unmistakable



demonstration to this effect. Hence many begin to revert to the past, and laying aside for a moment the vociferation of "march of intellect" and "progress of the species," they are content to march and progress, like the crab, backwards and to claim Hippocrates and Galen, and Sydenham as their fathers. This is at any rate so far good, that it shews how a forgotten range of facts and an antiquated terminology may be re-acquired as soon as there is a sufficient motive: nay, it nourishes the hope, that under the pressure from without, the large body of dependents, if not the feudal lord of science, may come to even greater and more unexpected results than these. Who shall say that they may not ultimately see that it is their interest, as practitioners of medicine, to deposit their cloke of mystifications, to bring to market something which is intelligible and useful to humanity, to go wherever truth leads them, even though that truth be "stranger than fiction," and to come to our Swedenborg in his double character, and acknowledge with humble thankfulness that a greater than Hippocrates is here,—a man who has married practice to theory, who has dissected the living body without destroying it, and has so opened the science of anatomy and physiology, that they must sooner or later become branches of human education, in which case the medical profession will have a solid basis in the social world, and be as a golden crown of wisdom and practice resting securely upon the correct knowledge and common sense of mankind.

To all those who are in possession of truths which are not recognized, or are rejected, by the systems of the day, the writings of Swedenborg may be perfectly invaluable. Those writings will prevent them from being dependent, in any department of reason, upon the old state of science. They will furnish a high rallying point where a number of such distinct truths may be combined, and derive that strength which is the result of union, and especially of the union of truths. They will put weapons of offence and defence in the hands of causes which are now repressed almost into nothingness, and give power to those which are strong in spirit, yet weak in body. They will add force to faith, and sustain the earnest soul through the day of small things, and meanwhile yield it a peaceful delight prophetic of a glorious future. To all such persons these writings ought to be as glad tidings, and should be received with hearty thankfulness, and a determination to lose no time in converting them to use.

But it is on the New Church itself that Swedenborg's scientific works have the high-

est claim. They were written, indeed, to convince the skeptic, yet perhaps their chief end may be to confirm the believer. They disclose the intellectual use of nature, as being a theatre of instruction where man may learn the highest truths in the lowest form, and from which he may mount upwards, on the ladder of divine order, until the intellect merges in the moral sphere. They proclaim that in this course of true instruction there is nothing to be unlearned, either in this life or in that which is to come, but that our limits are to be successively enlarged, and all that is real and positive ever carried forwards into the proximately succeeding state. For these works are thoroughly congruous with the theology of the New Church. The order which they show to exist in nature, is the very mirror of the order that reigns in the spiritual world. They mark the successive stages through which Swedenborg was led by the Divine Providence, until he was capable of that interior state in which his spiritual eyes were opened, and the inner world disclosed to his view; and as they were therefore the means, so were they in unison with the end. The doctrines which they set forth respecting the human body are reiterated with scarcely an omission in his theological treatises, and particularly in his "*Arcana Cælestia*," where they serve as the ground-work of his stupendous descriptions of the life of man after death, when he is associated with his like, according to the laws of order and degrees, and if he be capable of it, becomes a part of the grand human form of heaven. It is therefore at once edifying and delightful to examine the scientific evolution of those doctrines in the "*Animal Kingdom*," and to observe how wonderfully coherent they are, and how firm they stand in nature. At the same time, far be it from us to admit, that Swedenborg's Theology was the outgrowth of his science. This has been stated to be the case, and it is an assertion easily made, a proposition which the sceptic will be too ready to conceive. But we give it a direct negative; it is the offspring of a double ignorance,—of an ignorance of both the premises. Those who are best acquainted with the writings of Swedenborg know full well that it has not a glimmer of probability to support it.

Nevertheless it may be confidently affirmed, that it is impossible to affix a meaning to much that Swedenborg has said of the human body in his theological writings, without a study of his scientific works. In this respect the former presuppose the latter as containing a body of elucidations that can-

not be obtained from the views of any other physiologist.

But these works not only support and elucidate Swedenborg's theological writings, but they also afford the members of the New Church an opportunity of descending from the spiritual sphere into the natural, and there gathering confirmations from the broad field of creation. In proportion as this is rightly done, or done for spiritual ends, there will be a regeneration of the sciences, and the ascending or analytic method will become subservient to the influx of spiritual power and truth from above.

The order of nature will be more and more seen to be at one with the order of heaven. The sciences through which nature is viewed in different aspects, will become easy of comprehension and recollection, because all their details will be ranged on the electric spirals of order. The organic sciences especially will be schools in which the great lesson of society is learnt, and the laws of government and intercourse represented. The human imagination will be limited by the truth, and will admit that all that outlies its sphere, is a monstrosity, and an outrage against the universal principles of art; and that without rational truth there can, at this day, be no true art, as there can be no heroic action. The understanding will no longer love the occult, or dwell in quiddities and logical formulas, but in the recognition of ends and uses in substantial forms. Man will see the omnipresence of God in nature, because he will contemplate a moving order perpetually tending from ends to ends, and thus involving an infinite intelligence and love in every point of its progression. There will no longer be faith alone, nor charity alone, nor works alone. The natural world will not be divorced from the spiritual, nor the body from the soul; for there will be no hostility between the different faculties of the mind, but the spiritual man will rest on the rational, and the rational on the sensual, which last will then become the enduring basis of the heavenly, and the ultimate theatre of its life and fructification. "In that day there shall be a highway out of Egypt to Assyria, and the Assyrian shall come into Egypt, and the Egyptian into Assyria, and the Egyptians shall serve with the Assyrians. In that day Israel shall be the third with Egypt and with Assyria, even a blessing in the midst of the land,"\*

But until this prophecy is accomplished, science must be dead. For the Egypt, Assyria, and Israel of the Word, are not places, lying under a particular latitude, or confined to one planet, for the divine truth is

omnipresent, and transcends the condition of space and time; but they are general states within every man that is born into the world. The Egypt of divine truth is his scientific mind; the Assyria is his rational mind; and the Israel, his spiritual; and the prophecy here describes the true order of the influx and circulation of mental states and principles, in either an individual, a society, or the human race at large. This is the order to which we believe power will ultimately be given by Him who has all power in heaven and on earth. For we know that until it is established, opinion must be as the shifting sand; human systems must be so mortal that the mere flux of time is sufficient to destroy them; the scientific state of each age must be at the mercy of any strong man with an energetic will and an equal faculty of persuasion; since without a permanent reference to true order, intellectual feats can be measured by no standard but daring and determination. But a better time is at hand, and a better state than man deserves, or than he himself could originate. The new era has commenced already. The truths of a New Church have been revealed in the writings of Swedenborg; and in those truths and those truths alone, may science drink of the waters of immortality.

#### PRACTICAL REMARKS

On the Treatment of Cynanche, with Cases.  
By Charles Travers Mackin, Esq., M. D.,  
Battersea.

Allow me the favor of inserting a few cursory remarks on a disease of common occurrence, apparently simple in itself—simple in the indications to be followed—simplest of all, by reason, not of the hints, but of the positive directions, for its management laid down for our guidance and instruction by Dame Nature. We shall, however, see that it may, through contingencies which it were needless to enumerate, become a source of imminent danger, and as such, imperatively demand (it would seem) a painful operation for its relief, and that, too, at the hands of our elder brethren of the profession.

In a recent *Lancet* is a case of cynanche.

Before proceeding further, I would wish it to be distinctly understood, that I offer the following remarks, not for the mere purpose of criticism, but with a view of showing, as far as my limited powers will admit, that a mode of practice in similar cases, bearing a

\* Case of the Rev. John M., by Mr. Roberts, read at the Medical Society of London—January No., page 79.

strict analogy to the principles which guide us in our management of inflammatory affections in other parts of the frame, will, I have but little doubt, avert the necessity of having recourse, in cynanche, to laryngotomy, or any other final alternative of surgery.

I will first, make a short summary of the case in question; secondly, I will venture a few observations on it—taking it on its own merits, and as I find it recorded; and lastly, I shall hazard both comment and criticism by giving my own ideas of the line of practice to be followed, supporting my opinion with a few of such cases as have occurred in my own practice.

A patient is seized with soreness of the throat, on the 14th of September, accompanied by the usual constitutional disturbance. He is relieved by "appropriate measures." On the 18th he experiences a recurrence of the same symptoms, aggravated in intensity, the left side of the throat being now attacked. Difficulty of deglutition is the most prominent local symptom, from the 18th up to five o'clock on the 19th. (Dyspnœa not being mentioned, I presume, does not exist at this stage.) He now, from the engorgement of the mucous membrane of the nares, becomes unable to respire through the nostrils. At noon on the 20th, dyspnœa manifests itself for the first time.

The then existing state of the throat is thus described—

"The *velum pendulum palati* was much reddened at its lower base. The tonsils could not be properly inspected, but did not seem to be swollen in proportion to the difficulty of deglutition. At five o'clock, the same day, there is impending asphyxia—"semi-consciousness" succeeds, and laryngotomy is performed.

The particulars of the treatment are rather ambiguous. In the first attack, "appropriate measures" were followed by relief. On a recurrence, leeches and fomentations were used unavailingly. When difficulty of breathing supervened on dysphagia, a blister was applied, and belladonna administered without benefit; and, according to the maxim, "*Le fin couronne l'ouvrage*," laryngotomy is had recourse to, and the patient recovers.

It must be at once conceded, that this case, taking it as related, was one of cynanche. It will likewise be noted, that on the 20th Sept., or about forty-eight hours from the commencement of the second and more serious attack, the difficulty in breathing, with asilation, was first noticed. The conclusion, then, is plain, that impeded respiration was secondary; and we must, therefore, naturally infer,

1st. That, from continuity of tissue, the

inflammation extended from the parts primarily attacked to the summit of the larynx and the surface adjoining thereto. Hence the ultimate necessity for operation.

2nd. That the standard treatment proved insufficient to check or impede its progress in any degree whatsoever.

These premises granted, we will take a general view of the indications of Nature for the reparation of inflammatory affections, from whatever cause they derive their origin.

The first of her intentions is evident. Motion of the inflamed part, tissue, or organ, must, for obvious reasons, check the reparatory process. She therefore wisely ordains that the punishment (or warning for future occasions) shall follow, close as shadow does the substance, any infringement of her directions in this respect. Hence, increase of pain is the immediate and invariable result—increase of inflammation the indirect and frequent consequence. We follow her injunction thus; if a joint be affected, we relax the muscles acting on it, set it at rest, and keep it so. If any intermediate portion of a limb be inflamed, we change not our principle, still bearing in mind her commands, which require no interpretation. Dame Nature acts without a deputy, by exercising her control, without our help, over internal organs when inflamed.

If the bladder require her assistance to prevent motion, it is at hand, and the motion of distention is rendered agonizingly painful. The urine, by her care lessened in quantity, is voided as fast as secreted.

If the kidneys, secretion is regarded or checked altogether. If the stomach, the movement of distention is summarily stopped by the immediate ejection of medicines and ingesta. If the peritonæum, respiration is generally thoracic, the diaphragm, abdominal muscles, and, consequently, the subjacent membrane in question being left in quiet. The bowels are also costive and quiescent, until unwillingly roused into action by a turpentine injection. If the costal pleura, respiration is abdominal, the intercostal muscles and ribs quiescent.

It is unnecessary to multiply examples. If the eye or any of its membranes be inflamed, we interdict and prevent, as far as we can, motion or use. If the brain or its membranes, we proscribe all sources of excitement. But if the throat be inflamed, we fulfil the foregoing plain indications after a fashion, by administering gargles, diluents, and necessary medicines, thus setting the parts in nearly constant motion which Nature tells us to prohibit; plainly erring from her directions, and our principles of treatment founded on the same.

A little further yet, let us pursue this train of reflection.

There is an impediment to the course of the circulation through a tissue in a state of inflammation. The circumjacent arteries propel their contents with increased force to overcome it. If they succeed in effecting this, resolution is the consequence. If not, how does the vis medicatrix unload the vessels of the part in question? By effusing the thinner portion of their contained fluid into the extravascular parenchyma. Tumefaction and tension are increased, and the indication thus offered is plain as the sun at noon. Well, then, we pursue the unerring instructions of our monitress by abstracting blood from the seat of discharge. This rule is not carried out, though perfectly practicable in inflammatory affections of the throat. Hence we are sometimes compelled to have recourse to laryngotomy—"an operation," says Abernethy, "which is a tacit reproach to the healing art, for it is a candid acknowledgment of our inability to cure."

If leeches be applied outside, the inner structures are influenced but little. As the swelling, which is attended with danger to life, is the swelling of the inner aspect of those structures, and as the abstraction of blood from the integuments can only influence the outer portion of the parts in question, it follows that the tendency to spread is not counteracted where counteraction might be practised with facility and probable success.

Having for some time past adopted a plan of treatment in all cases of cynanche presenting themselves, and having noted the results, both immediate and indirect, I offer it with some degree of confidence. The mode I pursue is simple and obvious enough, although I believe rarely practised. It would also seem, from the perusal of Mr. Robart's case, the discussion which ensued, and the remarks of the president, that the plan which I now proceed to describe is not generally known.

Free incisions of the tumefied parts within the throat, I have never yet seen fail of giving instant relief. I do not mean mere scratches, but one or more bold incisions, varying in depth and extent, according to the urgency of symptom and tumefaction of structure.

The operation, if it can be called such, is easily performed by any one possessed of the average amount of dexterity. The following will, I believe, be found the easiest method:—The blade of a long-handled, round-pointed scalpel is covered with adhesive plaster to within three-quarters of an inch of its extremity. The index finger of one

hand is used to depress the root of the tongue (this must be done firmly, as the tonsil frequently swells most in a downward direction, causing dysphagia to a greater degree than if alone increased by swelling in the transverse diameter.) The instrument being then introduced, its edge directed upwards and inwards, one or more free incisions are made, commencing below, and carried in a curve convex outwards and upwards along the tonsil and velum, to the base of the uvula. The time occupied is not more than two or three seconds. The pain is inconsiderable, the relief always immediate, and in the majority of cases, permanent. The bleeding is encouraged by gently gargling the throat with any warm fluid. The depth of the incisions must of course be regulated by the amount of swelling and urgency of symptoms. It is, however, advisable, in every case, to divide the mucous membrane effectually, and even penetrate a short way into the substance it invests. The flow of blood I have generally found to be inconsiderable, when compared with the relief experienced. Whether ulceration be present or not, I have never hesitated, if the concurrent symptoms seemed to demand such interference, at once to cut through the ulcerated part if it lay in the line marked out by the eye for incision. Out of some dozens of cases treated by me in this manner, during the last twelve months, none have proceeded to the formation of matter. I can call to mind many which have been attended with superficial ulceration, previous to my being consulted, but none which ulcerated after incision was practised. I have observed that the viscid secretion poured out by the structures in question when in the state of inflammation, has been materially increased in quantity soon after the division of the congested membrane. The reason being obvious, need not be here mentioned. With regard to gargles, I have latterly discontinued their administration believing that any benefit derivable therefrom is extremely problematical; while, during their use, motion of parts which ought to be wholly at rest is unavoidable. The diet should be liquid, and taken at as long intervals as possible. On the medicines necessary for cure, *secundum artem*, I have nothing to say, save that it is to be borne in mind that deglutition is difficult and painful.

Mr. W., a moderately stout young man, of good general health, has had hypertrophy of both tonsils for some years past; the passage between is at all times exceedingly narrow; he is liable to frequent attacks of cynanche; dyspnoea and dysphagia at such times productive of great distress. On the 27th of April, I was called to attend him for

the first time. On examining the throat, the half arches of the palate were found to be all but filled up by the protuberance of either tonsil, the uvula and velum strongly injected, to the extent of three-fourths of an inch from the free margin of the latter. Headache, fever, great pain on attempting to swallow, sibilation; voice nasal; incisions followed by relief; bleeding and discharge of mucus considerable.

On my visit the following day, I found a marked improvement.

On September 22nd, a sister of the gentleman just mentioned was seized with the same malady; slight swelling of both tonsils, with an insignificant degree of inflammation about the margin of the velum; some feverishness; incision not permissible; nitrate of silver objected to; blisters politely declined, "as they might leave a mark" Gargles to be used frequently were prescribed with the usual appropriate medicines. The case remained nearly in statu quo from that date, up to October 7th, when it declined gradually.

July 28th, a stout, middle-aged man. The usual appearance of cynanche; ordered a brisk purgative and an astringent gargle; 29th, much worse; incision freely, in the usual manner; instant relief, and on calling next day, found no further occasion for attendance.

Mrs. C., twenty-seven years of age. Hysterical temperament; appearance delicate; general health indifferent. On November 10th, was seized with rigor, pain in the head, and soreness of left side of throat; some difficulty in swallowing; redness and swelling of tonsil and velum; incision practised in usual manner. Aperient medicine, and injunctions to avoid the act of deglutition more than might be absolutely required; 12th: Left side of throat presenting usual healthy appearance; disorder transferred to right side in aggravated form; incision proposed and objected to; apply six leeches. Seven p. m. worse; repeat leeches, and apply nitrate of silver in substance. At eleven the same night I was sent for to stop the bleeding from the leech-bites; found her faint and greatly exhausted from loss of blood; throat worse; deglutition now impossible; some dyspnoea; apply a blister. 13th: Throat worse; more difficulty in breathing; a fresh blister to be applied. 14th: No improvement; dress blister with ung. hydrarg. 15th: Better. Nov. 18th; To-day I have taken my leave of the case. The left tonsil is of its natural size and appearance. The right is still considerably enlarged, and will most likely remain so. All inflammation has now subsided.

I have selected the foregoing few cases from my note-book as they tend to show the results of different modes of treatment in the same disorder.

I have not the slightest doubt on my mind, but that prompt incision of the inflamed tissues will be attended with success in the vast majority of cases. As far as my experience goes, it has never failed of relief, and that almost directly. Without in the most remote degree wishing to derogate from the merit so justly due to Mr. Roberts, I must be excused if I express a small doubt as to whether cynanche, be it dubbed erratic, erythematic, tonsillar, or pharyngeal, would, in one out of a thousand cases, proceed to such a height as to require laryngotomy, were the parts primarily affected by the malady freely divided by the scalpel ere asphyxia left us no alternative.—*London Lancet*.

Nov. 18th, 1845.

#### ON

#### Constipation, from Indolence of the Bowels, and its Treatment.

DR. TRISTER, assistant-physician to the Hotel Dieu, at Lyons, has published, in the last number of the *Journal de Medecine* of that town, an interesting article on the treatment of constipation from indolence of the bowels. This form is undoubtedly the one most frequently met with in practice. It is a frequent cause of ailments, which, when misunderstood, in the end seriously affect the health. The disease is very frequently met with among persons advanced in age, and among the hypochondriacal, in females, particularly those affected with chlorosis, or disease of the uterus; in individuals who do not take sufficient exercise, and in those who devote themselves especially to literature. It accompanies almost invariably all serious affections of the nervous system, and, above all, paralysis. Its consequences are, headache, indigestion, painful hemorrhoidal tumours, displacement of the uterus, sanguineous discharge from that organ, and leucorrhoea, in females, and in extreme cases may lead to marasmus. It is most important, then, to be able to recognize the sort of constipation of which we speak, and, above all, to know the most effectual means to remove it.

The directions given by most authors, for this last purpose, are in general of little use; sometimes they are even hurtful and dangerous. In fact, the means most frequently recommended are, oily enemata, or simple lavements of decoction of mallow, of bran, &c., at the temperature of, from 80° to 86° F.: and later, when these lavements fail to un-

load the bowels, manna, senna, tamarinds, rhubarb, castor oil, seidlitz water, scammony, in short, all sorts of laxatives, or even the most drastic purgatives, are recommended.

Now it is at present recognised as a fact among all practitioners of experience, that in the sort of constipation here treated of, the use of warm injections is hurtful, because, as it depends on a sort of atony, or indolence of the muscular fibres of the bowels, the more you inject warm water into them, the more the muscular fibres are lengthened, distended, softened, and deprived of their contractile power. It is known, also, that the use of purgatives, far from being beneficial in this sort of constipation, is, on the contrary, very prejudicial, inasmuch as they blunt the sensibility of the coats of the bowels, which at length become insensible to the stimulus of fecal bolus; besides this, their continued use may violently irritate the bowels. But this is not all, for, as Teissier remarks, the authors who most strongly advocate the use of purgatives in this disease, acknowledge also the inconvenience arising from the use of such substances in a great many cases.

Beyond these means, it might truly be said that no resource remains. But science is not so powerless as might at first be supposed: nay, numerous useful means exist, of which the three principal are, *nux vomica*, cold lavements, and astringents, which Dr. Teissier, on the recommendation of some authors, has employed in several cases, and with apparently happy effects.

Schmidtman was the first to recommend the use of *nux vomica* in cases of sluggish digestion, with flatulence, distention of the bowels, and constipation. Teissier cites four cases which show that this substance has been equally successful in his hands under like circumstances. In the first case, a female, the sluggishness of the bowels was caused by the existence of syphilitic excrescences at the anus, with thickening of the rectum in its whole circumference, which for more than a year caused great difficulty in defecation. After the venereal affection was cured, the constipation continued, and resisted all the means used to overcome it. Dr. Teissier having remarked that the introduction into the anus of tents (*meches*) for several successive days, and cold lavements, had in some degree relieved the constipation, was led to think that these means had only acted by rousing the contractile power of the large intestine, and that that end would be more fully obtained by administering the *nux vomica*. He accordingly gave his patient, every morning, in a pill, nearly the fifth of a grain (one centigramme) of the extract of

this substance. Under the use of the *nux vomica*, in this dose, for nearly a fortnight, the constipation entirely disappeared, and a year has now nearly passed away without any relapse. From time to time, merely, when the bowels are inclined to become sluggish, the patient takes one of the pills as above, and the next day the usual evacuation takes place. In the second case, the constipation, which was of long standing, was complicated with disorder of the stomach, referred to supposed gastritis. The patient was at first put on low diet, gum water, emollient injections, and the white meats, which only increased the sluggishness of the bowels. Recourse was then had to various other means, which relieved the gastric symptoms, without entirely curing them, but had no effect on the constipation. Dr. Teissier, seeing the little success attending this mode of treatment, had recourse to full diet, and the use of the extract of *nux vomica*, in the dose of the fifth of a grain, daily. In less than fifteen days the constipation and the other symptoms had almost entirely disappeared, and in less than a month, convalescence was complete. In the two other cases the result was the same. It must not, however, be supposed that the remedy is infallible; the Doctor admits that he has seen it fail in the case of nervous individuals suffering from obstinate constipation. He thinks it is particularly indicated in those cases where there is reason to suspect a general want of tone in the bowels, as in the paralytic, or in old persons, or where we may suspect a want of tone of the muscular coat of the intestine, in consequence of great and long-continued distention, or, in short, when the constipation can be referred to an undue secretion of gas, which, of itself, by causing distention of the bowels, diminishes their contractile power.

Injections of cold water, better known than *nux vomica*, constitute likewise a valuable resource against constipation from want of tone. Of late years they have been much vaunted; but, nevertheless, they are as yet but little used in practice. They act somewhat in the same way as the *nux vomica* in rousing the sensibility and the contractile power of the intestine. Our author does not, however, consider that two remedies ought to be used indiscriminately under the same circumstances; he thinks the cold injections particularly suitable to persons of a nervous, highly irritable temperament; to the hypochondriacal, and to females suffering from irritation or engorgement of the womb.

Females who have contracted the pernicious habit of taking a warm enema daily, and who have thus lost the power of evac-

ating the bowels by the sole efforts of nature, ought to substitute cold for warm water; they would thus more easily attain the end they have in view, and avoid the inconvenience of diminishing more and more every day the contractile force of the muscular fibres of the bowels, and thereby increasing the degree of constipation. In general, cold injections are very harmless and very well borne; they produce, however, in some individuals, an uncomfortable sensation of cold in the bowels and loins, which may continue for an hour or two. Sometimes they produce pain in the bowels, and slight diarrhoea; in this case, all that is required is to discontinue them for a time, and to use them only every third or fourth day, instead of daily. In the case of patients in whom there is little reaction against cold, it is better not to prescribe water at the ordinary temperature at once, but to begin with it at the degree 68 Fahr., gradually coming down to 64°, 59°, and 53°, till, at length, water of the natural temperature may be used.

Astringent injections are also highly useful, under certain circumstances, in relieving constipation. Bretonneau was the first to establish this new and important fact, which has been again brought forward by Trousseau and Pidoux, in their "Treatise on Therapeutics," but without its having been as yet generally adopted in practice. One can readily imagine the reluctance some medical men have to recommend, in constipation, injections containing the substances they are in the habit of prescribing in diarrhoea—such as catechu, kramiria, alum, &c. But if we reflected, that in persons who have long suffered from constipation, particularly females, the rectum forms above the sphincter a pouch, sometimes of considerable size, in consequence of the distention from accumulated feces, to which the coats of the bowels have been subjected, we should be less surprised that the idea has occurred to have recourse to the injection into the rectum of tonic and astringent substances, with the view of causing corrugation of the muscular fibres of the bowels, which, by corrugating, become shorter, and thus diminish the enlargement of the cul de sac now spoken of.

Astringent injections are particularly suitable in cases where there is reason to suspect an abnormal dilatation of the lower portion of the rectum; for instance, in constipation from the presence of a mechanical obstacle at the anus, caused by hemorrhoidal tumours, swellings of a venereal or cancerous character, or contraction of the sphincter with or without fissure. These injections are, moreover, suitable, for the same reason, to females in whom constipation exists, along

with engorgement or retroversion of the uterus, and to all those persons who, having their bowels relieved only once in eight or ten days, void, after painful efforts, which can be compared to nothing but a sort of parturition, an enormous mass of hardened and dry feces. In all these cases, it is of consequence to rouse the tonic action of the muscular bands of the large intestine, and this indication is well fulfilled by astringent injections.

The ingredients of these injections may be infinitely varied; they may be composed of red roses, krameria, oak bark, bistorta, catechu, alum, &c. The following is Tasseir's mode of proceeding:—He begins with the simple infusion of roses, cold, and at the end of a few days, he adds to each injection from fifteen to thirty grains of the extract of ratanhy. He thinks that in obstinate cases a minute portion of the extract of nux vomica—one-seventh or two-sevenths of a grain, for instance—might be added, with advantage, to each enema. He considers, also, that they measure ten or twelve ounces, so that they may not be retained many minutes; that their action may be of short duration, and that the muscular fibres of the bowels may be allowed readily to contract themselves. The nux vomica, the cold, and the astringent injections, are not certainly the only means at the disposal of the practitioner in the constipation we are now treating of; but they are those of which our author has had most experience, and from which he has derived most success. We must not forget here the means proposed lately by Fleury—viz., the introduction of tents into the rectum, which acting as a foreign body, stimulate the bowel by their contact, and rouse its contractile power; nor the shampooing of the rectum, proposed by Recamier; nor, lastly, inspissated ox-gall.

To all these means must be added, as auxiliaries, drinks composed of vegetable bitters, a tonic diet, the use of black meats, Bordeaux wine, active exercise in the open air, &c. These are useful auxiliaries, much more beneficial certainly than the use of white meats, (veal and chicken,) relaxing vegetables, such as sorrel, spinach, chicory, cooling lemonades, juice of prunes, bouillon aux herbes, &c.

Boulogne, Nov. 15th, 1845.

His Majesty the King of Prussia, by a Cabinet order of the 16th September, has been pleased to order the establishment at Berlin, of a homoeopathic hospital at the expense of the government.—*Allgemeine Homoeopathische Zeitung*.

On the Pathology and Therapeutics of Asthma.

BY M. GENDRIN.

The following valuable clinical remarks, by M. Gendrin, on the nature and rational treatment of asthma, which we extract from the medical section of the *Epoque*, are deserving of attention. They are a good specimen of the high power of generalization, and of the extended views of the La Pitie physician. M. Gendrin's pathological and therapeutical opinions offer a strong contrast to the narrow, limited, local doctrines of the Broussarian school, of which he has always shown himself an enlightened and able antagonist. We are happy to say, that a return to a sound, comprehensive, generalization of the causes, and phenomena, and therapeutic indications of disease, of which we now give an example, is daily becoming more apparent among French pathologists.

The patient lying at No. 8, of the St. Anne's Ward, will enable me to say a few words to you respecting asthma—a disease, the immediate cause of which modern pathologists are endeavoring to find in an organic affection of the lungs. We must first, however, rapidly examine the history of this poor woman. She is thirty-five years of age, and being a washer woman, is daily exposed to the influence of atmospheric variations, and to that of the cold and moist air of the river, where she washes in a boat. She was first attacked with asthma three years ago, and since then has had a fresh attack every third or fourth month. Each accession has lasted one, two, or three weeks, and on disappearing has left behind a certain amount of dyspnoea, which gradually diminishes. She is now under the influence of one of her attacks. Her respiration is slow, short, accelerated; inspiration requires great efforts, the simultaneous action of all the inspirator muscles; expiration is frequent, and accompanied by a sibilant sound, which is heard at the bedside of the patient. She can only breathe when sitting up. Her features express deep anxiety. The state of dyspnoea is not quite continuous; it is aggravated by paroxysms, especially at night. At intervals she is seized with fits of coughing, during which she brings up a quantity of glairy mucous, transparent, and mixed with air. Often in the midst of the coughing, vomiting comes on, and the excretion of the mucous from the bronchi appears to be thereby facilitated. The state of agony in which this woman then appears to be, and the semi-convulsive agitation which induces her rapidly to raise herself upright, in order to favor respiration, give a very good idea of the sufferings of asthmatic patients. The entire organization is disturbed; the pulse is frequent; the

systoles of the heart are energetic, the jugular veins distended, and the skin of the face and neck covered with perspiration.

On examining the chest, its form is found modified; it is ovoid at the base, on both sides, in front and behind; the parietes of the chest are prominent, vaulted as it were, and percussion is attended with an abnormal degree of sound; it seems as if a bladder distended with air were struck; the sound of the expansion of the pulmonary vesicles is no longer heard on auscultating; a sibilous sound, here and there humid, coincides with the expiration. This sibilance may be appreciated by the hand, which, on being placed over the chest, feels a trembling crepitation, isochronous with the motions of expiration. The heart, the large arteries, and the abdominal organs, show no indications of disease. Such is asthma in its paroxysms. An analysis of the phenomena shows the presence in the bronchi of a mucous fluid, which obstructs them, and which the efforts of coughing are destined to expel. The excessive dyspnoea of the patient is the result of the occlusion of the air-tubes by the products of secretion, and also of the emphysematous condition of the air-cells of the lungs, as indicated by the tympanitic condition of the thorax.

Such are the symptoms which have induced some pathologists to consider asthma as bronchitis, accompanied by an unusual secretion of mucous; others, as emphysema of the lungs; and others, as a disease attributable to spasmodic motions of the expiratory and inspiratory muscles; as if such spasms could explain the unusual secretion of mucous, and the stagnation of air in the cells of the lungs. To consider asthma only in the phenomena of its attacks, is only to see a part of the disease, one of its periods. Such a doctrine can only, at the most, lead to the cure of asthmatic attacks. The fit of asthma is only a part of the disease. If we consider it alone, we lose sight of the cause which reproduces the attack for years, during a part of the life of some persons. In order to understand the disease, the attacks must be reduced to what they really are—that is, phenomena of a morbid state which persists in the organization continuously for a longer or shorter time, and which announces its presence, at intervals, by attacks of dyspnoea, of which the abnormal secretion of mucous is the first symptom. If we take this view of the subject, it becomes easy to understand the appearance of asthma as the result, in one, of gouty cachexia; in another of the herpetic diathesis; in a third, of a metastatic disease, owing to the suppression of chronic suppuration, &c. We can com-



prehend also asthma being transmitted hereditarily, or being the result of erroneous irregular regimen or habits. Lastly, this mode of viewing the etiology of asthma gives valuable indications for treatment, which is the most important. If asthma resists nearly always the curative methods adopted, it is because these methods are only directed to the cure of the attacks, and are not deduced from the nature of the disease. It is not, certainly, an easy thing to establish a system of medication drawn from the study of the entire economy, and from the rational appreciation of the causes which produce the disease; and this, perhaps, explains why cures are so rare. But when medicine is considered in a philosophical point of view, when we cease to search, along with the empirics, for a remedy the nature of which is not known, for a disease the nature of which is still less known, then it becomes indispensable to look for the rules of treatment in the nature of the disease, and not in the lesions to which it gives rise, and which after all, are only its phenomena.

You must not, however, think that I wish to draw your attention from the consideration of the local phenomena of diseases, and that I do not attach importance to their study. It would be a serious omission to neglect the local lesions, and not to take into consideration local phenomena, as it would prevent our appreciating exactly all the elements of the morbid state.

I have prescribed an emetic to the patient whose case is before us. It will, in all probability, modify the bronchial secretion, and favor the expulsion of the excreted products which clog the aerial tubes. I expect, also, that through the spasmodic expiratory movements which it will occasion, it will empty the emphysematous air-cells of the lungs. If this fortunate result is obtained, (as clinical experience tells us will probably be the case,) you will see the dyspnoea cease, as likewise the chronic asthmatic excretions. One day will perhaps suffice to bring the patient to the end of the attack which has occasioned her to enter the hospital.

If we do not cure the attack so rapidly, we shall at least obtain a diminution in the symptoms, which will lead to their disappearance, in the course of two or three days, under the influence of a slight sedative medication, or under that of a renewal of the emetic.

Supposing this result obtained, in what state will the patient be after the attack has been cured? If the repetition of the attacks of asthma has given rise to true emphysema

of the lungs, with rupture of air-cells, there will remain a certain degree of shortness of breath, and the physical symptoms of emphysema. But these symptoms will be much less marked and less extensive; there will be no orthopnoea, properly speaking, no fits of coughing, and but a very slight mucous expectoration. If, however, the lungs are not injured in their texture—as we may hope is the case with our patient, who is still young and of a vigorous constitution—the respiratory functions will become completely re-established. You will no longer hear, on auscultating, the sibilant rhonchus produced in the bronchial tubes by the mucous which fills them; you will no longer find, on percussion, the tympanitic sound to which the air that dilates and obstructs the vesicles of the lungs give rise; and you will hear the vesicular expansion murmur at the basis of the thorax, where you now look in vain for it.

The prognosis thus laid down will enable you at once to understand the very different states in which asthmatic persons are in the interval of their attacks. If the patient is still young, of a good constitution, and has only had a small number of paroxysms; you will not perceive, in the thoracic organs, the slightest trace of organic lesions or of functional disturbance in the interval of the attacks; the repletion of the bronchial tubes by viscid mucous, the emphysema which is observed during the attacks, all will have disappeared with the dyspnoea—the cough, the sibilant rhonchus, the tympanitic sonority and the bulging of the thorax. The patient is not, however, cured, for the attacks will return sooner or later. Allow these attacks to be frequently repeated, and then examine the same patient in the interval of his paroxysms; you will find his respiration short, frequent, and disturbed by a dry cough, whilst the physical signs of more or less extensive emphysema are present. The repetition of the attacks has given rise to permanent organic lesion of the lungs, and to a functional disturbance of the respiration, which becomes exasperated in the attacks, and persists, during their interval, with a gradually increasing intensity. During the first period of the disease, the asthma existed without pulmonary lesions, only reproducing the lesions during the paroxysms, and as phenomena depending on their manifestation. In the second period, the asthma is not represented by the organic and functional lesions of the lungs. It merely exasperates and aggravates them; and the paroxysmatic affection is complicated with organic lesions and functional disturbance, to which it, the permanent disease, has progressively given rise.

## REVIEWS.

*Animal Chemistry, or Organic Chemistry in its application to Physiology and Pathology.* By JUSTUS LIEBIG, M. D., &c. London: Taylor and Waston, 1842, pp. 345.

(Continued from p. 56.)

The starting point of our author, in the consideration of this subject, is the enunciation of the existence, in the living body, of a distinct force—the vital,—which is stated to be the cause of growth in the mass—of resistance to external agencies—as a cause of motion and of change;—an exciter of decomposition—a changer of the direction of chemical forces—a destroyer of the mechanical force of cohesion—as an attractive force; and that its existence, is an unequal intensity in parts, comprehends not only an unequal capacity for growth in the mass, but an unequal power of overcoming chemical resistance. This is in direct opposition to what he has stated in the previous part of his work; but as medical men, in this country, seem but too prone to recognise in Liebig a great physiological authority, it may be as well that we inquire into the truth of what he here so dogmatically asserts. “The manifestations of a vital force,” says he, “are dependent on a certain form of the tissue in which it resides, as well as on a fixed composition in the substance of the living tissue.” If the manifestations are, of course the force is likewise dependent, for it is by the manifestations alone that we can become cognizant of the existence of such a force; and if dependent, how is it at one time a cause, at another time an effect? Nothing, surely, can be more absurd than pompously to announce the existence of a thing, and then immediately to state that it is inadequate for the purpose it is assumed to fulfil. “In inorganic nature, do we require to assume the existence of distinct entities to explain the phenomena of attraction, combustion, &c.? We know not how or why a certain aggregation of matter called phosphorus should be capable, when exposed to certain agents under favorable circumstances, of exhibiting the phenomenon of combustion; or why a certain other aggregation of matter, called ivory, should be capable, when struck by a hard substance, of displaying those of sensible motion. But we know that they do so; and we satisfy ourselves, in these instances, with stating that the phosphorus is *qua* phosphorus, combustible, and the ivory, *qua* ivory, elastic, without ascribing to them any substantial principle of combustion or of sensible motion. In like manner we know not how or why a certain aggregation of matter, called organized, should be capable, when

acted on by certain appropriate powers, of manifesting the phenomena of life. But we know that it does so—that the more perfect the organism is, the more remarkable are these phenomena—and that any change in the former produces a corresponding change in the latter; and what other proof can we require, or possess, that organized matter is, *qua* organized, endowed with vitality, and that it is not upon any substantial principle of life that these phenomena depend?” It gives us pleasure to notice, in the recent work of Mulder on Organic Chemistry, that he has, with much acuteness, although in a form of argument formerly used by Thompson, exposed the fallacy of the vital principle school,—one in which Liebig aspires to be a leader, although he appears to be ignorant of the real force or meaning of the words he employs. “No idea (that of a vital force) can be less distinct than this. The existence of such a force in the fully formed organism is assumed as governing the whole. Respiration, the circulation of the blood, the functions of the nerves, &c., are effected by one force, which is called Vital Force. This vital force causes respiration here, digestion there, the secretion of the saliva and of the pancreatic juice in other parts of the body. It maintains at once the substance of the bones—of the muscles—of the brain. It is supposed that this same force is modified, with reference to the different organs which it influences. What would remain of the primary idea of force, if we saw force—here causing motion, there effecting a chemical alteration—elsewhere producing feelings or sensations? It seems to me that, in its ordinary signification, the term vital force expresses an idea as incorrect as if we supposed that one simple force, differently modified, operated in a battle fought by thousands—a force that acted so as to fire cannon and muskets, cut with swords, transfix with bayonets, sound trumpets, and keep men and horses in constant agitation, &c. The army appears as a substantial whole, and produces phenomena. The organism, composed of the most different parts, also appears as a substantial whole, and produces phenomena. If we assume for the latter a single force, differently modified as the organs vary—a single vital force by which the whole is animated, then, to be consistent, we should assume the existence of a fighting force in a battle.”

A careful perusal of this chapter will enable the reader to see that Liebig, however excellent he may be in the practice of chemistry, loses himself in a sea of contradic-

• Fletcher's Rudiments of Physiology, p. 39

tions; and that the ideas he possesses of all forces are exceedingly unlike those, which we should have expected in one enjoying such a reputation as he does for philosophical argument.

It might be as well that we should here inquire what is the true meaning of force.

"When we speak of attraction and repulsion," says John Fletcher, "we, indeed, seem to be speaking of simple forces producing certain actions: but we are, in fact, speaking of the actions themselves, those of attracting and of repelling, the forces being, in both cases, quite distinct from these actions, and consisting of a property of being attracted or repelled, on the one hand, and a power of attracting or repelling, on the other." And again, here is Mulder's explanation of the term force. "In the natural sciences, force is assumed to signify an assumed cause of observed phenomena; we do not, therefore, observe forces, but suggest their existence to ourselves; and we do so in conformity with sound principle, for the phenomena constrain us to believe that such forces exist. No cautious inquirer into nature goes farther than this in the present day.

We do not introduce forces to which we assign properties, but we form the idea of some particular force, after the necessity for its existence has been demonstrated by the observation of natural phenomena. The idea of force is, therefore, a concrete one, by which every specialty in the phenomena is embraced, and unity is given to the whole." Here then, we think we have a proper definition of the term force; which is in strong contradiction to the illogical application of it made by Liebig, who assigns to his vital force a series of properties, with which, if it is endowed, it becomes a distinct entity. Philosophically speaking, we might, with as much propriety, assign to the force of gravitation a series of properties, consisting of all the modes of being which gravitant matter assumes.

So far as we have gone, we find that Liebig has employed the term in a twofold sense,—first, in his "vital force," which is expressive of a distinct entity; secondly, as a property distinctive of an organized tissue; but what can be thought of the clearness of our author's views when he adds a third application of the term, and from his statements we are left to infer that it is only a mode of the being of matter. "The amount of motion," says he, "is the momentum of force."

Liebig has, however, furnished us with as excellent an illustration of our views as we could have desired. It is as follows: "As the manifestations of chemical forces (the

momentum of force in a chemical compound) seem to depend on a certain order in which the elementary particles are united together, so experience shews us that the vital phenomena are inseparable from matter; that the manifest actions of the vital force in a living part are determined by a certain form of that part, and by a certain arrangement of its elementary particles. If we destroy the form, or alter the composition of the organ, all manifestations of vitality disappear." It is not long, however, before our author contradicts himself, as the following sentence will shew: "It is obvious that a certain amount of vital force must be expended to retain the elements of the complex azotized principles in the form, order, and structure, which belongs to them:" although, as the former sentence announces, this "form, order, and structure," is the cause of the vital force. The effect is thus made, illogically enough, to have some share in the production of the cause.

His explanations, if such they can be called, although evidently by him intended to be so, of certain inexplicable phenomena, are, to say the least of them, very unsatisfactory. We are told, for instance, that the cause of the decadence of plants, and of the limitation to the duration of life in plants and animals, depends on this, that, after the establishment of an equilibrium betwixt the vital and chemical forces, a further increase of the latter takes place, which, continuing to increase, finally destroys the other. Such a statement brings us not one whit nearer to the knowledge of how this is caused, or how this assumed equilibrium is disturbed. Science has gained nothing by the communication of the dogma; and if it had been stated that all we know of the matter can only be expressed by saying it is an ultimate fact that plants, &c., die, it would have been a less pretending, but not less intelligible statement.

We shall now proceed to a consideration of the theory brought forward by our author on the cause of motion in animal bodies.

For the purpose of illustrating his subject and bringing us step by step to a comprehension of the views he entertains on it, he proceeds to trace the forces exhibited by chemical action in the galvanic pile, which are, according to him, transferred to a distance, and transformed into a new force, the mechanical in producing motion. Now, we are not at all convinced, however pleasing and simple it may appear to be, that any such thing as transference of chemical force takes place here; and we would, so far as we know of a subject, which, for the present, must remain in profound obscurity, rather

adopt a view more material, and look upon the electrical currents proceeding along a wire, as a proof of the elimination during chemical action of something really existing. For, did we not prefer this view of the subject, we should be apt, like our author, in tracing the analogy between the galvanic current and the vital agent, to fall into the error which he evidently embraces, when he inferentially states that the vital force, if not identical, is closely allied to electricity in its nature; and the way this conclusion is arrived at, is simple enough. He sees galvanic phenomena resulting from the decomposition of water by zinc, an absorption of oxygen, and a power produced in the direct ratio of the oxygen consumed, and capable of transmission to any distance. In the human body, again, he finds that oxygen is consumed, that tissues become effete and are thrown off, and that power appears to be produced in proportion to the oxygen absorbed. "Muscular substance is oxidated, as the zinc, in the part, force is generated, which is distributed by the nerves to different parts; when it is in excess in one organ, it is conveyed to other parts where deficient." From this decided relation between the change of matter in the animal body, and the force consumed in mechanical motion, no other conclusion can be drawn but this, that the active or available vital force in certain living parts is the cause of the mechanical phenomena in the animal organism." Now, we admit the facts, that all living action must consist, like ordinary chemical processes, in a series of actions and re-actions, which we only become cognizant of by witnessing them; but, for Liebig to imagine that he has simplified the matter, or thrown any new light on it, by assuming that the force of motion, or motion occurring in chemical changes, is transferred or transformed, on the one hand, into electrical phenomena, or, on the other, into mechanical, or in the third place, into *vital* phenomena, we feel constrained to deny. The very term, transference of force is unsound. It is only that which is substantial, as Mulder remarks, that can be communicated.

And in truth, all that we know of the matter, or are likely to know, is this, that the living body is composed of various tissues, in other words, vital compounds, each endowed with its own special properties, capable of being acted on by other compounds, and again re-acting on them,—of giving rise to phenomena—to actions (in which, truly speaking, consists life,) that these properties as in the case of the action of an acid on an alkali, are exhausted; that for the purpose of being renewed, and the actions again re-

peated, they require the deposition of fresh nutriment, otherwise life, which, as we have just stated, consists but of these actions must cease. And it may be summed up in this, that of the nature of these vital forces we know nothing; but this we certainly do know, that they are neither the electrical nor the chemical, because the phenomena they present are not those of either of the latter. But when we, as physiologists, admit that of them we know nothing, we are not a whit more in ignorance, than is the chemist or mechanical philosopher, of the nature of the properties which characterize inorganic matter. A few pithy remarks follow up the chapter on animal motion, and these are entitled *Theory of Disease*. This subject is very summarily disposed of by our author, who states, that disease occurs when the sum of the vital force is weaker than the acting cause of disturbance. Every cause is then assumed to be mechanical or chemical, and acting as such, by producing a disturbance in the proportion of waste and supply. A deficiency of resistance, we are then told, means, that the oxygen of the atmosphere acts more energetically on the living tissue, and of course more motion than normal is produced. The superabundant force is then conducted away by the nerves, and an acceleration of the involuntary motions, with an increase of temperature, takes place. This constitutes a febrile paroxysm, nothing can be simpler; and the proximate cause of fever, which has puzzled the brains of physicians from Hippocrates downwards, is clearly shewn forth to be nothing more than a quicker burning of the lamp of life. The remedies would seem, however, to be, to a certain extent, homœopathic; for a cure, it is stated is effected by the action of blisters, sinapisms, &c., which act by creating a more intense disturbance or combustion of tissue in a previously unaffected part than exists in the diseased one. When, however, the lighting of a neighboring fire does not extinguish the other, the physician we are told, acts with wonderful sagacity indirectly, when he diminishes, by his bloodletting, the oxygen carriers, when, of course, the fire goes out of itself. Pity that the doctrine is not followed out by the admirers of Liebig, and a practical exhibition made of the excellence of the discovery.—Formerly, the inhalation of dephlogisticated air, or of nitrous oxide, was viewed by the enthusiast of half a century ago as a panacea for all the ills that flesh is heir to; but as the world grows older, we grow wiser, and the proper course now would appear to be the very opposite; and there can now be no difficulty in smothering the fever, by an-

king the patient inhale hydrogen gas, provided it should not smother himself. It is scarcely possible to read this chapter without a feeling of wonder at our author's style of cool assumption. No difficulty occurs to him,—no exceptions to his generalizations ever appear to have entered his mind, but he goes on ploddingly with the most unmatchable gravity, dealing forth his formulæ of disease with all the precision of an algebraist. For instance, sympathy is defined to be the transference of diminished resistance to more distant parts, a mode of expression too palpably absurd to require any comment.

The chapter on respiration is interesting in a chemical point of view, but presents nothing worthy of special notice in a physiological sense, as it is a subject still sub judice. But even chemically, the whole doctrine is open to many objections; and the assertion, that the iron in the globules is the main oxygen carrier, is doubted both by Simon and Mulder, who believe it to be in the metallic state; and that the color of the blood depends on the degree of oxidation is certainly not true, as the coloring matter has been obtained by Simon perfectly free from iron. The inference drawn then by Liebig, of the cause of the frightful effects of prussic acid and sulphuretted-hydrogen, by their ready action on the compounds of iron, when alkalis are present, must fall to the ground.

We have devoted the utmost care to a perusal of this work, and we rise from it with the conviction that Liebig, so far as he states facts connected with nutrition of tissues, amount of food necessary for production of motion, &c., may be chemically correct; but that, departing from his weights and his balance, he aspires to be a philosophical physiologist, and, to explain causes of which he is necessarily ignorant, that he departs not only from his legitimate sphere, which he is so well qualified to occupy, but, from ignorance of what others have done and written before him, he entangles himself in a maze of contradictions, and confuses, by constantly shifting his principles, those who may seek information from his work; and here we are sorry to say, that the difficulty of dealing fairly with him arises less from the nature of the subject, than from the illogical and heterogeneous ideas he seems to entertain, at one time appearing as truisms, clothed in the technical language of the laboratory, at another, in the use of words which, however special they may be in the vocabulary of those who have previously studied physiology, are by him used frequently in a sense which may mean everything or nothing.

In our next we shall devote a few pages to the consideration of the relation which organic chemistry in general bears to physiology, and more especially to Homœopathy.

*British Jour. Hom.*

#### PEOULIAR CASES IN MIDWIFERY.

*By Thomas Torrance, Esq, Surgeon Andrs.*

In a late *Lancet*, I observed a case of expulsion of the entire ovum, at the full period of gestation. The two following cases have since occurred in my practice, a record of them in the same journal may prove interesting to the profession.

CASE 1.—I was called, about mid-day of the 22nd May, 1837, to a Mrs. T.—, aged twenty years, wife of a mechanic, in labour for the first time, of a slender make, but having a large capacious pelvis. After an easy labour, she was delivered, about 7 o'clock, P. M., of a full sized, well formed, male child. Having tied the umbilical cord, and handed over the child to the nurse, I turned my attention to the mother. Upon placing my hand over the uterine region, and making gentle traction with the cord, she gave a groan, and by one expulsive effort a second child was born, enveloped in the membranes together with both placentæ attached. I lost no time in separating the membranes, and exposed the child, also a male, but much smaller than the former, and which survived only a few days. I have been in attendance several times upon the mother at subsequent confinements, but have seldom been forward in time, her labor being too expeditious.

CASE 2.—Mrs. W.—, the wife of a farmer, and the mother of several children, was taken in labor during the night, in the month of August, 1839: I was called about seven in the morning, and, upon my arrival, found the nurse with one child, a male, upon her knee, which had been born about fifteen minutes. Upon my going to the mother, who was in bed, I was told by her that *all* had come away, but had not been removed. Upon introducing my hand under the bed-clothes, I found something unusually bulky which, upon examination, turned out to be a second child, enclosed in the membranes together with both the placentæ attached. I need scarcely add, that this second child, which was a female, was dead.

Expulsion of the second child, enveloped in the membranes with the placentæ, in twin cases, I believe is not at all a rare occurrence at the full period of gestation, at which time, however, I have never met with it in cases of single births, though frequently in cases at the seventh month, particularly when the child was dead.

*Lancet.*

## HOMŒOPATHY

May be considered a heresy in medicine, between whose votaries and the orthodox school a warfare, as bitter as it is *ungentlemanly*, has hitherto been waged. Because its enemies do not tell the truth about it, and because every thing vitally concerning human life and health is matter of deep moment to all; the writer proposes to state briefly and correctly what the claims of homœopathy are, to the favourable notice of the public. In doing this he feels that his position is much like that of Galileo, when advocating the Copernican theory of the world. He is broaching doctrines which, though true, are unfortunately calculated to strike the common sense of mankind, as being *utterly absurd*. The idea that the sun was fixed, and the earth moved, was so directly opposed to every man's senses and experience, that it was *then* unanimously rejected, though it has since come to receive the universal assent. So it is with homœopathy; those who look beneath the surface of things, and have sufficient industry and ability to investigate and comprehend its great truths, *know* that its doctrines, though now rejected by the unreflecting multitude, are destined, ultimately, to be universally received, and to confer inestimable benefits on the human race. "Truth, though crushed to earth, will rise again." Unfortunately, too, for homœopathy, as with almost every other new discovery, its worst enemies are its inexperienced and incompetent advocates and practitioners. Its great lights cannot now, however, be extinguished by all these difficulties and embarrassments, but *must* ultimately work an entire revolution in the principles and practice of medicine.

1st. Homœopathy claims to have discovered the true principles on which medicines should be given, and to have first established their true curative powers in all diseases, by the *Baconian method of induction*. (Thanks once more to the great lord Verulam.) By experimenting with all medicines upon the healthy, their true curative powers on the sick are spread out to view, as it were, in a solar microscope, their minutest effect on every portion of the human organism being shadowed forth in clear magnified perspective. The great law, discovered and promulgated by Hahneman, "*Similia Similibus curantur*," is as true as the Copernican system of the world, and, like that system, with gravitation added by Newton, it is destined to bring *order out of chaos*, in the science of medicine. The chaotic darkness, uncertainty, and never-ending fluctuation, pervading, till then, *all medical science*, has given place to a beautiful *order*, infallible

while the world stands. It has operated in the medical world little less than the omnipotent fiat, "let there be light," once did in the natural world. This discovery of the great Hahneman is fully equal to the discoveries of Copernicus and Newton, and is destined to carry his name down to posterity, as one of the greatest luminaries of science, no less than the benefactor of his race; whilst the petty sneers of those whose minds are either too contemptible to comprehend his discoveries, or too dishonest to give him credit for them, will be buried in deserved oblivion.

The second discovery of Hahneman, scarcely less in importance than the first, is, that all medicines given in infinitesimal doses, are more prompt and powerful in their remedial effects, than when exhibited in sensible quantities; and, indeed, that they never do produce their legitimate curative effects upon the constitution, except when they are thus diluted, *and by a process which charges them at the same time with human electro-magnetism*. When they are attenuated in this manner, so as to become what we may term, a "*subtle medicated magnetism*," and are dissolved upon the tongue, they at once incorporate with the *nervous fluid of the system*, and produce their effect directly on the *vital powers of life*, removing their morbid condition. That this discovery is another great truth, is as certain as the Newtonian theory of gravitation. *It is one of the eternal principles of nature*, connected with human life, as fixed as the revolutions of the planets. Those who have any concern with healing the sick, and do not *know* these two great principles to be true, are blamably ignorant of what in this day they might know.

When these great principles are scientifically carried out in their application to the treatment of diseases, their beneficial effects on the health and longevity of the human race, will be a very *high per centage* above what the practice of medicine now exhibits. That homœopathy is, to-day, altogether superior to Allopathy in the treatment of small pox, scarlet fever, measles, croup, cholera, typhus fever, ophthalmia, and skin diseases, even in the hands of the most bungling practitioner, are *facts* that the *community generally have a right to know*. That it is superior in the treatment of all diseases, acute as well as chronic, in the hands of a skilful practitioner, no good homœopathist, well versed in both systems, can doubt. That those pretended homœopathists who are too indolent to investigate diseases and idiosyncrasies thoroughly, and who use the low dilutions on all occasions, because they are too

lazy to prepare the higher, do not always succeed, is very true. But it is sinning against the good gifts of heaven and the light of eternity, to charge these failures to homœopathy, instead of charging them to the culpable negligence and indolence of those who pretend to practise what they do not. No one who does not legitimately carry out the doctrines and discoveries of homœopathy, should be permitted to dishonor it by assuming the name. The stupid and senseless blundering of blockheads, in the name of homœopathy, ought not to prejudice sensible people against the great truths of the science. These truths are fixed and eternal, and will remain so long after they are forgotten.

A word as to the different effects of medicines in a crude state, and when prepared homœopathically. Mercury and sarsaparilla, for instance, medicines that occupy a prominent place in Allopathy, meet but few indications in homœopathy, and those far from being important. The indications of medicines in the two systems, indeed, are very generally different, and, in many cases, diametrically opposite. Homœopathy has a list of thirty alterative medicines, a large proportion of which are more powerful than mercury. A curious fact developed by homœopathy is, that those substances composing the great proportion of the mass of our earth, are found to be the greatest medicines for chronic diseases generally. Such are silex, carbonate of lime, carbon, sulphur, sulphate of lime, &c.; these, together with graphites and common salt, are, in their crude state, almost inert, but when attenuated and magnetized homœopathically, they are made some of the most powerful medicines we have.

Homœopathy has been charged with being inefficient in the treatment of intermittent fevers. The writer has not found it so in upwards of thirty cases which he has attended the present year. It is true that great labor is required in discriminating symptoms, and in discovering previous Allopathic treatment in cases of relapse, but this carefully done, and homœopathy is bound to triumph in the treatment of this scourge of the Western country. The easy and safe manner in which fever and ague can be gradually but permanently dislodged, by homœopathy, from the system, leaving it sound and uninjured, are such as to be highly satisfactory to its friends.

In conclusion, homœopathy says to suffering humanity,—“Cease ruining yourselves with drugs. Do not injure your constitutions, and shorten your days, any longer,

with heroic medication. Emetics, cathartics, calomel, quinine, and bloodletting, are now unnecessary. We have discovered an easier, safer, and better method of curing all the diseases that can possibly afflict mankind. Our medicines never weaken or injure the most delicate, while they are more powerful in arresting disease, than the strongest doses that can be given.” These assertions are not put forth in the spirit of a quack advertisement, to deceive you, and get your money without any consideration, but to do you good. We come, like the good Samaritan, with oil and wine for your wounds.—*St. Louis Magnet.*

#### On the Use of Sabina in Uterine Hemorrhage.

By DR. ARAN,

Of the Hotel Dieu.

This neglected medicine has been lately much recommended by Dr. Aran, who published the following cases:—The first was that of a woman of bilious-sanguine temperament, and strong constitution, who was attacked with hæmorrhage in consequence of a fatiguing journey on foot. Besides feverish symptoms, she had dragging pain in the hypogastrium; the hæmorrhage was not violent, but long continued. Cold applications to the abdomen, the horizontal posture, and blood-letting, (!) diminished the discharge slightly, but it returned in the evening, when 1 gramme and 25 centigrammes of Pulv. Sabin. were administered, which effected a complete cure. Another woman, who had been quite regular in regard to menstruation, was attacked with violent uterine hæmorrhage at the time when the menses ought to have ceased. She neglected it; and when she applied for aid, a very copious discharge had continued for a fortnight. She got a bolus of Pulv. Sabin. After the patient had taken eight doses, with an interval of two hours between each dose, the discharge had subsided.—[Gazette Med. de Paris, 1844. N. 17.] Since the time of Galen, Sabina has been a celebrated emmenagogue. Mohrenheim relates, that a woman who wished to abort, took an infusion of Sabina. After some day's severe pain, abortion, with violent uterine hæmorrhage, followed by death, ensued, (Versuche, vol ii., p. 245.) Home found, that, when taken to the extent of half a drachm, it increased the menstrual discharge, (Clinical Expt., p. 419) (Wibmer, vol iii., p. 191.)

## Cantharides in Eczema and Psoriasis,

By DR. SICK.

Dr. Sick reports four cases of Eczema, and two of Psoriasis, in which the tincture of cantharides proved most beneficial. The first of the patients, a sailor, had suffered from Psoriasis, which affected chiefly the thigh, for above a year, and had tried various remedies in the different sea-ports he touched at. The second, a tailor, had suffered for four years with the disease upon his face and limbs. The disease was half a year's standing in the other two. The tincture of cantharides was ordered, beginning with three drops for a dose, and increasing by a drop daily. The disease was immediately arrested, and disappeared in all the three cases within seven weeks. Of the patients affected with Psoriasis, the first was a young girl, who had suffered with it for three years to such an extent that there was scarcely any part of the skin not covered by the eruption. After using the tincture of cantharides for three weeks, the skin was perfectly sound. In the case of the other two, who were twenty-three years old, the eruption was attended with intolerable itching and profuse sweat, that broke out even when they were at perfect rest. After taking the tincture of cantharides a few days, they were better, and in the course of some months they were perfectly cured.—Archiv des Königlichen dan. Gesundheit's Colleg. und Ester. Med. Wochenschrift.—1844.—No. 25.

(For the Dissector.)

## TRACTS ON CONSUMPTION.

## NUMBER TWO.

On some New Pathological Views of Tubercular Consumption.

(Concluded.)

By J—— G——, M. D.

The muscles possess the property of contractility in a more eminent degree than any other animal tissue, and are generally adduced as affording evidences that vital action consists of this single power. But while the phenomenon of muscular motion presents appearances that seem to have no analogy with any mere physical process, and has hitherto been found altogether too recondite for human research, there are many of its effects that can be explained only on the supposition of an expanding force. Careful ob-

servation shews, contrary to the opinions of writers on the subject, that in the motions of the muscles for flexion and extension they undergo no diminution of tension—the form of the muscles are changed, the tension is altered with the force exerted, but the feeling of hardness or softness remains the same for the same degree of exertion—a condition that could scarcely exist if one of the motions depended on simple relaxation. If muscular action were the result of one force, we ought to perceive in the act of extending the fore arm, for instance, besides a softness of the biceps flexors, a corrugation of its fibres, in order to dispose of the instant tendency of the muscle to increase its length upon the cessation of the contractile force. Certainly no such changes take place. Again, in the experiments made to determine whether the bulk of muscles are augmented or diminished by their action, no change has been observed. This could not be the case if one set of muscles were contracted and, it must follow, condensed, while the other remained simply passive; and it must demonstrably be the result if the one is expanded as the other contracts. Researches into the relations existing between the primary physical forces and vital action, show that galvanism is capable of exciting a muscle to its apparently ordinary actions; but to do this the muscle must not be detached from its congener. The opinion that expansibility or repulsion is a vital property of muscles, is not wholly new to physiologists. Brehat regarded the change that a muscle undergoes from a state of contraction to extension as in part an active force, or at least something more than the mere cessation of contraction; and Barthez maintains the very probable opinion that the relaxation is produced by a nervous action the reverse of that which occasions its contraction; the will relaxing as well as contracting. Dimly as we are compelled to view the subject, it is impossible to resist the impression, that it is necessary to the motions both of extension and flexion in muscles, whether the motion be produced naturally or excited artificially, that there should be two antagonist forces of repulsion and attraction, which must act coetaneously.

The question whether expansibility is a vital property receives an additional importance when we come to consider it in connection with the functions and motions of capillary vessels. This system of vessels undoubtedly penetrates every part of the animal frame, and though it cannot constitute the ultimate structure of tissues, it is the last to be distinctly traced by our means of observation, and, in consequence, demands a high consideration in both a physiologica



and pathological point of view. Though distinct from the matter of tissues, yet, in this system of vessels, aided by the action of its nervous fibrils, their bases must arise, and in connection with them the development of all observable pathological phenomena. It is a direct and justifiable conclusion that disease of the capillaries cannot exist without change or suspension of their action, and, consequently, without materially interfering, and, in some cases, abolishing the functions of any organ to which they may belong. It is therefore apparent that the judicious treatment of every disease must have reference to the condition of the capillary system; and it is certainly desirable, in looking for our therapeutic agents, to consider whether our object is to increase a contractile or to lessen an expansile action in these vessels.

It seems to be conceded, at least by many physiologists, that the capillary circulation is independent of any impulsion of the heart. The doctrine embracing this subject was taught as early as Stahl and Van Helmont; and the adequateness of the capillaries to maintain their own circulation was clearly shown and enforced in the *Zoonomia* of Darwin. Physicians are indebted to Bichat for the beauty with which he illustrated, and the force with which he called their attention to a renewed consideration of the subject. Broussais not only maintained the independence of the capillary circulation, but attributed the venous circulation, chiefly, to the impulsion given to the blood in this system of vessels.\* In this country the belief in the capillaries as organs of propulsion, with its necessary accompaniment, a vital property of expansibility, has been embraced by Professor Smith of Yale College, by his son, Professor N. R. Smith of Baltimore, and by Dr. Hodge of Philadelphia. But to no one is science more indebted for a bold elucidation of expansible and contractile forces, as vital principles, than to Dr. H. H. Sherwood of New York.† It thus appears that the doctrines of a force antagonist to that of contractility, with the perfect independence of the capillary circulation, and an actual influence exercised by it over the general circulation, have been long since promulgated and entertained by a numerous class of physiologists.

Capillary motions being exceedingly minute and essentially vital and organic, they admit of but little demonstrative proof, and

like other operations of the kind, may never receive a clear exposition. It is adduced as a proof of the independence of the capillaries of the heart, that the pulsation of the latter organ becomes imperceptible in the smaller arteries before reaching the former system of vessels, and hence that in them its force must be entirely spent. A higher evidence is afforded in the existence of a capillary circulation in those classes of animals—as the vermes—in which no heat exists. The experiments of Fabre on the mesentery of frogs, show that slight stimulations will change the generally monotonous regularity with which the blood passes from the arteries through the capillaries into the veins. By irritating this membrane he found the blood and other fluids rush, for some moments, towards the point irritated; and after accumulation there, the globules have been seen to take a different direction, and even to traverse the vessels that conveyed them in an opposite course. The idea of an expansible capillary force has an equal foundation in the fact that capillary circulation can be carried on without a heart, and is proved, experimentally, by excipients having been seen, by Hastings, Wedemeyer and others, to occasion not only contraction but dilatation of the capillaries. In addition to the proof afforded by this experiment, the phenomena observed in the erectile tissues, have been considered, though upon insufficient foundation, to favor the hypothesis. I have wished to make this subject clear, because, notwithstanding its foundation in natural organic laws, and the most demonstrative experiments, the heart has never ceased to be considered, by the mass of physiologists, as the sole mover of the circulation; and, very recently, some physical experiments, *with water*, on the dead, relaxed and, perhaps, disorganized vessels of an animal have been triumphantly adduced as proofs that the capillaries are inactive in the circulatory process.

From the above inquiry it is manifest that a distinct action,—consisting of an exertion of both the contractile and expansible forces—of the capillary vessels, is the agent by which the blood and other fluids are propelled through them. Admitting this as an obvious matter of fact it remains for us to ascertain, both for its value as a physiological truth, and as a basis from which to apply remedies in disease, what is the specific cause by means of which this action is accomplished. In this inquiry, it must be confessed, we can derive but little assistance from the researches of the anatomist, and the physiologist must therefore look for its elucidation from other branches of science. The experiments and the reasoning which

\* American Journal of the Medical Sciences, No. 4, p. 484.

† Motive Power of the Human System. *Passim*.

these afford, when cautiously applied, have frequently enabled us to arrive at physiological truths, which we perhaps could not have attained by any other method, and which may have been beyond the reach of actual observation.

I have already adverted to the fact that the blood of the two great circulatory systems—venous and arterial—bear towards each other different electrical relations; and in this circumstance I am disposed to look for light by which we may be able to understand the precise nature of the vital powers of the capillaries, and the process by which they maintain their circulation. In the absence of command over any of those delicate instruments which have been devised for ascertaining the electrical states of bodies, I have been unable to determine, by direct experiment, which is the negative and which the positive fluid; but for reasons which will be rendered more obvious in a future communication. I have concluded that the arterial is the positive, and the venous, the negative. Reasoning upon both the fact and the conjecture, we may further suppose that the blood, in the healthy condition of the system, leaves the heart with its electrical equilibrium slightly disturbed in favor of the positive state. The arterial side of the capillaries, deriving their nutriment from the unaltered arterial blood, must be in a similar state of excitation, and upon the approach of the blood, will, in conformity with the universal law that similar electricities expand and repel, become enlarged in their calibre, and, at the same time tend to repel the blood. But this fluid, being impelled forwards by the *vis a tergo* of the heart and arteries, is compelled to enter as the capillaries are compelled to receive it. It is well known that in this intermediate portion of the sanguiferous system the blood undergoes that important alteration which changes it from arterial to venous. In the process by which this alteration is effected the blood becomes carbonated, and the functions of secretion, nutrition, and some degree of calorification are effected. It is impossible to conceive of so material an alteration in the physical properties of any substance taking place without inducing a varying relation in its electrical condition; and accordingly we find, by experiment, that venous blood has its electrical equilibrium disturbed, and, we may suppose, on the side of the negative state. As a consequence of this change and of the common electrical law, that opposite electricities attract and contract, the capillaries will now be excited to contraction, and their contents will be forced into the veins. I have given this

part of my subject but a hasty examination; and yet it appears to me that it affords a simple and probably true way of explaining how the capillary circulation is maintained.

I have hitherto considered the functions of the capillaries in connection with the science of physiology, but their agency in disease is an object of more importance to the physician. Enlargement of the capillaries, with diminished or irregular action, is one of the most common proximate causes of disease, and more particularly of chronic affections. If the capillary circulation be independent of the action of the heart, this enlargement of capillary vessels cannot be, as commonly supposed, the result of simple relaxation, and dilatation by the injecting force of the heart. It is evident that for this condition of the vessels to exist there must be a deviation from a natural state; and it appears to me more philosophical as well as more in accordance with experimental reasoning, to suppose that this has arisen from a subversion of an exact balance between the vital force of contractility, and an opposing force of expansibility, than from a simple mechanical relaxation.

The interest which this subject inspires derives increased importance from its connection with the formation and growth of tubercles. It has already been remarked that these adventitious substances are the result of a certain diseased condition of the system, which it is highly probable has its salient point in a derangement of the blood. Their immediate precursor is a turgescence of the lymphatic glands, or of the whole or a part of the tissue of the organ in which they are formed; and it may be inferred, from post mortem appearances, in some cases, that this simple turgescence may result mortally, or pass away with the recovery of the patient, without the supervention of tubercles. In order that the turgescence may be followed by tubercle, it would seem to be necessary that it should extend to that degree that all power of contraction in the capillary vessels is lost, and consequently to an ability to empty themselves of the contained fluids. In this state the fluids coagulate, and a new morbid process is set up; changes occur in the vessels themselves, as well as in the cellular texture surrounding them.

The process by which tubercles are formed, it is conceded, may go on to a very considerable extent without any accompanying inflammation, while it is ascertained that the condition of the capillaries, supplying them with nutriment, undergo the change in magnitude which has been considered the characteristic effect of inflammation. It is of the

utmost importance, in a practical point of view, to distinguish this apparent resemblance, and, at the same time, pathological difference between the process of inflammation and that by which tubercle is formed: the one from the other.

Inflammation, according to the views of those who confine their belief to a single vital principle, is generally considered dependent on a diminution of contractile force, and consequent relaxation of the vessel, with dilatation from the injecting force of the heart. That this cannot be the true explanation of the phenomena, even as understood, is evident from its incompatibility with another acknowledged doctrine, that a larger quantity of blood passes, in the early stage of inflammation, through these very vessels. The increased capacity of the vessels for transmitting fluids implies that their function instead of being passive must be more active—a state entirely inconsistent with the view that inflammation depends upon relaxation of tonicity in the extreme vessels. It would be more in accordance with a reasonable deduction from facts to consider that in the earlier and, perhaps, real stage of inflammation, there is an active expansion of the extreme vessels, sufficient to admit of the state characterised as hyperemia, and analogous to that known to take place in the heart during its diastole, but more permanent. This action of the expanding force, or *turgor vitalis*, of the capillaries falls short of that degree which would subvert contractility, but is sufficient to modify or even to stimulate it to increased but unequal exertion. Inflammation, according to this view, consists, at least in its forming and active stage, in an increased action of the two vital forces of contractility and expansibility, with, perhaps, a preponderance on the side of the latter.

In the formation of tubercle another process in the capillaries takes place. Their growth and enlargement depend upon the vital power of expansibility, in these vessels, having, a slowly formed but, such a certain ascendancy that the opposing force of contractility is diminished, subdued, or ceases to act. In this state of moderate but permanent dilatation of the capillaries an undue afflux of morbid but white fluids takes place in conformity with simple physical laws. The expansion, in all probability, depends upon an increased repulsion between the fluids and walls of the vessels, arising from an increase of electrical excitation in both fluids and vessels. As upon hydraulic principles the motion of fluids through pipes diminishes with the increase of their calibre, so the first effect of the expanded capillaries,

whether in the turgid tissue or affected gland, must be simply a slower motion of its fluids than in healthy vessels. In the earliest stage and simplest form of the disease; this may be the whole pathological condition; but as soon as the balance and harmony between the two forces in the capillaries is seriously disturbed, their fluids cease to circulate, become stagnant, and their various constituents, which were maintained in a homogeneous state by constant motion, begin to decompose and undergo separation by precipitation. In place of the vital transudations into the secretory tubes of the lymphatic glands, by which the proper secretions are formed, the increased quantity of fluid, and the slowness or entire absence of its motion, admit of those changes and structures which constitute the substance of tubercle. Chemical or electrical laws take the place of the simply vital, and the effused fluids, stagnant and insusceptible of organization, assume a solid and crystalline arrangement. The forms of tubercles, induced under these circumstances, are modified by the mechanical resistance of the structures in which they are produced, but have sufficient generic resemblance to show that they are under the control of one general law.

Tubercle, as thus explained, is a non-vital or foreign body, capable of undergoing no change that is not induced in it by external agents, but, by its irritation causing the surrounding tissues to pour out fluids which soften, dilute and dissolve it. This softening commences at the circumference, and is a consequence of the changes excited in the living tissues in which this matter is deposited. The parts in immediate contact with the tubercle pour out serosity, and take on the ulcerative action, by which the tubercle is not only softened, but is gradually transmitted, by continuous ulceration, to the bronchiae, whence it is expectorated. These processes are the efforts by which nature relieves itself of an exhausting irritation, and attempts a cure of the disease. After their discharge, if the curative powers of nature retain sufficient force, a new membrane or lining invests the resulting cavities, and the patient, with a diminished respiratory apparatus, may be enabled to live on, and even to attain good health. This fortunate result, long since foretold by Laennec and others, recent anatomical investigations have so far demonstrated to be true, that no practical pathologist, upon fully considering the subject, can doubt that tubercular phthisis is a curable disease.

The pathology of tubercles, then, according to the views of the writer, consists in an expanded state of the extreme vessels, pro-

duced by electrical force, and causing, by a perversion of the nutritive process, the formation of new products, chiefly in the lymphatic glands of the serous tissues. This may be considered as manifested by their increased size, experiments on the electrical relations between venous and arterial blood, the character of their composition, their general location, and, as explained in our preceding number, by their susceptibility to pain, upon pressure on the sympathetic ganglions of the spine. They are a secondary effect of a peculiar depraved state of the system. Though the precise state of the depravation preceding and accompanying tubercles is unknown, yet it seems to be ascertained that it is independent of any kind of inflammation—the usual source of morbid growths in the animal economy—and reason has been afforded for considering that it probably arises in a morbid state of the blood, imparting to the arterial portion a more exalted electrical relation. The effect of this electrical excitation is to stimulate the capillaries to expansion, to cause an interruption in their accustomed actions, to allow their fluids to stagnate, and to induce a suitable condition in the part affected for the action of physical and chemical laws. Tubercles thus becoming non-vital, matters in the system, excite efforts of nature for their expulsion. The irritation induced by them, as foreign bodies, produces an effusion of fluids from the surrounding tissues—(by which they are sooner or later dissolved)—and inflammation and ulceration in the direction of the nearest surface, by which the now liquid matter may escape, commonly through the bronchial tubes.

#### On the Pathology of the Tuberculosis.

*By Dr. Cless, Practising Physician at Stuttgart.*

In this essay the author treats of the occurrence of tubercles in these several organs.

*The Lungs.* Here tubercles are so frequent that Louis established the principles, that, in every case in which tubercles are found in other organs, they exist in the lungs also; that tuberculosis in the lungs is always much further extended than anywhere else; and that in consequence, the presence of tubercles in the lungs would appear a necessary condition of their development in any other part.

Recently, however, exceptions to this have been not unfrequently observed.

Amongst 152 cases of adults suffering from tubercle, that were examined by the author (where tubercles were present either in the peritoneum, the pleura, or in the bronchial and mesenteric glands simultaneously,) he found six where the lungs were free from tubercles; also in some special cases the tuber-

culosis was more important and further extended in some other organs (the peritoneum and lymphatic glands,) than in the lungs. Yet the rule ever remains standing, that in the great majority of cases, tuberculosis of the lungs forms the predominating affection, although frequently during the life-time, disease in the other organs appears the more intense.

In childhood, however, tubercles of lungs do not seem to predominate, but rather tubercles of the bronchial and mesenteric glands. Nevertheless, the observations of the author and of Barthez and Rilliet tell for the contrary. With children, as well as with adults, the lungs must be held to constitute the chief seat of tubercles, save that with them the exceptions are somewhat more numerous than with adults.

The author further found, in more than three-fourths of the cases which he examined, tuberculosis simultaneously spread over several organs. The number of cases of insulated tuberculosis in childhood is very small; the tendency towards general diffusion being strong. The author rarely found one lung only affected with tubercles; when that did occur, it was, in the majority of cases, the right lung which suffered, that being also when both were diseased, the one most extensively affected. This observation refers equally to children and to adults. In most of the adult cases observed by the author, the tuberculosis of the lungs advanced to the formation of vomica; this, however, occurred less frequently in children. Barthez and Rilliet found them in not quite one-third of the cases which fell under their notice. It is chiefly the acute tuberculosis which causes death before the ripening of the tubercles, and this is with children by far more frequent than with adults; yet chronic phthisis often exists without ever arriving at the formation of vomica. Death occurs with children more frequently by the intercurrent of other diseases (particularly acute hydrocephalus).

As concerns the seat of tubercles in the lungs, they begin usually in the apex and in the upper lobe, and spread from thence to other portions of the organ. It is but seldom that an exactly equal degree of intensity and development of tubercles is observed at the same time, in both the upper and lower lobe (and when it is so, it is usually a concomitant of the miliary form). In some cases, indeed, the author found the seat of the tubercles in the lung to be exclusively in the lower lobe, but then the tubercles were insignificant and secondary: more frequently, indeed, in a complete case of pulmonary phthisis the disease was found to have been confined to the upper lung until its terminal stage.

*Bronchial Glands.* Among 152 cases of adult bodies with tubercles which he examined, the author found eight only with tuberculosis in the bronchial glands. These eight arrange themselves into three classes: 1st. Those accompanying the more diffused tuberculosis; these were four in number. 2ndly. Those accompanying tuberculosis of the lung without considerable diffusion of the disease in any other organ; including two cases. 3dly. Those in which it was the only, or at least the prevailing affection; they also were two in number. None of these individuals were above thirty years of age.

It is an established fact, that with children the bronchial glands are very frequently, and by far more frequently than with adults, the seat of tubercles. Some writers have however gone too far, in asserting that the phthisis of children is chiefly or alone a consequence of bronchial tuberculosis. The author never found tubercles in these glands alone, but always accompanied by simultaneous affections of other organs.

Barthez and Rilliet maintain that very few cases of insulated bronchial tuberculosis are met with, but that they are generally united with corresponding affections of the pleura and lungs. Bertin also assigns a secondary place to bronchial phthisis, and according to him the tuberculosis of the bronchial glands diminishes in frequency from one decade of years to another, and never occurs after the close of the third decade. Barthez and Rilliet knew no important difference in the frequency of the occurrence of bronchial tubercles in the several ages of childhood, or at most observed a very small preponderance in young children, while Bertin remarked the disease three times as frequently between the ages of two and eight years, as between nine and fourteen years.

*The Larynx and the Trachea.* Pathologists are at variance upon the nature of ulceration of the larynx and of the lining membrane of the trachea in phthisical patients; Louis declares that he never in one single case found tubercular granulation in these organs; he therefore attributes the origin of the ulcers almost always to a simple inflammatory process, occasioned by the irritation of the expelled matter frequently resting on its way; yet it has recently been placed beyond all doubt (by Rokitansky and Hasee,) that a third part of the ulcers found there, are really of tubercular origin, while certainly the erosions so frequently observed seem to be the product of a simple inflammatory, catarrhal, or apthous process. The author also in many cases convinced himself in the most decided way, of the tuberculous nature of these ulcers, yet he found some where no

tuberculous formation was to be discovered. Deep ulcerations appear most frequently to be seated in the larynx; and superficial ulcers are more frequently found in the epiglottis and trachea.

Amongst the cases observed by the author, not a single one appears where the tuberculosis or ulceration of the larynx and of the trachea formed the primary and predominating affection; it was always secondary and attendant upon the simultaneous disease of the lungs.

According to Louis, ulcerations of the larynx and trachea are twice as frequent in men as in women; and according to Hasee they occur most often between the twentieth and twenty-fifth years of age. In childhood these ulcerations are very rarely found.

*Pleura and Peritoneum.* Tubercles in serous membranes are ordinarily regarded as signs of tuberculous inflammation (pleuritis, peritonitis, and tuberculosis;) but a true inflammatory process is not always connected therewith. This tuberculosis is with phthisical patients of rather frequent occurrence, and attacks all ages from early infancy to advanced years: but it is perhaps with children more frequently than with adults.

If with adults the pleura is more frequently affected than the peritoneum, yet tubercles of the peritoneum, when they do occur, are more general and more productive of serious after consequences; so also the symptoms produced by tubercles of the peritoneum appear with more intensity and virulence.

Chronic peritonitis, when not produced by organic disease of some of the abdominal organs, is founded almost without exception on tuberculosis of the peritoneum, and very frequently a simultaneous affection of the lungs is more or less and sometimes altogether masked by the appearance of peritoneal disease. Tubercles of the pleura and peritoneum present themselves, it is true, most frequently as secondary affections, and principally as the product of intense universal tubercular dyscrasia; yet they do occasionally appear as primary, and even as the only tuberculosis. So also the author observed upon the pleura, broad, flat, confluent tubercles, single and insulated; the same upon the peritoneum, where he also remarked a peculiar appearance of the tubercular matter. Each single tubercle was at its base surrounded by a black or blue-black ring, formed by melanotic segment; sometimes a red border around the tubercles of the peritoneum and pleura, was also seen.

According to the observations made by the author, the peritoneum and mesenteric glands are seldom affected with tubercles at one and the same time; indeed, a high degree of th.

disease in the one, appears almost entirely to arrest or prevent it in the other. This was established by Berthoz and Rilliet; but Rokitsky asserts, on the contrary, that the result of tuberculosis of the peritoneum is usually tuberculosis of the abdominal and lymphatic glands.

**Heart and Pericardium.** Tubercles on the pericardium range amongst pathological rarities, and do not easily attain to a serious and excessive degree. According to Rokitsky they usually arise out of the tubercular metamorphoses of an inflammatory exudation; this, however, in one case observed by the author, was not confirmed.

With children, tubercles in the pericardium and upon the serous membranes, occur more frequently than with adults. The author never saw tubercles in the muscular tissue of the heart; they do indeed present themselves there very rarely, and thence spread. Upon the endocardium and upon the lining membrane of the vessels, according to Rokitsky, they never appear.

**Intestinal Canal.** Tuberculosis of the intestinal canal appears in two states; as submucous tubercular-granulation and infiltration; and as ulcer. (Probably many enlargements of the mucous-follicles and erosions are mistaken for tuberculosis.)

The author found in 88 cases (that is, in more than the half of those which he observed,) that the small intestine was affected; and in about a fourth part of them (namely, 37) he found the large intestine also suffering. Louis, on the contrary, observed with five out of six of his phthisical patients, ulcers in the small intestine.

Tuberculosis of the intestinal canal is of frequent occurrence at all ages. It is found the least often in extreme old age, and in the earliest periods of childhood. It is to be remarked, that in the experience of the author, the occurrence of tubercles in the intestine was less frequent between the 30th and 40th years of life than in any other period, whilst in the preceding and following decades with two thirds of the tuberculous subjects, tubercles were found in them. Of these two thirds, it appeared that between the ages of 30 and 39 the half were diseased in that organ.

As concerns the affection of the large intestine, it appears that between the 20th and 30th years of life there is strong disposition in this disease to seat itself there, since more than the half of the whole cases in which it was found there occurred in this period. In no single case of tuberculosis of the intestine did the author find the disease existing there alone; neither did he ever find it predominant and inclined to spreading when there was

simultaneously existing tuberculosis of the other organs. It consequently appears that it never here exists as an isolated or primary affection.

The author only once found ulcers in the stomach and œsophagus; Barthoz and Rilliet, on the contrary, remark that the stomachs of young children appear to be more frequently affected than those of older persons, the reverse of which is observed with regard to the small and large intestines.

Ulcers in the duodenum are very rarely found; but when present, according to the observation of the author, they most frequently commence near the lower portion.

As concerns the affection of the large intestine, it is most commonly found existing simultaneously with that of the small intestine, though it is indeed in some exceptional cases found where the small intestine remains healthy.

The cæcum and ascending colon are frequently attacked by tuberculosis; the further downwards the less frequent the affection; the author never found it reaching below the descending colon.

Whilst the tuberculosis of the large intestine is of more rare occurrence than that of the small intestine, yet, in some individual cases, the former reaches an intensity never observed with the latter.

**Mesenteric Glands.** In these glands both Louis and the author found tuberculosis in a fourth part of their phthisical patients, and at all ages; yet they appear more liable to attack in advanced age than in the prime of life. They were seldom affected in any preponderating degree between the 30th and 39th years of life, whilst during the preceding, and still more during the following decennium, the proportionally largest number of cases was presented. With children, however, the tuberculosis of the mesenteric glands appears to be somewhat more frequent than with adults of middle ages (but with them it seldom presented isolated or in preponderating degree, and mostly only as the accompaniment of a general and diffused tuberculosis). Barthoz and Rilliet found indeed the existence of tubercles here in almost the half of their cases; but only in one of 22 children were they of any serious extent. They found also that in these glands they scarcely ever appear before the third year.

The author thinks that it is without reason that these glands, together with those of the bronchia, have obtained so prominent a degree of attention in our days, amongst children's diseases. The too conspicuous rank given to them is caused by a mistaken opinion respecting the enlarged bellies of children, to which this character has been

given; these enlargements, however, are often altogether independent of tuberculosis or other degeneration of the mesenteric glands.

So far as concerns the connection of the tuberculosis of these glands with that of other organs, it appears only, in general, associated with further developed deposits in other organs, as the sign of a high degree of tuberculous dyscrasia, and holds only a secondary and subordinate place. That organ in which tuberculosis most frequently accompanies tuberculosis of the mesenteric glands, is the intestinal canal; yet tubercles in the mesenteric glands are nevertheless independent of the formation of ulcers in the intestinal canal. The latter frequently occasions simple redness and swelling of those glands.

Mesenteric and peritoneal tubercles are seldom found simultaneously. In one case, indeed, the author found fully-developed mesenteric tubercles (with deposition of bone-earth) in a female patient aged 41, who died of pulmonary phthisis. The lungs, with the bronchial and mesenteric glands, are the only organs in which the author has observed the process of earthy deposition.

**Liver.** In adult age this organ is one of those most rarely attacked by tubercles, which when they do occur scarcely ever progress very extensively. The tuberculosis stands here in strong contrast with carcinoma, whose especial seat is in the liver. With children, however, tubercles of the liver are more frequent. Barthez and Rilliet found their existence in this organ in one fourth of the cases of children affected with tuberculosis, but generally in a secondary and subordinate degree as compared with their presence in other organs.

**Spleen.** With adults tubercles are here also seldom found, and scarcely ever do they arrive at any extended development or occur in large masses. But it is otherwise with children, with whom Barthez and Rilliet found them present in more than a third part of their cases; and in intensity exceeding on the average that of the other organs. Tubercles in the spleen are, according to the author, not only very frequent with children, but, if we except the lungs and the serous membranes, in no other organ do they so often appear. The volume of the spleen is thereby usually increased; it sometimes, however, is observed that the spleen is quite covered with them and yet retains its ordinary size, the parenchyma being sometimes softened and at other times of natural consistence.

It is worthy of observation that, notwithstanding the frequency and intensity of tuberculosis of the spleen in childhood, yet it never appears as a primary or insulated phe-

nomenon. In the majority of cases tubercles of the spleen are the concomitants of diffused and general tuberculous disease. Never during life are they known by any separate or special symptom.

The author has often observed the commencement of the softening process of tubercles of the spleen, but never their actual and entire liquefaction accompanied with the formation of vomica.

The disposition of the spleen to tuberculosis does not appear (as is the case with the bronchial glands) to be entirely lost with old age.

**Kidneys.** Here tubercles are presented at every age; they are, however, decidedly more frequent in children than in adults, yet they are with them also subordinate to other affections, and seldom obtain an intense degree.

The parenchyma of tuberculous kidneys has always been found by the author in a perfect condition, with the exception of one case, where it was found considerably congested. In the greater number of cases, the tuberculosis of the kidneys was almost entirely unaccompanied during life by any appearance of disease proceeding from it. With some adults in the last stage of phthisis, diabetesinsipidus appeared, which, however, the author regarded only as a symptom of general wasting, and independent of the tuberculosis of the kidneys (analogous to the colliquation of diarrhoea,) since in the last stage of phthisis and with unaffected kidneys he repeatedly observed the same.

With a boy of 12 years old, in whom the tuberculosis of kidney had reached the highest degree, the urine was strongly albuminous, without the kidneys presenting any appearance of granular degeneration (Bright's disease.)

**Uterus, Fallopian tube, and ovary.** The tubercular degeneration of the internal genital organs of women has received too little attention. The author observed it six times; and it is by no means of infrequent occurrence, though Rokitansek asserted that tubercles are never found in the ovary.

The author saw tuberculosis of the uterus under three forms: 1st. As tubercle deposited in the substance. 2d. As resting upon the inner superficies. 3d. As converting the whole substance into tubercular matter.

In all cases of tuberculosis of the genitalia, there also existed simultaneously the same disease in the adjacent regions of the belly and bowels, but the former appeared only as secondary, and as the expression of a high degree of tubercular dyscrasia. Conspicuous symptoms marked the affection only in one case; in this its similarity with those

cancer of the uterus was worthy of observation.

At all ages, and also before puberty, the author found the tuberculosis in the parts indicated. Rokitsansky observes, of the tuberculosis of the uterus, that it never extends beyond the *os uteri internum*, and that it never attacks the vaginal portion (in which it differs from cancer.)

*Brain and its membranes.* The French pathologist first observed the so-named tuberculosis of the arachnoid, which is important on account of its relation to *hydrocephalus acutus*.

The author found arachnoidal tubercles in five children, between the ages of 8 months and 11 years, and with the exception of one case, the affection was always associated with acute hydrocephalus. In all these cases, tubercles existed in the lungs, and in most of them, in other organs also. Barthéz and Rilliet once found tuberculosis of the meninges isolated.

Tubercle of the arachnoid easily escapes observation, for it is frequently obscure and of no great extension. Tubercles here are always found on the outer side of this membrane, between that and the pia mater, never upon the inner, whilst this is the case with the other serous membranes. These observations are quite in accordance with the appearance of the simple normal serous effusion, as well as of the product of inflammation of the arachnoid being only to be found on the outer side.

Valleix has described tubercular arachnitis in adults, and affirmed that it is present wherever, in adults, inflammation of the membrane of the brain, or effusion from hydrocephalus exists. The author contradicts this last assertion.

Arachnitis with purulent effusion and hydrocephalus, are certainly often present with adult tubercular subjects, without, however, being necessarily accompanied with tubercular granulation in the arachnoid.

Tubercle in the arachnoid holds certainly a secondary place amongst the other diseased products of the brain.

Tubercles in the substance of the brain are by no means infrequent with children. According to Green they occur most between the ages of 3 and 7 years. Sometimes one single tubercle is found there, and sometimes also they are more in number. This seat is more frequently in the hemispheres of the cerebrum, than in those of the cerebellum. According to Green, in no case were tubercles exclusively confined to the brain, but they always existed simultaneously in the cavities of the chest or abdomen, yet the greater development of the cerebral tubercles

induced the presumption that the disease had originated there. Barthéz and Rilliet observed two cases of isolated tuberculosis of the brain. According to the fore-named authors, the coincidence of cerebral and arachnoidal tubercle was frequent. This, however, was not confirmed by the author.

*Lymphatic glands.* With diffuse tuberculosis it is not infrequent that the glands of the neck, shoulders, abdomen, &c., present degenerated tubercle; also in that case the subcutaneous cellular texture is not infrequently the receptacle of tuberculous matter, which then produces ulceration of the skin.

*Muscles, bones, and joints.* Although mention has scarcely ever been made of tubercles in the muscles, yet the author twice found them in the case of children suffering under the highest degree of scrofulous or tubercular dyscrasia (they were existing in the musc. soleus, gluteus, and in the tendo achilles.) In both cases, tubercular disease of bones was found in the neighborhood of the affected muscles. The tubercles were of roundish form, and from the size of millet grains to that of hemp seed, of whitish yellow color, and mostly solid, but some of them half-liquified, and resembling pus. Rokitsansky denied the appearance of tubercles in muscle in the form of original grey tubercles; according to him they are no more than tubercular exudations.

Tuberculosis of the bones is in a majority of cases the cause of pain in the bones in scrofulous and phthisical subjects. These tubercles also occasionally appear isolated and without the simultaneous affection of inward parts. Even with adults, tubercular affections of the bones sometimes appear.

In the joint itself also, and in its soft parts, the author once found tuberculous degeneration, (namely, in the sterno-clavicular articulation,) and at the same time the ends of the bones were carious and impregnated with tubercular matter.

The author has never found tubercles in the thyroid gland, in the pancreas, in the salivary or in the mammary glands. The testimony of Rokitsansky supports his experience, that in these organs they are never presented. On the contrary, tubercles in the testicle are often spoken of by writers. Rokitsansky also mentions them, and says, "they not infrequently appear there first, and spread from thence to the other sexual and urinary organs."

The frequency with which the several organs subject to tuberculosis are, in the case of adults, liable to the disease, is in the following proportion: Lungs 146, small intestines 83, mesenteric glands 38, large intestines 36, peritoneum 18, pleura 13, larynx and trachea 12.



chea 10, bronchial glands 6, external lymphatic glands 6, female parts of generation 5, spleen 4, kidneys 4, bones and joints 3, liver 2, membranes of the brain 1, pericardium 1; all together 152.

The proportion as given for childhood would be very different, and in advanced age also, particular exceptions occur.

The lungs at every period of life are the most liable to tuberculosis, but the cases in which the lungs remain sound, whilst other organs are attacked, are yet more scarce in adult age than in childhood; and the difference between the frequency of tubercles in the lungs, and their frequency in the organ standing next in liability to attack, is with adults much more considerable than with children.

In childhood, next after the lungs, the bronchial glands are most exposed to this disease; but with adults its occurrence there is rare, and almost unheard of after the 30th year.

In like manner, the presence of tubercles in the mesenteric glands is more frequent in childhood than in adult age, yet the difference here is not great; and the affection of these glands is secondary in importance to that of the bronchial glands. With them, however, liability to tubercular degeneration does not appear to be lost with advanced age.

The liver, spleen, and kidneys are more frequently affected with tubercle in children than in adults. Of these three organs, the spleen is with adults the most rarely attacked.

Cases of tuberculosis in the serous membranes, are also in childhood more numerous than in adult age; especially in the arachnoid, and in the brain itself.

On the other hand, adults are most liable to tuberculous disease in the intestinal canal. Tuberculosis of the larynx and of the trachea appears particularly to occur between the 20th and 40th years of life. With children it is very rare, and it is infrequent also in old age.

The internal genital parts of females may be attacked at any age; yet such affections are less frequent in childhood than in adult years.

The question whether a physiological law may somewhere be established according to which the development and distribution of tuberculosis in the several organs may be ranged, can hardly yet be answered. The assertion of Hasse, that "the development of tubercle in the different organs happens most frequently simultaneously with their greatest physiological activity," is easily confuted by matter of fact.

With regard to the difference of tuberculosis in childhood and in adult age, so much

may perhaps be explained, that with a fixed tubercular dyscrasia in the organs of children, the specific matter of the disease is deposited with greater ease, and in larger abundance in the different organs, on account of the changes of tissue, and of the freedom of the function of nutrition and circulation at that period of life. Doubtless these circumstances have their effect as respects the tendency of individual organs to tubercular affection, or the contrary.

That tuberculosis has in childhood a greater tendency to general diffusion, than later in life, is an established fact. Amongst the children who fell under his notice, the author found only one case in seven, where the disease was confined to one organ or one cavity of the body; whilst on the contrary, it was with one-fourth spread over all their cavities.

With adults as with children, tuberculosis manifests a tendency to general diffusion; but the disposition is more strongly marked in childhood. In one-fourth only of his adult cases did the author find the affection confined to one organ, and with more than two-thirds it had established its seat in all the three cavities of head, chest, and belly.

This tendency of tuberculosis to general diffusion in many organs, and to diffusion also amongst the whole human race, is the essential and proper characteristic of the disease, and has procured for it the character of being the most universal of all diseases.

*Autograph letter of the King of Prussia to Staff-Physician Dr. Marcusseller of Vienna.*

CHARLOTTENBURG, 3d January, 1842.

"I am gratefully obliged to you for the confidence with which you have recommended the homeopathic system to my protection, and attach much value to the recommendation of this important subject by a man, who like you, has practised Homeopathy successfully for so many years. I shall, with pleasure, continue, as I have hitherto done, to give the system every protection which can favor its free development. I have already approved of the establishment of a homeopathic hospital at the expense of the Treasury, and also intend to grant to homeopathic physicians, under certain conditions, the right of dispensing their own medicines.

"I remain, &c.

"FRIEDERICH WILHELM."

[*Leipziger Zeitung.*]

Professor Roger's Lectures and Experiments  
On the subject of "Animal Magnetism," or "Mesmer-  
ism," "Clairvoyance," &c.

The last of these highly interesting, amusing and instructive entertainments, took place at the large saloon of the Mercer county court house in South Trenton, on Saturday evening, the 14th inst. That spacious apartment was crowded to overflowing with the largest and most intelligent audience which has attended any public lecture in this city during the past winter. There were present a large proportion of the members of both houses of the legislature of New Jersey, many of the most respectable lawyers, physicians, and clergymen of this city, men of science, ladies, merchants, artists, mechanics and other. The experiments were of the most surprising and interesting character, and highly gratifying in their results. "Miss Martha," daughter of Prof. Loomis of Philadelphia, who usually accompanies her;—whose exhibitions of clairvoyance had previously excited great admiration, was thrown into the "mesmeric state" by Professor Rodgers, and after her eyes had been most carefully blindfolded, by a committee of gentlemen selected by the audience, she read a large number of newspapers furnished by persons present, also designated the time by various watches handed to her, told the denomination of various bank notes and the names of the banks by which they were issued, and pointed out the different flowers in a bouquet, and told with accuracy the names and colors of all of them. These experiments were very surprising, and excited general wonder and admiration.

A young lady, suffering severely from a diseased tooth, was then placed upon the stage, and mesmerized. A committee, composed of the Hon. Mr. Kitchell of Morris, the Hon. B. Hamilton, Senator from Sussex, Edward I. Grant, M. D., and the Hon. Mr. Halsted of Trenton, and George W. Smyth, Esq., of Warren, and Mr. Gustin, of South Trenton, were appointed to superintend the experiment, being the same persons who bandaged the eyes of "Miss Martha." Dr. A. H. Armour, Surgeon Dentist, of Trenton, was called from the audience to extract the tooth. He and the committee concurred in pronouncing the tooth much diseased, but firm in the jaw, difficult to pull, and that it had not been previously tampered with. The doctor proceeded to extract the tooth, which caused a copious flow of blood; but the patient gave no symptoms of pain or suffering, and made not the slightest movement of any kind. Shortly afterward, when restored to consciousness, by upward passes, she stated that she did not feel the operation at all, and

had no knowledge of any thing which had passed. The audience was filled with pleasure, and not a little astonishment at the entire success of this most remarkable experiment.

Professor Rodgers next proceeded to operate on some half dozen well known citizens of Trenton, who, on former occasions had been publicly mesmerized by him. This experiment was also entirely successful. The limbs of all those subjects were paralyzed and rendered rigid at will, relaxed, or excited into the most violent action, at the pleasure of the operator. Some were made to dance and sing in the liveliest and most violent manner. Others seemed in deep devotion, and chanted low and solemn tunes, while others brandished their clenched fists, and manifested all the symptoms of infuriated rage. The audience were by times overwhelmed with wonder and reverential awe; and anon convulsed with irrepressible laughter.

On motion of George W. Smyth, Esq., the following gentlemen were appointed a Committee to prepare and report Resolutions expressive of the sentiments of the audience in reference to Prof. Rodgers, his Lectures and Experiments; viz:—The Hon. William Halsted of Trenton, the Hon. Mr. Kitchell of Morris, the Hon. S. W. Phillips of Middlesex, the Hon. B. Hamilton, Senator from Sussex, the Hon. J. Shotwell from Warren, E. I. Grant, M. D., J. B. James, M. D., A. H. Armour Dentist, S. Hotchkiss M. D., Thomas Gordon, William P. Sherman, Peter Grim, Jr., William Grant, John R. Dill, Joseph Hammet, John B. Anderson, Isaac R. Titus and Mr. Gustin, Esquires; to whom was added George W. Smyth, Esq., of Warren County. This committee having withdrawn for a short time, returned and reported through the last named gentleman, the following Preamble and Resolutions, viz:

*Whereas*, Professor Rodgers has delivered during the last three years, no less than fifteen lectures before large and respectable assemblies of the citizens of Trenton and South Trenton, and the vicinity, on the subject of Animal Magnetism, Phrenology, and Clairvoyance; on all which occasions he has successfully magnetised some times two, and several times as many as three and four, and once ten of the audience, persons of good character and incapable of entering into any collusion or fraud to deceive their fellow citizens, on all of whom very astonishing and amusing experiments were exhibited, such as paralyzing the limbs, exciting the organs of tune, benevolence, acquisitiveness, self-esteem, combativeness, etc., etc., and whereas, on two occasions a lady suffer-

ing severely with diseased teeth, accompanied with abscess and extensive inflammation, was publicly magnetized, and had each time a molar tooth drawn, the one by Dr. Hotchkiss, the other by Dr. Armour, respectable Dentists of this city, and in the presence of sundry practising physicians of high character; on which occasions the said lady appeared to be wholly unconscious of pain or suffering from the operation: And

*Whereas*, This lady, as well as all the other citizens of this place who have been magnetized by Prof. Rodgers, invariably protest that there was no collusion or deception in the experiments performed upon them, respectively, and that they were, at the time of these experiments, wholly unconscious of what they were doing as well as of what was done to them; and to the truth of which statements they express a willingness to make solemn affidavits.—Therefore,

*Resolved*,—That this audience is forced, by the weight of irresistible evidence, to conclude that there is reality in what is denominated "Animal Magnetism," or "Mesmerism," and that by the gaze of the eye and certain manipulations, properly employed, persons can be thrown into the so-called "magnetic state," in which the mind and actions of the patient are subject in a great degree, to the will of the operator: and as in natural somnambulism, the person magnetized may do many things and may be subjected to many operations and experiments of which he or she will retain no recollection or consciousness when restored to the natural condition. And

*Whereas*, "Miss Martha" has, on several different occasions after being magnetized by Prof. Rodgers, had her eyes effectually bandaged with gloves and handkerchiefs confined at the top and bottom with tape by a committee of intelligent and scientific gentlemen appointed by the audience, and not unfrequently chosen on account of their skepticism; and when thus blind-folded to the entire satisfaction of the committee and the audience, with scarcely any exception, she having promptly read the heading of newspapers and handbills, and told the denomination of bank notes, and described pictures and sundry other articles furnished indiscriminately by the audience, and in most cases privately brought as a test of her powers, and shown to no one but the committee; and neither Prof. Rodgers nor any other person who could possibly be in collusion with him or "Miss Martha," being allowed, previously, to examine the same. And she having, in many instances, with great promptitude and accuracy, told in like manner the time indicated by watches, which had been

privately set by their owners; the committee carefully watching in the mean time to see that the bandage was in no wise disturbed so as possibly to admit of her seeing with her eyes:—Therefore,

*Resolved*,—That "Clairvoyance" as well as "Animal Magnetism" is incontestably proven by these experiments, which demonstrate the interesting and all important fact that the human soul can act independent of the body, and receive ideas and impressions independently of the external senses, that it is immaterial in its nature, and endowed with powers analogous to those of its Almighty Author.

*Resolved*,—That we have great pleasure in recommending Professor Rodgers' lectures and experiments to the liberal patronage of all earnest and unprejudiced enquirers after truth in mental philosophy.

*Resolved*,—That the thanks of this community are due to Professor Rodgers for his generous and patriotic donation of the proceeds of two of his lectures at the Court House, in behalf of the "Trenton Monument Association," the amount of which is, of course, less a criterion of the liberality and public spirit of the Professor than of the citizens of Trenton.

The foregoing preambles and resolutions having been read, were unanimously adopted by the vast concourse present, with the liveliest manifestation of satisfaction. Whereupon it was unanimously

*Resolved*,—That the various editors of newspapers in this city be requested to publish the proceedings of this meeting.—*State Gazette, Trenton, N. J.*

#### Dreaming a Translation.

A French savant, at Dijon, went one night quite exhausted to bed, after long and vain efforts to make out the sense of a passage in a Greek poet. On falling asleep, he seemed to himself to be transported in spirit to Stockholm, where he was conducted into the palace of Queen Christina, ushered into the royal library and placed before a compartment, in which he distinguished a small volume that bore a title new to him. He opened the volume, and in it found the solution of the grammatical difficulty which had so perplexed him. The joy which he felt at this discovery, awakening him, he struck a light and made a memorandum of what he had seen in his dream. The dark passage he now found perfectly cleared up. The adventure, however, was too strange to suffer him to rest satisfied without taking some steps to ascertain how far the impressions of his nocturnal journal corresponded with the reality.—Descartes was at that

time, at Stockholm, and our savant wrote to Chanut, the French Ambassador to the Swedish Court, with whom he was acquainted, requesting him to ask the philosopher whether the royal library had such and such peculiarities, (which he described,) and whether, in a certain compartment, a certain volume of such a size and form, was not there to be found, on such and such a page of which stood ten Greek verses, a copy of which the savant subjoined. Descartes answered the ambassador that, unless the quærist had been in the habit of visiting the library for the last twenty years, he could scarcely have described its arrangement more accurately; the compartment, the volume, the ten Greek verses, all tallied exactly with the description.

A counterpart to this story is related by Wangenheim:

The son of a Wirtemberg jurist was studying at Gottingen, and having occasion for a book which he could not find in the library there, and which he remembered to have seen at home, wrote to request his father to send him the same. The father searched the library for the book in vain; it was not to be found, and he wrote to his son to this effect. Some time after, as he was at work in his library, and rose from his seat to replace a book which he had done with on its shelf, he beheld his son standing not far from him, and in the act, as it seemed, of reaching down a book, which stood at a considerable height, and on which the outstretched hand of the figure was already laid. "My son!" cried the astonished father, "how came you here?" As he spoke the apparition vanished. The father, whose presence of mind was not disturbed, immediately took down the book on which the hand of the figure had seemed to be laid, and behold, it was the very one the son had written for. He sent it, by that day's post to Gottingen, but soon after received a letter from his son, written on the very morning on which he had seen the apparition, and stating the exact spot where the writer was confident the book was to be found. It is unnecessary to say that it was the very spot which the apparition had already indicated.

#### COMMUNICATIONS.

C. M. S. is a remarkable clairvoyant, and has had much experience illustrating our spiritual relations. She was hourly expecting the death of a young friend about which event, she for personal reasons was peculiarly anxious. It is a custom of the town, to announce a death by tolling the bell. The first sound caused her to faint,

and it required much effort to restore her. After this, she made remarks showing that she was not aware of his death, but still in consequence of the effect produced before the friends dared not tell her. When she went to her room some time after, she saw on he wall in bright characters of a reddish cast, "He is Dead." As it accorded with several other incidents of a similar character, she knew it to be a spiritual communication, and was perfectly calm. She called her mothers and sisters, and they saw it distinctly, and it remained there something like an hour, visible to any one. W.

S. F. was mesmerized at my study, Friday, P. M., and on being left to herself, looked for the reason why a friend who lived many miles distant, had not made her a visit that week as was expected.—Soon she was noticed to be in the greatest and most distracting grief; and after sometime, on coming into communication, said her friend was dead—that he died at 8 o'clock, P. M. the Tuesday previous, that before his death, he requested his father to write to her and that he had so written, and the letter was on the way, and would be in the office in one hour,—a friend went to the office, and found that there was no letter there then, but it was received at the end of an hour.

An extraordinary fact connected with this case, was that S. F. at the very hour when her friend died many miles from her, and (she never having had an intimation of his sickness, but expecting him daily to see) was passing to her chamber, and met this friend at the head of the stairs. She was perfectly conscious of shaking hands,—of asking how he came there, and of his answering, and then passing down stairs, and opening, and closing the door as he passed out. The next thing of which she was conscious, was of sitting on the next flight of stairs, being unconscious of having passed the length of the entry:

Some will say this was a swoon or vision, or something of that kind;—but the fact that this happened at the hour of his death, still remains wonderful, and to be attributed to some cause. W.

DR. SHERWOOD:—

I have read with great interest the communication of W. H. in the last number of the Dissector, in answer to a letter of Mr. Sunderland in a former number. Although I have but little sympathy with Mr. S. in his views, I cannot come to the same conclusions as W. H. I have no disposition to

abate anything from the claims which are made for him, "as the herald of a new dispensation of divine truth."

At least so far as this question is concerned, I shall admit all his followers claim. It is said by Swedenborg that the facts related by him, "were truly done and seen, not in a state of the mind asleep, but in a state of full wakefulness."

If I understand his writings, he saw these things pertaining to the spiritual world by means of his spiritual vision,—i. e., by the same powers through which he now perceives the realities with which he is at this moment surrounded. This I suppose to be the general idea entertained by the members of the "New Church," most of whom I suppose will maintain that Swedenborg was "specially inspired" to "herald the new dispensation," though he says, "The Lord opened the interiors of my mind and spirit."

From Swedenborg's own "revelations," we understand that all human beings will have essentially the same spiritual faculties or organs, but only becoming active or available, to most men, after the death of the natural body. The outward organs are the instruments through which the spirit receives impressions from the natural world.

Now will your correspondent deem it impossible or improbable that any other man shall ever have "the interiors of his mind and spirit," so opened while yet in the natural body as to perceive some things in the spirit world? I trust not.

In this connection, then, we give it as our opinion that by the will of a second person the physical in some individuals may be so held in abeyance as to admit of the action of the spirit precisely as it will act after death, and precisely as Swedenborg's spirit did act without the intervention of a second person. We will not say it will act to the same extent, but in the same manner. We have had facts occur in our experience settling this matter to our entire satisfaction, and helping us to very clear ideas concerning the spirit world and spiritual faculties and relations, before we had ever seen a word of Swedenborg's on the subject. We have been led by this to study Swedenborg's writings, and have not yet found anything to lead us to change from our former conclusions.

We are compelled, however, to distrust the revelations of those whose mercenary disposition would lead them to show the most sacred developments before a curious and scoffing crowd. The best clairvoyant by such a course as this, would soon be ruined for such experiments as led us to our conclusion. It is a use of the most sacred of the powers of man, and they should only—

aye more! they can only be used by those who have a true and enlarged faith, and who use them for pure and holy purposes.

If your correspondent is a true disciple of Swedenborg, and he should ever have a clairvoyant having full faith in the ideas entertained by "The herald of the New Church," and he should from pure and holy motives seek communion with the spirit world, he would be led to see that the phenomena in some of the more advanced states of the clairvoyant are more nearly allied to the experience of Swedenborg than he at present conceives possible.

If these conclusions into which we have been led are correct, what wonderful consequences shall result to the world as they shall come to be generally understood. It is in view of these consequences that I have been led to offer this communication in the hope that it may do something to lead to high conceptions of one of the most valuable and sacred developments of science.

Yours, &c.,

AN ADMIRER OF SWEDENBORG.

New-York, March 17th.

*From Dr. Black's Treatise on the Principles and Practice of Homœopathy, p. 175.*

"The first extract then we give is one attested by Hufeland, which is a sufficient guarantee for its impartiality and authenticity. (Hufeland's at Jatrognomick, Berlin, 1829.)"

"The success of a homœopathist, Dr. Stap, in curing Egyptian ophthalmia among the soldiers in the garrisons of the Rhine, attracted the attention of the Prussian Minister of war, who solicited him to visit Berlin, to take charge of its military hospitals, Lazareth and La Charité. He accepted the invitation and officiated to the entire satisfaction of the minister. HUFELAND, who introduced Stap to the assembled company of La Charité, then paid him a deserved personal compliment, and at the same time expressed these impartial views respecting the homœopathic system:

"Homœopathy seems to me particularly valuable in two points of view—first, because it promises to lead the art of healing back to the only true path of quiet observation and experience, and gives new life to the much neglected subject of symptomatology; and secondly, because it furnishes simplicity in the treatment of disease. The gentleman, whom I have the honor to present to you, is not a blind worshipper of his system; he is, I have learned with joy, as well acquainted with the entire science of medicine, and as classically educated as he is well informed in the new science."

**Treatment of Indurated Tonsil Glands by Compression.**—Professor Huss of Stockholm, has employed the following method with success. He introduces the index-finger into the mouth, and compresses the indurated gland with its extremity for several minutes at a time. This is repeated three or four times a day. After some days of this treatment, the professor states that the gland becomes softer, absorption commences, and the surface of the tonsil is evidently relaxed and wrinkled. When this condition has been attained, stimulating gargles may be employed. The author remarks that this treatment should always be tried in those cases in which excision is contemplated.

*Gazette de Hopitalux.*

**Diseases of the Pancreas.**—In "Casper's Wochenschrift," No. 17, Dr. Melion, of Frauensthal, has published an essay, with the object of giving more precision to the diagnosis of pancreatic diseases. Four cases are recorded, in two of which he was able to verify his observations by post-mortem examinations. The symptoms were pain in the epigastric region, vomiting of albuminous fluids, constipation alternating with diarrhoea, fixed pains in the loins and shoulders, rapid emaciation, and great mental depression. In the first fatal case, the pancreas was found adherent to the liver and stomach, and was of a cartilaginous hardness; in the second, the organ contained a cavity in its centre, filled with an ichorous fluid. [It is to be feared that in the catalogue of symptoms above mentioned, there is none which can be considered as in the slightest degree aiding the author's object. Dr. Dick (*Medical Gazette*, October, 1845,) is, beyond doubt, correct in the statement that there is no single symptom strictly indicative of pancreatic disease, and that no system of treatment, therefore, can be laid down.] M. Ceric\* has noticed the connection between pancreatic disease and spermatorrhoea.

#### ON HOOPING-COUGH.

By Dr. KASEMANN of Lich, in the Grand Duchy of Hesse.†

Since I began to practice homœopathically, I have seen several epidemics of this disease, and the results I have obtained, force upon me the conviction, that we cannot boast of so much certainty in this, as in many other diseases, the cause of which seems to depend, partly at least, on some peculiar circumstances connected with the disease. For

not to mention many other things, were we actually in possession of a better knowledge of remedies, so diverse are the shades of the accompanying symptoms, that their elucidation is often a matter of difficulty; for we seldom or never see the children during a fit: and as in many the severe fits occur only at night, we are deprived of all opportunity for observing them. As, however, it is necessary to ascertain the symptoms with extreme accuracy, in order to determine the choice of a remedy, it will be found extremely difficult to do this here, for most children are unable to describe their sensations, and the parents or friends are not always gifted with good powers of observation; they are indeed often very careless, many things completely escaping their notice: they, consequently, give but a superficial history of the case, notwithstanding the most careful examination. But, although I would not relinquish the homœopathic practice for any other, although I have met with some success, and have indeed obtained some speedy and favorable results, still my mind is not yet perfectly at rest, for, under similar circumstances, many patients have been little or not at all relieved, and the disease has run its course unabated. I am, consequently, forced to express a wish, that ere long we shall attain to greater certainty on this subject.

Were it true that the proximate cause of hooping-cough consists in a catarrhal inflammatory irritation of the organs of respiration, then there might be a possibility that Aconite would be of good service, but the possibility would never rise to a certainty; for it is far from true, that Aconite is applicable to all diseases dependent on inflammation or inflammatory irritation. On the contrary, inflammatory affections of different organs seem to demand different remedies. Without at all denying the extensive applicability of Aconite, we may say, that its sphere of action seems to lie principally in the arterial circulation; and, hence, it appears to be most specifically indicated in the inflammatory diseases of those organs which perform an important part in the circulation. All who have properly exercised the homœopathic method, are familiar with the excellent effects of this remedy in such cases; but all likewise know, that, in other cases, it has only power to moderate the vascular excitement, without affecting the form of the disease to which it does not correspond. But Aconite does not always deserve the preference in all cases where there is evidence of vascular excitement. Such a mode of procedure indicates a certain degree of superficiality; for the vascular excitation may be subdued without the intervention of this

\* Il Raccoglitore Medico, and Gazette Medicale, Sept. 28, 1845.

† Extracted from the Hygiea, vol. x.

medicine, by means of a remedy which is specific to the whole case, as is proved by the efficacy of Belladonna in many irritated conditions of parts in which the nervous system is predominant. Were the action of Aconite in inflammatory conditions unbounded, as some falsely suppose, hardly a single acute contagious disease would get leave to develop itself, if only Aconite were administered early enough; for all such diseases are preceded by a state of inflammatory irritation,—belladonna and other prophylactics would be thrown into the shade; but it is well known that in this respect there is still much to be desired. In the sometimes so violent excitations of the vascular system which frequently precede typhoid fevers, even such as are not infectious, Aconite is far from proving always of service; and indeed, I have latterly found Belladonna much more useful in such cases than Aconite, to which I formerly trusted too much. Every contagious disease has, however, its focus in some particular organ; and as hooping-cough may also claim to be a contagious (strictly a miasmatical contagious) disease, it would, at its commencement, demand remedies of a more specific character; and in reference to its probable seat in the pneumogastric nervous apparatus, Belladonna would appear to be not unfrequently indicated, if the cough at the beginning be of a spasmodic nature. In the catarrhal stage, however, and as long as the cough continues simple, and without any tendency to a spasmodic character, I imagine I have warded off the *stadium convulsivum* by means of *nux vomica*. This is, however, a ticklish question. Frequently, in many epidemics almost invariably, there is present an inflammatory chest-affection; and in these cases it is not easy to dispense with Aconite. It is, moreover, remarkable, that this remedy is said to be indicated by the essential nature of the disease, by persons who hold out hopes of a successful treatment of this disease only by the strictest individualisation. But is it true that the essential nature of hooping-cough is as varied as the numerous morbid symptoms which accompany this disease? or are these only accidentally connected with it, and is the large number of remedies recommended for it, directed rather against the concomitant symptoms? This disease, like several others, seems to prove that where many remedies are vaunted, the true remedy still remains undiscovered; whereas we have fewest remedies for those diseases which are treated with the most brilliant results.

Every homoeopathic physician has, doubtless, remarked that, by the employment of

medicines selected in this manner, the concomitant symptoms disappear, but the hooping-cough itself does not always undergo a change. Thus I have often (not always!) succeeded in subduing the violent nocturnal attacks by means of conium, without thereby producing any alteration in the diurnal fits; chamomilla has relieved the concomitant diarrhoea of greenish matter, but the attacks of cough remained unaltered. In one child which had, in addition to vomiting during the severe attacks, great diarrhoea of a pale yellow color, and which passed its stools during every violent fit, *veratrum* removed the diarrhoea almost completely in a very short time, but the cough underwent little change. In a case of frequent vomiting *ipécacuanha* proved serviceable; and although this remedy frequently acted very advantageously on the attacks of hooping-cough, yet this was not always the case. Where the sputa were tough and expectorated with difficulty, *Bryonia* made them looser, but produced amelioration only in so far as the violence of the attack depended on this symptom, for the *stadium convulsivum* pursued its course unabated. The greater or less severity of the attacks, as also the different stages, seem to constitute the chief indications. The other symptoms, however, appear to be worthy of particular notice, only in so far as they are of themselves important, and thereby endanger life or the organism. Laughter, weeping, crosses, overloading of the stomach, &c., occasion, in every case a renewal of the attacks, because they act on the part of the nervous system affected; these, therefore, are little fitted to serve as indications for treatment.

Among the remedies which possess the power of relieving the *stadium convulsivum* (the most important stage,) I have found from experience, that belladonna and *ipécacuanha* answered best in this year's epidemic. *Cuprum* I found serviceable only in cases of suffocating fits during the cough. Belladonna appeared to act best in the commencement of the *stadium convulsivum*; *ipécacuanha* at a more advanced period of the same stage, when there was frequent vomiting of food. In the case of a girl of 3 years of age, belonging to this town, who, for 8 days, had frequent attacks of the characteristic paroxysms of coughing, each time with vomiting of mucus and food, along with frequent alvine evacuations and colic, and in whom laughter, weeping, crosses, large meals, &c., brought on attacks, these became slighter after the first two doses of *ipécacuanha*, the colic and diarrhoea disappeared, and in 14 days the cough was quite away. In one solitary case of a child of 16 weeks old,

which, after three weeks of ordinary cough, got the real hooping-cough, against which I had employed cuprum without effect; and where there were, at the same time, retching and slimy evacuations, China proved very speedily of service; for, after the second dose, the attacks lost their intensity and frequency, and, after a few days, nothing remained but a simple cough. In so young a child, there can be no question of an abortive form of hooping-cough. I could adduce several similar instances with regard to belladonna. In one case, conium and cuprum were employed without the slightest relief, not even were the severe nocturnal attacks, with vomiting, &c., moderated after conium; whereas belladonna changed the state of matters so, that the powder which was calculated for twelve doses was not all required. The boy had no third stage, and continued quite well.

I administered all the remedies in low dilutions, 6 to 12 drops in sugar of milk; and prescribed about the twelfth part to be taken after every severe paroxysm, generally about every 4 hours, seldom only twice or thrice a day.

I cannot help thinking, that it is only in the commencement of the *stadium convulsivum* that we may occasionally succeed in changing the character of the cough, and checking the further development of the disease. If this stage have already existed some length of time, and reached a certain height, the severity of the paroxysms may indeed be moderated, but the disease continues to pursue its course, thus presenting an analogy to the acute exanthemata. I doubt, however, whether there would be any particular disadvantage in subduing, or totally extinguishing, by the specific method, the paroxysms of cough themselves, in their highest stage of development.

We labor under a disadvantage in the treatment of infants at the breast, which makes us less successful than we might be,—I mean the influence of the nurse; for I have frequently distinctly remarked the effect produced on the attacks of coughing by the health of the nurse; so that a cold caught by the latter often causes the fits of coughing, which were on the decline, to return in all their severity. Affections of the mind in the nurse, and the occurrence of catamenia during nursing, were always accompanied with violent paroxysms of cough. Several infants at the breast, even of the most tender age, suffered from hooping-cough,—some even who never came in contact with other children, and had no brothers or sisters. It is not to be denied, that, under homœopathic treatment, the last stage runs a more rapid

course, just as acute exanthemata, under the same treatment, are attended by fewer consecutive diseases.

This year's epidemic was often complicated with croup, or inflammatory affections of the chest. Croup frequently came first, and was followed immediately by hooping-cough; so that the premonitory catarrhal symptoms contained the germ of both diseases. It is possible, that the germ of hooping-cough was first planted, and that, in its catarrhal stage, the croup was joined to it; that, however, the fully developed croup made its appearance before the characteristic symptoms of hooping-cough, because the latter, probably, demand a longer latent stage. We see something analogous to this in the class of exanthematous diseases. When an inflammatory chest affection developed itself during the hooping-cough, a few doses of Aconite, administered in rapid succession, sufficed to subdue the febrile symptoms to such an extent, that belladonna could then be administered as applicable to both affections, and generally acted speedily. To this remedy I attribute the recovery of a scrofulous girl, who was previously in a bad state of health, and who, by this complication, was so severely affected, that her parents had no hope of saving her. In many instances, this medicine does not require the aid of Aconite; when, for example, the cough is not dry, and the inflammatory fever not very violent.

Whether belladonna and ipecacuanha are deserving of particular attention in these cases in which there is a regular type; or whether they are applicable to such cases alone, is a question which I must leave to be decided by experience; but I wish here to call attention to the subject. In a little child, the paroxysms occurred regularly every two hours; but I was forced to employ means to combat too many other symptoms, to allow me to draw any conclusion from this case.

The close connection between hooping-cough and measles was again well exemplified in this epidemic; for, whilst the hooping-cough was pretty general here, the measles prevailed in Giessen, which is distant about 9 miles (as I am informed by a physician of that town.) I witnessed a case which fully proved that porriginous skin diseases are not positively opposed to the contagion of hooping-cough. Co-existing with the porridge, the hooping-cough attained a considerable development; and it was only when the latter reached its acme, that the exanthema dried up, which it had previously frequently done; but it broke out again, during the *stadium nervorum pertussis*.



The last stage is seldom observed by the physician, as the medicinal means are generally discontinued as soon as the paroxysms have lost their frightful character; but, as far as I could learn, it was, after my treatment, very short, in comparison with that of patients treated in a different manner. A child, under a year old, had the whooping-cough long and severely; it was frequently quite comatose. I obtained some evident amelioration, notwithstanding many complications; but affections of the mother always did away with all the benefit obtained. After the cessation of the characteristic paroxysms, I gave a few doses of sulphur for some irritation of the skin; and the child had only for a short time longer some mucous expectoration: whereas other children otherwise healthy, had to undergo a long consecutive stage, although they had been previously much less severely affected. In some instances there was no appearance of a third stage; in those, namely, in which the paroxysms were early subdued.

The mortality was small; for till now (the 3d of April, 1839,) only a few children have died (under other treatment,) I believe, by suffocation during the fits. It has hitherto been my good luck not to lose any patient in whooping-cough.

The prevalence, for some time back, of east and north-east winds, seems to have caused a decline of the whooping-cough; and instead of it we have croup, of which disease I have, within the last few days, had a greater number of cases.

#### ZYMOTIC DISEASES---FEVER.

*Typhus and typhoid.*—The French Academy has for a considerable period since the date of our last Report been occupied by discussions respecting one or two points of great importance in the pathological history of fever. The questions of essentiality or non-essentiality, of its dependence or non-dependence upon inflammation of the Peyerian glands, have at length ceased to be agitated, and in their place we have that of the identity or non-identity of typhoid with typhus fever, and of its contagious nature. The discussion on these points originated in the presentation of a memoir by M. Gaultier de Claubry,\* in which both propositions were distinctly affirmed. M. Rochoux, who opened the debate which ensued, denied the identity of the two diseases on these several grounds. 1. That typhus was contagious, typhoid fever not so. 2. That the former

attacks at all ages, the latter rarely occurs before 15, or after 40. 3. That the peculiar delirium and eruptions of typhus are not observed in typhoid fever; and lastly, that the duration of the two affections is different, being in the one case from ten to fifteen days, in the other, from twenty to thirty.

This confessedly intricate question is extremely well reviewed by a writer in the *Dublin Journal*,\* who discusses the objections of M. Rochoux seriatim, after the following manner:—

The first point of difference which M. Rochoux seeks to establish, is the circumstance of contagion. This argument the author of the article alluded to shows to be of little value, as the typhus of Ireland is not always contagious, any more than the typhoid fever of Paris. As a proof of this, he states that out of 9-588 cases of fever admitted into the Belfast Hospital, no trace of contagion could be discovered in 2-342.

A second ground of distinction much insisted upon, is the different ages at which the two diseases occur. This is opposed by the author for two reasons: 1st. That much error is committed in estimating age, from the omission to notice the fact, that as it is the custom for the youth of both sexes to congregate in Paris from all parts of the French dominions, the majority of patients of all classes must necessarily be near the age of puberty. 2d. That the reason why typhoid fever is said never to occur in children, is that the French pathologist is apt to deny the existence of the disease, unless he has an opportunity of seeing the diseased bowels, which, as children comparatively speaking seldom die of fever, he has but little opportunity of doing. But, as the author observes, the objection is completely reversed by the fact, that cases are on record in which the rose colored spots of fever were visible even at birth. On the other hand he remarks, that the true typhus of Ireland is equally rare among children with the typhoid fever of France, and equally uncommon among aged persons, since of 11,209 cases admitted into the Belfast Hospital, 301 only were under 6 years of age, and 171 only were over 60. The other objections of M. Rochoux meet with the same opposition at the hands of the author, who therefore concludes that there are no just grounds for regarding the two diseases as distinct affections, but that the most which can be said is that they are varieties of the same type of fever.

The contagiousness of typhoid fever asserted by M. Gaultier de Claubry is likewise

\* *Revue Medicale, and Archives Gen.*, Juillet, 1845.

\* September, 1845.

maintained by M. Jacques,\* and M. Patry,† the former of whom affirms that the disease never quits a house until every person has been attacked who is predisposed; and that it is extremely rare to see the inhabitants of the same lodging, down with the fever at separate times, with an interval of more than a fortnight, the usual limit of the period of incubation.

In the treatment of fever we might gain but little information from the writings of the last few months. The plan pursued by M. Jacques, is the combination of emetics and purgatives, with the constant application of cold to the head and abdomen. The same treatment is likewise recommended by Professor Huss,‡ with the addition of frequent ablation with chlorine water, and the exhibition of opium, musk, and phosphoric acid. The latter medicine was found particularly serviceable in the adynamic forms of the disease, and it is somewhat remarkable that the professor takes the same symptom as an indication for the employment of this medicine, which is mentioned by Dr Graves as indicating the necessity for wine, namely, a feebleness of the first sound of the heart, and its approach in character to the introduction of the second sound.

9. *Typhus material*.—It is a favorite theory with the German physicians, that during the progress of typhus fever, a certain morbid material, said by Rokitsansky to resemble medullary sarcoma, is poured out from the blood into the texture of various organs. Vogel,§ among others, has paid much attention to the point, and has published observations which have recently been translated by our talented reporter on anatomy and physiology, Mr. Kirkes. It would seem that the parts most liable to become the seat of the above-mentioned material are the mucous membranes, but it may also appear in the substance of the denser organs. The action which precedes the deposition of the typhus material, is said to be inflammatory, and to affect especially the solitary and aggregate glands of the small intestines. The most important transformation undergone by the typhus material after its deposition is its conversion into a brownish slough, which upon separation leaves the typhus ulcer. The material examined by the microscope is seen, according to Vogel, to consist of an amorphous granular product of a brownish-white

color, and containing cells of 1-300th of a line diameter; some nucleated.

The subject of the typhus material has also been taken up by Engel.\* This author has observed it under two forms, a fluid and a solid, usually combined; the fluid matter is viscid and opaque, and when allowed to rest, throws down an abundant sediment of epithelial cells and phosphate crystals; the solid matter, as observed by Vogel and Rokitsansky, is chiefly found in the intestinal follicles. The processes of ulceration and reparation are faithfully described by Engel, as well as certain anomalies to which the diseased product is occasionally subjected; for a detailed description of these, we must refer the reader to the original.

10. *Yellow fever*.—The pathology of this severe malady, which has lately been invested with unusual interest from its appearance on our shores, is ably treated of in a communication from the pen of Dr. Nott,† of Mobile, giving the particulars of several epidemics witnessed by him in that locality. In seeking to determine the nosological status of this fatal disease, he comes to a conclusion, of the truth of which little doubt can be entertained, namely, that it is a special fever, and like other fevers, subject to considerable variations in its leading characters, according to the local or individual circumstances under which it arises. The author eulogizes, as every candid reader must do, the philosophical researches of Louis upon the disease as it occurred in Gibraltar, but finds it necessary to differ from him in some particulars. Louis, as may be remembered, considers the leading characteristic of yellow fever to be a "peculiarly anemic and friable condition of the liver, giving to it the color of butter." This appearance was not found by Dr. Nott as a general rule, being present in only one-third of his cases. It may be observed, however, that Dr. Imray,‡ to whom we are also indebted for an essay on the fever in question, sides with Louis.

Dr. Nott has examined with great minuteness the condition of the blood and secretions in yellow fever. As in other fevers, the blood was found to be dark and grumous, and exhibited but little disposition to coagulate. The peculiar and fatal symptom, the black vomit, is decided by actual experiment to be blood, modified by admixture with the acids of the stomach.

\* Reported in Archives Gen. de Med., Aout, 1845.

† Gazette Medicale, No. 21, 1845.

‡ Gazette Medicale, No. 21.

§ Erläuterungstafeln zur Pathologischen Histologie, and Med. Gazette, Oct. 31.

\* Schmidt's Jahrbucher, No. 7, 1845, and Med. Gazette, Oct. 31.

† American Journal of Medical Sciences, April, 1845.

‡ Edin. Medical and Surgical Journal, October, 1845.

The causes of yellow fever are discussed both by Dr. Nott and Dr. Imray; the former, however, goes no further than to admit, what cannot in the present day be doubtful, that it is a poison which by some means or other gains admission to the blood, and then propagates itself by zymotic action. He does not pretend to decide whether the poison is of animal or vegetable origin. Dr. Imray examines the question upon a more extended basis, and discusses the opinion held by some, that the exciting cause is of malarial origin, differing only from that which originates the intermittents and remittents of tropical climates, in the degree and concentration of its effects. He considers this opinion to be a fallacy, since there are many localities, as the islands of Dominica and S. Lucia for instance, in which circumstances necessary to the development of malaria exist in a high degree, without the production of yellow fever, while, on the other hand, in the neighboring island of Barbadoes, to which intermittent fever is comparatively a stranger, yellow fever forms a fearfully large item in the bills of mortality. Another reason which he considers to militate against the identity in origin of yellow with intermittent fever, is the fact that the former does not appear to be influenced either by season or temperature, being equally rife in wet seasons and dry; when the temperature was high, and when it was low. In this he is quite borne out by the observations of Rufz.\*

11. *Intermittent fever.*—M. Piorry has lately adopted the strange opinion that ague is not, as it is generally held to be, the cause of the enlarged condition of the spleen with which it is associated, but, on the contrary, that the hypertrophy of this organ is the exciting cause of the febrile paroxysm. True to his belief, he has lately recorded a case which proved rebellious to quinine, and which was at length cured by the application of a bandage preventing the descent of the enlarged spleen. The paroxysms are supposed by him to depend upon traction exercised upon the splenic plexus of nerves.† At a late meeting of the Académie de Médecine,‡ M. Savielle denied the influence of miasmata in the production of intermittent fever, and attributes the disease to the sole agency of cold and damp; the opinion, as might be expected, met with decided opposition from the majority of the members present. In the treatment of ague, M. Trou-

seau\* advises the exhibition of quinine in a single large dose, rather than in repeated small doses; he states that he has known an obstinate case which had resisted an ounce of quinine given in the ordinary way, to yield at once to a single dose of fifteen grains. The same opinion as to the efficacy of large doses, it may be remarked, is held by Dr. Elliotson (vide Watson's Lectures, vol. i., p. 747,) and has recently been acknowledged by Dr. Chambers,† of Colchester. The *Achillea millefolium* has also recently been employed with success as a substitute for quinine, by an Italian physician.

## THE DISSECTOR.

APRIL 1, 1846.

### *New Evidence on the Extensive Range of Tuberculosis.*

In nothing is the progress of Medical Science, at the present time, so strongly marked and impressively distinguished, as in the new evidence now rapidly accumulated and clearly presented, of the wide range and dominion of tuberculosis in the human system. Indeed so vast in amount, and so forcible in undeniable proof is this evidence, that it must of necessity, within a brief period, render a new classification of diseases absolutely imperative upon the profession. As our nosology now stands, this disease, when occurring in different organs, is classified as different diseases, requiring different treatment. The new evidence demonstrates that tuberculosis is one and the same disease in whatever organ or part of the system it may be found, and consequently requires essentially the same treatment. Another most important and influential fact is that tuberculosis is specifically and exclusively a disease of the serous surfaces or membranes; and that whilst it is found in each and every portion of these, the mucuous membranes and surfaces are exempt from its attacks, and have their own peculiar and distinctive class of maladies. Every day contributes substantial foundations for this bold and novel conclu-

\* Gazette Medicale, No. 37, et seq.

† Gazette Medicale.

‡ France, Sept. 16, reported in Med. Times, Sept. 27, 1845.

\* Journ. de Med., Mars, 1845.

† Provincial Medical Journal, Oct. 29.

sion, and the time can now scarcely be remote when it will become so firmly and broadly established, in the sight of the whole world of science, as to demand a grand simplification of all diseases into the dual division 1 SEROSIS, and 2 MUCOSIS, each of these requiring but the equally brief and simple subdivision, of 1 *Acute*, and 2 *Chronic* SEROSIS; and 1 *Acute*, and 2 *Chronic* MUCOSIS.

It is well known that we discovered this fact in comparatively early life, and have adopted and practised upon this simple classification for a great number of years, during many of which we stood alone beside the altar of this great truth, the solitary minister of its flame, waiting in patience and hope, until the morning of greater light should come. We now happily see it brightly dawning, and doubt not its advancement to meridian day.

To the able and unanswerable papers upon *tuberculosis* from eminent French, German, English, and American authorities, which we have republished in this journal and in our other medical works, we have now the pleasure of adding one, "On the Pathology of Tuberculosis," by Dr. Cless, of Stuttgart, and commend it to the close and candid perusal of our readers. It is so luminous and generally unexceptionable as to call for no special remark, except in reference to the following paragraph:—

"The question whether a physiological law may somewhere be established according to which the development and distribution of tuberculosis in the several organs may be ranged, can hardly yet be answered."

We here deem it a duty not less to ourselves than to the interests of truth and humanity to state, that this question is already answered, and the law here sought already found and established, in our own method of detecting tuberculosis, in the several organs and limbs, by pressure on the posterial spinal ganglia, in the intervertebral spaces, and of determining the precise seat of the disease, by the pain, more or less severe, which that pressure excites. The symptoms by which this law is established, we have published in detail in this and various other works; as yet we have found no exception to them,

in an extensive daily practice of more than thirty years, and have, therefore, no expectation that any such will hereafter be found.

#### The Magnetic Machine in Intermittent Fevers.

We have already described the prompt and efficient action of this machine, in subduing the most violent paroxysms of fever, but were not at that time aware of its equal efficacy in the cold stage of intermittent fevers. We can now, on the authority of a number of physicians as well as private individuals, confidently recommend its use in this case, as the cold chills are mitigated immediately, and cease altogether, in a few minutes after the commencement of the action of the magnetic machine. We are, moreover, assured that the chills, and consequently the fever, very rarely return, this circumstance, therefore, is well worthy of the attention of physicians in the Western and Southern States, and indeed wherever this disease is prevalent.

#### True Science versus "Young Physic."

##### To the Editor of the Tribune:

Being a constant reader of the *Tribune*, my attention has been attracted to the various articles on the subject of medical science, and the several modes now in vogue for treating diseases. The Chrono-Thermalist, the Homœopathist, the Hydropathist, the No-pathist and the Every-pathist, with *Doctor Brandreth*, *Dr. Kelly*, *Dr. Taylor*, *Dr. Chrystie*, and the whole race of anti-Allopaths, seem to have united their forces, and employed the *Tribune* as their organ, to crush the truth, as it is found in the old and still regularly and steadily pursued theory and practice of medicine. I do not wish to find fault with you for your course in this respect, for you have as a man an undoubted right to express your opinion on any matter, however unacquainted you may be with its true nature, and you have a right also to permit others to use your columns for the purpose. But I question the wisdom of making the *Tribune* or any other ordinary newspaper a *Medical Journal*, even under the pretence of enabling the people to decide what is true science and what is not. But when the writers of these articles occupy your reading columns with puffs of themselves and their systems, and especially when they throw out silly and unjust misstatements about the "indiscriminate use of the lancet, calomel and their violent allies," &c

&c.—when the opinion of some great writer abroad, who perhaps never looked beyond the title of a medical book, or of some learned divine, or eminent lawyer, who never took a dose of medicine, is quoted in derogation of the labors and studies of truly scientific men, and in favor of these numerous, half-fledged, “Young Physic” systems, I think I have a right to complain, and at least to ask room for an attempt to put the matter right before the public. In doing so, I would not endeavor to defend the science of medicine; it is far from needing it. Its investigation and improvement are pursued with steadiness, and an ardor unsurpassed in any former time; and as well may we look for an overturning of the truths of Christianity by the spread of Mormonism, as for a prostration of the science of medicine by any of the new-fangled notions of the day, or all of them combined. And why? Simply because it is based upon *well proved principles*. The people, ignorant of the truths of medicine, may be induced to say to the regular practitioners, “You are humbugs, and we will take no more of your big, disgusting doses—we intend in future to be cured by some one of the more modern and fashionable *systems* of medicine!” but will that destroy the truths of physiology, pathology, or therapeutics, as they have become established by long years of research and experience?

The most serious effect of these attempts to weaken the confidence of the public in the true science, and to build up the fortunes of their projectors, is, that by a withdrawal of the support which is needed by its votaries to prosecute their studies and to increase their experience, they become discouraged and their investigations are retarded. Every dollar put into the hands of Charlatanism, is so much taken from the support and encouragement of science. The Charlatan only is benefited in person—while true science loses its means of improvement.

But who is to decide what is true science and what is not? Amid the conflicting claims of all these *isms* (not forgetting Thomsonianism, once the *hottest* of all,) who is entitled to sit in judgment and decide which is right? You will perhaps reply the *public*, who are most interested in the result. But are not those who have devoted their whole time to these studies the most capable of judging between truth and error in their own art? As well might the science of geology or chemistry be submitted to the popular vote. As well might a physician who never looked into a law book, sit upon the Bench of the Supreme Court, as a law-

yer or mechanic who knows not the difference between ipecac and rhubarb, or is unable to distinguish the lungs from the stomach, be asked to decide that Allopathy, Homœopathy, &c. are all wrong, and Chrono-Thermalism is all right. Were I a proselyte to either of these notions, I would not give a straw for the favorable opinion of any non-medical man, *except I could make money by it*, which is the principal object of those who seek it.

But I go farther, and say that the public is not alone interested in knowing which is the best and truest mode of medical practice. The aim of medical science is to cure diseases in the speediest and surest manner, and it is the duty and *interest* of the physician to discover that mode.

Every far-sighted practitioner knows, and has lately been made to feel, that it would be for his *pecuniary* advantage to join in the popular cry against the old and well established principles of medicine, and in favor of the Homœopathic System; but I regard it as in the highest degree honorable to the profession that so few of them have been weak enough to forsake the truth, for a present temporary gain. While they are anxiously seeking all possible light to guide them in their duty to the sick, the public should feel that the profession has no interest beyond their benefit, and that if either Homœopathy, Chrono-Thermalism, Hydro-pathy or Thomsonianism were proved true, or even reasonable, the enlightened men of the Profession would at once see it so, and adopt it. But they alone are the proper judges of the right in these matters.

These inflammatory and disingenuous appeals to the prejudices of the public through the daily press, are therefore highly disreputable and injurious to the public welfare and can be made for no other purpose than benefiting the pockets of those who make them. If their authors are honest in their opinions and are members of the profession, let them expend their logic in such a way as will convince practical physicians of the truth of the opinions they hold. The medical press is open to them, and that alone is the proper place for such discussions—provided they write and act as the truly honest seeker after the right should. By appealing to the public, who are manifestly incapable of giving an enlightened opinion on such profound matters, they exhibit their weakness, unless they merely wish to profit by popular prejudice, which is *prima facie* evidence of their want of an honest disposition for scientific improvement.

M. D.

*Remarks by the Editor of the Tribune.*

Having given M. D.'s phillippic *verbatim*, we claim the privilege of telling him what we think of it. And first, we find it exactly paralleled by a Pharisaic inquiry and denunciatory assertion in John's Gospel, vii. 48: "Have any of the *rulers* believed on him? [Christ.] But this *people*, which *knoweth not the law*, are *cursed*!" Next, we will state our strong conviction that the advocates of Homœopathy, Hydropathy, and other radical innovations on the old system of medicine, have *not* "the medical press open to them," and would *not* be allowed to explain and advocate their views freely and fully through the more orthodox and popular channels of medical discussion. Neither is the *mind* of the medical faculty generally open to the reception of truths which sweep away a foundation on which their several superstructures of fame and fortune are erected. Our missionaries to pagan lands rarely think of beginning the work of conversion on the chief priests of the countries they work in, however learned these may be in science and theology. It was no eminent lawyer but a thorough soldier who in the 'Code Napoleon' effected the mightiest legal reform the world has seen. But space fails us. Suffice it that we allow the advocates of relative novel theories of healing an occasional and generally brief hearing through our columns, because we believe they cannot obtain a fair hearing otherwise. To each new thought which our time evolves, we are disposed to say, 'As a stranger, give it welcome!' If it be an error, that will soon be made manifest; and we choose not to treat inhospitably any of the disguised angels which a Paternal Providence is continually sending for the guidance and blessing of our Race.

To the above just and candid remarks of the independent editor of the *Tribune*, it may not be inappropriate to add, that the present panic outcry of the regular profession against the quacks, and of which the above letter of M. D. is merely a natural and irrepressible specimen, will be made in vain, through all the moods and tenses of indignation, until the former discover the true cause of that success and popularity of the latter, which so highly excites their apprehension and ire. That cause, we hesitate not a moment to declare, is to be found only in the want of knowledge and skill, and consequently of success, in those by whom this hopeless outcry is raised. Quackery flourishes more

rankly than ever, not in the increasing ignorance of the popular masses—for that is uncontestedly diminishing every day—but in the non-advancement of the regular profession, which is so flagrantly behind the age. In many respects, it is even ludicrously and contemptibly so; and in almost every department, except the distinctly surgical, the multitude have found by experience that the audacious quack effects as many cures as the pompous professor, and at less cost. The great secret is now discovered, and universally proclaimed, that, in nine cases out of ten, however diversified in character or degree, the regular practitioner, who calls in his carriage, prescribes cathartics, as a conjecturally safe and comprehensive foundation for further experiments and a future bill; and it is equally well known that the quacks do precisely the same thing, with rival if not superior success. The physician's general prescription is usually almost identical with the quack's general compound; and the skill and judgment exercised in the generalization of the latter, are at least equal to the learned discrimination and reflection which are presumed to dictate the former. But the quack has this manifest advantage—his cathartics, anodynes, or tonics, are always ready at hand, nicely and even elegantly prepared, and, above all, thoroughly recommended by the voluntary and grateful testimonials of hundreds of persons, real living beings, of unimpeachable character, whom these self-same quack remedies have essentially relieved or cured. And what has the regular practitioner to say to these things? Literally nothing, to any effect: he may sneer, and scoff, and rail, until the whole circle of his patients and friends become convinced that his emotions are very different from those of mere contempt; but he cannot rail such testimonials from the record, nor recovered health from observation and experience.

The fact is, and the truth may as well be spoken, the great majority of the regular profession, are as utterly ignorant of the true symptoms and treatment of a very wide range of chronic diseases, and of the administration of the true remedies, as the lowest

quack that never read a book nor heard a lecture. Is it any wonder, then, that the mere quack who has so extensive a scope for the application of his general panaceas, so wide a field from whence to call testimonials to their efficacy, should leave the medical tortoise far behind in the race for popularity and fortune? The prosperity of the quack, is the reproach of the profession. If the educated physician were really learned and skilful in his profession, according to his exclusive claims and pretensions—if he really kept pace in his practice with the progress of science and discovery—if he were as docile in learning as he is conceited and intolerant in teaching—quackery would wither and vanish, or at least be confined to the entirely illiterate and unreflecting portions of the community, instead of attracting, as it now does, the attention and respect of the most liberal and enlightened, and deriving its most lucrative support from the wealthy and influential. It is not the people but the profession who are responsible for the prevalence and palminess of quackery, and for the retardation of true medical science from whence it springs and which it tends to perpetuate. If medical men were really what they pretend and claim to be, patients would no more think of resorting to the quack, than they would apply to a blacksmith to repair a watch, or to a stone mason to set a diamond.

ED. DIS.

A communication has been made to the Paris Academy of Sciences, by Mr. Eseltze, relative to some experiments with the electro-galvanic light obtained by Bunsen's apparatus. The writer states that he causes this light to enter a dark room through an opening in a screen or shutter, and then, with the aid of powerful reflectors, is able to distinguish the internal parts of the human body. The veins, the arteries, the circulation of the blood, and the action of the nerves, are, he says, seen by him with perfect distinctness; and, if the light be directed towards the region of the heart, he is able to study all the mechanism of that important organ as if it were placed before him under a glass. The author even asserts that he has ascertained the existence of tubercles in the lungs of a consumptive patient, and gives a drawing of them as they appeared. On rubbing the skin

with a little olive oil, the transparency becomes augmented, and he was enabled to follow the process of (digestion!)

#### REMARKABLE PHENOMENON.

The following narrative deserves, and will from the thoughtful receive, the greatest attention, authenticated as it is by the names engaged in the investigation. The name of Arago precludes all suspicion of quackery, credulity, or inaccuracy. The facts are of a class which claims daily more and more attention and seems to promise light as to VITAL DYNAMICS—those motive causes which, because so closely interwoven with all our thoughts, have hitherto almost wholly eluded the cognizance of the Intellect. We have not been able to get a point of view distant enough from our habits and prejudices to see from.

*Translated for the N. York Daily Tribune from the Courier des Etats Unis.*

The Academy of Sciences was much moved, at its sitting on the 16th of February, by an account of the most extraordinary phenomena. This recital was given to the illustrious assembly by M. Arago, with the spirit and courage of a man who does not fear being misunderstood. We repeat the facts for our readers. Angelica Cottin, a child of 13 years, is a villager of the department of Finistere and works in a manufactory of ladies thread gloves. She knows how to read and write, though of only mediocre intelligence. In the early part of January last she was winding silk with her workshop companions when suddenly the cylinder which she turned was thrown to a distance. Not knowing how to explain that accident the young girls replaced the cylinder and recommenced their labor. But the same event recurred and they soon perceived that Angelica Cottin was the cause of the extraordinary occurrence. General terror was communicated to the entire village. They ran to the curate who exorcised the young girl and pronounced the "Vade retro Satanas," (Get thee behind me, Satan.) But the curate having thrown away his holy water and his Latin, was obliged to conclude that Satan had nothing to do with the phenomenon, consequently the physician succeeded to the curate. Accompanied by the physician and her father and mother, Angelica came to Paris. She was conducted by M. Arago to the observatory, and it was in his presence and before Messieurs Laugier and Goujon that the following observations were made and mentioned. It is the left side of the body which appears to acquire this, sometimes attractive, but more fre-

quently repulsive property. A sheet of paper, a pen or any other light body being placed upon a table, if the young girl approach her left hand, even before she touches it, the object is driven to a distance as by a gust of wind. The table itself is overthrown the moment it is touched by her hand or even by a thread which she may hold in it. This causes instantaneously a strong commotion in her side which draws her toward the table, but it is in the region of the pelvis that this singular repulsive force appears to concentrate itself. As had been observed the first day, if she attempted to sit, the seat was thrown far from her with such force, that any other person occupying it was carried away with it. One day a chest upon which three men were seated, was moved in the same manner. Another day, although the chair was held by two very strong men, it was broken between their hands. These phenomena are not produced in a continued manner. They manifest themselves in a greater or less degree, and from time to time during the day, but they show themselves in their intensity, in the evening from 7 to 9 o'clock. Then the girl is obliged to continue standing and is in great agitation. She can touch no object without breaking it or throwing it upon the ground. All the articles of furniture which her garments touch are displaced and overthrown. At that moment many persons have felt, by coming in contact with her, a true electrical shock. During the entire duration of the paroxysms, the left side of the body is warmer than the right side. It is affected by jerks, unusual movements and a kind of trembling which seems to communicate itself to the hand which touches it. This young person presents moreover a peculiar sensibility to the action of the magnet. When she approaches the north pole of the magnet she feels a violent shock, while the south pole produces no effect, so that if the experimenter changes the poles, but without her knowledge, she always discovers it by the difference of sensations which she experiences. M. Arago wished to see if the approach of this young girl would cause a deviation of the needle of the compass. The deviation which had been foretold was not produced. But perhaps the phenomena did not exist at that moment in their greatest intensity. The electrical fishes themselves exercise no action upon the magnetic needle, excepting by the aid of particular precautions. The general health of Angelica Cottin is very good. We must nevertheless consider her as being in a diseased state. The extraordinary movements, the paroxysms observed every evening, resemble what one observes in some nervous maladies. An-

gelica feels herself violent commotions every time that a discharge of the influence takes place. Her wrist is subjected to a sort of rotation upon itself and she is in a state of great suffering during all the continuance of the attack. M. Arago has requested the Academy of Sciences to appoint a commission to examine Angelica Cottin. The Academy have named a commission composed of MM. Arago, Becquerel, Babinet, Rayer and Pariset.

#### ANIMAL ELECTRICITY.

In the muscles of living animals, as well as of those recently killed, an electric current exists, which is directed from the interior of each muscle to its surface. The duration of this muscular current corresponds with that of contractility: in cold-blooded animals, therefore, it is greatest; in mammals and birds it is very brief. Temperature has a considerable influence on the intensity of the current, a small amount of electricity being developed in a cold medium, a larger one when the medium is moderately warm. The muscular current appears to be quite independent of the nervous system. It is uninfluenced by narcotic poisons in moderate doses, but is destroyed by large doses, such as kill the animal. The development of this muscular current seems evidently to depend on the chemical action constantly taking place as an effect of the changes accompanying nutrition; these organic changes, in short, give rise to an electric current, just as do the chemical changes attending the mutual reaction of inorganic materials, such as the reaction between a plate of metal, and an acidulated fluid in the ordinary voltaic pile.

That considerable chemical changes attend the process of nutrition in muscle, seems evident when we consider the constant supply and waste of material of which it is the seat, and the evolution of sensible heat which accompanies its contraction; in this way the generation of electricity can be readily accounted for; the muscular fibre represents the metal acted on in the arrangement of the voltaic apparatus, and the arterial blood corresponds to the acidulated fluid. The surface of the muscle, which is more or less tendinous, and therefore different in structure and in function from the interior, represents the second plate of metal used in the voltaic apparatus, which does not suffer chemical action, but which only serves to form the circuit. The direction of the muscular current, therefore, from the interior to the surface of the muscle is just such as might be expected, supposing it to be due to a chemical action taking place in the interior of the muscle.—*Matteucci.*



# THE DISSECTOR.

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## FALLACIES OF THE FACULTY.

*Lectures delivered at the Egyptian Hall,  
Piccadilly London, 1840.*

BY S. DIXON, M. D.

## LECTURE, X.

### PRINCIPAL CHRONO-THERMAL REMEDIES.

*Summary of the Chrono-Thermal Doctrine of Disease.*

GENTLEMEN,

We now come to consider the mode of action of the Chrono-Thermal agents—or those substances so generally effectual in prolonging that remission of symptom which we have proved, beyond question, is a law of all disease. Whatever be the nosological name of a distemper—Ague, Epilepsy, or Eruption—the physician will more surely accomplish his purpose of cure by taking advantage of this period of immunity than by any measures to which he may resort during the paroxysm. The more perfectly periodic the paroxysmal return, the more amenable will the disease for the most part be to the chrono-thermal medicines; but however imperfect, irregular, or brief the remissions, there is no case of disorder that may not be beneficially influenced by these remedies—whether they be alternated with baths and emetics, or be prescribed in combination with such symptomatic medicines and local measures as the features of the case, from place or prominence, may appear to demand. Let us commence the consideration of the Chrono-Thermal agents with a few observations on

**THE PERUVIAN BARK.**—To the value of this Bark as a remedy for many diseases, the celebrated Cullen, among others, bears his unequivocal testimony: what does he say

are the ailments in which he found it most useful? Rheumatism, Gout, Scrofula, Scurvy, Smallpox, Dysentery, Gangrene, Diseases of the Bones, Convulsions, Hysteria, Hypochondria, Hemorrhages. Is not this a pretty comprehensive association of apparently different diseases, all cured or relieved by a single substance! And yet never seemed to enter the head of any previous medical writer, that these diseases have each something in common—each some principal of continuity which, amid all their apparent variety establishes their Unity of type. One remedy alleviates or cures them all—and yet physicians either cannot or will not see that the action of that remedy is one and one only, viz., motive power. What better evidence of the absurdity of Cullen's own Nosological System—a system that so far from explaining the perfect continuity that prevades the chain of all morbid motion, separated the links so widely asunder that the student could not for the life of him believe them to be any thing else but so many distinct and unlike disorders, each of which, forsooth, required a separate treatise to understand it! What a beautiful piece of work for the quacks! what an admirable method of darkening the world, that bad men might the better pursue their game of imposture!

An accomplished French physician, Baron Alibert, speaks thus of the Bark and its influence in disease,—“I have been able to pursue and appreciate the salutary results of the employment of this substance in Cancerous affections, in Scrofulous tumours of the Glands, according to the recommendation of Fordyce in many Cutaneous diseases, and principally in Lepra, Elephantiasis, and in certain cases of Jaundice, arising from diminished tone in the secretory organs of the bile—in the alterations effecting the Osseous system, such as Ricketts, Spina Bifida, &c., With the Bark we may also advantageously combat certain disorders of the Nervous sys-

tem, such as Epilepsy, Hypochondria, Hysteria, &c. Many authors recommend it in Hooping-Cough, and the various convulsive coughs. No remedy, according to them, is so efficacious in strengthening the organs of respiration, and in preventing the state of debility induced in the animal economy by the contractile and reiterated movement of the lungs. The most part of those who employ it in like cases, are nevertheless, of opinion, that the administration of it is imprudent without some previous preparation, according to the particular stage of disease. These practitioners (influenced, doubtless by their hypothesis of a humour in the blood) would in some sort mitigate the ferocity of the paroxysms by sweeteners and temperants—often even by evacuants, such as emetics and bleedings. To prevent irritation, they wait until the strength has been absolutely struck down. But upon this point, the celebrated Murray differs from these practitioners *in toto*. The Peruvian Bark according to that physician, is equally adapted to the cure of Convulsive and Periodic Coughs as to the cure of Intermittent Fevers. He witnessed an Epidemic in which these maladies were efficaciously met by this powerful remedy from the commencement. He has therefore proved that there is no advantage in retarding its administration; and that to permit, in the first place, so great a waste of the vital powers, only renders the symptoms more rebellious, and their consequences MORE FATAL!"

Gentlemen, I am not now giving you opinions,—I am not now dealing in hypothetic disquisitions—I state facts simply, facts powerfully attested; for Murray in his day was celebrated over all Europe, and Alibert only a few years ago, was second to no physician in France. Both have now passed from the scene of life; but their writings may be still read with advantage by every one who takes any interest in medicine.—The value of the Bark in all diseases, both authors distinctly state. You have also heard what they say of the sanguinary practice. Nothing can be stronger than the expression of their united evidence against that practice; yet in the teeth of that evidence—in the teeth of common sense even, which says that whatever reduces the vitality of the whole, must more surely confirm the hereditary or other weakness of a part,—the medical herd of this country still go on like their ignorant fathers before them, bleeding, leeching, and purging to death, or all but death, every unfortunate creature who falls into their hands. Did the disciples of Malthus only know how admirably their master's system has been carried out by the

great body of English practitioners, what encomiums would they not heap upon the schools to whose regiments of lancets and leechers the world is so indebted for keeping down a surplus population! But let not people suppose that possessed of a remedy so powerful, and, so far as nomenclature is concerned, one so almost universally applicable as the Bark, the physician has an infallible elixir—a remedy adapted to all constitutions. The most perfect agree-fit within my own remembrance, appeared to me to be the effect of two grains of quinine, prescribed for an asthmatic patient. Dr. Thompson mentions the case of a patient of his, in whom this medicine brought on an attack of asthma: "When he was getting well, after seven or eight days, I again," he says "began the sulphate of quinine, and the same attack was the result." A lady, after taking it, became subject to intermittent fainting-fits. Now some would be glad to lay hold of this as a reason why you should never use quinine.—But the smell of the rose has produced fainting-fits—the smell of ipecacuan asthma—must we, therefore, never smell a rose, or keep ipecacuan in our houses? What agent in nature is absolutely innocuous?—Rhubarb in a very minute dose, has produced convulsions with some people—but, according to some people, should we never prescribe rhubarb? When quinine disagrees, the common complaints are tremor, faintness, headache, vertigo, nervousness, cramps, and "all-overishness." Ratie, in his Hospital Reports, among its deleterious effects mentions, "nervous agitations," which, I fancy, might be as well translated, "shivering-fits,"—or, what say you to "ague," Gentlemen, Oh! you may depend upon it whatever can correct a morbid motion, may cause it!

Like many other medicines, the Peruvian Bark is termed by writers on *Materia Medica*, a tonic. All medicines are tonics, when they improve the health of the patient; but when on the contrary, weakness or nervousness is the result of using them, who will say, that in that case they are anything but debilitating? Bark, like an emetic, or a purge, may cause both one and the other. To go on, then, day after day, prescribing this substance, and what are termed "strengtheners," without manifest amelioration, or with positive retrogression, is not giving a course of "tonics," but a succession of exhausting or debilitating agents;—it is to prescribe a name for a name.

What then, is the mode of operation of the Peruvian Bark when its action proves salutary? This I conceive to be the true explanation. Whether it be administered during the Remission or Paroxysm, the bark,

like every other medicinal agent capable of influencing the corporeal *totality*, must, if it act at all, do one of two things, namely,—Being a superadded, *power*, it must either, with more or less force, CONTINUE, or with more or less force REVERSE the direction of the existing order of corporeal movement, according to the *attractive* or *repulsive* manner in which it may exercise its motive influence. Now, as this difference of result depends upon whether the patient's brain be *negatively* or *positively* electric, a thing which can only be known by trial, it must be clear to every reflecting person, that where the chances are equal in favour of the presence of either electrical state, it is better to prescribe the medicine during the remissional movement of body, when so far as continuance goes, it must act to a certain extent at an obvious advantage. In common with every material agent capable of influencing matter in motion, the power of the bark, under ordinary circumstances, must be more effective in continuing than in reversing existing motion. To *reverse* generally suggests opposition, difficulty, disadvantage. To *continue* what is already begun as generally implies a course of action that can be advantageously undertaken. The chances, then, being so much in *favor* of *continuance*, it no longer remains a question, which, state of body should be selected for the exhibition of the bark,—the Paroxysm or the Remission. Which of these two periods has most resemblance to Health? The term Remission at once suggests the answer; that then is the proper period for the administration of this particular remedy. And experience has confirmed what exact reasoning might have anticipated; for when exhibited to the patient during the Paroxysmal movement, the bark, for the most part, not only renders that movement more intense, but prolongs with equal frequency the duration of its period. A like effect follows its administration during the movement of Remission, for not only in most instances does it prolong this period, but adding force to the existing order of movement, it brings it at last to that desirable standard which it only previously approached; namely, the standard of Health. Numerous instances, of course, have occurred where a contrary effect has followed the exhibition of the bark, both in the case of the paroxysm and remission. But the general result of its employment determines us in the line of practice we should, under ordinary circumstances, pursue. So long, then, as we can, by the bark or any other agency keep up the movement of remission in as great, or even greater force than before, so long do we secure our patient from a recurrence

of the previous paroxysmal movement, involving, as the latter must do, the identical corporeal matter of the movement of remission. Whatever be the name or nature of the disease, the remissional movement, in most instances, though a shade or two beneath that of health, may, as we have already said, by the increase of force effected by the bark, be brought at last to the healthy standard; nay, in some cases, by a too long continuance or an excess of the medicinal force applied, it has itself been actually converted into a new febrile paroxysm of more or less intensity. But in that case the paroxysm of the old disease has, with equal certainty, been prevented from recurring. Still, however mild and subdued the movement kept up by the bark may appear, in comparison with that of the previous paroxysm, if it only be continued for a sufficient time, it generally becomes at last so habitual as entirely to supersede the original disease, and to destroy, as a matter of course, the constitutional memory upon which the recurrence of the old paroxysm depended. Such constitutional memory French writers term "*memoire machinale*." It is by this that all the motions of health are periodically reproduced—and by the same law, all morbid motions take on a habit of return. Whatever will put the brain on a new course of thought or action, will confuse this memory. Hope, joy, faith, and enthusiasm act in that manner. What are these—what are all passions but mild fevers?—and, as no two fevers can affect the body at one and the same time, inasmuch as no given corporeal atom can move in opposite directions at the same moment—these fevers, however mild in themselves, are sufficiently powerful, in many cases, to avert the return of the more dangerous morbid motions. Like the fevers of pregnancy, puberty, &c., they may cure or arrest every kind of disease you can name, from toothache to pulmonary consumption; like the same fevers, they have produced all! according to constitutional predisposition.

The Chrono-thermal medicine next in value to the Bark, is

#### PRUSSIC ACID.

The College of Physicians have given a formula for the preparation of this acid for medicinal purposes; but I prefer that of Scheele, and I believe most other practitioners do the same. The concentrated acid cannot be prescribed in practice. It must, then, be given in a diluted state. "Diluted prussic acid," says Magendie, "is employed with success, in all cases of morbid irritability (weakness?) of the pulmonary organs.

It may be advantageously used in the treatment of nervous and chronic coughs, Asthma, and Hooping cough; and in the palliative treatment of Pulmonary Consumption; indeed, a great number of observations induce the belief, that it may effect a cure in the early stage of the latter disease. In England it has been administered with success in Dyspepsia, and also in Hectic cough sympathetic of some other affection. [Why sympathetic of another affection? When a man's health is wrong throughout, some prominent symptom is seized upon, and considered to be the cause of all the others!] [Dr. Elliotson, both in hospital and private practice, has frequently employed medicinal prussic acid, prepared after the manner of Vauquelin. He has recorded more than forty cases of Dyspepsia, with or without vomiting, and accompanied with considerable pain, in the epigastric region, and with pyrosis, (water-brash,) which were cured by this acid. The same physician quotes a case of colica pictum (spasm of the colon) in which Dr. Prout gave the acid, and procured instantaneous relief. Dr. Elliotson also administered hydrocyanic acid, in a great number of Pectoral affections; and has almost invariably succeeded in allaying the troublesome cough. [Why will people use this word "invariably?"—what agent in the *Materia Medica* acts invariably in the same manner? such medicine would be, indeed, a specific! but that we shall never discover!] Applied externally in lotions, in different diseases of the skin, it has, not, in Dr. Elliotson's practice, produced any decided effect. Dr. Thomson, however, asserts, that he has employed it in lotions with constant success [here again, "constant success!"] in diminishing the itching and the heat so annoying in cutaneous diseases, and has cured several species of herpes.]

"M. J. Bouchenal has published an interesting memoir on the employment of prussic acid in the treatment of chronic Pulmonary Catarrh. He mentions four cases in which this remedy proved effectual. He concludes by urging that prussic acid, when given in a small dose, is not more inconvenient than an ordinary cough mixture. M. Bouchenal has also employed prussic acid in a case of consumption, but he only succeeded in allaying the cough for a time, which leads him to doubt the fact of its having really effected the cure of confirmed consumption. I do, however, assert and maintain," says Magendie, "that with prussic acid I have cured individuals, having all the symptoms of incipient Phthisis; and even those in a more advanced stage.

"In Italy, the medicinal hydrocyanic acid

has been used to allay excessive irritability of the womb, even in cases of Cancer." "Professor Brera extols its happy effects in pneumonia: he recommends it also in Rheumatic cases, and as a worm-medicine. Since this professor has employed it in diseases of the Heart, Dr. Macleod has administered it in the same diseases. He has found it allay nervous Palpitations, especially those which seemed to depend on derangement of the digestive organs. [How common this error of accusing one symptom of being the cause of another!] He has also employed it in some cases of Aneurism of the Heart. Dr. Frisch, of Nybourg, in Denmark, has allayed the intolerable pain caused by Cancer of the Breast, which had resisted all the antispasmodics, by washing the ulcerated surface with diluted prussic acid. He has also successfully employed the remedy in several cases of Phthisis. Dr. Guerin, of Mamen, has obtained beneficial results from its employment in two cases of Brain Fever."

Thus far I have given you the experience of others, with this acid as detailed in MAGENDIE'S FORMULARY;—let me now add a few observations of my own in its favor.—Combined with the tincture of lobelia inflata, I have found it one of the most generally effectual remedies for Asthma, with which I am acquainted. The same combination has enabled me to cure Spasmodic Stricture of the urethra; and, generally, speaking I have obtained successful results from the administration of prussic acid in cramp and spasms wherever developed. In the low, habitual Fever, whether misnamed dyspepsia, hysteria, or hypochondria, I have found it particularly valuable. I have also experienced its curative influence in the treatment of Dropsy; more especially when complicated with difficult breathing.

In Palsy, I have found prussic acid more generally successful than strychnia. I may here again, however, mention that it is my custom, in the treatment of disorder generally, to combine one or more chrono-thermal powers—quinine, hydrocyanic acid or arsenic—with one or more symptomatic medicines, possessing marked local influence.—Thus, one or more of the chrono-thermal agents may be advantageously combined with iodine, in glandular and skin affections, with colchicum or guaiac in rheumatism—squill or digitalis in dropsy—cantharides or copaiba in leucorrhoea and gleet—with squill in catarrh—with purgatives where constiveness is a symptom; and so in like manner, according to the most prominent feature of a case. Combined in this way with tincture of ginger, cardamoms, &c., I have found prussic acid extremely valuable in the treat-

ment of flatulency and acidity of the stomach. In all these disorders, however, this, and all other remedies will be found to be advantageous only in so far as they contribute to improve the temperature, and, consequently, the circulation of the subjects of them. Your patients, when obtaining their beneficial effects, will tell you, "I have not had those heats and chills which used to trouble me,"—or, "my hands and feet are not so cold or so burning as formerly." If you poison a certain number of rabbits with prussic acid—say a dozen, and pour cold water in a stream over six of them, these six will recover, while all the others will die. This has been done over and over again with the same result. You see, then, how clearly the influence of this agent depends upon its power of controlling temperature.

We have seen that prussic acid may be successfully employed in the most obstinate agues; yet I remember the case of an Irish barrister, who, from the same medicine, experienced severe shivering and chilliness, with cramp, pain of the stomach, and slight difficulty of breathing; the very symptoms, you will remark, Gentlemen, for which it is so often available in practice. The electric condition of the cerebral part influenced, determines whether a given remedy shall produce attractive or repulsive motions; and this, we have repeatedly stated, can only be known by trial. From such trial, no greater harm than a little temporary inconvenience can take place, when prussic acid disagrees, if prescribed and watched by a judicious physician. Rhubarb or magnesia may do the same, for, like prussic acid, both act electrically.

From Prussic acid, I now pass to

**OPIMUM, AND ITS SALTS OF MORPHIA.**—These, like the Bark, may be advantageously employed; as we have already stated, in prolonging the interval of remission in every form of disease. Opium, indeed, like every other remedy, possesses more or less influence over the whole system, but its more obvious effect is the control which it exercises over the nerves of sense. With these we associate Memory—and as every part of the body has, through the brain, a power of remembrance, whatever will confuse or suspend the action of the senses, will often equally suspend and confuse memory, and consequently conduce to the suspension or interruption of any habitual or periodic action of any part of the body. A minute dose of opium generally heightens the perceptive powers, while a large dose as generally diminishes them. But a large dose, after all, is only a relative term—for the quantity that

would poison a horse, may be a moderate dose to the habitual opium eater!

I do not know a disease in which I have not found opium useful. In dropsical cases, when administered at that particular period of the day when the patients have confessed to amelioration of their feelings generally, it has, in my experience, been frequently followed by a copious flow of urine after every diuretic had completely failed. By giving it in a large dose during the remission, I have kept several consumptive patients alive for months, and some for years even, whose existence must assuredly have been shortened but for the beneficial influence of this drug. There are persons, however, whom

Not poppy, nor mandagora,  
Nor all the drowsy syrups of the world

would medicine into slumber—but upon whom the cold affusion would instantly produce that effect. Behold again, how much all things depend on temperature! With some people opium, as I have already mentioned, acts like ipecacuan—who can tell what may be the effect of any remedy till it be tried? It is only impostors who *never fail*! As a proof of the influence of opium as a preventive against disease, we are informed by Dr. McPherson, of the Madras army, in his book on China, that "the peculiar active principle in opium, the narcotic, has of late been employed with considerable success in Bengal, as a substitute for Quinine. It may also be mentioned, that at the time fevers prevailed so extensively among our troops at Hong-Kong, but comparatively few of the Chinese suffered, though exposed throughout to the same exciting causes." And this Dr. McPherson attributes to their habit of opium smoking. Travellers, who have witnessed the effect of this drug in the East, mention tremor, fever, dropsy, delirium, and restlessness, as the consequences of the habitual use of opium. It has, nevertheless, contributed to the cure of all these symptoms when produced by other causes. In practice, we find it gives repose in one case and preclude all sleep in another. It has caused mania, and cured it.

Very analogous to opium in their mode of action are

**ALCOHOL, WINE, AND MALT LIQUORS;** but like every other medicinal agent, they act upon the body, beneficially or the reverse, in no other manner than by changing the existing temperature of the brain. If a glass of brandy has arrested the ague-fit and its shudder, the army surgeon will bear testimony to the "horrors" and tremblings which the abuse of strong liquors too frequently induces in the previously healthy. Are not the

chill, the shiver, the fever-fit, the epileptic, asthmatic, icteric, stricture, and other spasmodic paroxysms daily produced by potation? How often have we known dropsy brought on by gin-drinking:—yet is not gin daily prescribed with the best effect for the dropsical? See how differently alcohol affects different men! One it renders joyful or gentle—another sullen and morose—in a third, it gives rise to wit, while a fourth, under its influence, loses the wit he previously possessed. I remember the case of a man of the 1st Regiment of Foot, who grew mighty religious and took to psalm-singing every time he got drunk. But this spurious kind of godliness, as you might have expected, generally evaporated with the fumes of his liquor. That excess of religious feeling or *veneration* (as the Phrenologists call it) does, however, depend upon the temperature or motive condition of some cerebral part, there cannot be a doubt; and that it takes place by fits or periods, Shakespeare well knew, for he makes one of Clarence's murderers say: "I hope this holy humour of mine will change; it was wont to hold but *while* one would tell (count) *twenty*."

Wine will make the brave man timid and lachrymose—the coward capable of actions, the mere thought of which, in his sober moments, would have inspired him with terror. One man will first show the effects of drunkenness in his speech—another in his diminished powers of prehension—some individuals will not betray the influence it has obtained over them until they try to walk; their limbs may then fail them, though neither hand nor tongue show any signs of inebriety. Now all this is done by the change of temperature which wine induces on various parts of the cerebrum of particular individuals. It throws them into a state of fever; and the same phenomena may be witnessed in the course of fevers produced by cold or a blow. Dr. Jenner, in describing the effects of excessive cold on himself, says, "I had the same sensations as if I had drunk a considerable quantity of wine or brandy, and my spirits rose in proportion to this sensation. I felt, as if it were, like one intoxicated, and could not forbear singing," &c.—[*Baron's Life of Jenner*.] Take the converse of this—A man shall get as "drunk as a lord," and immediately become sober under the influence of a cold shower, or plunge bath. Does not this unity of result argue unity of mode of action? We prove, then, by every possible manner, that the effect of wine, whether for good or evil, like that of every other power in nature, relates to the influence it exerts over the temperature of *one or more* portions of the Brain.

MUSK, VALERIAN, CAMPHOR, ASSAFETIDA, have each and all of them cured the ague. Were it not for its expense, Musk would, doubtless, be more extensively used in the practice of medicine. For myself, I place it in the same rank with quinine and arsenic in the treatment of what are termed the purely nervous affections. It is generally recommended in books to begin with ten grains;—in my hands a much smaller dose has been attended with the best effects in numerous cases. But a great deal depends upon the purity of the drug. I lately succeeded with musk in a case of intermittent squint, which successively resisted quinine, arsenic, prussic acid, and iron.

A married lady, who always when pregnant became the subject of epilepsy, but had no fits under other circumstances, consulted me in her case: I tried every remedy I could think of without any advantage whatever; I then gave her musk, which at once stopped the fits. The dose in this case was four grains.

We have constant disputes whether a particular remedy be stimulant or sedative. Opium, musk, and prussic acid, have by turns become the subject of discussion. One theorist will take one side, another another, and each will bring you facts of equal cogency. Both are right, and both are wrong. To reconcile this seeming paradox, we have only to observe that all remedies are either stimulant or sedative according to the dose and the constitution of the patient.

STRYCHNIA can both interrupt and produce fever. In an experiment upon a horse suffering from "lockjaw," a watery solution of nux vomica—the well-known source of the strychnia—produced, when injected into the veins, a shivering fit of some duration. I have, nevertheless, found the sulphate of strychnia of great service in obstinate agues, and in many chronic diseases in which chilliness, vertigo, and hallucination or phantasy were symptoms. In the case of a female affected with nervous blindness, for whom I successfully prescribed sulphate of strychnia, the remedy deprived her, for about an hour, of the use of her limbs. The recovery of her sight, under its exhibition, amply compensated for this temporary accident. I have found it confuse the vision in a similar manner when prescribed for muscular palsy. In the treatment of epilepsy and many other spasmodic affections, this substance may be advantageously combined with the sulphate of quinine. I have, notwithstanding this, on several occasions, been obliged to intermit its use, from the pains of which the patients complained while taking it;—and this led me to make trial of the remedy in rheu-

matism, which, in some instances, it cured.

SILVER.—A consideration of the occasional beneficial influence of Nitrate of Silver in epilepsy, led me to try its effects in other disorders of the spasmodic kind, such as asthma, cramp, &c., and I am glad to have it in my power to bear testimony to its very great value in all of these affections. It is a powerful Chrono-thermal medicine—and like every medicine of this class, it can produce the diseases it can cure.

We have seen that tremor, spasm, palsy, differ but in degree. In all these disorders, silver may be advantageously substituted for bark, prussic acid, &c. While engaged in prosecuting my researches upon the merits and demerits of silver, I found it to be one of the most powerful diuretics in the *Materia Medica*; a circumstance not altogether unobserved by the older authors, particularly Boerhaave, who was accustomed to prescribe it with nitre in dropsy. It has, nevertheless, the power to suspend the urinary secretion. There is an affection to which young women are remarkably subject—a periodic pain of the side—or *stitch*. This disorder has been maltreated under a variety of names, according to the notions entertained by attending practitioners, as to its origin and nature. If practitioners would only take the trouble to ask the patient whether the affected side be colder or hotter than natural, I do not think they would be so forward, as they usually are, to order leeches and cupping-glasses. In ninety cases out of a hundred, the sufferer will tell you that that side is always chilly! This at least might convince them inflammation is not the “head and front of offending.” Such pain is the result of spasm of one or more of the intercostal muscles—which pain, when the patient is told to inspire, will assuredly increase. Beware of adding to it by blood-letting! In numerous cases, it will yield to half-grain doses of nitrate of silver—failing which, prussic acid, quinine, or arsenic, may be successively tried; and to one or other of these, it will prove, for the most part, amenable. In pain of stomach after eating—also a disease of the spasmodic kind—I have found silver particularly valuable. In all varieties of cough and catarrh, I have derived advantage from its employment; and I am sure it has, in my hands, contributed to the cure of indubitable phthisis. Let it be at the same time remembered that I do not exclusively rely upon this medicine in any one form of disease;—for, unless it be sulphur for *psora*, I do not know a specific in physic!

There is a disorder to which aged individuals and persons who have suffered much from mental anxiety are liable—a disposition to *faint* and *fall*—often mistaken, and fatally

mistreated, under the name of “tendency to apoplexy.” The employment of silver in this affection has, in my practice, been very generally successful. I have found it also decidedly advantageous in vertigo, and in many cases of mental confusion.

Nitrate of silver has a great influence over the spine and spinal nerves; for patients sometimes complain of pains like lumbago, sciatica, and rheumatism while taking it. I have occasionally known it produce shivering and fainty sensations, but these inconveniences were merely temporary, going off upon the discontinuance of the medicine. It has cured them all when procured by other causes. You are aware that blueness of skin is an occasional effect of nitrate of silver; and I must here explain to you the reason. Many of you have seen, doubtless, the pictures produced by *light* on paper saturated with nitrate of silver. Before the nitrate of silver could turn the human face blue, the skin, as in the case of the paper employed in that process, must be completely saturated with the preparation—for how otherwise could the light affect the face in that manner. Though I have myself prescribed nitrate of silver thousands of times, I never witnessed the slightest tinge from its use—nor would any other practitioner have to complain of it in this respect, but such as had employed it in too large doses, or too continuously. Who, then, would reject a valuable remedy, because its abuse has produced, in rare instances, a peculiar color of skin—seeing that every remedy, if improperly applied, may occasion the far greater calamity of death itself?

COPPER, like silver, is now seldom used but in epilepsy. Fordyce, nevertheless, thought so highly of it as a remedy for ague, that he ranked it with the Peruvian bark. Boerhaave, Brown, and others, esteemed it for its diuretic power; and accordingly they prescribed it in dropsy. In the same disease, and in asthma, I have had reason to speak well of it, and I can also bear testimony to its salutary influence in chronic dysentery—a form of disease so frequent in the East Indies, that while serving there, I had many opportunities of testing Dr. Elliotson's favorable opinion of its value. That it can produce all these disorders is equally true: for where it has been taken in poisonous doses, “it excites,” according to Parr, “a pain in the stomach, and griping in the bowels, tenesmus, ulceration, bloody stools, difficult breathing, and contraction of the limbs.” A universal or partial shiver will be found to precede or accompany all these symptoms. Copper was a favorite *febrifuge* with the older practitioners.

IRON is a very old remedy for ague—perhaps the oldest. Stahl particularly dilates upon its virtues in this affection. Much of the efficacy of a medicine depends upon the constitution of the season and climate—much upon the constitution of the patient. This metal, like every other remedy, has consequently had its supporters and detractors in every form of disease. It is at present, one of the principal remedies for Hysteria, and other female disorders—disorders which we have already shown are mere variations of remittent fever. The water in which hot iron had been quenched used to be prescribed by the ancient physicians as a bath for gout and palsy. In skin diseases and cancer, rickets, epilepsy, urethral stricture, &c., iron has been vaunted by numerous modern practitioners. The ancients recommended it in diarrhoea, dysentery, dropsy, hectic, vertigo, and headache. Now, in all these affections, it has served me much like other powers—ameliorating or aggravating the condition of the patient, according to peculiarity of constitution. Some pseudo-scientific physicians have amused themselves with witticisms at my expense, on the subject of iron. Finding it in some of my prescriptions for Phthisis, they have accused me of mistaking this disease for dyspepsia. How long will men deceive themselves with such puerile absurdity? When will they learn that the human body, in disease, as well as in health, is a *TOTALITY*,—not a thing to be mapped into parts and portions, like a field of rice or corn! Let them take a lesson from St. Paul, who, in his first epistle to the Corinthians, has these remarkable words:—“And whether one member suffer, all the members suffer with it: or one member be honored, all the members rejoice with it.” With

ZINC and BISMUTH I have occasionally succeeded in prolonging the remission in many cases of disease, where the other principal chrono-thermal medicines had been ineffectually tried. Generally speaking, however, they are less to be relied upon for this purpose, than those I have had so frequent occasion to mention in the course of these lectures. The successful employment of

ARSENIC by the natives of India, first, I believe, induced European practitioners to try its effects in ague, and also in diseases of the skin. The happy effects of this medicine were found not to be confined to these disorders. Not only has its judicious administration been attended with success in epilepsy, and numerous other forms of convulsive disorder, but it has been advantageously employed in the treatment of structural change. Like every other remedy, arsenic has its advantages and disadvantages. Enquire of miners, exposed to

the fumes of this metal, and you will find that fever, tremor, spasm, palsy and sores, compose almost the sum-total of their sufferings. In the Edinburgh Medical and Surgical Journal there is a relation of five cases of poisoning by arsenic. Among the symptoms mentioned by the narrator, Mr. Marshall, were vomiting, pain, and burning of the stomach, thirst, crural and abdominal spasms, purgings, headache, dimness of sight, intolerance of light, palpitation, chills and flushes, epilepsy; all of which proceeding from other causes, I have successfully treated by arsenic. The first case of epilepsy in which I ever derived benefit from any remedy, was cured by this metal; the disease was principally brought on by hard drinking, and the fit came on at a particular hour, every alternate night. Now it is worthy of remark, that after an attempt at suicide by arsenic, detailed by Dr. Roget, periodic epilepsy was among the effects produced. The subject of it, a girl of nineteen, had also chills and heats, which if you please, you may call Intermitting or Remittent Fever, or any thing else you can fancy—for it is not my custom to quarrel about names!

As a remedy for skin disease, I have every reason to speak highly of arsenic, even when complicated with much structural change. Some cases in which it had very great effect, I will detail to you. The subjects of them were sepoy, or Indian soldiers who had suffered in the Rangoon war, from climate, defective food, and the usual privations of men in the field. These patients were under my care for a fortnight only; and to that period the treatment refers. All of them, be it remembered, had had the Fever.

Case 1.—Jan Khan, havildar, (Native Sergeant,) had diseased thickening of the skin of the legs and arms. His nose was enormously enlarged, and his whole appearance unhealthy. He ate and slept badly, and his tongue was foul and clouded. After the operation of an emetic, the liquor arsenicalis was administered in six drops three a-day. At the end of a fortnight, the alteration in his general appearance was wonderful. The nose had then become nearly of the natural size, and the disease of the skin had gradually lessened. He then slept and ate well, and expressed himself much pleased with the improvement he had received from his medicine.

Case 2.—Daud Khan, sepoy, had pains of the bones and joints, white patches all over his skin, and an irritable sore of the acrotum, from which a fungus, about the size of a chestnut, sprung up. He complained also of a burning sensation in his feet. When I



first saw him, he was so weak he could not rise from the floor without assistance, and his countenance indicated extreme wretchedness and debility. Having detached the fungus with a pair of scissors, the lunar caustic was applied, and arsenic administered, as in the previous case. In a week, there was great amendment of the sore. The patient since then, rapidly gained ground; of the pains of the bones he no longer complained, and the eruptions on the skin gradually disappeared; the ulcer at the same time closed, and I expected he would soon be fit for duty.

Case 3.—Setarrum, sepoy, had large sores of the leg, sloughy, ill conditioned, and spreading in different directions. He had also cuticular eruptions, like the last mentioned patient; and his appearance and strength, though not so wretched, were yet sufficiently miserable. Pure nitric acid was applied to the whole surface of the sores, and a poultice ordered. The arsenic was given as above. On the separation of the dead matter, the leg was supported by Baynton's bandage. The sore gradually healed—the eruptions disappeared—and the patient regained complete health and strength.

Case 4.—Subryah, sepoy, had had his leg thrice amputated, the last time in the middle of the thigh, but the bone had been left with only a covering of skin. The stump was in an ulcerated state when I first saw him—and the probe, upon being passed through one of the sores, found the bone carious, (abraded) and denuded as far as it could reach. The patient's health was altogether wrong, not one function being properly performed. It was proposed to amputate at the hip joint, as it was not believed that any other treatment could do good. To this step, however, he would not submit. A trial was given to arsenic, and the sores, beyond expectation, at the end of a fortnight had nearly healed. The patient then slept and ate well, and looked comparatively strong and healthy.

Case 5.—Vencatasawmy, sepoy, had disease of the skin, and an ill-looking sore over the sternum, (breast bone,) which bone was perfectly carious,—the probe could be passed through it to the depth of three inches in the direction of the mediastinum. The patient was weak and irritable, and could neither eat nor sleep; his pulse was rapid and small, and his appearance altogether miserable. Arsenic was resorted to as before. The ring worm, under its use, disappeared—the sore began to look clean—the probe, when he went from my hands, only passed to the depth of an inch, and the patient's health was rapidly improving.

These cases were intrusted to my care by

Dr. Gibb, of the Madras Medical Staff, while he himself was on "sick leave," and were afterwards reported by him to the Medical Board of that Presidency.

Do I now require to tell you the principle upon which arsenic proved so efficacious in the treatment of these various structural changes? It acted simply by its power of controlling Remittent Fever, under a chronic form, of which these unfortunate sepoys were all suffering—the structural changes being mere features or developments of the general derangement.

Gentlemen, we have now established—in-disputably established—even by the cases of the schoolmen themselves, that Fear, or any other given passion,—Bark, or any other given chrono-thermal medicine, has each cured a host of maladies, which the authors of nosological systems not only put down as separate and distinct disorders, but to which the profession usually ascribe a difference of cause and nature;—some, according to their views, being diseases of debility,—some, nervous—some, inflammatory. Now, connecting this with the fact, that the subjects of all these apparently different ailments have Fits and Intermittents, and have each a greater or less number of the symptoms or shades of symptom constituting the particular type of disorder, so well known to the vulgar by the term Ague; for which the same vulgar are aware, there are no powers so generally applicable, as Bark and the passion Fear; to what other conclusion can an unprejudiced person come, than that all disorders are variations of this one type—that, abstractedly speaking, there is but One Disease! If this then be true—and its truth may be easily tested in every hospital in Europe—am I not justified in believing that the notions (for I will not call them principles) which have hitherto guided or rather misguided physicians in their treatment of disease, are a mere romance of the schools; that their views of its causes have, for the most part, been as erroneous as their modes of cure are defective; and their nomenclature and narrations throughout, little better than an unmeaning jargon!

Gentlemen, I shall conclude these Lectures with a brief summary of the doctrines which have occupied us during the course. Their importance to the human race, if true, cannot for a moment be doubted;—if proved to be false, I shall be the first to acknowledge my error; but, as I said in the outset, I will only appeal to results—to nature. I have proved, however, I hope to the satisfaction of most of you, that

1. The phenomena of perfect health consist in a regular series of alternate motions.

or events, each embracing a special period of time.

2. *Disease*, under all its modifications, is in the first place a simple exaggeration or diminution of the amount of the same motions or events, and being universally alternative with a period of comparative health, strictly speaking, resolves itself into Fever, —remittent or intermittent, chronic or acute. Every kind of structural disorganization, from Tooth Decay, to Pulmonary Consumption, and that decomposition of the knee-joint, familiarly known as White Swelling, being merely "developments" in its course; —Tooth Consumption, — Lung Consumption, —Knee Consumption

3. The tendency to disorganization usually denominated acute or inflammatory, differs from the chronic or scrofulous in the mere amount of motion and temperature; — the former being more remarkably characterized by excess of both, consequently exhibits a more rapid progress to decomposition or cure; while the latter approaches its respective terminations by more subdued, and therefore slower and less obvious alternations of the same action and temperature. In what does consumption of a tooth differ from consumption of the lungs, except in the difference of tissue involved, and the degree of danger to life, arising out of the nature of the respective offices of each.

*Disease*, thus simplified, will be found to be amenable to a principle of treatment equally simple. Partaking, throughout all its modifications, of the nature of Ague, it will be best met by a practice in accordance with the proper principle of treatment of that distemper. When the doctrine of the Concoction of Humours held its baneful sway over the mind of the physician, it was considered the greatest of medical errors to repel paroxysm—each fit being supposed to be a friendly effort of nature, for the expulsion of a peccant or morbid humor from the body. Like the popular error of our own day, so prevalent in regard to "the Gout," it was deemed to be a salutary trial of the constitution. An ague in spring was said to be good for a king! That monarchs occasionally became its victims at this season, had no particular share in the revolution which has since taken place in medical opinion. So late as the time of Boerhave, a physician asserted, that if he could produce a fever as easily as he could cure it, he should be well satisfied with his own skill! The consequence of such notions was, that the practitioner exerted his utmost to increase the heat of the body during the paroxysm,—but the fearful mortality attending the practice had no other effect upon the mass of the

profession, than to make them redouble their exertions in the discovery of means of increasing this heat, that they might thereby assist the unknown process which morbid matter was supposed to undergo! One hundred years have scarcely elapsed since the fever patient was wrapped in blankets, his chamber heated by large fires, and door, window, and bed-curtain closed upon him with the most scrupulous attention. The few that escaped this terrible ordeal, were said to be cured—and these cures, like *ignes fatui*, only served to delude and blind the practitioner to the awful mortality which followed the practice.

Like the present treatment of the symptoms still absurdly called Syphilis, the practice proved infinitely more destructive to life than the disease itself—but, so far from opening men's eyes, the seniors of the profession, when the invaluable *Bark* was first introduced to their notice, opposed it with a violence and a virulence only since paralleled by the resistance offered to the introduction of the variolous and vaccine inoculations. To bring forward any sweeping or useful measure in Medicine, requires a moral courage and perseverance that fall to the lot of few. The man who wishes to gain a ready notoriety, has only to puff off some inert or mystical mode of treatment, and his success is certain. He must beware of coming before the public with a remedy to which the stigma of poison can be attached. Does not the quack constantly boast of the absolute safety of his remedy!—see with what pertinacity he contrasts his vegetable medicine with the words mineral poison, which last he uses for a bugbear, as if the vegetable world was all for a blessing, and the mineral all for a bane; and the wonderful part of this is, that it answers admirably, even with what are termed the educated public—if those can be really educated who would swallow opium and hemlock in any quantity because they are vegetables, and who appear not to know that table-salt is a mineral—that coal or carbon is a mineral—that iron and lime are minerals, and that all of these mineral substances actually enter more or less largely into the economy of their own living frames! To sum up the whole, every vegetable substance is the product of the earth; and if there be truth in scripture—if there be a statement in the sacred writings more deserving of the attention of the physician than another, it is that contained in the 38th chapter of the Book of Ecclesiasticus, namely, that "The Lord hath created medicines out of the earth, and he that is wise will not abhor them!"—Can the man be a Christian

who, after this, would dare to rave against mineral medicines?

As now practised in England, Medicine is little better than a copy of the exploded navigation of the ancients. Taking his bearings, less by the observations of the fixed stars, than by every little eminence and prominent locality, the ancient mariner, cautiously if not timidly, crept along shore. With the unerring compass for his guide, the seaman now steers his bark boldly, upon the boundless ocean. Despising the localism that formerly guided his sail, he now completes his voyage to the distant port, in as many days as it formerly occupied him weeks or months. Keeping in view the principles here laid down, the physician, may in like manner, with a few rare exceptions, entirely dispense with the common anatomical landmarks of his art—if he be not startled with the novelty of the light by which we have endeavored to dispel the darkness that has hitherto clouded the field of medicine. Taking corporeal unity and totality for his rudder and compass—the brain and nerves for the ocean and seas on which he is to act—temperature and remittency for his tide and season; constitution and habit for the rule by which he must occasionally change his tack; he may now rapidly accomplish ends which, by groping among the intricacies of nomenclature or by a vulgar attention to mere localities, he can only imperfectly attain by the reiteration of long and painful processes; he may thus, with ease, obviate difficulties which he previously believed to be insurmountable. Let him not question whether or not the adoption of this will best serve his own interest. As physic is for the public, not the public for physic, he may rely with certainty that notwithstanding the present over-crowded state of the profession, the supply of medical aid will sooner or later, adjust itself to its own, as well as to the general weal.

It was one of the boasts of the eccentric Radcliffe, that he could write the practice of physic on half a sheet of paper: the whole might be comprised in half a line—attention to temperature! This, you may be sure, was Radcliffe's chief secret—for he was one of the earliest physicians who first introduced what is called the cooling system in fever. When the Duke of Beaufort was taken ill of the small-pox, "the doctor," says Pott, "was sent for, and found his grace's windows shut up in such a manner, by the old lady duchess, his grandmother's order, that not a breath of air could come into the room, which almost deprived the duke of the very means of respiration. This method had been observed by the physicians (!) in her grace's youthful days, and this she was

resolved to abide by, as the most proper in this conjuncture, being fearful that her grandson might otherwise catch cold, and, by means of it, lose a life that was so precious to her and the whole nation. She had also taken a resolution to give her attendance upon the duke in person during his sickness, and was in the most violent consternation when Radcliffe at his first visit ordered the curtains of the bed to be drawn open, and the light to be let in, as usual, into his bedroom. "How," said the duchess, "have you a mind to, kill my grandson?—Is this the tenderness and affection you have always expressed for his person?" "tis most certain his grandfather and I were used after another manner, nor shall he be treated otherwise than we were, since we recovered, [escaped, truly!] and lived to a great age without any such dangerous experiments" "All this may be," replied the doctor, with his wonted plainness and sincerity, "but I must be free with your grace, and tell you, that unless you will give me your word that you'll instantly go home to Chelsea, and leave the duke wholly to my care, I shall not stir one foot for him: which, if you will do, without intermeddling with your unnecessary advice, my life for his, that he never miscarries, but will be at liberty to pay you a visit in a month's time." When at last, with abundance of difficulty, that great lady was persuaded to acquiesce and give way to the entreaties of the duke and other noble relations, and had the satisfaction to see her grandson, in the time limited, restored to perfect health, she had such an implicit belief of the doctor's skill afterwards, that though she was in the eighty-fifth year of her age at that very time, she declared it was her opinion that she should never die while he lived, it being in his power to give length to her days by his never-failing medicines."

Well, Gentlemen, the proper medical treatment of all diseases comes, at last, to attention to temperature, and to nothing more. What is the proper practice in Inter-mittent Fever? To apply warmth, or administer cordials in the cold stage; in the hot to reduce the amount of temperature by cold affusion and fresh air; or, for the same purpose, to exhibit according to circumstances, an emetic, a purgative, or both in combination. With quinine, arsenic, opium, &c., the interval of comparative health—the period of medium temperature, may be prolonged to an indefinite period, and in that manner may health become established in all diseases—whether, from some special local development, the disorder be denominated mania, epilepsy, croup, cynanche, the

gout, the influenza! In the early stages of disease, to arrest the fever is, in most instances, sufficient for the reduction of every kind of local development. A few rare cases excepted, it is only when the disorder has been of long standing and habitual, that the physician will be compelled to call to his aid the various local measures, which have a relation to the greater or less amount of the temperature of particular parts.

The Unity of Disease was first promulgated by Hippocrates, and for centuries it was the ancient belief. In modern times it found an advocate in the American physician Rush—but except in this instance of unity, betwixt the respective doctrines of both authors and my doctrine of disease there is not a single feature in common. For while the first, from his observation of the resemblance of disorders one to another, inferred that one imaginary humour must be the cause of all complaints—the doctrine of the second was that all disorders consisted in one kind of excitement. The principle of Hippocrates led him to purge and sweat;—that of Rush to bleed, leech, and starve. In practice and in theory I am equally opposed to both. Other physicians doubtless have held the idea of a unity of disease, but neither in the true theory of the nature of morbid action, nor in the principle of the practical application of medical resources have I as yet found the chrono-thermal system anticipated. The opponents of my doctrines, and those who embrace them by stealth, have alike searched the writings of the ancients in vain to discover a similarity to them in either respect. If it be urged against the author of the chrono-thermal system of medicine, that he has availed himself of facts collected by others—and that therefore, all is not his, which his system contains—I answer, Facts when disjointed are the mere bricks or materials with which the builders of all systems must work. And to deny to any man the merit of being the architect of a great Edifice of Truth on that account, would be just as reasonable as to ascribe the merit of St. Paul's Cathedral to the donkeys and other beasts of burden Sir Christopher Wren necessarily employed in fetching the marble and mortar composing it. "Merely to collect facts is an easy and mindless task, that any common being can perform; it requires eyes and hands, and almost dispenses with a brain; it is the work of a toiling wretch, who, like the miser, is incapable of using what he possesses. Mere facts lie around even the savage, but he knows not what he sees—and such, precisely such, is the case with the mere learners of the names of

things, the collectors of little facts, the undiscriminating triflers, who think they are cultivating the sciences."—[*Alexander Walker*] It is of these, nevertheless, that our medical clubs and coteries, are chiefly composed, and it is with the conglomerating effusions of these that the editors of the medical press chiefly contrive to keep the daylight of medical truth from the eyes of the student. "Microscopical observations,"—straw splittings, and other little facts you have from their hands in abundance—but facts properly arranged and systemized into a whole or great fact; not only do you never find in their writings—but when you present such great facts to their eyes, they either comprehend them not, or if they do so, they immediately endeavor to steal or stifle the discovery. Out upon such contemptible creatures, fit only to

Suckle fools, and chronicle small beer!

What was the first reception of the chrono-thermal system by medical men? I do not speak of its reception by the *ornaments* of the profession—the twaddling intriguing sycophants of country towns—I mean its reception by the medical *aristocracy*, as the Court doctors call themselves. Immediately after its publication, one of these court gentry (James Johnson) misrepresented, ridiculed, and denied it—three years after that another court physician (Holland) attempted, as you have seen, by a side-wind to steal it—three years more passed away and a third court doctor (Forbes) by those meanest arts, misstatement and misquotation, did his little endeavor to stifle it. If such was the candid and gentleman-like conduct of the *town* doctors, what had the chrono-thermal system of medicine to expect at the hands of the physic-selling profession in the country? What could these intriguing little gossips do but follow in the wake of their town masters, the court physicians? Now they ridiculed it—now they denied it—but all the while they had no hesitation to practice it by stealth, some in one, some in another of its fragments. This moment it was partially true, but not new;—the next, the newness was admitted, the truth denied. But, Gentlemen, up to 1836, when I first published the heads of that system, the profession to a man were utterly ignorant of the very nature of disease. Its periodicity in the case of ague, and in a few other disorders, they knew—the periodicity of all animal movement, whether in health or disease, they knew nothing at all about—and of the mode in which remedies act they were just as ignorant. As to blood-letting, which the great majority of them now admit they did carry too far, the

exclusion of it from the chrono-thermal system, so far from being its principal feature, as some of them pretend, is only a fragmental part that of necessity followed its discovery. I have never taken credit for being the first opponent of the lancet. But one thing in regard to this matter I do claim credit for—I claim credit for being the first man who, by a strong array of facts, and some force of reasoning, produced an impression on the public that all the facts and all the arguments of former opponents of the lancet never before produced on the Profession; namely, an impression of the dangerous nature of the remedy; and whether they like to be told of it or not, I claim to have either convinced or compelled the profession materially to alter their practice.\* In all the late medical reviews of my writings, the subject of blood-letting, which afforded so much mirth to my early critics, has either been kept entirely in the back-ground, or, if noticed at all, my strictures on it are declared to be a mere echo of the present opinions of the profession!—but whether they be so or not, the astute editors of these publications determine that no merit attaches to me for my endeavors to put it down, inasmuch as it had been equally opposed and decried by somebody of some place or another in Greece, who lived before the time of the Messiah! Gentlemen, to say blood-letting is a bad remedy is one thing; to *prove* it to be bad is another; of force the world to believe and act upon your arguments against it, in the teeth of the opinion of the world, is a still greater achievement. That merit I distinctly claim. The silence and admissions of the medical press on that head equally attest the fact; while the recent bare-faced attempt of Dr. Laycock, under the disguised (?) name of “Vital Periodicity,” to purloin my doctrine of the *Periodic* movement of all *Vitality*, whether in health or disease, is as much a compliment to the genius of its real discoverer as it is a proof of the worth of the discovery. On that

\* Even upon the subject of *Apoplexy*, it is amusing to see the manner in which those who formerly advocated the lancet in that disease now and avor to get out of their difficulty. Sir C. Bell, Dr. Clutterbuck, Dr. Marshall Hall, Mr. Wardrop, &c., in recent remarks upon the treatment of apoplexy give so many doubts, *cautions*, and *reservations* as all but to amount to a complete prohibition of the lancet in this disease—not one of them, however, having the boldness to oppose it entirely in direct words, or virtue enough to acknowledge to whom he owes the new light that has so lately come upon him in this matter.—“Awful is the duel between *MAN* and the *AGE* in which he lives!”—*Bulwer*.

discovery is based the whole chrono-thermal system of medicine.

Before concluding, I will just make a remark upon the subject of the doses of all medicines. Perceiving, as you must have done by this time, the utter impossibility of retelling, in many cases, especially of chronic disease, the particular agent by which you are to obtain amelioration or cure,—and as in almost every case where an agent does not act favorably, it does the reverse—you must see the necessity of commencing your treatment with the smallest available doses of the more potent remedies; of feeling your way, in short, before you venture upon the doses prescribed by the schools. Let me not, for a moment, be supposed to countenance the homœopathic nonsense.—The 12th part of a grain of calomel, for example, is a proper medicine to give to an infant; but such dose has no more relation to the millionth or decillionth part of a grain of the same substance, than the twelfth part of a bottle of wine—one glass—has to a drop of that liquid. The one has power to influence the whole body;—the other is utterly inappreciable beyond the taste it may impart to the tongue, the only organ it can, by any possibility, even momentarily influence.—Gentlemen, pity the Homœopaths!—shun the Pathologists and Bloodsuckers—and follow only that best guide of the physician—Nature! not in the confined sense of our mortal economy, but in every department of her works.—One great principle binds them together—God, in his *UNITY*, prevades them all!

(For the Dissector.)

# TRACTS ON CONSUMPTION.

NUMBER THREE.

On the Cause and Prevention of Tubercular Phthisis.

By J— G—, M. D.

The term *Phthisis*, being that of Hippocrates, imports the high antiquity of a certain disease, and the interpretation given of it by Aretæus shows that it is the same which is so alarmingly frequent and fatal at the present day, and characterised as Consumption. The aid which the study of the origin and cause obviously contributes to the accurate knowledge of all the departments of disease must have made an enquiry into this subject coeval with the first observations of Consumption. Moral and physical evils coexist with and exert an agency in producing, per-

haps, every form of disease, and this connexion being obvious to the senses and the understanding they early formed a branch of Medical Science, that includes many of its essential principles. The importance of this connexion is perceived to be such that it may be said, in proportion as the medical practitioner is acquainted with the just relations between its various parts, so will he be enabled to prevent the existence, or to treat with success the diseases which may come under his care. The species into which Hippocrates divided Consumption, embracing as they do the varieties of good classifications of the present day, show that he had diligently endeavored to investigate it; and his book *De Atribus* affords evidence that the physical evil whence it springs had engaged his serious attention. Apparent as it then is, that the cause of consumption did not escape the enquiries of the earliest cultivator of medicine, it still does not appear that he, any more than the countless devotees to medical science who have followed in his steps, discovered any thing in relation to its true nature.

Investigations into the origin and nature of Phthisis Pulmonalis have given authority to the opinion that two things are necessary to its production—a cause which acts on the lungs, and a disposition in the lungs to be acted upon; or in the language of medical men, a predisposing and an exciting cause. The first of these may be regarded as the cause which induces the morbid state of the constitution, giving the name and character of tubercular diathesis; and the second that which determines the local deposition of tuberculous matter. The difference in the operation of the two causes may be illustrated by considering that a person little exposed to the exciting cause may have the constitutional affection long before any local disease becomes manifest; while no degree of exposure to exciting causes will determine the local disease when the constitutional affection does not exist. Of the predisposing causes the most prominent is considered a certain feebleness of constitution, the result of hereditary predisposition to tuberculous formations. Indeed, the great importance given to hereditary influences in the causation of the disease, and the small share which it is believed external agents possess, when hereditary taint is not also present, is the striking peculiarity, in the views of consumption entertained by medical men of the present day.\* Besides this cause, several others

are added, as interference with the due nutrition of the body, from deficient or improper diet, absence of sufficient exercise to insure the proper growth and development of the body, or its check from the exhausting and debilitating effects of excessive labor; an imperfectly protected state of the body from inadequate clothing; inattention to cleanliness; gluttony and the abuse of spirituous liquors; and intense affections of the mind. Viewed as predisposing causes, this enumeration of evils is as applicable to any other disease as consumption; and, at any rate, they have been fully and elaborately treated of, and with all the importance due to them, in monograph treatises on the disease. As my object is not to repeat what has been said on Consumption, but to endeavor to find out what ought to be said, I shall dismiss this subject with the remarks, that the terms predisposing and exciting have been found useful in facilitating an understanding of the disease; but if we can determine the true cause of the effect—discover that efficient source of the disease which, when present may be and is followed by it, and which being absent it cannot exist—these terms may, without disadvantage, be banished from medicine.

shows that while no temperament, complexion, or frame of body confers immunity from Consumption; and it is frequently observed to originate in the healthy offspring of healthy parents, the infancy and youth of the children of tuberculous parents are very often characterized by as full a development of the organs and general system, and as active a state of the functions, as in those who are considered free from the supposed taint; while, equally with them, they may die in old age without the supervention of the disease. It must be admitted that the impure nutriment which the foetus derives from the abnormal state of the blood, and the infant, from the milk of a tuberculous mother, may reasonably be regarded as the sources of the disease when it exists at these early periods of life. But as tubercular consumption is far the most frequently developed after puberty, and after the changes of constitution have shown that the effects of diseased fetal or infantile nutriment have for a long time ceased to act, and been superseded, we must look for its cause in some more general, constant and independent source. It is possible to conceive that an impulse to the disease may be present in the materials furnished by one or both parents at a fecundating copulation; but it is impossible to understand how it can remain latent for an indefinite number of years, or, as believed, for one or more generations. The discovery and application of a cause *vera* will obviate the necessity of solving these difficulties.

\* On this subject, so painful to the feelings of parents, it is highly probable physicians have generalized too largely. Observation

This grand cause of Consumption is to be looked for in a vitiation of the atmosphere. The sensible effects produced by this element show that it has a powerful and enduring influence over the terrestrial creation. It is recognised as the chief agent in producing; and as the grand recipient of a large proportion of nature's operations. It is the perpetually working laboratory, in which spontaneous distillation, sublimation, composition and decomposition pursue their eternally recurring revolutions. In addition to the well known chemical elements of its composition, its contents are the mineral vapors from the earth, the products of combustion and respiration and of the volatile exuvia—whether gaseous or fluid—of animal and vegetable decomposition. Besides these vaporous and gaseous productions, we now know that the atmosphere is freighted with countless multitudes of insect ovula and vegetable semina, which, on meeting with a proper nidus, are hatched and developed into organised matter. This is clear to the naturalist, when he observes that stagnant water, though purified by distillation and confined in a marble basin, will, in a short time, become loaded on its surface or about its sides with various species of confervas, while the interior will be peopled with microscopic animalcules. To this thickly inhabited state of the atmosphere has been satisfactorily traced the cause of the rapid and wonderful effects of what, in common language, is called a blight upon plantations and gardens; and of the appearance of lichens and mosses which, in a single night, will line the surface of floors and brick walls.\*

Importance has been given to this subject by many physicians, and particularly the disciples of the Linnæan School, having considered organic matters floating in the air, as the direct cause of nearly all the diseases to which both animals and vegetables are subject. More recently Hahnemann, in his organon, tells us that almost all chronic diseases are the result of a morbid animal miasm which he calls the *péri* or itch principle. According to Dr. Baron all tubercular disease, originates from vesicular worms, generated in minute serous cysts. This opinion has received a degree of support from the researches and assertions of Dupuy; who states that he has traced the conversion of the Cysts, containing these animals into collections of tuberculous matters. It is some further corroboration of these views, as applicable to consumption to find that animalcules can always be discerned in the Sputa of its victims, while vegetable organizations have

been found connected with the matter effused into the textures in tuberculous constitutions.

Although the atmosphere acts with great energy upon the inorganic materials, and the microscopic productions of our planet, its influence over the two great visible classes of animal and vegetable life is more conspicuously discerned. To animal life it is observed to be more particularly indispensable; without it, respiration is impossible; all its other functions must cease, and death be inevitable. But this fluid so essential to vitality, "this most excellent canopy, this brave overhanging firmament, this majestic roof, fretted with golden fire," is the direct source of the greater position of "the ills that flesh is heir to." Whether organic or inorganic matters be this source of deterioration we may be unable to determine; but enlightened observation, in various parts of the earth, shows that human health cannot be maintained, without a certain degree of chemical purity in the elements of the atmosphere. From the reasons already mentioned, it is evident, the portion of its constituents essential to this purity rarely exists; and, though we do not well understand in what the impurities consist, or the principles on which they act, yet their influence in inducing, at least, those general diseases termed endemical and epidemical, is generally acknowledged.

Uncertain as we are as to the precise nature of the morbid changes of the respirable medium which induce disease, yet they have been always supposed to arise from one of two causes: "either some temporary peculiarity in the constitution of the atmosphere itself, or a mixture of adventitious deleterious matters with it" Illusive as the difference between these two causes has been to the researches of philosophers, it is of unquestionably great importance, as well as its determination as to which is the true one, because it involves the dearest interests of the human family. If diseases are dependent on the former, it is scarcely possible to conceive that they admit of control, while, if they are generated by the latter, they may be prevented by a simple application of human agency. But the subject in all its bearings is one of the most difficult to elucidate that can be presented by any science, not only on account of the impenetrable nature, or apparent variety of the causes themselves, but, also, because of the mysterious action which they exert on the living system. Its obscurity gives importance to the investigation, and, while it justifies the labor, requires that it should be examined in detail.

In the early ages of medicine, and before

\* Good's Study of Medicine, vol. i., p. 197.

chemistry existed as a science, the general suffrage of physicians seemed to be in favor of the opinion that some undefined change in the properties of the air, independent of the mixture with any accidental impurities, gave rise to all endemic and epidemic diseases. And it is the general opinion, at this day, that certain states or vicissitudes of the atmosphere, particularly in its temperature or hydrometric condition, may produce sporadic ailments, if not some of general prevalence. Consumption in particular, has been considered not only dependent for its predisposition on a cold, damp and variable climate; but as in an especial manner determined by this cause to its local manifestation in the lungs. The direct and constant exposure of the lungs to this element, would naturally suggest it as the probable source of all their ailments. In corroboration of the apparent truth of this opinion, we find removal from such a climate, as above mentioned, to one which is warm, dry and more equable is well known to be productive of the most beneficial effects to phthisical invalids, where other therapeutic agents are of little avail. "If we take into account also the effect of the continual action a bland atmosphere on the extensive surface of the respiratory organs both as abating irritation of the lungs, and enabling them more effectually to produce those changes in the blood that are essential to health, we have an apparently satisfactory explanation of the results observed." And when, on the other hand, we observe a change from the latter to the former climate, is as frequently attended by a contrary state of the functions and of the circulation, with a deterioration of health, we can scarcely avoid attributing the evil consequences of consumption, to these states of the atmosphere. But it may be said, in modification of these views, that there is reason for believing that consumption is limited to no climate, and scarcely to any country. It is particularly prevalent over the temperate regions of Europe and Northern America. it extends over the isles of the oceans; pervades the northern tropics; and according to recent statistical reports exerts its most destructive influence in the West Indies. If there is any portion of our earth exempt from the direful effects of this terrible disorder, it is the southern hemisphere; and certain facts render it very doubtful whether it prevails endemically, or in that common form of our division that affects the serous tissue, in any part of that region. The different magnetical or electrical condition of that hemisphere justifies the inference that a disease, which we shall show has a direct relation to this state of the earth cannot probably originate in it. This conjecture is sus-

tained by reference to the medical reports of the British army, which show that at the cape of Good Hope, and in Australia, the mortality from this disease is smaller than in any part of the northern hemisphere, in which the subject has been examined with a view to determine this fact. In regard to this proof of the existence of the disease in the southern portion of the world, it must be considered that the estimate is taken from accounts illustrating its prevalence among strangers, and who, in all probability, brought with them the disposition to it. Other medical statistics assert that the disease does not originate in Peru, Quito, or Buenos Ayres. Our information respecting the influence which the different electrical states of the hemispheres exerts over tuberculous disease is too limited and imperfect to enable us to decide how far they are causes of, or furnish exemption from the disease. But the freedom of intercourse, which a long peace and the extension of commerce have been the means of producing, throughout the different parts of the world, has subjected all regions and climates to the acquaintance of accurate and intelligent observers; and it may be reasonably calculated that the data will soon be multiplied from which, upon comparison of one country with another, the real causes of disease may be ascertained. No subject is more worthy of full examination, or would, in all probability, be attended with more important results.

But since the discoveries of chemistry, and more particularly of hydrogen, and the other gases by Cavendish and his followers, the opinion is more probable that atmospheric heat, or moisture, acting alone or together, and even though alternating with cold, is not capable of producing an epidemic, an endemic, or, perhaps, any one of those forms of disease which are commonly ascribed to these causes. To effect such a result something must be superadded to the ordinary constitution of the atmosphere—it is necessary that there should be a morbid condition of the air we breathe, independent of either mere temperature or moisture. That alternations or fluctuations in these phenomena exercise a great influence in the development of diseases admits of no doubt; but alone they can only act as predisposing causes. Besides, observation and research as well as reasoning assure us that during the prevalence of both endemics and epidemics the atmosphere always receives some extraneous accessions, other than either heat or moisture. By taking this comprehensive view of the causes of disease, we act more in harmony with the true system of philosophizing, inasmuch as it refers to a distinct



and palatable relation between the effect and a cause, and by directing our attention to, enables us to approach nearer to the discovery of the nature of atmospheric deterioration.

Though no doubt can be entertained of the agency of atmospherical influences in the production of many diseases and particularly Consumption; yet the manner in which it acts is not easily proved. Whether the deteriorations act directly on the nervous system, or, as I have found reasons for supposing,\* produce their effect primarily on the blood, and through it on the solids of the body, or whether they are all acted upon together and simultaneously, remains for further consideration and research. It is certain that chemical analyses of the atmosphere, rarely, or never present it to our senses as formed simply of those gaseous elements considered essential to its composition. Acting upon every species of mineral, upon every kind and state of animal and vegetable bodies,—the receptacle of myriads of organized substances;—the air we breathe, comes to us loaded with various heterogeneous matters, which, though imperceptible to the analytic chemist, may be supposed to include every form and species of gaseous combination known to us, and others which have yet eluded the researches of the most patient investigators. These extraneous substances so far as known, are most generally compounds of carbon and hydrogen, sulphur and hydrogen, probably all the compounds of metals with hydrogen, selenium and hydrogen, cyanogen, or other compounds of carbon and nitrogen, ammonia, animalcules and microscopic vegetation. Some specific combination of these gaseous and organic products, possessing peculiar qualities, and imparting a peculiar vitiation to the air, is undoubtedly the cause of both endemic and epidemical diseases. The evidence of this appears in the similarity of soil, and general elements of climate necessary to the production of diseases, as well as in the analogy, or identity, all over the earth, of the several forms of disease referred to vitiation of the atmosphere for their origin. But as these combinations undergo constant decomposition, and form new compounds as soon as dissolved, even under the process of analization, it is impossible with our present knowledge, and may always be so to define the kinds or quantities of matters necessary to produce the variety of ailments dependent upon vitiation of the atmosphere. Unsatisfactory as have been antecedent discoveries, or future may continue to be, it is

still useful to be able to establish the position, that, from the contemporaneous existence of most diseases, with peculiar conditions of the atmosphere, they are undoubtedly connected with extraneous aerial absorptions.

But though atmospheric impurities are a very great, and the chief source of the diseases to which the human frame is liable; yet it is not by their direct action on any part of the system, that they produce their deleterious operation. No one of these gases, nor any combination of them administered artificially will produce an intermittent fever, the influenza, or consumption. It is true that effects somewhat similar have been observed to arise from the respiration of particular gases; but however analogous in appearance they cannot be considered identical; resembling diseases of particular names in many of their phenomena, but still so different as to be unlike both in nature and consequences. It is by the electrical states induced in the atmosphere by combination of gases, vapors and organized substances, too complex for human ingenuity to imitate; that the respiratory organs, and through them the blood, and through that fluid the energy of all parts of the system is affected, and the phenomena of disease become apparent. If we consider that the facts connected with animal life, accumulated by modern physiologists, point to and authorize the opinion that vitality is but an exalted electrical state, in which electricity as known to the experimental philosopher, galvanism, magnetism, chemistry, and the common physical laws of matter are subordinate and contributory, we shall not hesitate to recognize the probability, that the presence of an agent, partaking of the same character, and existing in undue quantities, must modify its action, and thus form the true and ultimate source of diseases.

The energy of electricity and its known influence over organized matter, whether animal or vegetable, must convince us that any deficiency or redundancy of it in the air we breathe cannot be long endured, especially by the feeble, without the most injurious consequences. When the constitution is enervated and possesses that character which is denominated the tubercular diathesis, all the parts of the economy partake of the debility, and any defect in what is essential to the due elaboration and perfection of the animal fluids, and to the energy of the nervous power, as of electricity, is felt with greater force, and is productive of much more injury than in sound health. A redundancy of the vivifying influence of electricity must favor the formation and development of morbid accumulations, like tuber-

\*See Number 2, Page 22 of this Volume.

cles in the system; for it is rendered almost certain by a variety of facts that the proper performance of the functions in the human body requires a fixed quantity of this fluid. This has been proved by Dr. Wilson Philip and others in numerous experiments on animals, though it must be admitted, not so clearly, or to the same extent, as in its well marked effects on the growth and properties of plants. It has been distinctly observed that under its action the animal functions are discharged with increased vigor, particularly the circulation of the blood, and the cutaneous secretion. Observations such as these and many others of a similar description, which might be quoted, demonstrate very completely that the animal machine is sensibly affected by electricity; and there is nothing improbable in the conjecture that its varying states in the atmosphere is the cause of the salubrity or insalubrity of particular districts and seasons, the existence and character of epidemic and endemic diseases, and hence may be inferred, is the cause of all diseases.

Recent researches into the laws of electricity show that it is developed, and its quantity modified by every change in the form and composition of substances. The combustion of charcoal, hydrogen, alcohol, oil and other inflammables imparts positive electricity in abundance to the portion of air with which its products is mixed. The volatilization of metals, and even the evaporation of water, at least from substances susceptible of chemical change, are sources from which the atmosphere becomes charged with an excess of electricity. Indeed, the researches of Becquerel and others authorise the conclusion that electricity is evolved in all cases of chemical solution whether by liquids or aciform fluids; and it is even contended that variations of atmospheric temperature, and barometrical pressure develop it. When these are the ascertained facts arising from means so simple on a scale so limited, we may reasonably suppose that the changes of form and chemical composition which take place from the decomposition and volatilization of the immense variety of substances on which the atmosphere acts, or is the receptacle, must be productive of much more energetically electrical effects. In the northern hemisphere, and with an hydro-metrical state of the atmosphere admitting of the use of our instruments, it always indicates positive electricity, and Mr Daniel states that it has been ascertained its intensity is subject to regular variations. These variations, it is believed, are found to correspond with those periods of the day in which, from the action of the sun, the eman-

ations from the earth arrive at their maximum and minimum at the atmospheric elevation in which the experiment is made. Experiments on this interesting branch of science must be multiplied before we can acquire data on which we can reason with absolute precision; and certainly no subject holds out a prospect of results that would be more gratifying to the physician, or more beneficial to mankind.

The fluctuations in intensity of this positive electrical state of the atmosphere, by acting on and modifying the vital electricity of the animal system, produce corresponding changes in it, and thus induce the immense variety and modification in individuals of those diseases which are considered dependent for their existence on atmospheric influence. Its long continued action must sooner or later affect the whole mass of the blood, and thus cause that cachectic state constituting the tubercular diathesis, from which springs the positive and expanded condition of the capillaries in the lungs or other weakened organs, and which, it has been shown is the proximate cause of tubercles. As different elements of soil, plants and animals exist in different climates and different parts of the world, so, no doubt, their decomposition and volatilization generate different electrical states of the atmosphere, but always maintaining a greater or less conformity with the local circumstances. Consumption is one of the most prominent of the diseases originating in and influenced by the atmosphere, is connected with and dependent upon an electro-positive state of that element.

This view of the cause of Consumption is strengthened by the known electrical condition of the atmosphere in some countries—as in England—in which it is peculiarly prevalent; by a rational consideration of many of its characteristics; and as has been referred to before, by the effects of remedies in subduing it.\* To the comparatively negative, or at least, different electrical state of the air over marshy parts of a country, where intermittent and remittent fevers are frequent, we may reasonably attribute the less liability of their inhabitants to Consumption, as well as the advantages such situations possess over the air of mountains for consumptive invalids. And to some such operation we must look for an explanation of the singular and salutary effect excited by a hurricane at Barbadoes, in 1780, which produced such a change upon the air that (according to Sir Gilbert Blane) some who were laboring under incipient consumption were cured by it, while others, who had reached a more advanced stage, were deci-

\* Number 2, page 22.

daily relieved, and freed from many of their symptoms.

The view of the cause of consumption we have adopted, has before come within the scope of medical surmise; but the subject has been considered so intangible that however interesting as a scientific fact its existence may be, it has been deemed insusceptible of practical application. Though, in truth, no discovery in medicine, nor in nature could be of more value to the interests of humanity than to be able to identify the cause of consumption with a certain electrical state of the atmosphere, the suggestion of the possibility of such a connection has been dismissed as a fruitless conjecture. Opinions in this respect have, however, recently undergone a change. Improvements in the construction of electrical apparatus have furnished us with means of research sufficiently delicate to enable us to observe the variations in the electrical state of the atmosphere with as much accuracy as those which occur to its temperature and pressure; and they will no doubt, henceforth, be registered with as much diligence as those phenomena have heretofore been. But in examining the cause with a view to the prevention of consumption, it is fortunately of comparatively little importance for practical purposes, whether it consists in the forces of matter, or in matter itself—organic or inorganic—because, in the present state of our knowledge, we can only act upon matter. The removal of the cause of consumption, and consequently the means of preventing it are dependent upon our ability to render the air we breathe respirably pure; this condition being alike incompatible with the existence in it of noxious exhalations, and the electrical state which acts injuriously on the vital powers.

A review of the history of consumption induces, irresistibly, the mortifying conclusion that there is no disease over which medical art has exercised less power, than in fact all medical treatment, if not positively injurious, has been of no avail—and that all its reputed salutary effects have been imaginary or deceptive. Experience, the great test of the useful, has rendered the opinion general, that any control over it, exercised by the physician, has consisted more in abolishing pernicious practices than in ascertaining any positive methods of lessening its fatality. If there is an exception to this sweeping charge of the inutility of the physician, it consists in his power to correct that derangement of the digestive functions which sensibly modifies and perhaps is modified by the disease, and which, being the result of an undue indulgence of the appetites and passions, like the agency employed, is artificial, and the

proper subject for human control. But though the beneficial effects of treatment on this principle, in lessening suffering, is undeniable, it has no tendency to cure the disease. If it is necessary that we should be able clearly to discern and to understand what it is, in every malady that must be removed or changed in order to restore health, how can we justly pretend to remedy consumption when its pathology is so unsatisfactory and unsettled that nothing can be conceived more contradictory than the various views that have been given to the world? Instead of an undoubted, well regulated, or even plausible theory of the true state of the body, on which we have been attempting to operate with our remedies, we have been left to the fallacious guidance of a multitude of unconvincing conjectures. Justly confident of the utility of their profession, as physicians generally are, and proud as many of them may be of their individual skill, all must acknowledge, that consumption has hitherto, mocked alike the scientific efforts of the enlightened physician, and the presumptuous labors of the empiric. The unmanageable symptoms of this disease, plunge the most learned and experienced physician, called upon to treat them, into doubt and despondency; while its universal termination in death, has, in this enquiring age, created in both the medical and non-medical public, a demand for some mode of managing it, radically different from those in practice.

This urgent want of a means by which the mortality from this dreadful malady may be diminished, has incited physicians to look to prevention as the most probable agent by which they can attain this object. Prevention of disease is, indeed, independent of relief from the suffering, which in a greater or less degree, accompanies every malady, of greater consequence to society than its cure. "That must be a decided improvement in the art of medicine which provides the means of preventing diseases;" and, we trust, the time will soon arrive when the attention of medical men will be turned as much to the former, as in all past time it has been directed to the latter. On the progress which may yet be expected in this, in connexion with the former line of enquiry comprised in this article, in both of which our success has been hitherto very limited, depend our chief hopes of the increasing usefulness and efficacy of the medical art in the treatment of consumption. The investigation and discovery of its cause will teach as the nature of the influence under which the vital properties of the fluids, and the vital actions of the solids of the body become liable to deviations from their natural and healthy state, and will suggest

the only principles on which a hope of cure can be based; while the application of the means of prevention may be made to intercept the diseased actions of which the body is susceptible in this disease.

Under the head of prevention, in systematic treatises on Consumption, arresting the causes of the disease is the avowed principle of action; but, in defining them, we find that the predisposing have been confounded with the *causa vera*, and even with exciting causes. Influenced by this error, writers have been profuse in their directions regarding the means and importance of securing athletic health to parents; of maintaining the health of the mother during pregnancy; of a proper regulation of the food, clothing and residence of infants; of suitable dress, exercise and education of youth, &c. All the minute attention and advice which have been directed to this subject, are not only useful to those predisposed to consumption, but acting upon them would undoubtedly produce a beneficial effect upon society at large. They are, however, better calculated to make a book than to prevent a single case of consumption. But we contend that as it may be considered an ascertained fact that consumption is directly dependent on a vitiated state of the atmosphere, therefore, it must be equally maintained, that by changing this state, *sublata causa tollitur effectus*. in that portion of atmosphere employed in supplying the respiratory necessities of man we must prevent its existence. Vast as the evil is, and wholly as it has heretofore been beyond the control of man there is, in this principle, an undoubted means of preventing consumption, the truth and practicability of which it will be the object of this portion of our communication to demonstrate.

As the only rational means of preventing maladies must be founded on some plan for preventing the generation of their cause, or of turning it aside, we propose to show how the cause of consumption may be rendered innocuous, and consequently how the disease itself may be anticipated and superceded. The discovery of the precise nature of this cause is essential to a perfect knowledge of the subject, though, perhaps, not indispensable to the successful application of our principle for obviating the disease. Although the process we propose to use for preventing consumption is also better adapted than any previous device for enabling us to ascertain all the chemical properties of the atmosphere and through them its electrical state, and thence its cause, we have already shown that we cannot pretend to have determined them. Even if our invention be fully adequate to solve the subtle and recondite ques-

tion, we have not yet had time or conveniences for making the requisite experiments. All the circumstances, at present known, connected with consumption, concur in establishing, while no one can be said to be in opposition to the view we have taken, that it is dependent upon an electro-positive state of the atmosphere; and thus it fulfils the fundamental condition of a theory, or in other words of a truth. But whether this electrical state is induced by one or more vaporous or gaseous solutions in the atmosphere, by organized substances floating in it or by the assemblage and mutual action of the whole, must still be classed among those arcana of nature, which will only reveal themselves to time and an adequate means of investigation. We know the terrible effects of this cause, and we know that, as in all similar phenomena, an accurate scrutiny of these effects must precede any reasoning or useful experiments on its nature.

To subvert the original cause of consumption it is only necessary to put forth as much of industry and ingenuity in the construction of our habitations, and their adaptation to domestic comfort equal to that employed for the simple but indispensable purpose of warming them in cold climates. But instead of building for the purpose of counteracting the cold of winter almost exclusively in view, we must pay equal attention to our comfort in summer, and, by providing an adequate supply of pure air, make all subservient to the security of health. The ends to be attained by these great objects are embraced in our remedy. Let our houses, in every climate, be built with a thorough regard to insulation, and an exclusion of the external impure atmosphere with its excesses of temperature, and let labor and expense like that for elevating the internal temperature, be incurred in lowering temperature, and freeing air from excessive moisture and extraneous exhalations, and thus rendering it respirably pure, and the occupants would incur little or no risk of consumption. By applying a process, which will be explained as we advance in our labors, an abundant supply of pure air, conjoined with the means of moderating temperature in summer and aiding in exalting it in winter, may be obtained—a process which, if at present overlooked, or from its simplicity deemed inadequate to effect the objects in view, will, we feel confident, sooner or later receive the suffrages of mankind.

The testimony in regard to Consumption abundantly shows that atmospheric contamination arising from extraneous impurities is the original, or at least, an indispensable, co-operating cause of the disease; and it

must be equally obvious that its purification is sufficient to prevent or put an end to the production of this cause, and it follows of course to the disease itself.

The means by which we propose to counteract the evils of an impure atmosphere, so as to prevent, or at least moderate, the liability to so terrible a disease as Consumption, consists essentially in subjecting the portion of atmosphere employed in respiration to mechanical condensation. Physical science teaches us that mechanical pressure is one of the best means of divesting air of condensable vapors. It is well known that equal volumes of air, whatever may be their respective densities, the temperature being the same, have equal capacities for vapor; so that a cubic yard of air, under a pressure of four, eight, or any number of atmospheres, will, *ceteris paribus*, hold no more watery vapor in solution than one under the ordinary pressure of a single atmosphere. By condensing four cubic yards of air into the space of one, its capacity for retaining water in solution, the temperature remaining the same, must be diminished to one fourth its previous power, and, consequently, if before saturated, it must precipitate three fourths of the water it contains. The same law undoubtedly holds with regard to all other vaporous solutions, and it is probable has a similar operation upon solid matters, in the air, retained in suspension.

The atmosphere, in its ordinary condition, always contains aqueous moisture, and a variety of other impurities, which have already been mentioned. It would seem to be a provision of nature that all the exhalations from the earth, capable of acting injuriously on the human system, should be condensable by pressure; and therefore removable from the mass of respirable air by human agency. If we force into a reservoir a large quantity of highly condensed atmospheric air, and then drain from the bottom the moisture that has been precipitated by the condensation, it is evident that by this process air may be as thoroughly deputed of vaporous solutions, as water of solid matters, by filtering or by distillation. Even that adventitious, though constant, and for the purpose of respiration, probably deleterious component of the atmosphere, carbonic acid gas, may be condensed into a liquid, by a very high degree of pressure, and withdrawn from a mass of air employed in respiration. Air thus freed from injurious admixtures may, in order to impart to it a proper degree of hygeometric moisture, be exposed to pure in the place of the impure water previously held in solution—the quantity of which it is capable of absorbing must be equal to that it lost in its condensation.

Extraneous matters in the atmosphere are not in any circumstances essential to its healthful composition. On the contrary, they impart to it properties resembling their own, which, in proportion to the quantities in which they exist in it, are injurious to the animal system. None of these extraneous substances, so far as known or suspected, require so great a mechanical pressure for its condensation as carbonic acid, and therefore, if this gas can be separated from atmospheric air by mechanical agency, we can have no difficulty in rendering adequate quantities of it respirably pure. The separation of the liquid, or perhaps solid and organic substances that are diffused through the atmosphere, and the knowledge of their properties that may thereby be obtained, will afford just ground for determining the minute constituents of the air, the quantities and nature of its deteriorations, the mode by which they operate in the production of diseases, and hence the certain means of preventing them. Heretofore, the physician, in seeking for the cause of distempers, could argue only from effects, but with the means of divesting thousands or hundreds of thousands of cubic yards of air of its impurities, in his possession, he may compel the cause of disease to put on a tangible shape, and by developing its secret power, teach us to demonstrate and neutralize its effects on the animal economy.

To determine the value of any scheme, we must ascertain the full extent of the means that are required to effect its objects, and whether it is within our power to reach the end to be attained. It would be useless to devise a process for even preventing a mortal disease, if it could not be acted upon without an expense which would render the plan unattainable, and it would be of diminished practical utility in proportion as it did not admit of being applied to general use. In a plan for preventing a disease arising from the respiration of impure air, we must take into consideration the quantity of cause necessary to produce the effect, or, in other words, the amount of pure air that must be substituted to prevent it. All are aware that the respiration of pure air is essential to the preservation of good health, and that its purity and salubrity depend, in a great measure, upon its freedom from foreign matters, and a due proportion of oxygen gas. We know, too, that air may be more suddenly and destructively contaminated, where the processes of respiration and combustion are going on, than by the most abundant production of animal and vegetable decomposition. To maintain it in its purity, under any of these circumstances, frequent change is necessary. This change, it is true, may be

caused to a further extent than is necessary, or even salutary; it may be administered, like any other medicament, too copiously; and as we propose to effect purification as well as change of air, which cannot be done but at some cost, we have no desire of carrying them beyond the point of utility. To make our meaning more evident, it is necessary to recapitulate some facts that, though they may appear to have but an indirect, have an important connexion with the principles on which the proposed means of preventing Consumption are founded. They are all necessarily based upon the quantity of atmospheric air used in human respiration.

The quantity of pure air requisite for the respiration of an individual cannot be accurately determined, since it varies according to his constitution, the temperature of the air, the condition of his stomach as regards fulness or depletion, and numerous other extraneous circumstances that must always regulate the quantity which it is desirable to supply. In systematic works on ventilation, the estimates greatly exceed the amount that it would be necessary or even desirable to provide for the respiration of invalids, or healthy persons not in exercise. Contrary to the representations that have been uniformly made on this subject, it is possible as already intimated, to carry ventilation to an injurious extreme, and to shorten rather than prolong life by too much fresh, and even pure air. Startling and paradoxical as this position may seem, it is borne out by many analogies in nature. The composition of the atmosphere, as well as the whole process of respiration, shows that but a limited quantity of oxygen is necessary for the healthy exercise of that function. Oxygen exists in the atmosphere in the proportion of but one to four of all the gases; and the quantity of nitrogen and carbonic acid, which remain in the lungs after each expiration, show that these gases are not absolutely injurious, while they authorise the inference that air may be too pure as well as too impure for respiration. Dr. Liebig, in his animal chemistry, demonstrates that oxygen exerts such an affinity for all parts of the animal frame, that it would inevitably consume it, unless its utmost demands were supplied by food; and as there is a limit to the power of assimilating food, it is clear, on this view of the subject, that the admission of oxygen into the lungs may be carried to an injurious excess. As a candle in the ordinary and quiet state of the atmosphere, burns with a mild and sufficient light, giving to it the duration called for by the demands of economy, while if immersed in oxygen gas, it is rapidly consumed in surpassing splendor, and even in frequent

change of the air surrounding it *flashes away*, so the human frame in this gas, or in too great supply of fresh air, must have its energies more actively exerted, but the same rapidly exhausted. There is a proper medium between the lurid flame and the splendid light—the feeble change of the system from an insufficiency of respiration, and its rapid consumption from excess—which, if attainable, would give the proper supply of air; but as the requisite quantity is ever-varying, even in the same individuals, with changing circumstances, it is hopeless to expect that any fixed standard can be attained.

It is ordinarily calculated that a human adult employs in respiration an average of about four hundred cubic inches of air a minute, and consequently nearly fourteen cubic feet in an hour, or about twelve cubic yards a day. This, then, is the minimum quantity of pure air that ought to be furnished to him daily. But he also wants a certain quantity with moisture, and renders it unfit for absorbing more, and as a necessary deduction, for one of the purposes of respiration. Therefore, in addition to the amount each adult requires for daily consumption, it is desirable to change as much of the air in his residence, as the moisture given off by the lungs and by cutaneous transpiration, would saturate in the same time. If we consider that as soon as the air we respire becomes diffused through and attains the same temperature as the atmosphere, a portion of its vapor becomes redundant, and must be precipitated or otherwise discharged, we shall probably find, difficult as the accurate determination of the fact may be, that the moisture given off in this way does not require, at the most, more than half a cubic foot of dry air a minute to absorb it. Hence it may be calculated that not more than seven hundred and twenty cubic feet, or twenty-six cubic yards of pure and dry air can be required, daily, for all the purposes of respiration by each adult that may be in a habitation. Now the power of ventilating a house or room should be proportioned to the number of persons that occupy it; but it is obvious that a calculation which supposes the average number of adult inhabitants that remain in a habitation continuously, throughout the twenty-four hours, to be ten, and allows twenty-six cubic yards of pure air for the respiration of each individual, must be amply sufficient. It will be shown hereafter that by our means there will be no difficulty in producing this quantity, or, if desirable and not injurious, two, four, eight, or more times that much to every person that usually inhabits a house.

Besides the purification of air which ac-

see from its compression and draining off its deposits, there are the accompanying advantages of an evolution of heat from the compression, and a generation of cold from its subsequent expansion, both of which, and particularly the latter, may be applied to moderate the temperature of a dwelling. The elements of physics teach us that condensation is an invariable source of heat, and every student of the science knows that the compression of the gases furnishes it in considerable quantity. It is evident, then, that there is in the principle of mechanical condensation a means by which heat may be obtained without fuel from air; and, by increasing the pressure and quantity, to any extent we may please. Little important as this fact is in a practical point of view, from the cheapness of fuel all over the world, we shall hereafter show that the result can be obtained by a comparatively small consumption of mechanical power, and, as a consequence, of expense.

Whenever, or wherever, air which has been condensed is allowed to escape, it will expand into the volume it occupied previous to its condensation, and, in the process, the quantity of heat which was previously extracted from it, will be absorbed from all surrounding substances and rendered latent. It is a matter of indifference whether the expansion take place rapidly or slowly, at one temperature or another, the amount of heat absorbed by equal expansions of equal volumes, is a constant quantity, the only difference being that the amount absorbed is taken up in unequal times. The importance to invalidate, of a diminished summer heat is not less than an increase of winter temperature; and we propose to obtain the former of these ends by the rarefaction and distribution of air throughout the rooms of a house, asylum, &c., of atmospheric air, previously subjected to mechanical condensation.

High atmospheric air is acknowledged to have a powerful effect in predisposing to consumption. This condition of the atmosphere with its invariable accompaniment—a diminished supply of oxygen, and an increased quantity of moisture in the volume of air used in respiration, act injuriously upon the constitution of the Caucasian race, and, if long continued, induce that feebleness which subjects the human system to the liability of falling an easy prey to the cause of consumption. Upon the inhabitants of very hot countries, as the Malays and Negroes, this effect is more marked. In confirmation of this opinion, it may be cited that both these races are well known to be much more subject to tuberculous disease than Europeans,

when exposed to the same causes.\* The languor and debility which invariably affect all the varieties of the human race, subjected to the over-stimulation of long-continued high states of the thermometer, deranges sooner or later, all the functions; and if they are not restored to their healthy action by a remission of heat, or the withdrawing of an equivalent stimulus of other kind, they will be liable to be destroyed by the slightest external influence. The value, then, of a principle which, besides rendering air respirably pure, proposes to modify temperature to our comfort as well as security, can, if physical effects are invariably dependent on physical causes, be readily appreciated.

The quantity of caloric evolved by the condensation of a column of air, and consequently the quantity absorbed by its expansion, is the next subject to which we must give consideration, in order to determine the value of our scheme both as a prophylactic and as a source of refrigeration. A variety of experiments, conducted by the most eminent philosophers, have been made with a view to resolve these questions in physical science. For the purpose before us, these investigations are of much importance, because upon their result depends the value of our researches into the means of rendering a sufficient portion of the atmosphere for practical purposes, respirably pure. We confess that to solve these and their consequent problems with accuracy, is exceedingly difficult, and, on this account, the various experiments undertaken with the view are by no means found uniform in their results. Air may be condensed and dilated an indefinite number of times, and there will be a simultaneous and proportional diffusion or absorption of its heat; and in a quantity as well as intensity, which probably admits of being equal in both instances, certainly in the production of cold, to the greatest degree that they are capable of being generated by art. But though the heat evolved by condensation and absorbed by the rarefaction of air is equal and invariable, the experiments to demonstrate these facts require a particular manner of performance to make the results apparent and uniform. In consequence of this difficulty (of which it does not belong to this Journal to treat) the quantity of caloric assigned to the condensation of air, or the quantity absorbed by its rarefaction, has not yet been ascertained with any results approaching to undoubted certainty. The deductions from such experiments as have been made, show a variance so large as in the proportion of one to five or upwards. It is

\* Clarke on Consumption, p. 157.

true the mode of experimenting or of reasoning has not been uniform. Different philosophers have employed different means of investigation; but this affords only additional evidence of the uncertainty that must attach to the apparent results. The instrument which we have devised for purifying and refrigerating the air we breathe, has a peculiar fitness for aiding us in determining this question with great accuracy; and, at some future day, we intend to institute a series of experiments necessary for the attainment of this desirable object, the result of which, we shall give to the public through the columns of this journal. A powerful one, well planned for illustrating the principle has already been made, but owing to errors and defects in its construction incidental, perhaps, to every new engine, and to a novitiate intercourse with working mechanics, it requires alterations to enable it to be used with all the advantages it is capable of affording. The result of a number of experiments that have been made with it accords with the testimony furnished by other experiments that air gains and loses, at least  $180^{\circ}$  F, for every time its volume is reduced to one half or rarefied into two volumes; while it is probable that the large amount of  $280^{\circ}$ , for the same changes, assigned to it by Guy Lussac, does not exceed the reality. The smaller of these amounts would be sufficient to establish the utility of employing condensed air for cooling, and ventilating houses.

This engine is simple in its construction, requires but a small expense of power, admits of being complete in its operation, and its parts, if well made, are not liable to get out of order, or to be injured by wear. It consists, essentially, of two double acting force pumps—one for condensing, and the other for rarefying air—both connected with a common beam or axle—and an air magazine or receptacle for condensed air. By this principle of construction, the pressures on the pistons in the cylinders, when the machine is in operation, are made to oppose each other, and the power consumed in the former is reclaimed in the latter, and made, as far as possible, to reproduce the original effect. This method of working the machine is important for the production of refrigeration; by no other known means than such as admit of the mechanical effect of expanding air being obtained, can the cooling power of dilatation be made apparent under all circumstances. The machine may be placed in any part of a house; but it is obvious that for supplying it with cooled air, the nearer the roof the better. By such an arrangement the heat squeezed out of the condensed air, would unite with the air round it, and, from

its levity, ascend in the atmosphere above the height to affect human comfort; while the heat absorbed by the expanding air, as it descended by its gravity, must be derived from the objects which it is desirous to cool.

To put the apparatus in operation, it will be necessary to pump air into the reservoir to the pressure at which it is intended to be worked, say two, four, eight or sixteen atmospheres. When this point is attained, the condensing pump is made to force another of its measures of air into the reservoir. As this latter vessel is constructed with a balance valve, at a point where it communicates with the expanding pump accurately loaded with a weight equal to the pressure of air within it, or, what is much better, furnished with an accurately adjusted cut off, it allows as much air to escape into the expanding pump, as the reservoir receives from the condensing cylinder. In the expanding cylinder the air received will tend to dilate into the volume it occupied under the atmospheric pressure, and, according to the law discovered by Boyle, will, in the act, exert the same mechanical force that was required to condense it. With every succeeding motion of the piston in the condensing pump, its measure of air must be found in the reservoir, and, at the same time, an equal quantity must flow through the balance valve with or by means of the cut off, with a repetition of its mechanical effect on the piston, into the expanding pump.

The quantity of air condensed and expanded and consequently the extent of refrigeration, produced by an engine of this description, depends upon the area of the cylinders, the length of the stroke, and the number of strokes in a given time and the tension at which it is worked. As the size of the pumps can be proportioned to any demand for air, a due consideration of the circumstance may enable us to adapt the engine, not only to dwelling houses, but also to hospitals, asylums for the predisposed, schools, large manufactories, churches, prisons, or fortresses. The dimensions deemed fully sufficient for a house of an ordinary size are as follows:—The diameter of the cylinders should be four inches, and the length of the stroke about two feet. Pumps of this size will have a capacity of about three hundred cubic inches; and if we consider them as making sixty double strokes a minute, they will condense and expand about twenty cubic feet of air a minute, forty-five cubic yards an hour, and upwards of a thousand cubic yards a day. Working at a tension of two atmospheres they would, theoretically, furnish one thousand cubic yards of air a day cooled at least  $180$  degrees F below the



natural temperature, or would produce a quantity of cold equivalent to the production of about six hundred and forty pounds of ice. Practically they have been found, working at the above tension, and with a mechanical force equivalent to that of two men, with the atmosphere temperature at 80 degrees F, to pour out air, at the rate of a thousand cubic yards a day, cooled down to 10 degrees F below zero. According to either the theoretical or practical datum, and after making large allowances for the conducting power of the walls of a house, for the animal heat generated by the inhabitants, and for every other usual source of heat, it must be evident that there is in this principle of refrigeration and ventilation, the means of commanding under Summer, even if tropical heat, the most desirable mean temperature. It is proper to remark that though the process of reasoning, by which the best plan for constructing the machine was arrived at was simple, yet the effects were not obtained without repeated trials and failures; while there are many appliances besides the essential principles already mentioned, requisite to give complete efficiency to it, which it is not necessary at this time to describe.

Such are the only measures which, in the opinion of the writer, are calculated to prevent that particular morbid state of the constitution on which the terrible disease characterized as tubercular phthisis depends. Regarding this constitutional state as originating in an electrical condition of the atmosphere, dependant upon the presence of extraneous impurities, it is obvious that if this be true, and we can subvert this condition, we must be able effectually to prevent the disease. Our plan provides the means by which atmospheric air may be divested of aqueous moisture, and all condensable gases, while the process may be made to aid in elevating the natural temperature of winter, or of moderating that of summer in a limited space like that of a dwelling house, a hospital, or a public school. It will possess to the invalid more than the advantages of migration to a climate reported to be most favorable to his condition, while it may be made to enable the native of either the tropical or frigid zones to breathe in any climate, an atmosphere having an approximation to the temperature of his own. And all these effects, except the elevation of temperature, can be made to comport with the measure of our wants as easily and at as moderate expense, as the natural temperature of cold climates can be raised to an equal degree in similar spaces.

The machine we have alluded to, may be worked by manual, horse, water, or steam

power; but in order that its effects may be obtained at the least possible expense, the preferable power would be the wind. Horizontal sails capable of receiving from the wind a mean force equivalent to the power of two men and applied to the engine, would be adequate to condense with all the attendant frictions and losses of power, a thousand cubic yards of air a day, under a tension of two atmospheres; nor on the principle of construction adopted would an increase of tension materially increase the demand for power. Such sails would be so small, and could, by a slight modification of the present means of constructing roofs, be so easily screened from view, that they would present no unsightly object. In regard to the expense attending its operation, if we consider that the materials employed are simply air, or air and water, and that the mechanical agent is the wind, the only cost will be that of the machine and the oil and labor it will take to lubricate it. The cost of the engine and the appliances for making the necessary distribution of air, would not be greater than for fire places, grates, and chimneys of a well-built modern dwelling. As an enterprize of benevolence, or as a pecuniary speculation, constructing an asylum for the reception of consumptive invalids, or the predisposed to that disease, might in this age of difficult investment of capital, be an object of consideration. The natural laws on which this scheme for preventing Consumption is based, certainly exist, and therefore if we can at this small expense obtain a rational hope of modifying or subverting them, so as to render them innocuous, it is worthy of the assent and practical adoption of mankind, or at least its careful examination. If it shall have the effect of superseding the cruel, absurd and homicidal practice of sending pulmonary invalids to a foreign land and a hurried grave, it will have conferred incalculable benefits on mankind.

#### MAGNETISING MEDICINE, TRIUMPH OF SCIENCE.

The following article is extracted from a London publication entitled "The Popular Record of Modern Science." The book from which the extracts are taken is written by Professor Gregory, of Edinburgh, a gentleman held in high estimation for his scientific acquirements, and a son of the celebrated Dr. Gregory.

#### RESEARCHES ON MAGNETISM.

A contribution to science of far more than ordinary interest, has this week been furnished by Professor Gregory, of the univer-

sity of Edinburgh, in a comprehensive statement of the researches of Baron Von Reichenbach on "Magnetism and certain allied subjects." It appears that, while travelling on the continent last summer. Dr. Gregory's attention was directed to a detail of Baron Von Reichenbach's experiments, just published in the "Annalen der Chemie und Pharmacie," a periodical of the highest rank, conducted by Baron Liebig and Professor Wohler.—The conclusions to be derived from these experiments were of the most startling character; but Dr. Gregory being aware of Reichenbach's character for minute accuracy and untiring perseverance, and of his reputation among chemists, in consequence of his laborious and successful researches on the tar of wood and of coal, which made us acquainted with creosote and many other new compounds, could not for one moment hesitate to receive the facts on which they rested. He felt anxious, therefore, on his return to Scotland in October last, that these experiments should be made known, and while preparing a translation of Reichenbach's statements, he took the opportunity of describing, in two lectures to a numerous audience, a considerable part of the results obtained. The fame of these lectures spread to London, and coming as it did at a time when discoveries by Faraday and Hunt had already excited the public mind upon the subject, the greatest interest was felt for further information. This information is now supplied, and it is of a character to awaken the liveliest gratification, as opening up a new and inexhaustible field for philosophical inquiry.

Baron Von Reichenbach's experiments originated in his having the opportunity of studying a patient, Madlle. Nowotny, aged 25, subject for eight years to increasing headaches, and latterly affected with cataleptic fits, accompanied with spasms. She possessed a remarkable acuteness of the senses, could not endure the daylight, and in a dark night perceived her room as well lighted as it appeared to others in the twilight, so that she could even distinguish colors. She was also very sensitive in various ways to the influence of the magnet. Struck with these things, and remembering that the aurora borealis appears to be a phenomena connected with terrestrial magnetism, or electro-

magnetism, it occurred to him that possibly a patient of such acuteness of vision might see some luminous phenomenon about the magnet. Dr. Von Eisenstein, (the physician in attendance?) afforded every facility, and experiments were accordingly commenced.

"The first trial was made by the patient's father. In profound darkness, a horse-shoe magnet of nine elements, capable of carrying eighty pounds, was presented to the patient, the armature being removed; she saw a distinct and continued luminous appearance, which uniformly disappeared when the armature was applied.

"The second experiment was made as follows, on her recovery from a cataleptic attack, when the excitability of her senses was greatest. The room being artificially darkened, and the candles extinguished before the fit was ended, the magnet was placed on a table, ten feet from the patient, with the poles upwards, and the armature removed. None of the bystanders could see anything whatever, but the patient saw two luminous objects, one at each pole, which disappeared on joining the poles, and reappeared on removing the armature. At the moment of breaking contact, the light was somewhat stronger. The appearance was the same at both poles, without any apparent tendency to unite. Next to the metal she described a luminous vapor, surrounded by rays, which rays were in constant shooting motion, lengthening and shortening themselves incessantly, and presenting, as she said, a singularly beautiful appearance. There was no resemblance to an ordinary fire; the color of the light was nearly pure white, sometimes mixed with indistinct colors, the whole more like the light of the sun than that of a fire. The light was dense and brighter towards the middle of the edges of the ends of the magnet, than towards the corners, where the rays formed bundles, longer than the rest. I showed the patient a small electric spark; this, she said, was more blue, and left on the eye a painful and lasting sensation, like that caused by looking at the sun, when the image of the sun is afterwards seen on every object."

These experiments were repeated, and sometimes with a weaker magnet, nothing being said to the patient, who then saw only two luminous threads; the first appearances, however, always returning when the original magnet was substituted. As she regained strength, her impressibility diminished. After some time she saw nothing more than a kind of flash when the armature was removed, and eventually her recovery put an end to further experiments.

Dr. Lippich, clinical professor, now ob-

\* Abstract of "Researches on Magnetism and on certain allied subjects," including a supposed new imponderable. By Baron Von Reichenbach. Translated and abridged from the German, by William Gregory, M. D., F. R. S. E., M. R. I. A., Professor of Chemistry. Edinburgh. 1846.

tained for the Baron the means of experimenting with Madlle. Sturman, a patient aged 19, suffering from consumption, and subject to the lower stages of somnambulism, with attacks of spasms and catalepsy, and she proved still more sensitive than Madlle. Nowotny.

"When the magnet (capable of supporting eighty pounds) was placed six paces from the feet of the patient, (then in bed,) in the darkened ward and the armature removed; the patient, then quite conscious, gave no answer, having instantly fallen into a state of spasm and unconsciousness. After an interval, she came to herself, and declared that the moment when the armature was withdrawn, she had seen fire rise from the magnet, which fire was the height of a small hand, white, but mixed with red and blue. She wished to examine it more closely, but the action of the magnet (the circuit being then not closed) instantly deprived her of consciousness. On account of her health, the experiment was not repeated."

A lad, subject to frequent convulsions, was the person next experimented upon, and with somewhat similar results. The next was Madlle. Mair, aged 25, suffering from paralysis of the lower extremities, with occasional spasms, but exhibiting no other derangement of the nervous functions. As often as the armature was removed from a large magnet in the dark, she instantly saw the luminous appearance above the poles, about a hand's breadth in height.—Her sensitiveness increased when she was affected with spasms, and she then not only saw the light at the poles much larger than before, but she also perceived currents of light proceeding from the whole external surface of the magnet, weaker than at the poles, but leaving in her eyes a dazzling impression which did not for a long time disappear. This was the fourth confirmation of the existence of the magnetic light. The sensibility of the next patient was still more remarkable and distinct

"This was Madlle. Barbara Reichel, aged twenty-nine, of stout build. At the age of seven, she had fallen out of a window two stories high, and since that time she had suffered nervous attacks, passing partly into lunacy, partly into somnambulism, and speaking in her sleep. Her disease was intermittent, often with very long intervals of health. At this time she had just passed through severe spasmodic attacks, and retained the entire sensitiveness of her vision, the acuteness of which was singularly exalted during her attacks. She was at the same time in full vigor, perfectly conscious, looked well externally, and went alone through the

crowded streets of Vienna to visit her relations in their houses. The author invited her to his house, and she came as often as he wished it, so that he was enabled to employ her extraordinary sensitiveness to the magnetic influence, in researches with such apparatus as could not conveniently be brought into other houses.

"This person, although strong and healthy, saw the magnetic light as strong as any sick individual; she could move about freely, and was very intelligent, and in addition to these rare advantages, although highly sensitive, she could bear the approach of magnets, and experimenting with them, far better than sensitive persons generally do."

"This patient saw the magnetic light, not only in the dark, but also in such a twilight as permitted the author to distinguish objects and to arrange and alter the experiments. The more intense the darkness, the brighter and larger she saw the flaming emanations, the more sharp and defined was their outline, and the more distinct the play of colors."

"When the magnet was laid before her in the dark, she saw it giving out light, not only when open, but also when the poles were joined by the armatures; but the luminous appearance was different in the two cases. With the closed magnets, there were no points where the light appeared concentrated, as was the case when the magnet was open; but all the edges, joinings, and corners of the magnet gave out short flame-like lights, uniform in size, and in a constant undulatory motion. In the case of the magnet of nine elements, capable of carrying eighty pounds, these were about as long as the thickness of a little finger."

"When the armature was removed, it presented a most beautiful appearance. Each arm of the magnet was about eight and a half inches long, and the light rose almost to an equal height above the magnet, being rather broader than the bar. At each depression, where two plates of the magnet are laid together, there appeared smaller flames ending in points like sparks, on the edges and corners. These small flames appear blue; the chief light was white below, yellow higher up, then red, and green at top. It was not motionless, but flickered, undulated, or contracted by starts, continually, with an appearance as of rays shooting forth. But here, as in the case of Madlle. Nowotny, there was no appearance of mutual attraction or mutual tendency towards each other of the flames, or from one pole to the other; and, as in that case, both poles presented the same appearance."

"Experiments performed on a sixth patient, Madlle. Maria Atzmansdorfer, aged twenty, who had headaches and spasms, and walked in her sleep, led to results confirmatory of the preceding. The light dazzled her eyes by its brilliancy."

"From the above facts it appears, that the foregoing six sensitive individuals, each according to the degree of sensitiveness or to the diseased state of the body, saw, more or less vividly, a luminous appearance like a moving flame, at the poles of powerful magnets. These individuals were highly sensitive, although of unequal sensitiveness; and, although unacquainted with each other, and with each other's observations, their accounts agree in all essential points, and were in each case, uniformly consistent, not only with themselves, but with the known laws of electricity and magnetism. The author, having no reason to doubt the perfect honesty of those persons, and feeling, at all events, confident of his own caution, accuracy and bona fides, had no hesitation in admitting the reality of the phenomenon, although invisible to ordinary men; and he considers the fact of the existence of such luminous appearances at the poles of powerful magnets as fully established as the researches of one man can establish a fact. He confidently anticipates confirmation from other observers, since sensitive persons, although not numerous, are readily found in small towns, and quite easily obtained in large cities."

But in order to prove that the impressions upon these persons were the result of actual light, Baron Von Reichenbach instituted the following experiment:—

"A very sensitive Daguerreotype plate, being prepared, was placed opposite to a magnet, the armature of which was removed, in a closed box, surrounded with thick bed-clothes, so that no ordinary light could enter. After sixty-four hours' exposure, the plate, when held over mercurial vapor, was found fully affected, as by light, on the whole surface. In a parallel experiment, made without a magnet, the plate was found entirely unaffected. This proves that, unless other imponderables, such as magnetism, act on the prepared plates as light does, the emanation from the magnet is of the nature of light, however feeble and slow in its action on the Daguerreotype."

This beautiful and satisfactory experiment

was followed by another equally remarkable. By means of a lens, the magnet was made to produce a focal image on the wall, and whenever the experimenter moved the lens, Madlle. Reichel was able to point to the situation of the light.

Thus much with regard to the luminous appearances. We now come to the mechanical force exerted by the magnet on the human frame. Dr. Patelin, of Lyons, and other observers, having formerly stated instances of the attraction of the human hand by a magnet, and of the power of some patients to distinguish water, along which a magnet had been drawn, resolved to institute experiments in this direction.

"The adhesion of a living hand to a magnet is a fact unknown in physiology as in physics, and few have seen it: it, therefore, requires explanation. Madlle. N. being in catalepsy, insensible and motionless, but free from spasms, a horse-shoe magnet of twenty pounds power was brought near to her hand, when the hand attached itself so to the magnet, that whichever way the magnet was moved, the hand followed it as if it had been a bit of iron adhering to it. She remained insensible; but the attraction was so powerful, that when the magnet was removed, in the direction of the feet, further than the arm could reach, she, still insensible, raised herself in bed, and with the hand followed the magnet as far as she possibly could, so that it looked as if she had been seized by the hand, and that member dragged towards the feet. If the magnet was still further removed, she let it go unwillingly, but remained fixed in her actual position. This was daily seen by the author between six and eight P. M., when her attacks came on, in the presence of eight or ten persons, medical and scientific men." At other periods of the day, when she was quite conscious the phenomena were the same. She described the sensation as an irresistible attraction, which she felt compelled against her will, to obey. The sensation was agreeable, accompanied with a gentle cooling aura, streaming or flowing down from the magnet to the hand, which felt as if tied and drawn with a thousand fine threads to the magnet. She was not acquainted with any similar sensation in ordinary life; it was indescribable, and included an infinitely refreshing and pleasurable sensation when the magnet was not too strong."

Similar results were obtained with Mademoiselle and Madlle. Sturman, and the statement of the various modes in which the veracity of the patients and the accuracy of the experiments were tested, is such as to inspire the most unreserved confidence

\* Dr. Gregory's pamphlet contains well executed lithographic representations of the appearance of the various flames and streams of light, from drawings made by the patients.

in the experimenter. Mr. Baumgartner, the distinguished natural philosopher, was one of those who, amongst others, tested in a very ingenious way the above phenomena.

With regard to magnetised water, Baron Von Reichenbach, although strongly prejudiced against this "mesmeric idea," was compelled to admit that a palpable effect was produced.

"He saw daily that his patient could easily distinguish a glass of water, along which a magnet, unknown to her, had been drawn, from any others; and this without failure or hesitation. He found it impossible to oppose a fact like this by arguments; but when he saw the same result in many other patients, he ceased to struggle against that which, whether he understood it or not, was obviously a fact. He then perceived that it was more rational to admit the fact, and to wait with patience for the explanation."

The experimenter then determined to see whether bodies besides water could be magnetized, so as to produce similar effects. He passed the magnet not only over all sorts of minerals and drugs, but over indiscriminate objects, and they all affected the patient more or less powerfully. But although all were equally magnetised, the results were different, some substances producing a strong and others only a slight impression. It was therefore clear, that the different results must have been caused by an inherent difference of power in the various kinds of matter, and he resolved to test if this difference would manifest itself, when the substances were applied in their natural condition. To his astonishment they still acted on the patient, and with a power often little inferior to that which they had when magnetised.

Amongst the various substances tried, (of which a well arranged list is given) distinct solitary crystals were found to act in the strongest manner.

"In trying the effect of drawing the point of rock crystal, 7 inches long, and 1 3-4 thick, from the wrist to the points of the fingers, and back, as in magnetising, the author found that the sensation experienced by the patient, was the same as with a magnetic needle or bar, nearly five inches long, one-sixth inch broad, and one-thirtieth inch thick, weighing nearly 180 grains, and supporting about 3-4 oz. The patient felt an agreeable cool aura in both cases, when the crystal or magnet was drawn from the wrist to the point of the middle finger; if drawn in the opposite direction, the sensation was disagreeable and appeared warm. A crystal twice the size of the first, produced, when drawn downwards, the same effect as a mag-

net, supporting two pounds of iron; and when drawn the opposite way, a spasmodic condition of the whole arm, lasting several minutes, and so violent that the experiment could not well be repeated."

It was found that this peculiar force residing in crystals was analogous to electricity and magnetism, inasmuch as it was capable of acting through opaque bodies, and admitted also of being transferred to other substances. A large rock crystal, placed so that its point rested on a glass of water, produced water as strongly magnetised as a horse-shoe magnet. It was further ascertained that the power thus transferred, was capable of being retained for a short time (in no case, however, longer than for ten minutes.)

In Madlle. Nowotny, the hand was attracted by a large crystal, exactly as by a magnet of middling size. Crystals also gave forth the same luminous appearance as the magnet, only more singularly beautiful in color and form.

Still proceeding steadily in his researches, and calling to mind the many effects analogous to those of the magnet, alleged to have been produced on sick persons by the human hand, Reichenbach, while he avoided all study of the literature of animal magnetism, in order to retain an unfettered judgment, resolved to ascertain "whether animal magnetism, like the crystalline force, might not be subject to physical laws?" As crystallization seems to mark the transition from organic to inorganic nature, he ventured to hope, that by experiment, he might discover a point of connection between animal magnetism and physics, or perhaps even obtain, for animal magnetism, that firm foundation in physics, which had so long been sought for in vain."

And here the philosophical caution of the practised observer is strikingly displayed.

In order that his experiments might be free from every disturbing cause, he felt it essential, previously, to ascertain the part which terrestrial magnetism plays in relation to human sensations. If a magnet or crystal produces marked effects, it is certain that the magnetism of the earth must exert a powerful action, and, therefore, it became necessary for him to ascertain the conditions of this action, to enable him to estimate the degree in which the results of the new experiments might be modified by its influence.

The inquiries instituted with this view, led to the discovery of a singular fact, namely, that persons sensitive to the magnetic influence (at least, in the northern hemisphere,) find, when in a steepest state, every other position except that from north to south highly disagreeable; that

from west to east being in particular almost intolerable.

"On examining the position of Madlle. Nowotny, she was found lying almost exactly on the magnetic meridian, her head towards the north. She had instinctively chosen this direction; and it had been necessary to take down a stove to allow her bed to be placed as she desired it to be. She was requested, as an experiment, to lie down with her head to the south. It took several days to persuade her to do so, and she only consented in consideration of the weight which the author attached to the experiment. At last, one morning, he found her in the desired position, which she had assumed very shortly before. She very soon began to complain of discomfort, she became restless, flushed, her pulse became more frequent and fuller, a rush of blood to the head increased the head-ache, and a sensation of nausea soon attacked the stomach. The bed with the patient was now turned, but was stopped half-way, when she lay in a magnetic parallel, with the head to the west. This position was far more disagreeable than the former, indeed, absolutely intolerable. This was at half past eleven, A. M. She felt as if she would soon faint, and begged to be removed out of this position. This was done; and as soon as she was restored to the original position, with the head to the north, all disagreeable sensations diminished, and in a few minutes were so completely gone, that she was again cheerful."

Further singular corroborations are quoted in confirmation of this view; and Reichenbach thinks it sufficient to account for many of the errors and contradictions which have occurred in animal magnetism from the time of Theophrastus and Mesmer to our own day. "For if the same disease were treated magnetically, in Vienna, in the position north to south; in Berlin, in that of east to west; and in Stuttgart, in that of south to north; totally different results would be obtained in the three cases, and no agreement in the experience of the different physicians could be obtained."

"Nay, if the same physician, at different times, or even at the same time in different places, were to treat the same disease with the same magnetic means, while accidentally the beds of his patients were placed in different positions, he must necessarily see quite different results, so as to be entirely puzzled with magnetism and with himself. He must conclude it to be full of caprice and change; and finding it impossible to foresee and regulate its action, reject magnetism altogether as an unmanageable instrument. Such has been, in fact, the sad history of

magnetism. From the earliest times, often taken up, and as often cast aside, it now lies almost unemployed, and yet is so distinguished, so penetrating, nay, we may say, so incomparable a means of relief in cases where man has hitherto been unable to afford any benefit. Nervous diseases are still the *scandala medicorum*. It may be confidently expected, that ere long an improvement will be effected. The all-powerful influence of terrestrial magnetism will be measured and calculated, and the whole subject of magnetism will now admit of being regularly studied in reference to medicine. Progress will be made; experimenters will mutually understand each other; and the world at length hope to derive some actual benefit from those extraordinary things which have so long excited expectation without satisfying it. Having thus established the existence of a powerful influence exerted by the earth's magnetism on the magnetic phenomena in sensitive persons, all subsequent magnetic experiments were made with the patients in the position from north to south, which is considered by the author as the normal position for the living body, sensitive or affected with nervous maladies."

The experiments then instituted resulted in convincing Reichenbach that a similar force to that which he had detected in the magnet, and other bodies, resides in the human hand.

The most singular experiment is that with a glass of water.

"If it be grasped from below by the fingers of one hand, and from above by those of the other, during a few minutes, it has now acquired to the sensitive, the taste, smell, and all other singular and surprising properties of the so-called magnetised water. 'Against this statement,' says the author, 'all those may cry out who have never investigated the matter, and to the number of whom I formerly belonged; but of the fact, all those who have submitted to the labor of investigation, and have seen the effects I allude to, can only speak with amazement.' This water, which is quite identical with that treated with the magnet or with the crystal, in all its essential properties, has, therefore, received from the fingers and hand an abundant charge of the peculiar force residing in them, and retains this charge for some time, and with some force. It was found that all substances whatever were capable of receiving this charge, which the sensitive patients invariably detected. The inevitable conclusion is, that the influence residing in the human hand may be collected in other bodies, in

the same way, and the same extent, as the influence residing in crystals."

But in ascertaining thus much we have not arrived at all the sources of this force. Some of Reichenbach's most interesting and striking researches go to establish, in the most unquestionable manner, that it resides also in the rays of the sun, and the moon, and the stars; that it is developed likewise in chemical action, (especially in the processes of digestion and respiration,) and again by electricity. These are its ascertained and peculiar sources; but it seems, from the experiments subsequently detailed by Reichenbach, that there is scarcely an object in the collective material world through which it may not be manifested in relation to peculiar indiosyncrasies.

Towards the conclusion of his remarks, the author gave some very interesting statements of the relative development of the magnetic force in individuals, at specified periods of four and twenty hours, and he suggests many applications of these facts of great practical value in the preservation of health. He promises also, within two months, to publish the results of extended inquiries.

On the whole, it is scarcely too much to assert, that a more interesting series of observations in relation to physical science has rarely been presented to the world. Those who will take the trouble to enter into the statements, of which little more than an outline has here been presented, will meet suggestions sufficient to give direction to a whole life-time of thought and observation. The phenomena observed and narrated bear with almost equal force upon every branch of inquiry—crystallography, mineralogy, geology, botany, anatomy, physiology, medicine, astronomy; in short, the whole circle of the sciences. It opens up a field of inquiry, to which every student of Nature must direct his steps, and to which all, no matter how varied their pursuits, may bring their labor with a certainty of reward.

In conclusion, it is proper to mention that one very gratifying circumstance, in connection with the publication of these researches, consists in their having drawn forth the admirable remarks of Professor Gregory, by which the publication of them is accompanied. It is also a matter of congratulation, that, in a letter dated from Vienna the 7th of the present month, published in the appendix and addressed by Baron Von Reichenbach to Professor Gregory, the following paragraph is to be found:

"Berzelius has expressed himself in the same way as you have done; and carries on with me a friendly and brisk correspondence on the subject of my researches, on which we may shortly expect a report from him, to be laid before the Swedish Academy of Sciences."

#### CURATIVE EFFECTS OF MESMERISM.

A young lady of Ohio, about 18 years of age, who has been for some time at school at Hartford, Conn., received an injury in the lower part of her spine in November last, from a fall which rendered her unable to bear even the slightest elevation toward an erect position, and kept her in continual pain. She was attended by the most skillful physicians without benefit, but at length, under the advice of a physician of this city, she was placed on a bed constructed for the purpose, and brought here by railroad and steamboat, with the view of trying the effects of mesmeric treatment under his direction. She arrived here on the 3d inst. (April, 1846) accompanied by her brother-in-law and sister, and put up at Judson's Hotel, Broadway. The following evening the physician introduced Mr. Oltz, a distinguished magnetizer, and recommended him to make the proper mesmeric passes along the spine for the purpose of allaying the high nervous excitement under which she was laboring, and which had continued without intermission, from the time of the accident. The passes were quite effectual, and that night she enjoyed sound and refreshing sleep which she had not obtained for the previous five months.

The next morning, the magnetizer, by means of the mesmeric passes alone, gradually raised her to an erect position, in which she remained about a minute. In the evening he operated again, and she was again enabled to sit erect. The doctor then directed him to raise her upon her feet, which he did with a few passes; and supported by the magnetizer and the physician, she found herself able to walk several times across the room. After resting about fifteen minutes, in an easy chair, where her expressions of wonder and gratitude were deeply fervent and affecting, she repeated her walk around and across the room, and retiring full of joy and hope, again passed the night in tranquil sleep.

On the following morning, the mesmeric passes proved so effectual that she was considered sufficiently restored to undertake a

journey to Philadelphia, that afternoon, on her way to her family in Ohio. Mr. Oltz accompanied her to the depot in Jersey City, and having seated her comfortably in the car, and stowed away her previous travelling coach upon the top, transferred his mesmeric power over her to her brother-in-law and saw her start on her unexpected journey. The following are extracts of a letter from the sister who accompanied her, to her physician in this city, dated Harrisburgh, Penn., April 13th, 1846:

"I fear our neglecting to write from Philadelphia will lead you to think we do not appreciate the kind interest you took in sister's case. Be assured we do and ever shall remember you with gratitude. \* \* Our kind friend Mr. Oltz, (to whom you will please remember us) doubtless told you how well we succeeded in getting to the cars. Mr. B was able to continue the influence to such a degree as to keep her very easy for about two hours, when, owing to some relaxation of effort, she became sick at the stomach. We gave her the globules [Ipecacuanha] which soon relieved that, and then, notwithstanding the noise and motion of the cars, Mr. B—succeeded in putting her into a sounder sleep than ever she had been in before, and she awoke from it quite refreshed. For two days after our arrival in Philadelphia she felt too weary for exertion; but on the third night, after being magnetized, she sat up for more than two hours and walked about the room for nearly an hour; she slept well for that night, and was next day quite comfortable. We left Philadelphia at half-past seven in the morning, and rode nine hours over the roughest rail-road in the country, but under the magic influence she was kept quietly asleep most of the time. She feels much fatigued and sore to-day, but is in good spirits at the idea of starting and the comparative ease with which the rest of the journey will be performed."  
—*New York Tribune*.

Besides the ordinary effects of an injury from a fall in this case, there was great derangement in her magnetic organization which required the power of the magnetizer to restore to its proper condition and normal action, and hence our confidence in the success of the experiment and the rationale of its results.

#### Tubercular Disease of the Organs and Muscles.

Miss M. S. of Providence, R. I., aged 25 years. This young lady had been out of health about seven years, when she was

placed under my care in May, 1845. She presented the external appearance of the most robust health; yet this was one of the worst cases of tubercular disease I ever saw; for on an examination, I found all of her organs, including the cerebrum, cerebellum and uterus, as well as all the muscles, in a very advanced stage of tubercular disease; accompanied often on retiring to bed with the most violent and prolonged spasms, terminating in insensibility and coma or sleep. The muscles of the body and limbs presented everywhere the same elastic and puffy state seen in the common white swellings of the joints and limbs. There was also great sensibility to pressure the whole length of the spine.

A clairvoyant examination of this case, confirmed the above diagnosis, and besides located the disease in the cerebrum in the organs of imitation, marvellousness, hope, and conscientiousness of the left hemisphere; a matter of great importance in directing the passes in mesmerising and in the application of the buttons in magnetising.—Prescribed the magnetised gold pills and plaster, mesmerism and the action of the magnetic machine.

The following letter from this talented young lady will show the result of this practice:

*Providence, March 9th, 1846.*

DR. SHERWOOD, Sir:

I feel it a duty devolving upon me, to write you at this time. As regards my present state of health, I can say, I am well. During the past winter my constitution seems to have undergone a change; which change cannot be attributed to any other source than strictly adhering to your practice. I consider it a case worthy of note; for after having spent my "living upon physicians, and was nothing bettered, but rather grew worse," and all that were ever employed gave me no encouragement of ever fully recovering, after having experimented upon me until my patience was worn out.

Under my present state of health the whole creation seems created anew. I now begin to realize how many years I have spent in a disordered state of health, enjoying naught of life or its charms. I am now able to attend any public assembly without apparent inconvenience; my head feeling as clear the next day as before. The privilege I think I know how to prize. My sleep is sweet and refreshing; none of those long, dreaded nights, and anxious watchings and fears. My gratitude I can never express, in being led to persist in your method of treatment.



I will endeavor to state as high as I can the origin and progress of the disease. In the spring of 1838, my health began to give out, a general weakness seemed to pervade my frame, and in the month of May was quite reduced with distressing pains in the lower part of my back, accompanied with spasmodic affections; employed a physician who immediately pronounced it a severe case of spinal irritation, and was put upon a mode of treatment general to their clique; no relief was gained excepting short periods of repose when the disease seemed to be preparing to break out anew, until it seemed to extend to all parts of my system, and for seven years I have been going on in this way, employing other physicians, but all to no purpose. When I recall the nights and days of suffering with my head, it is more a wonder that mind has kept her throne. I say not that my mind has not suffered from the shock, but enough of reason is left to know from what source I at last found relief.

I have stated what was then considered the source of so much trouble, but since applying to you, find that an organic affection in the lower part of my body must have been the primary cause of so much pain in my back and head.

I commenced the use of your remedies the early part of May, 1845, and used two boxes of pills, and the magnetic machine and plaster, and am now enjoying more of life and better health than I had previously, for eight years; this is not only my testimony, but of friends who have seen me most, and it is a wonder to them that I am where I am. I am now 26 years of age, and feel younger than I did at 18. I know my recovery is attributable to the thorough use of your remedies; and if my recovery can be of any assistance to others similarly affected, use it as far as you think proper.

#### Baron Reichenbach's Experiments.

We were made aware, some time ago, that a German periodical, devoted to chemistry, had presented last summer, a long and carefully prepared paper, detailing certain experiments of the Baron Reichenbach of Vienna, respecting hitherto undescribed phenomena connected with magnetism. We were informed that, conducted as they had been by a rigidly scientific investigator, and one whose writings were usually but statements of dry facts, they might be considered as entitled to respectful notice; and yet they were of such a nature as we have been accustomed to regard with the greatest suspicion. They appeared, in short, as tending

towards the domain of animal magnetism, and yet as promising to bring that theme of marvels within the scope of exact science. This is a subject of course, on which curiosity will be greatly excited; and we are therefore glad to obtain an opportunity of conveying some account of it to our readers in consequence of a very readable abstract of Reichenbach's papers in the "Dublin Quarterly Journal of Medical Science."

The writer sets out as follows, strictly following, we believe, the statements of the Viennese chemist, but condensing his language: "If the poles of a strong magnet capable of supporting the weight of about ten pounds, be passed over the bodies of fifteen or twenty persons, there will always be found some individuals among them who are affected by it in a very peculiar way. The number of such persons is much greater than is generally supposed. Of the above number, there will be three or four at least. The nature of this impression on sensitive persons, who, in other respects, may be looked upon as perfectly healthy, is not easily described, being rather disagreeable than pleasant, joined with a slight sensation, now of cold, now of heat, as if the person were blown upon by a cold or lukewarm current of air. Sometimes they feel contractions in the muscles, and a prickly sensation, as if ants crawled over the body; and many persons even complain of sudden headaches. Not only women, but even young men, are sensible to this influence, and in young children the sensation is very strong." Susceptibility, however, amongst the healthy, is strongest in sedentary persons, and those suffering from secret grief and deranged digestive organs. Persons affected by nervous complaints, as epilepsy, catalepsy, hysteria and paralysis, are peculiarly sensitive; and still more so are lunatics and somnambulists.

To pursue the abstract of our Dublin contemporary—"Actually or apparently healthy sensitive individuals discover, in their relation to the magnet, nothing besides the sensation just described. But the case is very different with the sick sensitive. Its action on them is sometimes agreeable, sometimes unpleasant—often disagreeably painful to such a degree, that fainting, cataleptic fits, and spasms, at times violent, and sometimes dangerous, ensue, according to the nature and degree of their disease. In this latter class, to which the somnambulists also belong, an extraordinary increase takes place in the sensitiveness of the senses. The patient sees, tastes, and feels better than others and often hears what is said in the next

room. This is, however, a fact well known and is not by any means unnatural."

"The hypothesis that the aurora borealis is an electrical phenomenon, produced by the magnetism of the earth, the real nature of which is at present unknown, owing to our not having been as yet able to detect an emanation of light from the magnet, led Reichenbach to try whether persons, in a state in which the senses were thus sharpened, could detect such an emanation from the poles of a magnet. He was enabled to make trial on a young woman named Vowotny, aged twenty-five, who suffered from continued headache, accompanied by catalepsy and spasms. So sensitive was she, that she could distinguish all the things in her room, and even the color of objects, on a dark night. The magnet acted on her with extraordinary force; and though by no means a somnambulist, she was equally sensitive with one."

"The experiment was made in a perfectly dark room. At the distance of about ten feet from the patient was placed a horse-shoe magnet of nine plates [a magnet of nine plates of alternate metals, bent into a horse-shoe form, so as to make the ends or poles approach,] and weighing about eighty pounds, with its poles directed towards the ceiling. Whenever the armature of this magnet [a piece of iron clapped upon the poles of the magnet] was removed, the girl saw both poles of the magnet surrounded by a luminosity, which disappeared whenever the armature was connected with the poles. The light was equally large on both poles, and without any apparent tendency to combine. The magnet appeared to be immediately encircled by a fiery vapor, which was again surrounded by a brilliant radiant light. The rays were not still, but continually flickered, producing a scintillating appearance of extreme beauty."

"The entire phenomenon contained nothing which could be compared to a common fire; the color was much purer, almost white, sometimes mixed with iridescent colors, and the whole being more similar to the light of the sun than to that of a common fire. The rays were not uniformly bright; in the middle of the edges of the horse-shoe they were more crowded and brilliant than at the angles, where they were collected into tufts, which extended further out than the other rays. The light of the electric spark she considered much bluer. It left an impression on the eye similar to, but much weaker than that left by the sun, and which did not disappear for several

hours, and was transferred to all substances upon which she looked for some time in a painful manner."

Reichenbach endeavored to verify these results by trials upon other persons, particularly upon a woman named Reichel, who was rendered sensitive in consequence of an accidental hurt but was nevertheless healthy.

In her case, "the appearance of the light along the four longitudinal edges of each plate composing the magnet was extremely curious, even where the edges of two contiguous plates fitted one another exactly; and where one would think rays of light given off from each plate must necessarily merge into one another at their basis, they could be distinguished with great accuracy." Reichenbach, "in order to be certain that there was actual light given off in these cases, made some very careful experiments with the daguerreotype; the result of which was, that an iodized plate was acted upon when placed opposite the poles of a magnet. He was also able to concentrate it with a lens; but the focal length was found to be fifty-four inches, while for a candle, it was only twelve inches. He could discover no action of heat with the most delicate thermoscope. In some cases the patients declared they could see the surrounding objects by means of this light, and that any substance stopped its passage, as it would ordinary light: thus, for example, when the hand was laid before the poles, it streamed through the fingers. From the similarity of this light in many respects, to the aurora borealis, Reichenbach considers them identical." We may here add, from another source, that the Baron contrived to subject his patients to an effectual test in these less experiments; for he caused the lens to be shifted about, and the theoretically proper place for the focus on the opposite wall was invariably and at once pointed out."

Continuing his abstract, the Dublin journalist says: "From the observations of Petelin, made at Lyons in 1788, and which were afterwards verified by many others, we know that, in catalepsy, the hand is capable of being attracted by a powerful magnet, just like a piece of iron; and as Mesmer observed that water over which a magnet has been several times passed, can be distinguished from ordinary water by sensitive patients. Reichenbach has fully verified these facts in a large number of persons. He found that this effect took place not only during perfect catalepsy, but even afterwards, when the persons were in full possession of their senses. Miss Vowotny described the sensation to him as an irresistible attraction

which she felt obliged to obey, though against her will; that it was a pleasant feeling, combined with a cool, gentle aura, which flowed over the hand from the magnet, the former feeling as if tied and drawn to the latter by a thousand fine threads; and that she knew nothing similar to it in ordinary life, it being a peculiar indescribable feeling of refreshing and extraordinary pleasure, particularly if the magnet attracted the right hand, and was not too strong.

"He did not, however, verify Thilorier's observation, that nervous patients can convert needles into magnets; and he considers in fact, the attraction of the hand by the magnet to be of a totally different nature from that between iron and the magnet. This opinion we shall see verified further on.

"We have had no instance hitherto of the form or arrangement of the molecules of a body rendering it capable of exerting force on other bodies at a distance; but Reichenbach, by a series of experiments on magnetic water—that is, water over which a magnet had been several times passed—was led to suppose that other bodies could, in all probability, be also rendered magnetic. This he soon found to be the case in a greater or less degree; but he also observed that many substances, which were never in contact with a magnet, affected the nerves; and by extending his experiments, he arrived at the law that amorphous bodies possess no power similar to that possessed by the magnet, but that crystals are capable of producing all the phenomena resulting from the action of a magnet on cataleptic patients. This is true, however, only of single perfect crystals, and not of an agglomeration of crystals such as lump sugar. Thus, for instance, a large prism of rock crystal, placed in the hand of a nervous patient, affects the fingers so as to make them grasp the crystal involuntarily, and shut the fist.

"The power is not equally distributed over every part of the surface of the crystal, but is found to concentrate itself in two points or poles corresponding to the principal axes of the crystal. Both poles were found to act similarly; but one was generally somewhat stronger than the other, with the exception that one gave out a cool, and the other a luke-warm gentle aura."

Notwithstanding the apparent resemblance of the magnetic power in crystals to ordinary magnetism, Reichenbach satisfied himself that there is a difference; because he found that crystals do not attract iron filings or affect the compass or needle. It appears that the ordinary magnetic power is of two kinds; one of which is this peculiar power

resident in crystals, and in the living body. The learned chemist also found that a charge of this power can be communicated to bodies, as is the case with a charge of electricity. "The readiness with which the situation of the poles could be detected by those sensible to their influence, was striking. Many of the patients could detect all the ores, even in the most complicated crystalline forms, with unerring accuracy, by their effects on them; as of course it is unnecessary to observe they could have no knowledge of crystallography. By extending his experiment, he soon found that the poles of a crystal gave out light exactly as the magnet does. Miss Sturman described it as a tulip formed flame, blue at the base, passing into perfect white at the top, with scattered rays, or stripes of a reddish color, passing upwards from the blue towards the white. The flame scintillated and flickered, and threw on the support on which the crystal rested, for a space of about eighteen inches all around, a certain degree of brightness. Miss Reichel describes the flame similarly; but, in addition, she saw a peculiar star-like light in the interior of the crystal, which evidently resulted from reflection, produced by the structure of the mineral.

It may be necessary to remark, that, in order to observe these phenomena, the room must be perfectly dark, and the crystal very large; not less at least than eight inches thick, and proportionately long. Smaller crystals will, however, answer with exceedingly sensitive persons.

"The curious results produced on cataleptic patients, which we have already mentioned, excited some attention in the last century, and it was soon found that similar results could be produced without a magnet, by the hand alone. It was impossible from the then state of physical science to show the connection between these phenomena and the ordinary physical ones of the magnet; and the subject was therefore passed over by philosophers, and gradually grew into disrepute, principally from the use made of it by mountebanks, and from the unsuitable name—animal magnetism—which it received. From the similarity of some of the phenomena observed by Reichenbach with those described by the elder magnetisers, he was led to think they might be the result of the same cause.

"As a magnet affects the human body he thought that the magnetism of the earth cannot be without some influence of a similar kind; and in this he was not mistaken; for he found that, of all positions in which a nervous invalid can lie or sit, the best is in the magnetic meridian, with the head towards, the north; the opposite direction is

not quite so good; but the worst possible is at right angles to the magnetic meridian, with the head towards the west. He found that patients placed in the same position slept better at night, suffered less from headaches, and in general found themselves much better; while, with the head towards the west, the same patients suffered greatly; their pulse increased in frequency, hectic fever often resulted, and catlepsy was sometimes occasioned; but the moment the patient was restored to the first position, all these symptoms ceased, and were in general replaced by an agreeable feeling of well-being. In some of the cases which were tried, the most extraordinary effects were produced on the patient by this change of position; and he hence concluded that the various and contradictory effects which have been attributed to the application of electricity and magnetism to the cure of diseases, have arisen from the neglect of the influence exerted by the magnetism of the earth on the patients; and to the same cause he also attributes the little success which has hitherto attended the treatment of nervous diseases.

"In extending his experiments, he found that soft iron, which loses its magnetism when removed from the inductive power of a magnet, does not lose the power of acting on the nerves; and he hence concludes that magnetism, properly so called, is perfectly distinct from this new power, as we have already seen in other instances, when speaking of the crystal. We have already mentioned that bodies placed in contact with a crystal or magnet, such as water, &c., became possessed of the same power of affecting the nerves as those bodies, and could be distinguished from portions of the same substances not magnetised. But we have now to learn that the same properties can be communicated to the human body; or, in other words, that a man rubbed, or in mere contact with a magnet or crystal, is capable of producing the same effect on the nerves as those bodies: nay, more, that a man has these properties even when he has not touched a magnet or crystal; in fact, that we are a source of this peculiar power ourselves. It is unnecessary to give here the mode in which he arrived at this remarkable conclusion, as the experiments are all similar to those made with the magnet and crystal—a man being merely substituted for these latter. Like them, the hand produces an aura, attracts the limbs of cataleptic patients, and communicates a charge to other bodies which, as in the case of magnet and crystal, disappears again in a short time, and is capable of passing through all bodies, is little influenced by the magnetism of the earth, and like

them, is polar, the principal axis being across the body, the ends of the fingers being the poles. The head and genitals very likely form secondary poles.

But the most extraordinary part of the whole investigation is, that the top of the fingers of healthy men give off taste of light, just as the pole of crystals, while those of women give off none, or at most merely appear slightly luminous. The patients who were able to observe these phenomena, described the flame as being from one to four inches long, according as they were more or less sensitive, and of an extremely beautiful appearance.

Baron Reichenbach has also attained what he considers as conclusive evidence, that magnetism exists in the sun's light. All bodies exposed for a time to sunlight, retain a magnetic light for some time after. One of his experiments is so curious that we shall give it here: To a piece of thick copper wire, about thirty feet long, he fastened a piece of sheet copper about nine inches square. The end of this wire was placed in the patient's hand, and the plate exposed to the direct rays of the sun outside the window; this was scarcely done when an exclamation of intense pleasure was heard from the patient; she instantly felt the peculiar sensation of warmth, which gradually spread from her arm to her head. But, in addition to this, she described another and hitherto totally unknown sensation, namely, a feeling of extreme well being, as the patient said, similar to the sensation produced by a gentle May breeze. It flowed from the end of the wire to the arm, and spread itself over the whole body, producing a sensation of coolness, the patient feeling at the same time strengthened and refreshed. In some of his experiments Reichenbach substituted various bodies, and among them a man, for the plate of copper, and still obtained the same results. What is extremely curious, the yellow part of the ray of light produces the agreeable and refreshing feeling, while the violet part causes the disagreeable feeling sometimes experienced from the action of the magnet; and this violent part we know to be that in which the greatest chemical action takes place. In heat, friction and artificial light the Baron found various modifications of the same surprising effects.

It equally appears that "in every case of chemical action, even where it consists in nothing more than the combination of water of crystallization, with a salt or mere solution of a body in some solvent, this power is set free." "If we recollect," says our journalist, "how manifold are the circumstances under which chemical action takes

place on the earth, we will be able to see what an inexhaustible source of this power there must be. In the animal body there is a series of such change continually going on; we eat food, it is digested in the stomach, and converted into blood, which is again further changed into muscle, fat, &c., and these in turn are again decomposed to yield fuel for animal heat and motive power. The continued chemical action is, therefore the generator of the peculiar force which we find developed in man, as in the magnet and crystal. But not only does the chemical action going on in the living body generate this power, but the decomposition which ensues immediately after death is also an abundant source of it. Reichenbach, on going into church-yards on dark nights with some of his patients, discovered that graves were always covered with a lurid phosphorescent glow, about six or eight inches high; and in one case Miss Reichenbach saw it four feet in height in a grave yard in Vienna, where a large number of persons were daily buried. When she walked through this grave-yard, the light reached up to her neck, and the whole place appeared covered with dense, misty, luminous fog. This the baron conceives, explains in a very satisfactory manner the appearance of light and ghosts, &c., which have been from time to time observed over graves."

After thus discovering several sources of the power, Reichenbach was led to the detection of it, in a certain measure, in all bodies whatever. From this flowed some observations, the curious nature of which must be our apology for borrowing so largely from our contemporary. "Every one," said he, "is aware that there is a large number of persons upon whom certain substances have a certain peculiar effect, generally of a disagreeable kind, which sometimes appears to be absurd and ridiculous, and is often attributed to eccentricity; thus there are some who cannot bear to touch fur, others who do not like to see feathers; nay, some who cannot bear the look of butter. The invariable nature of this feeling, and the similarity of circumstances attending its existence among the most different races, and in the most distant countries, led Reichenbach to examine it closer; and he found that these antipathies occurred, for the most part, among persons apparently healthy, but more or less sensitive, and that they increase in degree according as persons suffer from nervousness, &c., and that, hence, there was evidently some connection between these sensations and the effects which he had in so many instances found to attend the action of magnetic crystals and on similar persons.

"We have already seen that in certain cases, the action of the crystal was attended by a disagreeable feeling, which sometimes produced painful spasmodic affections of the limbs; and that this property could be communicated to various bodies, though in different degrees; and that it is never totally absent from bodies which form perfect crystals. On this subject we have, however, already said enough; and it only remains to say a few words on the sensations of apparent difference of temperature, the disagreeable feeling, as it were of disgust, and the apparent mechanical agitation of darting pains through the body, sometimes produced by most dissimilar substances.

"Some of these sensations were felt by healthy persons, but highly sensitive individuals felt them all more or less strongly, according to the nature and extent of their disease.

"On making a number of experiments on the most different substances, he arrived at the conclusion that all amorphous bodies which do not possess the peculiar power resident in crystals, possess, in different degrees, according to the nature of the body and with a great degree of constancy, the property of giving rise to disagreeable sensations, sometimes accompanied by heat, and sometimes by a feeling of coolness. In the crystal, we had a power depending on the state of aggregation or form, while in the case before us, the nature of the substance is the determining cause of some dynamical effect of another kind."

Many curious observations remain, but our space is exhausted. Most readers will, we think, join us in wishing that the experiments of the Viennese philosophers should be repeated, and subjected to every imaginable test; as, in the first place, they seem worthy of this pains; and in the second, it is impossible to receive such extraordinary matters into the book of science without the strongest of attainable proofs. It would now, we think, be wrong to treat such things with the indifference of mere incredulity. It is far from likely that so many persons as have testified to peculiar effects of a zoo-magnetic nature, should have been entirely mistaken, or altogether possessed by a spirit of deception.

Nor is there any improbability that we are tending towards the discovery of some new form of the imponderables, in which the human organization is strangely concerned, and which therefore promises to possess medicative power. Where a prospect, however shadowy, holds out so much temptation, men will venture to follow it, and surely it were well for a few genuine men of science

to go into inquiry, if only to prevent the multitudes of the unlearned from breaking their heads upon it. It sometimes appears to us as if the spirit of incredulity overreached itself; and perhaps there is an instance here. Forty-six years ago, many cures by magnets, called "metallic tractors" were announced. They were suddenly quashed by two physicians, who stimulated the applications by using bits of wood and iron, disguised as tractors instead. What, however, if it should prove that the cures were real cures in both cases, only produced by a cause different from the tractors, and which resided in the bodies of the operators, and connected with an earnest exertion of the will in both cases? Things as strange have happened.

#### REMARKS BY THE AUTHOR.

An attentive perusal of the preceding articles will naturally induce the reader to revert, with an additional degree of curiosity at least, if not of confidence, to what has been said in the successive chapters, and various appended articles of this work, on the subject of Magnetism, as the motive power of the human system, and also the curative power of the author's peculiar remedies. Even the routine practitioner of the schools, hedged in, as he may be, by habitual prejudices, and by an equally habitual deference to stationary medical authorities, not a whit more advanced in science than himself, may be led to suspect the possibility of magnetizing other substances besides iron, to which his knowledge may hitherto have been limited, and he may, if not altogether invincible to the approaches of modern science, even exert his mental courage so far as to speculate upon the possible magnetization of substances adopted in the practice of medicine. We do not expect, of course, that he will permit his speculations to become sodaring as to take even a glimpse at the idea that all medicines, of every kind whether having their natural properties enhanced by artificial magnetism or not, operate, either for good or evil, by the magnetic forces alone, for this would be akin to the grand conclusion that all the forces of nature in all substances whatever, are identical with those of magnetism. But when he

reads the conclusion of the inquisitive, cautious, and philosophical Reichenbach, republished and respected as it is by the learned and eminent Professor Gregory, of Edinburgh, that not only water, but all sorts of minerals and drugs, were not only susceptible of being magnetized, but also capable of imparting to his patients the magnetism they had acquired; when he further reads, on the same authority, that Reichenbach found that all substances whatever were capable of receiving a magnetic charge from the human hand, and that sensitive patients "invariably detected" the magnetism thus imparted, he may be led to think that there are greater absurdities in the world than the doctrine of magnetised medicines, and that even "Sherwood's Magnetic Remedies," after astonishing and confounding the medical faculty of the United States for more than thirty years, may admit of an explanation in perfect consistency with the demonstrable principles of magnetism. It must be a rather disagreeable transition of feeling, we dare say, for the too confident and arrogant sneer of derision to subside and change into the involuntary assent of grave and respectful conviction; but thousands have been compelled to experience this queer sensation, and every day is rapidly increasing the number.

It is difficult for the author of this work to advert to the preceding notices of the recent work of Reichenbach, without exposing himself to the charge of egotism, while merely sustaining his just and honest pretensions to precedence in this field of magnetical enquiry. In a matter, however, which may hereafter affect the claims of his country to a just position in the history of the science of the present age, all considerations relative to himself, whether of honor or of reproach, are, with him, of inferior moment. On this account, therefore, he will cheerfully incur the risk of the imputation of personal vanity, by claiming that it was an American physician who first not only asserted and demonstrated the practicability of magnetising medicines, but established, in the course of a long practice, their paramount, indeed *exclusive efficacy*, in an exten-

sive range and heretofore supposed wide diversity of human maladies, for which science had previously discovered no appropriate nor reliable cure. He fearlessly asserted that his remedies were *magnetic*, not upon the general principle that all remedies act magnetically, but upon particular and strictly chemical principles, at a period when he well knew that his supercilious brethren in the profession would ridicule the idea, and even before magnetism was distinctly recognised as a chemical agent at all. He thus, for the sake of holding forth a humane and guiding light of truth in advance of the age, and when his country, young even in national existence, had but comparatively few pretensions to the honor of original discoveries in science, voluntarily and deliberately incurred the envious hostility of a profession, jealous and implacable to a proverb, towards any of its members who shall dare to step beyond the hard, conventional limits, prescribed by previous authorities.

He not only adopted magnetic medicines, but he magnetised them himself, in a chemical process necessarily and unavoidably too elaborate to be entrusted to the unprincipled recklessness of quacks on the one hand, or to the illiterate mass of the profession (in this respect but little higher than quacks) on the other; and thus had to encounter another and more plausible source of reproach, sustained only by sound convictions of prudential necessity. He has truly informed many members of the profession concerning the composition of his medicines, and has concealed from none, that their basis is a perchloride of gold, exalted, by a process of magnetic chemistry, above any other chloride that can be produced either in this country or in Europe; and he has frankly imparted even this process, so far as it can be made without actual observation and explanation of every detail in the laboratory itself; and it has been as frankly conceded by all who are capable of forming a sound judgment upon the subject, that it could not with safety be entrusted in any written formulae, either to the profession in general, or even to the best pharmaceutical chemists, ignorant of

the peculiarly critical operations upon which a valid result depends. To do so, would not only be to risk, but to inevitably ensure in a great majority of cases, the manufacture of a spurious production, and thus eventually consign to neglect and disrepute a remedy now, and, we trust, hereafter, a rescue to thousands from hopeless and fatal disease.

In this Journal, the author has advanced and defended the opinion that the great secret of Homœopathy, or of the extraordinary efficacy of infinitesimal quantities of medicinal substances, consists in their being actually magnetised by the triturating and other attenuating processes by which they are prepared. In other words, that the homœopathic medicines are magnetic, and that this is the sole explanation of effects at once undeniable and hitherto ridiculed, only because they appeared inexplicable. In his little work, "A Manual for Magnetising with the Rotary and Vibratory Magnetic Machines," the author has given Hahnemann's directions for magnetising medicines, by trituration and shaking. On page 166 of the *Motive Power of the Human System*, he has given extracts from Hahnemann on the subject of certain preparations of gold, as possessing "great remedial virtues, which cannot be replaced." This explanation of homœopathy was received with little favor at first, by some of its professors in this country, although fully and decisively sustained by Hahnemann's own language as quoted, notwithstanding his somewhat mystical dialect. Many of the objectors, however, upon more mature reflection, have assented to the force of the evidence adduced, and we think that the experiments of Reichenbach will now leave but little doubt upon the matter, in the minds of any who carefully investigate it.

On the subject, too, of the magnetic organization of the human system, first advanced by the author of this work, and for some time regarded as a mere imaginative vision of real or pretended clairvoyance, Reichenbach will be found to have elicited

strongly confirmatory evidence and elucidation, although as yet his experiments have left this exceedingly curious and important branch of science in a cruder condition than he might have found it in this and other works long since published by the author in this country. Thus he appears to have supposed that the major magnetic axis of the human body is across it, and that the principal poles are in the hands at the ends of the fingers; whereas the author has clearly determined, by experiments equally legitimate, and much longer repeated, that the major axis is a longitudinal one, and the principal poles are in the brain, the solar plexus and the genitals; those in the fingers, although as luminous and emissive as he describes them, being merely among the great number of minor or secondary poles. The author, nevertheless, cannot but congratulate himself and his readers upon this substantially conclusive corroboration or a discovery which, when first advanced, was deemed, even by many of his friends, as too bold and startling to be prudently offered to the public. Scientific caution, however, has been, and may be carried to the excess of frivolous fastidiousness and timidity; and moral courage in discovery, when properly sustained by evidence satisfactory to all reasonable minds, is a quality much more useful to the cause of truth and the advancement of science.

93- While Mr. Sunderland was giving lectures last February in the Tremont Temple in this city, he was applied to by Capt. W— of the U. S. A., to magnetise his daughter for the purpose of rendering her *insensible* while a cancer tumor should be cut from her left breast. The lady was 23 years of age and weighed about 180 pounds. The tumor had been examined some eighteen months before, by a number of our first physicians, who all agreed that it should be taken out with the knife. One of them pronounced it fibrous, and another cancerous. It caused her much pain, and about three months before she came to Mr. S., her attending physician put a diachylon plaster upon it; but took it off again in twenty-four hours, as he said it "only made it worse." In about 17 days Mr. Sunderland succeeded in securing the *spell* upon her system, so

that she was utterly *unconscious*. During this time she was visited by her surgeon, but the tumor was not particularly examined. Feb. 22, at 10 A. M. was the hour fixed upon for the surgical operation to be performed.

The night previous was spent almost without sleep by the anxious husband and parents. The patient herself had not been made acquainted with the design, and at the appointed moment she was *spell-bound* in a state of utter *unconsciousness*, with her left arm stretched over her head in a state of rigidity resembling death. The operating surgeon came precisely at 10, accompanied with three other surgeons; and, after arranging his instruments, waxing his thread, &c., he, with the attending surgeons, examined the breast for the space of half an hour, and, — finally decided that *there was no tumor there!* During the time she had been magnetised, the pain and tumor had disappeared *as by magic!* — *Boston Paper.*

#### On Nature's Temporary Hemostatics.

BY C. H. HALLET, ESQ.,

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PHYSIOLOGISTS and surgeons have long been agreed about Nature's hemostatics, in the case of lesions of the external parts of the body. They have described two classes of these, the temporary and the permanent, and four conditions combining to the production of the former—namely, retraction and contraction of the coats of the injured vessels, the formation of coagula, and a tendency to syncope. The two first—the effects of the action of the vital properties of the vascular texture—act by diminishing the rapidity of the flow of blood through the cut orifices, and thus favor the supervention of the third—the formation of coagula. The fourth, or tendency to syncope, contributes materially to these results. "These important changes," says Professor Miller, "are contributed to by the natural result of loss of blood in considerable quantity; a growing faintness and tendency to syncope. The heart's action abating, and the general circulation becoming more and more feeble, the contraction of the arterial orifice is favoured as also the formation of coagula." Although coinciding fully in the opinions which are universally held respecting the extent to which these several conditions act in arresting, or conducing to the arrest of, hemorrhage. I believe we must take into consideration

\* Principles of Surgery.



tion a fifth and most important element—the relatively increased amount of fibrin in the blood following on its loss.

We have been for some time aware that the loss of blood causes a change in the relative amount of its principal constituents; a diminution of red corpuscles, and increase of fibrin. Now, as the coagulation of the blood depends on the fibrin, we should naturally be led to expect the accession of that phenomenon to be accelerated by the abstraction of the vital fluid. Such is really the case. "Thus, if a large quantity of blood be withdrawn from the vessels of an animal at one time, or within short intervals, the part one that last now coagulate much more rapidly, but much less firmly, than those first obtained." A familiar example will suffice to illustrate this. A medical practitioner determines to phlebotomize a patient, and desirous of observing the state of the blood, causes it to flow into a number of small receptacles—say teacups—successively. On arresting the flow of blood, he proceeds to examine that which he has designedly abstracted from the patient's system, and observes that the last cupful has coagulated as soon as the first; in fact, has solidified immediately on removal from the vessels.

Such an important change in the constitution of the blood, and such an augmentation of one of its most remarkable properties, cannot but be of great service as a hæmostatic. The phenomenon is so striking as to be worthy the attention of the profession. In fact, the advantage to be derived in one form of hæmorrhage—that accompanied and complicated by the hæmorrhagic diathesis—from an increased fibrinous state, and consequent heightened coagulability of the blood, has been brought prominently before the profession by Professor Miller. He writes, (op. cit., p. 513,) "We shall endeavor to increase the blood's power of coagulation, more especially its power of forming a dense coagulum. If possible, we would increase the proportion of fibrin." But the fact of hæmorrhage inducing not only a direct effect on the powers of the system, but also a change in the blood favourable to its own arrestment, seems not to have attracted that attention which I am led to believe it deserves. The formation of coagula curing syncope, or a state approaching it, is well known. Thus Druitt ("Surgeon's Vade-Mecum," p. 280) says: "Now if a very large artery, such as the femoral or subclavian, is wounded, and if the aperture in it is large, and if the flow of blood is in no manner opposed, the loss of blood will be so rapid as to occasion death almost instantaneously. But if the wound in

the artery is very small, it may be closed firmly by coagulated blood during syncope, and the patient may survive." He does not give any explanation why the coagulum forms during syncope, but appears to ascribe it to the occurrence of syncope, not to the change in the blood, as the following sentence will show. "Fourthly, the faintness induced by hæmorrhage both checks the current of the blood from the heart, and gives it an increased disposition to coagulate." A statement opposed to all we know on the subject.

When a vessel has been divided, I consider Nature's proceedings towards the salutary results of occlusion of its orifice, and arrest of hæmorrhage, to be as follow:—On the immediate occurrence of the injury, the coats of the vessel retract and contract, an effect which lessens the diameter of the arterial orifice, retards the current of blood through it, leaves a space between the vessel and sheath, in which they stagnate, and exposes a rough surface on which the blood may be entangled as it flows past, and nuclei formed around which the blood may coagulate; a result to which these various states tend. The wound being small, or other conditions being favourable, these may be adequate to the purpose; but if they should fail, the hæmorrhage will, of course, continue, and another series of actions will be brought into force. Nature's local powers having proved insufficient, she calls the whole system, to her aid. A faintness or tendency to syncope—syncope itself in extreme cases—is induced; and the blood is become more fibrinous. Both these conditions operate essentially in the same manner as retraction and contraction of the vessel, that is, retard the current of blood through the arterial orifice, and favour by this, and by increased coagulability of the blood—the result of the latter condition—the formation of occluding coagula, although these would be less firm, and therefore more liable to be broken up by the returning force of the circulation than those formed by the first set of conditions. In the more severe cases, as hæmorrhage from wounds of vessels of the first or second magnitude, even these may prove insufficient, and the issue, unless the surgeon is opportunely able to prevent further loss by the exercise of his art, must necessarily prove fatal.

The chief elements, it will be observed, in Nature's temporary hæmostatals, is the presence of coagula within the sheath and open extremity of the vessel. To procure these, I conclude, from the foregoing observations, that two consecutive series of auxiliaries are brought into play by Nature: these I shall name, for the sake of distinc-

tion, the primary and secondary series. Each series will be found to have the same action, at least, tend to the same results,

To retard the current of blood, we have the retraction and contraction of the vessel in the primary series, the sedative result on the heart's action from the loss of its wonted stimulus in the secondary. To assist these in the formation of coagula, we have the rough surface of the sheath to entangle the blood, and the space between the sheath and the vessel in which the blood may be at rest in the primary; the change in the relative amount of the constituents of the blood, caused by the previous excessive depletion, and causing an increased amount of fibrin, and hence, increased tendency to coagulation of the blood in the secondary. The only distinction which seems capable of being drawn between the two is, that the primary series depends on local, the secondary, on constitutional changes.

In ordinary slight cases of hæmorrhage, the primary is always the principal agent in causing occlusion of the injured vessel. In more severe cases, the secondary is indubitably the more efficient, since the primary has failed in its attempts to achieve a salutary effect. Still, it must be remembered, that the action of the latter cannot possibly exist without the former, except where the hæmorrhagic diathesis is present; for here the primary is almost, if not wholly, in abeyance, whilst the secondary is Nature's chief reliance in the hour of need. With this exception, therefore, we observe that Nature has both series in action when the secondary has been induced at one and the same time.

This would appear to lead to the conclusion that the secondary was only accessory to the primary series. But the phenomena are so striking, the relation, as pointed out between the two, so close, their order of occurrence so natural and so regular, their results so similar, that I am led to place the secondary on the same footing with the primary, even higher in the scale of importance, in severe cases, and to consider it as Nature's greatest safeguard in those severe cases where the primary has failed.—*London Lancet.*

A few Observations on the Use of  
**PROF. SEUTIN'S STARCH BANDAGE,**  
In the Treatment of Fractures.

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In the treatment of fractures, any apparatus capable of fulfilling the chief indication—namely, that of maintaining the extremi-

ties of the fractured bones in exact apposition, and which at the same time permits of progression—must undoubtedly be a very valuable one to the surgeon. Numerous apparatus have been invented for this purpose, since the time of Hippocrates; the principal ones now had recourse to are, the common apparatus, with splints. Desault's long splint, with Boyer's modification of it, for fractures of the thigh; the double inclined planes of Mac Intyre, Liston and Abernethy; Greenhow's apparatus; the fracture box; the *appareils inamovibles* of Larry and Emile Lacroix, the former consisting of—1stly, a linen cloth several times double; 2ndly, two cylinders or junks formed of straw, bound tightly together with twine, each an inch and a half in diameter, and rather shorter than the cloth; 3rdly, one of two bags or cushions, stuffed with chaff, of sufficient thickness, and of the same length as the junks; 4thly, a conical pad, stuffed with tow, six inches long, three wide, and two thick at its base; 5thly, three six-tailed compresses; 6thly, a long compress, called the stirrup; 7thly, the “tibiale,” a large piece of linen cut to the shape of the apparatus; 8thly, ligatures five or six in number; 9thly, the solvent liquid, a mixture of camphorated spirit, Goulard water, and white of egg, beaten together in water; and the latter, which is frequently employed by Dieffenbach, of a solid case of plaster of Paris, procured by pouring into a convenient sized wooden box, containing the fractured limb covered with oil or cerate, a sufficient quantity of semi-fluid gypsum; the *appareil hypochondrique*, or “a suspension,” proposed by Sauter, of Constance, in 1812, and adopted with certain modifications, by Mayor, of Lausanne, and Chelius, of Heidelberg. It consists of a flat piece of board, a chaff cushion, and ligatures for fixing the limb; the whole is suspended by attaching a cord, passed through a hole in each corner of the board, to a pulley, fixed either to the ceiling or the top of the bed; the moulding tablets of Mr Smee, prepared by copiously brushing over one side of a piece of coarse sheeting with a thick solution of gum, and afterwards covering it with a composition made by rubbing whiting with mucilage, continually adding the powder, until the whole is of the consistence of thick paste; a second piece of sheeting is then rubbed over on one side with the solution of gum, and the moistened side applied upon the composition with which the piece of sheeting has been covered;” the apparatus invented by Jobert, of the Hôpital St. Louis, Paris, which consists of a leather sock or bracelet fastened to the foot of the bed, for making extension, a long

cloth folded and passed over the opposite side of the body, and fixed to the head of the bed, for producing counter-extension, and another, if required, placed across the limb, for counteracting the action of the muscles, on the upper extremity of the fractured bone; and lastly, the *appareil amovible*, or starch bandage, which forms the subject of the present paper.

The principal advantages of this bandage, which—from the facility with which it is split, thus constituting, at will, a moveable and immovable apparatus—has been termed also by its inventor, the *appareil amovible-inamovible*, are, 1st, that of effectually preventing any motion between the fractured extremities of the bones; this is evidently of the utmost importance in the treatment of all lacerations of continuity in the osseous tissue, as, unless coaptation be maintained, not only will irritation and inflammation be excited, and the pain and suffering of the patient greatly prolonged, but also the formation of the callus considerably retarded, if not entirely prevented; for children and infants, also, whose restless nature is a source of considerable anxiety to the surgeon, in consequence of the difficulty thereby experienced in maintaining perfect immobility of the fractured bones, the starch bandage is an invaluable apparatus. All others, independent of their total inability to maintain perfect coaptation, become, in cases of fracture of the lower extremity, constantly saturated by the alvine and urinary excretions. They therefore require to be frequently changed, in order to prevent the irritation, excoriation, and fætor, which would otherwise be occasioned. But this frequent changing must evidently cause considerable pain to the patient, as well as greatly retard the formation of the callus, by allowing the fractured ends of the bones to rub against each other. Thus, it will be perceived, that by remedying one evil the surgeon creates another. In the delirium occurring in cases of compound fracture from extensive laceration of the soft parts, injury of the nervous filaments, &c., no apparatus will so effectually prevent the fragments producing that disturbance upon which the delirium in many cases depends. It forms, with the fractured limb a whole, which cannot move without the concurrence of its constituent parts. Hence the impossibility of any partial movement taking place, or the occurrence of any displacement of the broken bones, the whole limb being obliged to move in the direction of any impulse given. “Neither can there be free motion in any articulation; for supposing a bone was solicited to move on another, it will be prevented from doing so by two dia-

metrically opposite surfaces of the bandage; hence it is easy to conclude that the muscular contractions themselves will be unable to produce any change in the relation between the fractured surfaces, since, on the one hand, the contraction, requiring a certain lateral space for the development of the fibres, can but imperfectly take place, and on the other, although it might be freely effected, the displacement would be rendered impossible by the contentive means.” The compression also which the bandage exercises, considerably suppresses the suppuration occurring in compound fractures which, from its frequently being very excessive, greatly reduces the strength of the patient and consequently protracts his recovery. It likewise secludes the purulent matter from the free contact of air, and thus renders its absorption much less dangerous. In gun-shot fractures of the articulating extremities of bones, in which, when amputation has not been immediately performed, a cure can only be obtained by ankylosis, the starch bandage affords an excellent means for securing this desirable termination, by preventing all motion of the joint; 2ndly, that of adapting itself when properly applied to all elevations and depressions, consequently it exercises an equal degree of pressure on all parts, and is therefore not liable to produce congestion or mortification; on the contrary, it acts antiphlogistically by giving tone to the vessels, relieving the inflammation, and by preventing any unnecessary afflux of the fluids towards the fractured limb, allows this to receive only sufficient for the repair of the solution of continuity; 3rdly, that it does not become deranged, but remains in the same position as when applied; 4thly, that it admits of progression and enables the patient to be removed to any part without danger; thus the adult patient who has been accustomed to a life of activity, is no longer under the necessity of remaining in bed during the formation and consolidation of the callus, there to become exhausted and cachectic by a long-continued decubitus, and a prey to his bitter reflections, but is able to change his position, get up, and even walk about on crutches, and by this means recruit his strength, relieve his mind, and facilitate and hasten his recovery. Those severe and distressing cases of ulceration and gangrene which are so commonly met with, especially in old people, and which are consequent on remaining long in the recumbent posture, are of very rare occurrence, if not entirely unknown to those who employ the “*appareil amovible-inamovible*.” 5thly, that of the

material of which it is composed being economical and easily procured: 6thly, that it is equally applicable to all kinds of fractures; 7thly, that it admits of the limb being placed either in a state of flexion or extension, of pronation or supination; or of abduction or adduction; 8thly, that it is more easily removed and more speedily applied than any other apparatus; 9thly, that from the facility with which it may be divided, it forms, as its name implies, a movable and immovable apparel, at will. These advantages are certainly not trivial, and when they are considered together with the success with which it has been attended in the hands of several distinguished surgeons, in the treatment, not only of both simple and compound fractures, but also of dislocations, ruptured tendons, caries, and other affections of the joints, &c., &c., it is a matter of surprise that this bandage has not been more favorably received and more generally adopted by the profession in this country.

*On the mode of application.*—The necessary requisites are one of Scultetus's bandages or a common roller, two or three old linen bandages, of convenient length and breadth for the fractured limb, some pasteboard, of sufficient stiffness and firmness, from which splints are to be torn rather than cut of the proper size, in order that their edges may be so levelled off as to lie evenly on the limb, instead of being sharp and angular, and thus produce an injurious pressure on certain parts, and some fresh well-made starch. These things having been previously prepared, the surgeon immediately proceeds to reduce the fracture. When this is accomplished, and while the bones are being maintained in apposition by an assistant, a bandage is to be applied first round the toes,—for instance, supposing it to be a fracture of the leg, taking care, however, to keep their extremities free, as an index to the condition of the remainder of the limb. Those parts which, from their prominence, are likely to receive too great a degree of pressure, and by this means become inflamed and gangrenous, such as the ankles, the tendon of the tibialis anticus, the spine and tuberosities of the tibia, the head of the fibula, and the condyles of the femur, are then to be guarded with wadding or amadou, previous to the application of the first roller. This is then to be passed round the foot and leg, as high as the knee or to a short distance above it, according to the situation of the fracture, and afterwards slightly starched for the purpose of fixing its edges; if more be applied, it will penetrate through to the internal surface of the roller, which will in consequence be rendered harsh and irritating

to the skin. The posterior splint, from which a semicircular piece has been torn to allow of a space for the heel, having been softened in water, starched and padded, is now to be applied and secured with the second roller, which must be well starched by means of a brush, or the palm of the hand. The lateral splints, prepared as the posterior one, are next applied, and over them the third bandage, which should receive a good coating of starch. If preferred, the lateral splints may be applied at the same time as the posterior one. However, I think more firmness is obtained by applying them as I have stated. If more solidity should be required, a fourth, and even a fifth bandage may be applied. It is advisable, previous to the application of the bandages, the first, however, excepted, to dip their extremities into the starch; by this means the edges become fixed as the bandage is unrolled. The end of the last bandage should also be folded in and placed in a conspicuous place. In cases of compound fractures, the apparatus must be so applied as to allow a free exit to the secreted fluids; thus, the edges of the rollers must either be turned back from the solutions of continuity, or holes cut in those situations corresponding to them, and the splints either notched or perforated. A communication can then, if necessary, be established between two openings, and a free discharge promoted. The wounds can also, by this contrivance, be dressed according to circumstances. Metal splints are sometimes requisite to give support to the fractured limb when the apparatus becomes softened by an abundant suppuration. Extension and counter-extension should be kept up until the bandage is perfectly dry. An old shape, resulting from a previously treated fracture, is an excellent addition to secure coaptation during its desiccation, which may, in some cases, be promoted by hot bricks, bottles of hot water, bags of heated sand, or by exposing the limb to a fire or the sun's rays. In fractures of the lower extremity in children, the bandage should be covered over, when dry, with white of egg or some kind of varnish, or enveloped in a piece of oiled skin, in order to prevent its being soiled and softened by the excretions.

The period at which the bandage should be applied has been and still is a point of much controversy. Professor Scultetus is in favor of its immediate application, whether tumefaction be present or not, and states that, instead of its being followed by any ill effects, it lessens the traumatic inflammation by diminishing the afflux of blood, promotes the absorption of that already effused, and

across the circulation by its compression, which should be gentle and equal.

Others argue that if the bandage is applied when there is much tumefaction, and before this has arrived at its height, either strangulation will be the consequence, or else the swelling will decrease and leave a vacuum between the surface of the member and the bandage, the result of which would be a want of proper support to the fractured bone. These are certainly objections, but objections of little weight. It is true, strangulation would be occasioned if the swelling should increase after the application of the bandage, but this would not be the case provided the apparatus were properly applied. I believe the following remark of M. Nelapau to be perfectly just, and founded on clinical observation—that “if there is no tumefaction, the bandage will prevent its recurrence; and if there is, and the pressure be well made, it will disappear.” Whenever the swelling is considerable, I should recommend the first roller to be wetted in simple or Goulard water previous to its being applied. This would tend to reduce the tumefaction; but should such not be the case, space would however be given for its increase by the expansion of the bandage in drying. It is true, also, that the bandage no longer affords the necessary support to the fractured limb when an empty space becomes formed between it and the latter, in consequence of the subsidence of the swelling. But this will be of but short duration, as it is sufficient when the vacuum is but trifling, to soften it with water, then mould it to the shape of the fractured member, and finally to secure it by a starched roller; or if the vacuum is considerable, to split up the bandage with the scissors which Mr. Sennin has invented for that purpose, and remove a slip, if necessary, of the requisite width, and then bring it together again with a starched roller. The section of the apparatus is of the utmost importance; it enables the surgeon to make a careful examination of the limb, to remedy any improper pressure or defect, and to ascertain the position of the fractured bones. It should always be done on the following day or the day after. It causes no pain or displacement, and may be repeated as often as required without any danger of retarding the formation of the callus, as the posterior surface of the bandage gives the necessary support. It is a good plan, when applying the “bandage-amillonne,” to place a piece of tape in the situation where the section will have to be made, so as to serve as a guide to the scissors. —*London Lancet*.

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A Sketch of the Relation of the Spinal Marrow to

PARTURITION AND PRACTICAL MIDWIFERY.

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The Uterus is a muscle,—the largest and most important muscle of the animal economy. It supports the race in the same way that the stomach and the heart support the individual. It is the organ of nutrition and circulation to the species. Parturition, the chief function of the uterus, is performed like the functions of other muscles, under the direction of the nerves by which it is supplied. These nerves have been beautifully made out by Dr. Robert Lee; and are derived chiefly from the third and fourth sacral nerves, and hypogastric ganglia. Through its nervous endowments the uterus has the power of associating with itself other muscles, in a certain definite order, for the safe and efficient performance of parturition. But the act of parturition never had been, and never could be, studied properly, as a motor function, until the discovery of the physiology of the spinal marrow by Dr. Marshall Hall.

The Spinal Marrow is the central organ presiding over the motor actions of the uterus.

All the chief physiological uterine motor actions are reflex in their nature.

Other causes of uterine contraction are, direct or centrifugal epinal action, the influence of emotion, and muscular irritability.

Contraction of the uterus from irritation of mammary excitator nerves, as in the sucking of a child, or from irritation of the cutaneous nerves of the abdomen, as by the aspersion of cold water, are pure instances of reflex spinal action. In either case the direction of the motor influences is from the extremities of the incident excitator nerves through the spinal marrow, and then to the motor organ.

Contraction of the uterus from fear is an instance of the influence of emotion. Emotion may be induced by external objects, as from the sight of instruments; or it may arise within the mind, as from the remembrance of former suffering. In these respects there is some analogy between reflex action and the action of emotion or volition; but emotion and volition are psychological, excitomotor is physical. This constitutes such immense difference, a difference so preponderating over the analogies referred to, that there is danger of great confusion in physiology, if the term reflex cerebral action

(proposed by Dr. Laycock) should come to be generally applied to motions dependent either on emotion or volition.

The seat of emotion is not yet ascertained, but it acts *through* the spinal marrow and the spinal motor nerves, as would appear from the facts that emotional movements remain in parts entirely paralyzed to cerebral voluntary motion.

Contraction of the uterus from the application of galvanism is an instance of uterine action from *vascular irritability*. Here, the stimulus directly affects the muscular fibres of the uterus.

*Volition* may increase the actions of the expiratory muscles after the dilatation of the os uteri, or it may bring into action before this part of labor is completed; but the motor forces, dependent on the will, are *accessory*, and *essential* to the process of parturition; delivery may take place in cerebral paralysis with total loss of voluntary motion, the actions dependent on *reflex action*, or *emotion*, and on *muscular irritability*, all remaining perfect.

Delivery may take place in profound coma—many such cases are on record; or in paraplegia from disease in the middle portions of the spinal marrow, as in a case related by Ollivier, when both volitional and emotional action are subtracted, but labour proceeds by virtue of the reflex action and the muscular irritability which remain. It should be mentioned, that in simple coma, only emotion and volition are withdrawn; but in paraplegia from disease in the middle of the spinal marrow, there is also the absence of the expiratory reflex action, the abdominal muscles are now inactive.

In paraplegia from disease involving the whole lower portion of the spinal marrow, labour either does not take place, or proceeds with extreme inertia, as in a case related by M. Brachet; here volition, emotion, and all the reflex actions, are absent, and *muscular irritability* alone remains. Patients in this state have nevertheless been delivered by the stimulus of galvanism applied to the uterus itself.

I have the motor actions concerned in natural parturition admit of an interesting synthesis and analysis; obstetrician should be as familiar with the simple and compound forms of muscular action as the chemist with elementary bodies and their combinations.

The *type* of uterine action is rhythmic; the pains succeeding each other at regular intervals. The *rhythm* is probably dependent on the spinal marrow, being synchronous with

the action of the expiratory muscles, which is undoubtedly reflex in its nature.

The *mode* of uterine action is probably peristaltic; peristaltic action has been observed by Muller in the uterus of the rat, and in the oviduct of the turtle; in the human female, the contractions appear, according to Michaelis and Wigand, to commence at the cervix, to extend from thence to the fundus, and then to pass downwards again towards the os uteri. This is analogous to what takes place in other organs possessing peristaltic action; the heart begins to contract at the auricle, the contraction traverses to the apex, and then returns; in the stomach also, on the authority of Magendie, contraction begins at the pylorus, proceeds to the cardia, and then sweeps back from left to right. The objects to be obtained by this double action in the uterus would seem to be the prevention of the descent of the umbilical cord, the ascent of the arms of the child at the commencement of the pain, in cases when they hang down, and in this way to prevent arm or shoulder presentation, and the prevention of inversion of the uterus. Intussusception of the upper part of the organ, and complete inversion, would probably be frequent if contraction uniformly commenced at the fundus.

The peristaltic mode of action appears to depend on the ganglionic nerves. The question may be asked, is peristaltic action anything more than the muscular irritability of parts supplied by the ganglionic system? The uterus contracts so as to expel its contents after death. In the oesophagus, which, like the uterus, is endowed both with peristaltic action and reflex spinal motion, Dr. Marshall Hall has observed distinct contraction after death; I have also observed the same phenomenon.

The exciters of the reflex spinal action in the uterus are numerous.

First in importance are the incident nerves of the whole length of the parturient canal, from the fundus uteri to the constrictor vaginae.

Irritation of the incident nerves of the ovaria and of the mammae, the cutaneous nerves of the abdomen and general surface, the nerves of the stomach, bladder, and rectum, all excite reflex uterine action during labour.

A definite order is observed in the phenomena of labour.

With respect to that great problem in physiology and obstetrics—namely, the cause of the coming on of labour at the end of the tenth lunar month of gestation, nothing definite has hitherto been said. In the earliest part of the parturient process,

which in my lectures I have been accustomed to call the *premonitory stage* there is an equable, continuous contraction of the uterus, which exists for some time before the appearance of the periodical contractions. This equable contraction urges the head of the child firmly against the os uteri. What is the cause of this equable contraction? We must look beyond the uterus for the answer; for the uterus attempts to act in extra-uterine pregnancy. I believe the ovaria are the exciters of the first motor action of the uterus. It is well known that the majority of cases of abortion occur at what would have been menstrual periods, and it is equally well known that the entirety of the phenomena of menstruation depend upon the ovaria as their cause. In the human female, labour comes on at the tenth menstrual period from the time of conception; in animals also, as far as my observations have extended, the term of gestation is some multiple of an æstral period. Now the menstrual periods of the human female and the æstral periods of animals are alike in this, that in the one case ova are chiefly prepared at these epochs, in the other solely. Farther than this the analogy cannot fairly be pressed. It is too much to speak of any moral similarity between the human female and the lower animals in this respect. I consider, then, that parturition in the human female is essentially a menstrual period; but that instead of an ovule being thrown off from the ovary, an ovum is expelled from the uterus, and I compare the lochial to the menstrual discharge. In animals, the phenomena of parturition are more strikingly similar to those of æstration; there is evidence that a similar state of the ovaria obtains. For instance, the guinea pig and the rabbit will admit the male immediately after delivery, and conception will follow the congress. In the mare also, a few days after foaling is the time chosen for the admission of the male. On these and other grounds I believe the ovaria to be the exciters of the first contraction of the uterus in parturition, but I am engaged in testing the matter experimentally. I shall excise the ovaria in animals which have conceived, and note the results.

The effect of the equable contraction of the uterus first induced, is, as I have said, to urge the head of the child against the os uteri. This is the most excitable part of the uterus, and after a time, irritation of the os and cervix call forth the pains which constitute the commencement of actual labour. The effects of irritation of the os uteri are shown in cases of premature labour induced by irritation in this situation, as by the introduction of a plug, and by certain cases

where, from the pendulous state of the uterus, the head cannot be brought in apposition with the os uteri, and labour, in consequence, is put off until this cause of inertia is removed by an abdominal bandage, or the prone position. Irritation, then, of the os uteri must be looked on as a cause, though, in ordinary cases, a secondary cause, of the coming on of labour. I believe the ovarian nerves and the nerves of the os uteri, are as much the exciters of the motor actions of parturition, as the pneumogastric and the trifacial are the exciters of the motor part of respiration.

After the persistence of the premonitory stage of labour for a certain time, actual labour pains commence. The object now to be attained is the dilatation of the os uteri, and I therefore propose to call this the *stage of dilatation*. Throughout this stage, the body and fundus contract periodically. The contractions of the uterus in this stage are not so violent as they subsequently become. This is owing to the contact of the membranes and the amniotic fluid with the os uteri. At the same time the os uteri and the vagina dilate. This dilatation is effected partly by the mechanical pressure of the membranes and the advancing head of the fœtus, but the os uteri possesses a *positive* as well as a *passive* power of dilatation—a dilatation similar to the dilatation of the cardia in vomiting or deglutition. This *positive dilatation* is shown by the extreme suddenness with which it takes place after the existence of previous contraction, and by the sudden contraction which sometimes occurs immediately after the birth of the child, as encysted placenta. The perinæum, in the dilatation of which is *passive*, never contracts in this way. It is also shown by the form of the hæmorrhage in placenta prævia; after the separation of a portion of the placenta, hæmorrhage is increased during the pains; if the dilatation were from mere pressure, the hæmorrhage ought to cease during the pains, and come on in the intervals. The direction in which the motor force is exerted in the stage of dilatation is *downwards and backwards*, in the direction of the axis of the pelvic inlet. In this stage of labour the motor actions are purely of a reflex kind, the excitor being the internal surface of the uterus, and particularly the os uteri. The centre of the nervous arcs involved in the uterine actions is in the lower part of the spinal marrow. In natural cases, emotion does not at all influence this stage physiologically.

During the *stage of dilatation*, various extra uterine reflex actions occur. The actions of the bowels and of the bladder are excited, and in many cases vomiting takes place. At

the time of the completion of the dilatation of the os uteri, several rigors affecting the whole muscular system are frequently experienced. Defecation and micturition have evidently a beneficial purpose in enlarging the capacity of the pelvis; the nausea and vomiting promotes the dilatation of the os uteri, and is a preparation for the expiratory action of the next stage.

In the next stage of labour, the head of the child advances through the vagina to the os externum; this I propose to call the *stage of propulsion*. In this stage, the whole of the uterus contracts upon the child, but new motor powers are now brought into play. Irritation of the os uteri only excited reflex motor action in the uterus itself, but irritation of the vagina excites both the uterus and the respiratory muscles. The contractions are also more violent, because the liquor amnii has now escaped, and the hard head and body of the child are in direct contact with the extensor surfaces. At the coming on of each pain, a deep inspiration is taken, and during the pain, expiration is protracted as much as possible where the pains are long. They consist, as far as the respiratory system is concerned, of several sudden and deep inspirations, followed by prolonged expirations. At the height of a pain in this stage, the glottis and cardia are closed, the abdominal and other expiratory muscles contracted, and the diaphragm inert, as in vomiting. All obstetric writers have taught the contraction of the diaphragm during the pains of this stage; but if it be considered for a moment that the diaphragm is a muscle of inspiration, while the parturient action is expiratory, the fallacy of such a view will be evident. It is true that the floor of the diaphragm remains plain during the effort at expiration, with the glottis partially or entirely closed, but this is from the mechanical distension of the chest by the contained air, not from active contraction of the muscle itself.

It will be seen, that in the stage of propulsion the direction in which the motor force is exerted, is different from what it was in the stage of dilatation. The direction the head of the child has now to take is *downwards and forwards*, instead of *backwards*. It has to pass through the lower half of the pelvic segment of the circle of Osar, in the direction of the axis of the pelvic outlet. Obviously, a new direction of the motor force was necessary to effect this, and it is supplied by the addition of the expiratory action at this time. The action of the abdominal muscles urges the fundus uteri backwards against the spinal column, and assists in giving the head the

proper direction while emerging through the pelvis. The mechanical adaptation of the fetal head to this progress has often been dwelt upon. Another object effected by the expiratory action is the compression of the uterus, which is thereby excited to additional contraction.

In this stage of labour, the nervous arcs concerned have their centres partly in the lower nodules of the spinal marrow, and partly in the medulla oblongata. There is this analogy between the medulla oblongata and the lower spinal marrow, that in the one are congregated the keys of the motor arcs of respiration, deglutition, and their various morbid actions; in the other, the centres of the motor arcs of parturition, defecation, micturition, ejaculation, and conception, as far as the pelvic viscera are concerned. It cannot but be considered wonderful that the dilatation of the os uteri should only excite the nervous arcs concerned in vomiting, while the dilatation of the vagina should only excite the respiratory arcs. In the stage of dilatation the motor actions are chiefly reflex; but both volition and emotion intervene in the stage of propulsion. The patient desires to press her feet against some fixed body, and to grasp with the hands, so as to increase the power of the expiratory efforts. When the pains are moderate, the woman utters only a prolonged and intermittent groan, owing to the contracted state of the glottis; but when she is suffering, produced from the distention of the vagina, is excessive and unbearable, she utters a loud cry. This cry is a motor action, a powerful expiration, excited by the emotion of intense suffering; it opens the glottis widely, and immediately takes off from the uterine system all the extra-uterine pressure. Thus, the glottis may be compared to a safety-valve which is opened by emotion whenever the pressure becomes too powerful to be borne with safety.

In the next stage the child is born, and I have called this the *stage of expulsion*. The birth of the child is effected by the powerful action of the expiratory muscles, with the glottis and cardia closed, and by simultaneous contraction of the uterus and the whole parturient canal. At the moment of birth, the vagina is retracted over the head of the child by the action of the levatores ani, and positive dilatation of the sphincter ani and sphincter venicus occurs. The dilatation of these sphincters is partly produced by emotion, and partly by reflex action. It forms a most important provision for the safety of the perineum. At the moment when this part is subject to the greatest amount of distention, these two sphincters suddenly contract



before and behind it. We may thus see a reason for the situation of the vagina between the orifices of the rectum and bladder. Laceration occurs generally in first labours, and at this point primiparous women often suffer from feelings of delicacy. They should always be prepared beforehand for involuntary action of the bowels at this juncture, and impressed with the propriety of not preventing it by volition which otherwise they are, from motives of delicacy, prone to exert at this time. A napkin should be placed to receive any fecal matter that may be discharged. The regulation of the glottis by emotion is another provision for the defence of the mother from laceration at this period. At the moment of birth, the woman, affected with uncontrollable agony, gives a loud cry, which by opening the glottis widely, releases the uterus from all expiratory pressure.

This completes the process of actual labour. The phenomena which follow are so far different, that I propose to treat of them as a *supplemental stage*.

When the body of the child is born, the contracting uterus follows it in its descent, and the action of the uterus, produced by the great excitation of the vagina, is such, that in many cases it at once throws off the placenta, and lodges it in the upper part of the vagina. When this is the case, the presence of the placenta in the vagina, and the irritation of the surface, from which the placenta has been torn, are generally sufficient to ensure, by reflex action, the contraction of the uterus, and to prevent hæmorrhage. The maternal emotions also tend to accomplish this end. The sound of the child's voice affects the action of the uterus. If the placenta does not separate immediately, slight irritation through the loose abdominal walls, or gentle traction of the cord, is sufficient to cause its expulsion. Denman recommended that the placental mass should be allowed to remain a considerable time in the vagina. He supposed that coagulation of the blood, poured out at the moment of the separation of the placenta, was thus favored, and after-pains diminished as a consequence. But this plan would also act by exciting reflex action, and the permanent contraction of the uterus. At this time a bandage is applied to the abdomen, and furnishes another guarantee against hæmorrhage.

The uterus has now lost its great excitator, by the delivery of the fetus, but it is necessary that the uterus should be stimulated for a considerable time in order to promote its return as nearly as possible to its pre-impregnated state. This is provided for in nature. The stomach has an intimate reflex connection with the uterus at all times, but

immediately after delivery this is very much increased; every thing the patient drinks now excites uterine contractions. The reflex connection between the mamma and uterus is increased to a still greater degree. The mere sight of the child will sometimes suffice to create the sensation of "the draught" in the breasts, and this reacts upon the uterus. Drinking fluids also excites the draught, and thus the stomach exerts an indirect action on the uterus besides its proper reflex action. Still more powerful is the act of suckling the child; distinct uterine action is excited on each occasion, and when after-pains are present, a distinct pain is regularly produced every time the infant is applied to the breast. These different sources of excitation continue for some time after delivery, and are sufficient to restore the uterus to the size natural to the unimpregnated state in women who have borne children.

No one can refrain from admiring the successive order in which various excitator powers come into operation during the progress of labour. First, according to my belief, the ovaria excite the uterus, while this organ is defended from the irritation of the fetus by the liquor amnii; a fluid of its own temperature, a medium least of all capable of exciting that reflex action of which the uterus is so susceptible. Next, the head of the child is brought in apposition with the os uteri, shielded, however, in some measure, by the liquor amnii, until the os is sufficiently dilated to permit it to pass; then, the naked head and body of the child come in contact with the highly excitator surface of the vagina and the os externum successively. After the fetus has been expelled, the placenta takes up the train of excitation, and this is followed by the gastric and mammary succession of stimulus and action. Not less extraordinary is the gradual augmentation of motor action, from the simple equable contraction of the uterus the day or two before labour, to the grand combination of muscular actions, which marks the final throes that expel the child.

The motor power of the uterus itself, the number of motor organs involved as auxiliaries, and the different forms of muscular action brought into action during its progress, mark the act of parturition as the most comprehensive of all the motor functions of the animal economy. Taking muscular irritability as the basis, we have reflex action, emotion and volition, every power, in fact, which exists, whether for the execution of contraction or dilatation, all extensively and simultaneously engaged; the end of all being the safe accomplishment of delivery.

Well might the philosophic Demman exclaim—"Instead, therefore, of despairing, and thinking they are abandoned in the hour of their distress, all women should believe and find comfort in the reflection, that they are at those times under the peculiar care of Providence, and that their safety in childbirth is ensured by more numerous and powerful resources than under any other circumstances, though to appearance less dangerous."

## THE DISSECTOR.

JULY 1, 1846.

### *Lateral Curvatures of the Spine.*

Miss E. L. H., aged 19 years called upon us on the 16th of March, 1846, with a lateral curvature of the spine. The posterior part of the upper and principal curve in the spine, lay under the right scapula, and its deviation there from the median line was an inch and a half. It was about eight years since the curve commenced, which was now imbedded in a veritable white swelling of the scapula, and which, by the expansion of the muscles gradually drew the spine from the median line to its present position. We prescribed the magnetized gold pills and plaster to reduce the white swelling, and directed her to go home and use these remedies, and return here on the first of June, when I would commence magnetizing the spine.

On an examination at the end of this time, we found the white swelling greatly lessened and the curve reduced one half. We now commenced magnetizing the spine once a day, and on the third day brought it up to its place, and on the fourth it passed the centre under the action of the machine, and began to curve to the left side.

We magnetized this case twelve times only when the curve being reduced to one-fourth of an inch, we directed the young lady to go home and resume the use of the pills and plaster, and to continue their use until the white swelling was entirely reduced, when the spine would resume its

natural position and would be maintained there under the healthy and natural action of the muscles.

We have had more than a hundred cases of lateral curvature of the spine during the last three years, every one of which was connected with a white swelling on the posterior side of the curve.

The true cause of lateral curvatures of the spine is not understood by the profession; they are *always* cases of tubercular disease of the muscles of the spine. The tuberculations or white swellings are always on the posterior side of the curve, and produce the deviations of the vertebrae. The obvious treatment, therefore, is first to reduce the tuberculations, when the vertebrae will return to their proper place of their own accord, and the muscles thus relieved and restored will retain them in their true position. Yet the regular quacks of our profession continue to recommend that such patients be hampered with cushions and splints; but regarding them as worse than useless, we always remove them.

The importance of the use of the magnetized gold pills and plaster in these cases will be seen in the following case which we treated and published before we introduced the use of the magnetic machine as auxiliary to the cure.

Miss E. B., of Stratford, Conn., aged twelve years. I called to see her in Dec. 1839, and on an examination found a lateral curvature of the dorsal vertebrae, a portion of which extended under and raised the right shoulder blade. The right hip was also raised above the left, and her health and strength much reduced.

Prescribed the magnetic remedies. The plaster to extend the whole length of the spine. The weight of her body was also directed to be suspended by her arms, with any simple contrivance, as by taking hold of a stick suspended from a ceiling, a few minutes, five or six times a day.

I called to see her again the last part of April, 1840, when, on examination of the

spine, it was found to have resumed its natural position, and her health and strength was perfectly restored.

#### Magnetic Machine--Pretended Improvements.

In answer to many correspondents who ask our opinion as to the reality and importance of the pretended improvements upon the vibratory magnetic machine, as set forth in the advertisements and puffs of certain parties, we beg to say that these alleged improvements, having no actual existence, are of importance only to the pretenders who get credulous victims to believe in them. There has been no improvement whatever made in magnetic machines, either at home or abroad, since we introduced the vibratory instead of the rotary movement in the one manufactured under our superintendence, and which maintains an undiminished reputation and unrivalled sale. If any real improvement should be discovered, our friends and patients may rest assured that we shall adopt it, at the earliest moment; but nothing of the kind has occurred or appears even in prospect. We have no doubt that our machine, which is always manufactured of superior materials, and in the best manner, conveys a greater amount of the magnetic forces into the system in better adjusted proportions, and with less inconvenience to the patient, than any other that has been ostentatiously fabricated to rival it; and the information which we are receiving, by almost every mail, of its almost miraculous effects, in a far greater variety of cases than it was originally supposed to be applicable to, fully convinces us that its sphere of usefulness is widening every day, and will extend in proportion as the instrument itself becomes known and experimentally tested.

Similar inquiries are frequently addressed to us concerning the rings, bands, and belts termed "Galvanic," and sold in connection with a bottle full of liquid called "The Magnetic Fluid!" We have already expressed our deliberate opinion of these nostrums, and now repeat that they have no other effect than that which they may derive from the

genial imaginations of those who use them. These rings, bands, etc., are composed of small, thin pieces of zinc and copper, but it is well known that these metals evolve no forces until they are acted on by a corrosive acid, as in the galvanic battery. Rings of steel, permanently magnetized, and maintaining an action through the finger, arm or body, between the opposite poles, have a slight effect in highly susceptible subjects; and even copper and zinc, if connected at the same time with the two opposite surfaces of the body, namely, the mucous and serous, would also exert an action; but when both are applied to the same surface, as is the case with these rings, galvanism is evidently out of the question.

#### Consumption.

We would again direct the attention of the readers of this Journal to the importance of the use of the magnetic machine in the treatment of tubercular consumption, as our experience of its effects in more than 350 cases of this disease leaves no doubt but it greatly assists the action of other remedies in reducing tubercular disease of the lungs.

These cases were all distinguished by the magnetic symptoms, which *never* err; and the state of the tuberculations was often observed through clairvoyance during the progress of the treatment, as were the changes in the appearance of the tubercles from the action of the instrument.

Of 164 cases of ladies and gentlemen who visited our rooms in 1844, in all the different stages of the disease, we lost only *eleven*; and of 203 who visited our rooms in 1845, we have lost only *nine*. In two of these the tuberculations were reduced as shown by the magnetic symptoms and by clairvoyance, but both died of mucous disease, in the then feeble state of the lungs, in consequence of colds.

All the cases were from the commencement of the treatment, under the action of the magnetized gold pills in conjunction

with that of the machine, and a great majority of the cases the magnetized plaster was used at the same time. No other medicines were used in these cases except occasionally different articles to palliate the cough, and in a few cases the Hardwood Tar Syrup, or the pill composed of Hard Bal. Copa. subbe and Ext. Hyas, where the tuberculations were accompanied with much mucous disease, generally from colds after the tubercles had nearly disappeared.

*On some Electrical Effects Developed chiefly by the Galvanic Battery.*

BY GEORGE F. T. HILL, M.D., FILEY.

On sending a current of electricity, by means of the galvanic battery, through fine metallic wires, the most refractory metals are fused with facility, and become incandescent. If thin metallic leaves be employed, they burn with great brilliancy, being dissipated into vapor. Now, on the supposition that the space between the ultimate atoms of a body, independent of the several forces that may be arranged round them are entirely occupied by heat, I think the evolution of the latter substance, as exemplified in the above cases, may be satisfactorily accounted for. As a consequence of the law, that no two bodies can occupy the same space at the same time, we may suppose that the addition of electricity to a substance causes its heat of combination to be evolved, and thus to become sensible. Otherwise, whence arises this great increase of temperature? The caloric must obviously be supplied through the medium of one or other of the bodies employed; and if we grant this, the inquiry naturally presents itself as to what causes its evolution. Suppose A to represent a body, and B the heat of combination arranged all around it. Now, if we add to this a portion of electricity, C, on the supposition that this is materia, a displacement of part of the specific heat, B, must take place or the body be considerably enlarged. We find that heat is evolved, and must, I conceive, consider the specific heat of the body to have been lessened, for any other source from which this rise of temperature could have been derived is unknown. The form of the body remains unchanged, for, as the specific heat is replaced, atom for atom, or rather volume for volume, by the electricity, no condensation can possibly

take place. The evolved heat now exerts its action upon the body, which, as in ordinary circumstances, assumes the liquid form, and becomes incandescent.

In these experiments we find quantity of electricity to be the sole requisite. The large battery of Children, though capable of fusing several feet of platinum wire, had an intensity so feeble as not sensibly to cause a divergence of the gold leaves of the electrometer. This is perfectly in accordance with the above theory, for it is clear that the larger the addition of electricity, the greater the diminution of specific heat, whether the tension be high or low. Did the evolved heat proceed from the electric fluid itself, we should of course expect that intensity as well as quantity would be required for the production of these effects. This we know not to be the case. I do not consider the circumstance stated by Dalton, that the specific heats of bodies are greater at high than low temperatures, to be any obstacle to the reception of the above, but to use an expression of the late Dr. Turner, these phenomena "have been investigated only for matter when in its ordinary state, and probably do not apply in cases of electric excitement." On the other hand, increase of specific heat causes an evolution of electricity. Harris detected electricity, though in exceedingly minute quantity, in the evaporation of distilled water from platinum vessels, when the presence of any chemical action was out of the question. In this we have phenomena directly opposed to the former, but I think they may be considered no more anomalous than the fact, that watery vapor should be decomposed by metallic iron, heated to redness; and that the oxide thus generated should in its turn be decomposable by a stream of hydrogen gas. I apprehend, then that there are other causes in operation which modify the effects of these most subtle and diffusive bodies, heat and electricity. In the condensation of aqueous vapor, the objects in contact with it likewise show signs of electric excitement. For a portion of vapor contains more specific heat and less specific electricity, than the same when liquid, and, therefore, before it can assume this form, it must receive electricity from surrounding objects, which thus exhibit signs of its emission.

No heat is evolved when a current of positive or negative electricity only is passed along a body, for in this case the repulsion of the particles confines the fluid to the surface alone, where it cannot influence the internal arrangements of the conductor.—*London Lancet.*

## On the Successful Treatment of Ovarian Dropsy,

BY WILLIAM ROGLES, ESQ.,

SURGEON TO THE ROYAL FREE HOSPITAL, LONDON.

I have lately had a patient who had been subjected to Mr. Brown's treatment,\* and, in justice to that gentleman, I must say that I believe he has been successful in curing her. I mention it, briefly, at this time, because public clamour appears to be directed against his doctrines; and, moreover, in common fairness he ought himself to have the opportunity of stating the case, as doubtless he will, in detail.

The patient was a married lady, about thirty years of age, who had had two children and one miscarriage. She first consulted me in the spring of last year, having previously been under the judicious care of Mr. Knaggs, of Camden Town. When she presented herself to me she had considerable abdominal enlargement, general emaciation, and great depression of spirits. An alternative course of treatment was suggested and adopted, but without any beneficial effect. Dr. Blundell was consulted, as also, subsequently, was Dr. Henry Davies. The opinion of both these gentlemen was, that the disease was ovarian dropsy; but no special treatment was recommended. In the beginning of December last I was requested to meet Mr. Brown. His opinion was, that it was a case in which his mode of treatment would be successful. I confess I was somewhat sceptical upon this point; but in the absence of all experience of his plan, I could not so much as venture an opinion respecting it. The treatment, however, was forthwith commenced; mercurial frictions, diuretics, and tight bandaging of the abdomen with a flannel roller, were the means applied. In ten days pyralism was produced, and the size of the abdomen was reduced from thirty-four and a half to thirty-two inches. I am not satisfied, in my own mind, that this reduction in size resulted from diminution of the cyst as Mr. Brown believes. I would rather attribute it to the absorption of the tissues caused by the salivation, and consequent loss of nutriment; these, however, are matters which may be passed over. Tapping was now performed, and nine pints and a half of fluid were drawn off; the abdomen was again very tightly bandaged, and the diuretic medicines continued.

The case, at this time, seems to be perfectly cured. The lady pronounces herself to be in better health than she has been in for years; she is, consequently, in high

spirits, can walk about with ease, and is daily gaining flesh. I have said, the case seems to be perfectly cured; but I am not insensible that there are early days to arrive at such a conclusion. What I mean is, that at present there is not the slightest appearance of the re-accumulation of fluid. I shall watch the case narrowly, and if, at the end of six or twelve months, there should be any indication of a return of the disease, I will, if you will allow me, publish the fact in the pages of *THE LANCET*. I would beg leave, in conclusion, to recommend to my professional brethren the adoption of this mode of treating ovarian dropsy, so that the merits of the plan may be fairly tested. In any cases that may occur in my own practice, I shall most assuredly have recourse to it, and I will trouble you with a faithful record of the results, feeling certain that your pages will always be open to the discussion of matters of so practical a nature.—*Id.*

## Diseases of Children.

In the January number of the *Clinique des Hopitaux des Enfants*, we find various interesting articles, of which the following is the analysis:—

## M. Guersant on the Influence of Rachitis on Fractures in Children.

From statistical researches founded on a medium of eighty cases of fracture, yearly, we have remarked that about a third of the fractures which we observe, occur in rachitic children. The circumstances which predispose them to fractures are two-fold; the anatomical structure of the rachitic bones, and the great weakness of rachitic children, which exposes them to frequent falls. The structure of rachitic bones varies according to the period of the disease. In the first period the spongy tissue is gorged with blood, more especially in the extremities of the long bones. In the second stage, the vascular system is still more developed, the compact tissue softens, the medullary canal becomes larger, and the bones bend in various directions. In the third period the disease remains stationary, and improves, the cellular structure becoming less vascular, and the bones regaining a certain degree of hardness. The predominant feature in these various states is extreme fragility of the bones. This fragility however, is fortunately compensated by the thickness of the periosteum in children generally, and more especially in rachitic children.

The symptoms of fracture in rachitic children are very different from those which are met with under other circumstances. There

\*Vide Case, ante.

is no crepitation, owing to the softness of the bones; often no deformity, on account of the periosteal covering; and when deformity exists there is no means of distinguishing it from the curvatures that are so frequent in rachitic children. These are the only symptoms which enable us to recognise the fracture:—1st. Abnormal mobility of the bones modified by the resistance of the periosteum; 2nd. Flexibility of the limb at the seat of fracture. If the existence of fracture is not recognised, or if a lengthened period elapses before the surgeon is called in, the periosteum may be ruptured, and then the signs of fracture become more apparent. There is then deformity riding of the fragments, and even crepitation, when the general rachitic affection is not too advanced.

The symptoms of fracture persist a long while after the accident, even when it is treated properly. Fifteen days afterwards, the fragments are generally still found moveable, whereas in a healthy child at that time, consolidation has always taken place. Consolidation is thus always tardy, and the more so the more severe the general disease. In addition to the direct unfavorable influence of rickets, there are other morbid influences to which the patients are often exposed. Thus, they are frequently attacked with pneumonia, bronchial catarrh, and eruptive fevers, to which ricketty children are extremely predisposed, these diseases always lengthening the treatment of the fracture.

M. Guersant reduces the treatment of these fractures to the mere application of a roller-bandage applied to the limb, and three or four small splints placed at the seat of the fracture, the whole being again kept in place by another circular bandage. The splints must not be allowed to rest on the osseous protuberances, lest excoriations should follow; this is the more important, as the extremities of the long bones are morbidly swollen. The entire apparatus must be surrounded with a piece of oil-skin, if it is one of the inferior limbs that is fractured, owing to the circumstance of very young children often wetting their bed. M. Guersant does not approve of any other forms of apparatus, all kinds of padding or cushions being soon destroyed, and the starch bandage being softened, by the contact of the urine.

The general treatment ought to consist principally, as in simple rachitis, in a good and tonic alimentation. Some writers have latterly asserted that a substantial diet is not beneficial in rachitis; but this is an error which may be explained by the circumstance

of substantial food being sometimes given too suddenly to children who have previously been living on very low diet. The change should be gradual, so as to allow the stomach to become accustomed to the difference in the food.

#### M. Bricheteau on the Antagonism of Ague and of Pulmonary Consumption.

This question has been much discussed of late by French medical practitioners, as our readers are well aware. M. Bricheteau, physician to the "Hospital Necker," analyzes the various communications that have appeared on the subject, including documents from different parts of Algeria, from Bourdeaux, Strasbourg, Lyons, the department of the Ain, Rochefort, Rome, &c.,—all localities in which intermittent fever is rife, —and appears to come to the conclusion that there cannot be said to be antagonism between the two diseases—that is, exclusion of the one by the other; although the circumstances which favor the development of intermittents may be, and in all probability are, unfavorable to the development of phthisis. M. Bricheteau thus concludes his remarks:—

"Although, on examining the etiology of these diseases, we do not find incompatibility between the causes of phthisis and intermittent fevers, it is impossible not to recognise, either in the climate of marshy districts or in the influence of marshy miasmata over the economy, conditions favorable to tubercular patients. Our knowledge of this fact is to be referred to the authors of the labors which we have enumerated. But instead of calling to our assistance some obscure antagonizing tendencies, would it not be possible to account for this kind of prophylaxy, by attributing it to the moist uniform heat which reigns in some marshy districts, and which, by favoring the development of fever, may impede that of pulmonary tuberculization. Does not this appear proved by what takes place at Strasbourg, where the climate being both damp and cold, the town is ravaged by intermittent fever, and by phthisis; whereas the more southern departments of L'Ain, La Nièvre, Le Var, &c., are decimated by intermittent fever, but offer very few phthisical patients? We may also add that it is impossible to deny that in all countries intermittent fevers preserve from other affections. The Dutch appear to be aware of this fact, as Boerhaave informs us, that they are in the habit of congratulating themselves on the return of their fevers. The same Boerhaave, along with Hoffmann, Lancisi, and Sydenham,

thought that intermittent fevers freed us from various diseases, and even predisposed to longevity: 'Febres intermittentes, nisi malignæ, ad longevitatem disponunt, et depurant ab inveteratis malis.' Some recent writers think that typhus fever is rarely met with in countries ravaged by endemic intermittents."

#### Abcesses in the Liver; Ulceration of the Intestines.

Mr. R. W. Smith presented a specimen of abscesses of the liver, which were not indicated by symptoms during life, at least so far as the history of the case was known. The subject was a man who had been a patient in the Talbot Dispensary, was afterwards in the Jervis-street Hospital, and lastly in the Whitworth Hospital. During the last three months he was constantly suffering from gastritis and gastro-enteritis. He had uncontrollable dysentery, but voided no blood; frequent vomiting, pain in the epigastrium, but never complained of pain in the hypochondrium, nor in the shoulder; had no jaundice, no rigors, nothing which could lead to the belief that hepatic disease had existed. The dysentery resisted all remedial means. He gradually became worse; singultus came on, and death took place. On examining the abdominal viscera it was found that the great intestine was ulcerated extensively. The ulcers were of various sizes, and occupied the mucous coat in the whole extent of the periphery of the canal. Some had an erysipelatous aspect, some an ash-colored surface. In the stomach there were signs of chronic gastritis. The mucous membrane was vascular and softened. The liver was full of abscesses; a very large one was on the right lobe. This was lined with a strong dense membrane, forming the sac of the abscess. In the left lobe were three abscesses. The first of these that was cut into had no sac, but was surrounded by the substance of the liver with which the purulent matter was in contact. The second also was without a distinct sac. The third, which might be termed a dissecting abscess, was bounded by the diaphragm anteriorly, and by the stomach posteriorly, and had separated the peritoneum from the other coats of the stomach. The formation of abscesses in the liver, without symptoms of hepatic disease, has been lately noticed in cases of dysentery."—*Dublin Pathological Society, April, 1844.*

#### Sub-Cutaneous Division of the Sphincter in Anal Fissure.

M. Blandin has lately operated in fissure of the anus by the sub-cutaneous section of

the sphincter. In two cases in which he recently adopted this treatment, the operation was followed by a prompt cure.

M. Marchal (de Calvi) has lately performed the same operations on a man laboring under cancer of the rectum. His patient suffered intense agony at the time of defecation, which M. Marchal attributed as much to spasmodic structure of the anus as to the presence of the cancerous mass. The operation was followed by great relief. —*Gazette des Hôpitaux.*

#### M. Valleix on the Treatment of Difficult Dentition.

M. Valleix relates a case in which a young girl died after suffering during three weeks from symptoms which could only be referred to difficult dentition. Her constitution was strong and her health had previously been very good, but the four molar teeth which complete the second dentition developed themselves simultaneously, giving rise to intense inflammation of the gum at the angle of each jaw. M. Valleix excised the gum which covered the teeth, but only when convulsions had already appeared, and without any beneficial effect. He thinks that the operation ought to have been performed sooner, and that whenever there are many teeth forcing their way through the gums, and the general reaction is severe, it ought to be resorted to at once, without waiting for the appearance of serious symptoms, such as obstinate vomiting, abundant diarrhoea, or high fever. The pain of the operation is trifling compared to that occasioned by the teeth themselves, and when performed early it will often disperse a host of alarming symptoms. In the above case, obstinate bilious vomiting existed, and the state of the stomach soon became such that the smallest quantity of fluid was rejected. This symptom, when carried to such an extent, is always serious, and is generally followed by convulsions. The appearance of convulsion was preceded during several days by general agitation, strabismus, swelling of the right eye, dilatation and immovability of the pupils. The convulsions lasted three days and ended in death, notwithstanding the most energetic treatment.—*Lancet.*

#### M. Ricord's Treatment of Indurated Lymphatic Ganglions.

All surgeons know how difficult it is, generally speaking, to bring about the resolution of lymphatic ganglions in the treatment of syphilitic diseases; the measures usually adopted—leeches, blisters, and resolution ointments, often failing. M. Ricord employs at the hospital a much mor-

energetic treatment, destroying progressively the ganglionic mass by the Vienna paste, (potassa fusa and quick lime.)

A layer of the caustic paste is first applied to the tumor. When the eschar falls another layer is applied, and so on until the basis of the tumor is approximated. The thickness of the layer must then be diminished, in order that it may not attack the subjacent parts; at the groin, for instance, a careless operator might open the crural artery. There are always patients in M. Ricord's wards undergoing this treatment. The caustic appears to act in two ways; it destroys a part of the ganglionic mass, and promotes the resolution of the rest by elevating its vitality.

M. Marchal (de Calvi) has adopted this mode of treatment at the Val de Grace, in a considerable number of cases, and with great success. When it does not appear to him applicable, he combines with the ordinary treatment by leeches, blisters, and resolute frictions, the daily administration of from twelve to twenty-five drops of the tincture of iodine. He does not find that the iodine of potassium produces any perceptible influence on these ganglionic indurations.—*Gazette des Hopitaux*.

#### On the Contagious Nature of Puerperal Fever, and its Connection with other Diseases.

Under this title, Dr. Peddie details in the *Edinburgh Medical and Surgical Journal*, several cases which occurred in his practice, and which, illustrating the highly contagious character of puerperal fever, show how unwittingly the physician may be made to scatter, in his progress, the seeds of destruction and death. Independently of the facts which are by all admitted, Dr. Peddie's cases confirm the experience of a more limited number, which shows that puerperal fever may originate from the contagion of a different disease,—in this instance, erysipelas,—and they moreover show that the contagion of puerperal fever may give rise to a different disease, in this instance, also, erysipelas. Mr. Storr, of Doncaster, illustrated this subject in the *Provincial Journal*, (No. 166,) and adduced a host of evidence from his own painful experience, and that of several other practitioners. The following are Dr. Peddie's conclusions. One in reference to treatment is omitted. The observations are not judicious.

"1. That a specific virus, of an animal nature, is produced under certain circumstances, and in turn generates a peculiar form of fever in the puerperal state.

"2. That that virus frequently originates from erysipelatous inflammation.

"3. That, when once generated, it may be communicated from one lying-in patient to another with extraordinary virulence, quite independently of locality, either by direct intercourse, or through the medium of a third person; and that this is more likely to happen when the predispositions of a weak body and a depressed mind exist.

"4. That it may produce disease of various kinds in non-puerperal individuals, more especially of an erysipelatous and phlebotic character.

"5. That the principal concern of a medical man, seeing that a cure is so difficult and so very rare, should be to adopt every conceivable precaution against the occurrence of a single case of it, or to lessen the risk of its propagation, when once established. And to attain these ends, patients in child bed should either not be attended at the same period with cases of malignant or severe erysipelas, or that proper caution should be observed as to ablutions, &c., more especially after contact with any discharge from them; and that when a puerperal fever case does occur, lest it should be something more than sporadic, chlorinated ablutions and change of garments are first required; and then, should a second case occur, it would be the safest plan for the practitioner to abandon the practice of midwifery for a time—two or three weeks, if possible—and in the interim attempt by removal into the country, warm baths, and other alternative and purifying means, and by the exposure of the clothes to a free atmosphere or to a high temperature, (150° dry heat,) as Dr. Henry recommends, to rid himself of the subtle virus which adheres to him so tenaciously."

#### HOMCEOPATHY.

Testimony of Dr. E. Humphreys, U.S.A.

"After practising for more than 30 years upon the Allopathic system, and during the last 5 years having investigated and practiced the New Homœopathic System, I do not hesitate to recommend it as a most safe, expeditious and certain method of curing disease. And I do farther assure the public that homœopathy is no "humbug," "quackery" or "emanation of a disordered brain," as alleged by its interested and uneducated opponents—but a true science based upon a principal or law of nature, a discovery not an invention, an immutable principle, coeval with magnetism, electricity, or the laws of vegetable life."

E. HUMPHREYS.



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## TRACTS ON CONSUMPTION.

### NUMBER FOUR

On the Sanability and Treatment of Tubercular Phthisis.

By J—— G——, M. D.

Hitherto it has been our chief object to point out the means—diagnostic and pathological—by which the practitioner may ascertain the condition of his patient's lungs in Consumption; and now we must endeavor to show how he may make this knowledge available to his welfare. In presenting to the notice of physicians a new principle of treatment for this almost hopeless affection, the writer trusts to be able to give such reasons for its introduction as will screen him from the imputation of empirical presumption. This principle calls for a new application of remedies, in claiming more than common efficacy for which, he hopes he may not be considered under the influence of mere personal vanity. While he deems it a duty to give publicity to carefully examined opinions and the results of experience, he is anxious to escape being classed with those who are captivated with a novelty before they have examined it, and who, in their enthusiasm at a few cases of real or fancied success, place no limits in their imagination to the importance of the agents used. It is rather his wish to be considered among those who view novelties in medicine with an eye of skepticism—who examine their properties by the severest rules of reason, and who satisfy themselves of their value by numerous trials before advocating, or even admitting their utility. The administration of the article of the *matéria medica* on which he places his chief reliance did not originate with him; it has been long used with apparent success by an emi-

nent practitioner of New York; but he has had sufficient personal evidence of its power over this intractable disease to be satisfied of its merits. Still, knowing the proneness of physicians to be deceived in regard to the virtues of a medicine that they have either introduced or advocated, and acting in conformity with the principles of medical duty above referred to, he has refrained, for several years, from urging its employment with that high toned confidence which usually accompanies a favorite and important remedy. Aware that it has heretofore been found every proposed remedy for consumption has proved unsuccessful in the hands of other physicians than those who originally used it, or a few blind admirers and followers, and unwilling to renew such a result, or to place too much reliance on his own or any single judgment, he has suggested the use of his remedy to several of his professional brethren placed above the feelings alluded to. In their hands his experiments have been repeated, and with a concurrence in opinion as to their value highly gratifying to his feelings. Expressing these opinions with moderation they uniformly agree that the introduction of his remedy, into the treatment of Tubercular Phthisis, is an acquisition to the healing art, since its use always produces beneficial effects—removing the disease in its early stages, and where it is too far advanced for a cure to be effected, checking the progress of tubercles, alleviating expectoration and prolonging life.

This new plan of treating tubercular phthisis is so far from superceding the general principles of medicine that it requires a comprehensive view of the whole disorder should be taken, and an adaptation of known remedies to particular modifications of it should be employed. Looking to the state of the constitution as the prime evil to be remedied, it considers the local affection a

comparatively unimportant consideration.—Correctness of diagnosis, so essential to the judicious management of any disease, is indispensable to the efficacy of this treatment because it is found to exert no salutary control over simulated consumption, or any of the ailments which so frequently accompany and complicate the genuine disease.

In a disease, which, like consumption, affects the system generally, and has many attendant disorders, it is not to be expected that the use of any medicine, or combination of medicines can afford well grounded hope of removing it under all circumstances. Useful as our remedy unquestionably is, it will be found, if administered on the principle of a specific—like all other medicaments so considered—to produce frequent disappointments. Discrimination must be used in selecting the proper stages as well as the proper cases for its exhibition; for, as in every other disorder, the nature and extent of the injury must guide us in its administration as they will form the measure of its efficacy. It has been our endeavor to show, throughout the whole tendency of our remarks, that we are not unaware of the generally inflexible and mortal character of consumption, still, we believe in, and shall aim to inculcate the possibility of continuing life under its existence, and even of effecting, in a large proportion of cases, a permanent cure. We consider that as certainly as morbid poisons act as physical causes upon and impair the functions, or induce disorganizations of tissues, so certainly do medicines, by equally physical agencies, restore the former, and put a stop to the latter. That there is within the scope and range of the *materia medica*, substances which act directly on the morbid process in consumption, so as to modify the constitution as well as check the increase of tubercles, is a position supported by numerous analogies, and confirmed in our opinion by a close and somewhat extensive observation.

The uniform results of this observation authorize the assertion that where consumption has not extended beyond its simple constitutional state, the principle of treatment we advocate will, in all instances, exert a salutary and permanent control over it.—And where the accompanying local injury does not extend beyond the presence of tubercles in one region of a single lung, or, as it may be illustrated, is not a greater source of irritation and suppuration than that arising from a sword thrust, or the presence of a musket bullet in the lungs, the employment of our remedies will always warrant the hope of curing the disease. Experience further justifies the belief that these reme-

dies will frequently put a stop to tubercular growth, after the softening and destructive process has attained a considerable extent; while by their aid the system may be freed from the irritating fluid, and the patient with a diminished respiratory apparatus, be enabled to live in the enjoyment of a certain degree of health. But we do not mean to imply that when the whole organ of the lungs is extensively disorganized by the presence of tubercles—when the portion remaining healthy is not sufficient for the decarbonization of the little blood that may be left in an attenuated body—it would not be unreasonable to expect a cure. In such circumstances a favorable result ought to be as unlooked for as a restoration of sight when the organization of the eye is destroyed, or “the functions of the brain, when the substance of that organ is reduced by disease to a pulsatious mass.” And yet, it is to be considered that a simple affection of the lungs, however extensive, is seldom the cause of death in consumption; there are generally superadded other organic lesions, which, though secondary, are nevertheless, often more immediately fatal than the primary affection itself. Thus, the colliquative diarrhoea, which almost always attends consumption, and is the result of tubercular suppuration and irritative inflammation in the alimentary canal, is less within control, and induces death more rapidly, than the most extensive suppuration in the lungs. The affection of the lungs may be participated in by the larynx, the mesenteric glands, and the various parenchymata, constituting a general tubercular phthisis, which, of course must be more beyond the power of medicines to subdue, than if confined to any one organ.—Each of these complications adds to the difficulty of treating the disease—increases the mortality of its character, but forms no argument against the possibility of curing simple pulmonary phthisis.

The difficulty of commanding credence for the existence, and of vindicating the title of medicaments to control so impracticable a disease as tubercular consumption is universally considered, will probably be as great as finding the remedies themselves. While the sanability of chronic bronchitis, chronic pleurisy, and the other imitations of consumption is generally admitted, it is contended that the disease on which the process of tubercular softening depends has never yet been amenable to art. And yet the researches of Laennec have shown, what the experience of every day since his time has tended more and more to confirm, that phthisis not unfrequently undergoes a spontaneous cure. Pathological examinations continually reveal the appearance of

crétaceous remains which can only be regarded as evidences of the former existence of tubercular deposits; while the investment of pulmonary cavities by new membranes, or their obliteration by cicatrices, where tubercular symptoms were apparent in life, must be looked upon as conclusive proofs of the same fact. It may, indeed, be said that in every case of chronic phthisis an attempt at cure is made by nature, and in most established, the final success of which is only limited by the extent of new disorganizations exceeding that of the reparatory process. To aid the vital recuperative powers in so desirable a proceeding it would be only necessary to apply sufficiently early, a medicament which should so neutralize the morbid cause as to induce a change in the constitution incompatible with the further progress of the disease. This may not be easily accomplished, but it ought not to be deemed beyond the reach of art.

Modern investigations of disease show that the blood, of all the constituents of the body, forms the most important part in the production and continuance of morbid changes, and they, also, prove that it can be modified in its character by aliments and other agents—both of which we are in the practice of regulating and administering with this view. Equally distinctly recognized, at this day, are the vital and plastic properties of this fluid, and, it follows, the extension of its office beyond the supply of materials for the secretions, to the production of such formations as tubercles. The knowledge of these important facts has directed the attention of physicians to modifications of the physical properties and inherent qualities—vital or electrical—of this fluid as the real causes of a great variety of diseases. Among morbid affections there is none in which the phenomena, indicating alterations in the blood, are more apparent than in consumption. Hence, there is not only no necessary reason for despairing that such a change may be produced in it, and its accompanying diathesis by medicaments, as may effectually cut off the source of tubercles, but the considerations above mentioned present much ground for hope that these effects may be easily attained. Indeed, it may reasonably be inferred, from the comparative diminution of deaths from this terrible malady, as exhibited in recent tables of mortality, that this change and a subsequent cure takes place more frequently than the public, or even the generality of physicians are aware—the latter too often regarding recoveries from reputed consumption as evidences of error in diagnosis. It is certain that if the blood be once changed, and the formation of matter checked, there is nothing in the structure of

the lungs denying to the lymphatics or veins an ability to remove by absorption that previously existing, or to prevent the cavities formed by expectoration from healing. "All that we know of the action of the absorbents leads us to believe that they are capable of removing tubercles; and that such an operation, to a certain extent, does really take place, is proved by the changes which that substance undergoes in its progress to the crétaceous formation."

It has been shown, in a previous number\* that the blood, in its arterial, exists in a different electrical relation from that of its venous state, and several reasons were given for considering that the difference between them attained a higher exaltation in phthisis. In the same number † it was contended that in the process by which a tubercle was formed the capillaries, which pour out the matter constituting it, are enlarged from an increased expansible force, the result of a subversion of the ordinary equilibrium, or change of healthy proportion of the electrical fluid, imparting an undue preponderance of positive force. Based upon this discovery in regard to the blood, we have built up the superstructure of the electrical pathology of tubercular phthisis.

Now, it is a fundamental law of electricity, as at present understood and explained, that all bodies similarly electrified repel each other; and it is, further found that they communicate the properties they possess to intervening substances. When two currents of electricity possessing the same kind of energy are brought into contact they not only repel each other, but intervening substances, as a feather, partake of the repulsion, and each of its component fibres becomes self-repulsive, and in fact, expanded. So in magnetism, if similar poles be brought together they not only repel each other, but, there can be no doubt, that if the force of cohesion in the magnets could be overcome, every molecule would exert this repulsion to every other molecule; and it is easily demonstrable that if iron filings be interposed, they will manifest this repulsion by occupying a greater space, or as in the case of the feather, by expanding. Bodies, then, be sides being rendered inductively magnetic or electric are expanded by these forces.‡ The opposite phenomena of attraction and contraction which appear on the approach of bodies dissimilarly electrified, the proximity of opposite poles of magnets, or of the posi-

\* Number 2, page 22.

† Ibid 2, page 90.

‡ Sherwood's motive power of the Human System. page 22.

tive and negative poles of a galvanic battery on bodies having free motion, are pretty well known to common observation, or manifestly follow from the converse of the previous law. These properties are common to all kinds of matter, and can be made apparent, at least in all substances having free motion. It is, therefore, no more necessary that animal tissues should consist of any particular structure to be endowed with contractility and expansibility than any other matter; the arteries, for instance, may possess these properties in an eminent degree without their coats being necessarily muscular, and the muscles without their substance being elastic. Upon these universal laws we found our ideas of the origin and progress of consumption and the application of medicines to its cure.

It was also stated, in our second number, that as the elements of nutrition are supplied to the capillaries, in common with every other part of the body, by the blood, unaltered from its arterial state, it must be obvious that not only the capillaries but all the tissues must partake of the nature of that fluid. The blood, again, deriving its properties from the air we breathe, and the elements we take must be modified by the conditions of these sources of vitality. If, from the unsuitable state of these elements to the wants of our system, a redundancy of electricity flow into the circulation, the proportion which exists in the healthy state of the blood must, of course, be altered, and a corresponding effect will be produced on the several tissues to whose nutrition and various functions it is subservient. In health we may suppose, the quantity of electricity received into the system, and essential to the process by which the tissues are maintained and renewed, bears an exact ratio to the quantity discharged in the operation by which the debris of the same tissues is eliminated from the system. The molecules of matter which are deposited by, or repelled from, one set of vessels in the former process, are attracted and removed, in their turn, by another set in the latter, and thus an equilibrium is maintained. But coetaneously with the presence of disease this equilibrium is subverted—there is either a preponderance of action on the part of the secretories or of the absorbents: though it is proper to admit that in some diseases there may be a deficiency of action in either or both of these structures. We have presented several considerations, for our belief that a change in the electrical condition of arterial blood, giving to it a higher state of positive excitation, is the first and most important link in the chain of phenomena constituting consumption. If this be true it is the necessary and obvious source of the

force which gives rise to the expansion of the extreme vessels, whence tubercles spring. The general effect of this change or disturbance is to impart a preponderance of action to the function of secretion in the organs chiefly affected; and, it would seem, an increase of absorption pervades every other part of the system.

It will, probably, be considered worth while to enquire whether the condition of the capillaries implied in the last sentence be true, and whether, if true, it admits of a satisfactory explanation on our principles. There is certainly in every case of consumption a formation of morbid products in the lungs, and a general waste of every other part of the system. The whole tenor of our essay shows that we consider the former a consequence of an expansion of the capillaries enabling them to transmit more than the healthy proportion of fluid. According to our view a preponderance of electricity in the blood, acting as a morbid cause, operates to accelerate the secreting function in the organ to which it is specially attracted, and we consider this a satisfactory explanation of the first effect. But in what way is the colligative diarrhoea and profuse sweating—forming the sources of the waste which are as distinguishing characteristics of consumption as the presence of tubercle—produced? Are they the result of the same cause, or is there a different and opposite one produced from the attraction and absorption of the electrical energy in its action on the secretory function? We shall have occasion to notice this subject again!

Another equally important though, perhaps, more explicable question is, why a particular tissue or tissues come, in preference of all others, under the influence of a cause which appears to attack the whole system through so general a channel as the circulation? This is one of those arcana of nature, belonging no more to consumption than to any other complaint, but which it has been thought as impossible to reveal as the fact is considered certain. It may, however, be supposed in explanation of it that as the blood is both the common pabulum for the supply of all the tissues, and the vehicle which conveys the cause of disease to those tissues, particular relations may arise between the agents so conveyed, and the different seats of disease. In consumption the morbid electrical blood may pass through the capillaries of various tissues in a state so far opposite, in regard to electrical tension, that no disturbance of function or derangement of properties may be produced, but when arrived at a structure with the properties of which they bear a peculiar electrical affinity they may excite a disturbance which

commencing in a slight change of function, becomes, by long, continued action, a serious lesion of structure. But, in truth, it is not the case in consumption, nor, in any other disease, that any one tissue is affected to the exclusion of all others. The glandular system and serous tissues may be more prominently involved in this disease, but the nervous power, the digestive mucous membranes, the skin, and even the bones participate in the general ruin. Still, there is a manifest preference given to a particular tissue, but no more than its chemical construction, or particular function, would cause to result from the presence in the blood of a morbid matter for which it had an affinity.

In offering this brief opinion respecting the mode of operation of actions so minute and obscure, we shall be satisfied to be considered as making an approximation to a rational explanation. The importance of the subject justifies every plausible attempt at its elucidation; for when we shall be enabled to determine the nature of the attractions that constitute disease, we shall have advanced far towards an ability to explain, with the certainty that attends a physical fact, the origin of disease, and even to predict its progress. The quantity of morbid energy required to produce disease, the actions and changes it induces, the kind and quality of an article required to cure it will follow. The sources of this knowledge have been overlooked, or have been supposed to be beyond the reach of investigation, but with the delicate and improved electrical instruments of the present day in our hands we need not apprehend failure in undertaking the analysis of the most minute physiological or pathological processes. It is a knowledge to be attained by careful, and no doubt elaborate experiments on the electricity developed by the atmosphere we breathe, and by the changes aliments undergo in the process of nutrition, and by noting their effects on the different tissues, guided in all our efforts by a sound physiology. Nor is the subject, great as it is, to be considered so vast and complicated that the genius and industry of man—of a Liebig for instance—may not be adequate to reduce all the phenomena to the simplicity of the plainest physiological facts.

If our view of the pathological state of consumption be correct, it is clear that the grand principle of therapeutics must consist in restoring a healthy equilibrium to the capillary system. While the preponderance of positive electricity continues in the blood—this constituting the prime morbid cause of the disease; no approach can be made towards this effect, it is, therefore, indispensable to a successful treatment of consumption, that

this great fact should be understood and its existence counteracted. All medical reasoning proves that living parts are endowed with a tendency to relieve themselves from the operation of disease, and to repair the damage it may have effected, provided the exciting or morbid cause be removed. The whole power and scope of remedies probably consist in simply neutralizing the morbid causes of diseases, and thus enabling the affected vessels, or other structures, to recover their natural and healthy condition by having removed from them all stimulus to extraordinary action. In acute diseases this may take place very soon after the excitement is withdrawn, but in chronic ailments a long continued expansion of the vessels imparts to them new habits which may prevent their recovering their natural properties long after the cause is neutralized. Consumption being the effect of a protracted and continuous exposure to a cause, in all probability constantly operating, it is evident that the disturbance of equilibrium in the forces acting upon the capillary system, must, if it cannot be checked by counteracting agents, go on, continually adding to the original evil, till it comes to a fatal termination. The vessels which form the tubercles may be the natural capillaries of the tissues, but modified by the cause which determines the character of the structure they are intended to supply, or they may be, also, a prolongation and new growth—caused by the redundant expanding forces brought into operation; and by this modification or new growth the identity of the tubercles is preserved and nourished. The creation of these new formations forms the stage of the disease which is understood as tubercular phthisis; it possesses a character entirely different from that which constituted the disease at its origin, and which, under the term tubercular cachexia, consisted simply in derangement of the blood and other fluids, with, perhaps, a very slight expansion of the capillaries. Though occupying the secondary station in the relation of cause and effect, this stage assumes the position of the actual disease permanently established as a part of the living structure.

As the predominance of morbid action in Consumption is to the side of expansion, with its consequences of local turgescence and the deposition of new substances it is obvious that the therapeutic indication is to administer medicaments which will neutralize or annihilate a preternatural state of the blood, be attracted to the diseased parts, and there act on the capillaries as lesseners of expansible force. The same principles of treatment will apply to the new formations, because it is the character of all such depositions, to be stamped with the properties

of the immediate tissue in which they originate, or rather, by the condition of the blood in the capillaries supplying that tissue. If the electrical state of the medicaments employed be one opposed to the electrical state of the blood they must, upon entering the circulation, tend to neutralize that state; and, it follows, if received into it in sufficient quantity they may change it to even an opposite condition. Neutralizing or changing the properties of the original morbid agent may constitute, in fact, the sole remedial agency of a medicament; but if we conceive its action as further directed to the expanded and enlarged capillaries that furnish the matter of tubercle, we can readily understand that it must dispose them to contract, they being also in an opposite electrical state, and resume their natural size and healthy functions. By diminishing or cutting off the supply of diseased fluids to a tubercle, its growth must not only be stopped, but at the same time its constituents must be placed in a state favorable to decomposition, and thus brought within the sphere of action of the absorbents.

The facts and arguments that may be adduced in support of the opinions that there are medicines which have this mode of action, and that it depends upon their electrical relation to the diseased structure, appear quite as conclusive as those brought in proof of any other explanation of the operation of medicines. We see from the action of tartar emetic in restraining hæmoptysis, and the acetate of lead in controlling uterine hemorrhage, that these salts must be carried to the capillaries of diseased organs, and there, by diminishing their expansion, stop the discharge, strengthen the tissue and cure the disease. Antimony is universally recognized, by the profession, as possessing the power of being determined to the capillaries generally, and of exerting a local effect in diminishing the turgescence of inflammation and congestion. But mercury with less evident effect on the general circulation acts, perhaps, even more on the capillaries, and with apparently greater power of determination to diseased parts. To the class of medicines which enter the circulation, and are capable, by a local determination and certain electrical affinities, of diminishing the expansion of diseased capillaries, iodine unquestionably belongs. The property by which this powerful medicament removes enlargement of the thyroid gland and scrofulous tumours, is undoubtedly by diminishing the calibre of their capillaries, and thus cutting off the supply of fluids by which the diseases are maintained. By contracting the expanded absorbents in dropsical affections, it brings them into a healthy condition, and imparts

the tone that fits them for renewing the appropriate function that was lessened or suspended by their unnatural dilatation. That it is simply by restoring the natural size and healthy tone to the absorbents, and not as commonly supposed, by stimulating them to extraordinary action that iodine acts in promoting the absorption of tumors, abscesses and dropsical fluids is a fair inference from the trivial fact that many persons get fat under its remedial operation.

The evidence that medicaments exert a special effect on the capillaries has been rendered stronger by the demonstrations, recent experiments of chemists have afforded, that many of them can be detected in the blood, the urine and in the saliva of persons who have taken them. It must, indeed, be regarded as a fundamental principle of therapeutics, one on which is based the utility of the physician, that every medicine has a special action on some tissue, and this effect though modified by idiosyncrasy, or some equally inexplicable circumstance, is apparent in every individual, and whether administered through the stomach, by injection into a vein, or by absorption from the surface. This general action of a medicament proves that it is not the result of mere sympathy, mechanical action or local irritation, but that it arises from a specific physical cause producing a necessary and unavoidable effect in the diseased part it acts upon. What more rational explanation of this influence can be offered than to consider that there exists an electrical affinity between the properties of the medicine and those of the capillaries or structure whose functions it is administered to modify and does modify? This manner of considering the *modus agendi* of medicines may bring together substances which have heretofore been considered as having no affinity of action, as well as separate such as have been closely allied. But though, if the principle were adopted, this might be a cause of temporary confusion, it will be found on examination to substitute simplicity for complexity.

This view of the operation of medicines affords a plausible if not a satisfactory explanation of that enigma in their action by which, after mixing with the whole mass of the blood, they are attracted to one organ in preference to all others. In every disease there is an inevitable change of function, or greater or less change of structure of one or more tissues or one or more organs, which change must produce altered chemical states, and consequently a different electrical relation from what existed in health, or exists in the rest of the body. Let us suppose that the extreme vessels, or the minute parenchymatous structure of a diseased organ presents a

preternatural electro-positive condition. If now we introduce into the circulation a highly electro-negative substance as a medicine, what will be its relation to the disease? Unquestionably there will be a very great mutual attraction between the diseased tissue or organ and the medicine--a strong affinity for each other, which will continue till each is satisfied, neutralized, and, if the electrical deviation from the natural state of the part constitute the disease, till it be cured.<sup>9</sup> Like the special determination of the causes of disease, medicaments may pass through the capillaries of various tissues without producing any action upon them, but when arrived at one for the properties of which they have a special affinity, a new action will be set up which must be either beneficial or injurious. But when the two opposite electricities of a disease and a remedy meet in the same organ, a mutual change of electrical properties in the two species of matter must take place, which ought, upon the general principles of electricity, to be accompanied by movements tending to restore both the functions and structure of the diseased part to a state of health. This view of the state of the fluids and vessels in disease, and of the action of medicines, may be too electrical for those who imagine it to be impossible to explain the phenomena without a special power like a vital force, but it certainly accounts for the recognized and unexplained fact that certain medicines have specific determinations to diseased organs. The subject is an important one, and, as it is obviously a fruitless labor to seek for an explanation of it in the mysteries of vital action, it is worthy of further examination on our principle. When our knowledge respecting the manner in which medicines act on the different tissues becomes accurately known, we shall be able to lay down positive rules for their administration, and with a confidence that we can predict unerring results. Already has the view we have taken of their action in tubercular disease aided in laying the foundation of a more minute and accurate knowledge of its pathology, and established, in the minds of a few individuals, a more rational and consequently more effectual mode of treatment than has heretofore prevailed.

Heretofore the principle on which physicians have acted in attempting to cure diseases, has consisted, chiefly, in eliminating from the system, by gradual but highly exhausting means, the supposed morbid cause. Bleeding, in addition to some reputed, but vaguely understood properties of relieving the vascular system, is considered a powerful agent by which portions of morbid poison may be abstracted. Purging, with a similar effect on the vessels, expels it from the

living body, by stimulating its excretory functions, and discharging the products of its increased action through the natural excretories. Emetics and diaphoretics, and indeed the whole class of stimulant remedies, are viewed as relieving the system in a similar way. It is only in a few diseases, as in syphilis or psora, that specific remedies are administered with a view to neutralize a poison supposed to exist in the blood; and of their mode of operation no explanation has been offered, with the exception of one by Hahnemann and his followers, worthy of a moment's consideration.

The knowledge that these classes of medicines are capable of removing morbid phenomena has been arrived at solely by observation and experience, and, therefore, exclusively upon empirical principles. Upon these sources of information physicians are still dependent for their perception of the properties of remedial agents, and their effects respectively on the animal system. The difficulties attending the determination of the value of medicines administered on this principle are acknowledged to be great; and they are unfortunately considered insurmountable. There is nothing in the known physical qualities of substances administered as medicines which would indicate their effects on the living body; nothing, for instance, that would assure us of the purging properties of Jalap or Rhubarb; and still less that would explain the manner in which they produce this effect, or foretell the relations to the tissues by which they remove disease. Equally indeterminate must be the knowledge of the quantity of purging effect required to eliminate from the system the noxious poison constituting a disease. But if we satisfactorily ascertain that disease consists essentially in an extraordinary electrical state of the blood, or of a particular tissue, there can be little difficulty in determining *a priori*, upon the general electrical relation of a substance, the action it will have on the blood, the particular tissue, and the whole animal economy. Looking at this subject with the greatest amplitude of view, it comes within the probable range of science to be able to subject the whole phenomena to calculation, and to foretell the precise quantity of a given substance required to cure a disease.

In the arbitrary division of the elements of matter into electro-negative and electro-positive, adopted by chemists, nearly every medicament, which has been found or even thought to be useful in the treatment of tubercular consumption, belongs to the former division. It must be regarded as a strong confirmation of our view of the electro-positive character of the disease, and of the action of remedies, that simple experience or

chance should have directed physicians to this choice. The whole subject of the empirical treatment of consumption offers such momentous strength to the positions we have assumed, that it is desirable a survey of the facts that can be adduced in their support should be taken, and we shall, therefore, devote some space to an examination of the more important articles, belonging to the class of negative electrics, which have been administered as remedies in consumption. It is proper to remark that some of the articles are considered negative electrics from the negative character of their chemical elements rather than from its having been experimentally ascertained that that is their true condition.

**Oxygen.** Pneumatic medicines are a class from which, reasoning *a priori* we should be disposed to look for considerable benefit in phthisis; and, accordingly they have been much employed. At the head of the list, and of electro-negative substances, is oxygen gas. As the respiration of an impure atmosphere is the grand cause of tuberculous disease, so the respiration of oxygen gas would seem to be the natural remedy. In practice, however, it has not been found advantageous, and consequently its employment has long since fallen into disuse. Administered alone, or even largely diluted with common air, it has proved so uniformly too stimulant, and so much increased some unfavorable symptoms, that though it has seemed to occasion relief in others, its use could never be persevered in a sufficient length of time to determine all its effects on the disease. From the general qualities of the gas and the use it is known to subvert in the function of respiration it might reasonably be inferred that it would excite inflammatory symptoms in the lungs of consumptive patients already too rapidly consumed under the natural process of respiration. In conformity with this reasoning it is found, experimentally, that the most obvious effects of its respiration are increased activity in the aortic and pulmonary circulation, succeeded by languor and extreme debility. Although it is necessary in phthisis to moderate the positive-electrical state of the blood, it seems also equally necessary that its general arterial qualities should be lessened, or be desanguified, and it is obvious that this latter effect is not to be obtained by the inhalation of oxygen gas. The respiration of pure air is indispensable to the treatment of consumption but it would seem that increase in the quantity of oxygen does not impart this purity; and hence the inference that no more ought to be used than exists in the natural state of the atmosphere. Freeing this element from extraneous impurities, in the manner we

have explained under the head of "Cause and Prevention of Consumption,"\* but retaining its usual proportion of oxygen, and its other respirable constituents, is the best way of purifying the atmosphere and affords the best form in which oxygen gas can be taken into the human system. Atmospheric air, rendered artificially pure, and modified in temperature to the wants of the patient, in the way we have described would, undoubtedly, be in the most favorable state for preventing the disease, as well as be a powerful auxiliary to remedial means. It is probable much advantage might be derived from the administration of oxygen into the stomach, in a form which would admit of its free evolution after entering the circulation.

**Chlorine.**—This gas, like oxygen, has of late years, frequently been administered in consumption, and, apparently, with a larger promise of advantage than any other remedy of this character. Its inhalation, largely diluted with common air, generally relieves the dyspnoea, and not uncommonly allays the cough; but it is subject to the objection which has caused the abandonment of oxygen, of often irritating, instead of soothing the enfeebled and excitable bronchial apparatus. But its occasionally injurious application, though an argument against persevering in its improper use, is none against its trial where it may probably be beneficial. The diversity in its properties and action, does not admit of its taking the place, vicariously of oxygen in the function of respiration, and requires that it should be administered with great caution. Like oxygen it might have, and indeed, has been found to exert a better influence over consumption when administered through the stomach in a solid form, in combination with a substance for which its affinity is so weak, that it can be easily disengaged after entering the circulation.

**Iodine.**—The inhalation of iodine, in the gaseous form, has been found to have the advantages and disadvantages of chlorine. Its action in consumption as an alterative, through the circulation, will be considered hereafter.

**Bromine** from its analogy to iodine, was early tried in the diseases in which the latter had been found efficacious, and the result has demonstrated that it possesses value as a therapeutic agent. Like iodine it has a marked alterative action, and acts, in cases adapted to its use, by imparting contraction and healthy tone to the vessels of the lymphatic system; and thus promoting absorption, which it is thought to do with more energy. It does not appear that it has been



employed in consumption, but having been found useful in bronchocele, scrofula, hypertrophy of the heart, and other congeneric diseases, it would probably prove a valuable adjuvant in that complaint.

*Arsenic* has been employed in phthisis in the way of inhalation. Its relation to other bodies as a highly electro-negative substance would have caused it to be spontaneously suggested, to one holding the opinions of the writer, as probably useful in consumption, and it has been found on other views, to be decidedly advantageous in the disease. M. Trousseau, who advises its employment, does not pretend that it will absolutely cure pulmonary tubercles, but he thinks the general symptoms may be so far modified by it, as always to produce improvement in the condition of the patient.

It may be remarked of arsenic, as of the whole class of substances used in inhalation that unless they enter the circulation and assimilate, or, at least, mix with the blood like oxygen, they can have but little influence over a disease of so general a character as consumption. However useful as local medications in laryngitis, and the various affections of the air passages, they for obvious reasons, can have little salutary influence, over parts with which they do not come in contact. Most of them are so repulsive to the respiratory apparatus that they cannot be admitted to the lungs, unless largely diluted with common air, and thus reduced to quantities too minute for any beneficial effect over such a disease; and, besides, there is no evidence that any of them, with the exception already set forth, are capable of entering the circulation. For these reasons we have forbore to notice many articles that have been employed in consumption, though most of them are electro-negative in their chemical characters—such as fumigation with tar vapour, watery and medicated vapors of various kinds—because they have not been found sufficiently efficacious to prevent their falling into disuse.

*Hydrocyanic Acid*.—This powerful sedative has been given in phthisis. Like many other of the remedies employed in this destructive disease, it seems to have failed to obtain desired, perhaps unreasonable results, and after a few trials by eminent men in various countries, it has been generally proscribed as too dangerous from its poisonous qualities, and too inert in its medical action. But its acknowledged eminently sedative qualities, its influence in diminishing irritability, its power of reducing the pulse, and of calming many of the symptoms of fever have prevented its falling into entire disuse. Its use is certainly indicated in those compli-

cations of phthisis which are attended with an excessive or morbid sensibility, and those depending on a highly irritable state of the nervous system. Granville considered it almost a specific in tracheal phthisis; and in chronic bronchitis undoubted proofs of its efficacy have been recorded. Magendie asserted that he employed it with success in all cases of morbid irritability of the pulmonary organs; and Elliotson says he has almost invariably succeeded in allaying the troublesome cough of a great number of pectoral affections. Dr. Frisch of Denmark has been quoted as successfully employing the remedy in several cases of phthisis; and finally, Magendie asserted and maintained that with prussic acid he had cured individuals, having all the symptoms of incipient phthisis, and even those in a more advanced stage. Amidst the conflicting testimony regarding its properties, we cannot consider it as entitled to any extraordinary reputation in pure phthisis pulmonalis, yet it has been so often supposed to act beneficially in the hectic connected with it, at the same time moderating the force of the circulation, suspending the night sweats, and diminishing the hardness and frequency of the cough, that we have no doubt it may be advantageously used as a general palliative in almost every case of the disease.

*Cod Liver Oil*.—Independent of the electro-negative character of the principle constituents of this article, it has been found to contain appreciable portions of iodine and bromine. It has long been popularly used in Europe, in scrofula and consumption, but has only within a few years attracted the general notice of physicians either in Europe or America. It has been much lauded in Germany and Switzerland as a remedy in these diseases, and has been given in this country, it is asserted with advantage.

*Naptha*—has been lately brought forward with a good deal of confidence as a remedy in consumption. Its introducer reported that he had successfully treated a number of cases by its means, but like every other remedy for consumption, it has failed in the hands of other persons. Though upon some chemical considerations a hope might be indulged that it could effect other results, yet, upon others, we can hardly feel surprised that it has failed.

*Digitalis*.—We have classed this powerful article of the materia medica among electro-negative bodies, but whether accurately or not, we are at present unable to determine. Concerning its virtues as a remedy in consumption, medical writers have differed more than in regard to any other medicine; some, even, having gone so far as to

assign to it the properties of a specific in this dreadful disease, while others have denounced it as pernicious. Equal diversity of opinion has existed in regard to its mode of operation; it having been considered by some a direct sedative, and by others a powerful stimulant; though little doubt exists, among the generality of practitioners, at the present day, that it belongs to the former division. Its utility in hæmoptysis, in the febrile excitement, and in the nervous irritability that accompany and complicate consumption is generally acknowledged. The testimony is so general in favor of its freedom from any injurious effects on consumption, that there are few cases, especially in the advanced stage of the disease, in which its sedative virtues may not be applied as a means of reducing increased action of the heart, thereby tending to abate inflammation of the lungs, and lessen a general excitement of the system; while in all cases it may be occasionally used advantageously as a palliative.

*Antimony.*—According to Dr. Good,\* some pathologists had, at the time he wrote, lately adopted the practice of giving very small doses of antimony, in its soluble preparations, dissolved in a very large quantity of water, and continuing it for an almost indefinite period of time. Viewed as an electro-negative, or alternative in its action, and administered in doses to produce a corresponding effect on the system, instead of an emetic or nauseating operation, it is probably worthy of a high consideration. "The once celebrated anti-hectic of Poterius, consisted of oxide of antimony, and tin." Where fever runs high, or bronchial inflammation is a concomitant of consumption, antimony administered on ordinary principles, may be considered a valuable adjuvant to more important means of correcting the tubercular diathesis; but it ought to be given in minute doses, on account of its tendency to produce depression of the vital powers.

*Quinia.*—The analogy between the remissions and exacerbations of consumption and those of malarial fevers long since suggested the propriety of giving peruvian bark in the former as in the latter disease. Quinia possessing all the anti-intermittent power of the bark, and at the same time concentrating its general negative electric qualities, may be better capable of exerting all the peculiar influence of that medicine as an alternative and tonic, as well as a neutraliser of electro positive morbid influence, and therefore be

better adapted to the treatment of consumption. Administered in a suitable stage, at proper times, and in appropriate doses, there is no medicine more efficacious in strengthening the organs of respiration, and in counteracting the debility induced in the animal economy by the long continued irritation of diseased lungs. Numbers of physicians have reported cases of consumption which they believed have been cured by this medicine simply conjoined with nutritious diet; and it accords with our observation to allege that several cases have been arrested, and even cured, in very advanced stages, by alternating quinia with hydrocyanic acid and some other medicines that will be hereafter mentioned.

*Cicuta.*—The value of small doses of narcotics, frequently repeated, in all chronic ailments is well known to the profession. They are peculiarly important in all affections of the lungs of this character, and they act upon this organ with a particularly kindly influence, for the well known reason that the respiratory nerves are more affected than any others of the system by them. It seems too, that, at least, some of them have a more sensible electric effect on the animal frame than any other class of medicines; for when acetate of morphia is administered in full doses, the patient is attacked with shocks like those from an electrical machine.\* In the inflammations of the cellular and parenchymatous substance of the lungs, in chronic pneumonia, and in the phlegmasia of the mucous membranes, which, as in chronic bronchitis, sometimes accompany tubercular phthisis, narcotics are indispensable. The exhausting irritation occasioned by the tubercles themselves, demands some narcotic which may diminish the sensibility of the nervous system, allay pain and promote sleep. By lessening the morbid sensibility in the ulcerated surfaces connected with the tubercles, as well as in the membrane of the bronchia, narcotics aid the alternative, tonic, and other action of the remedies in which we place our chief reliance for the amelioration and cure of the former, as well as the operation of the appropriate remedies directed to the latter. Of this class of medicines the salts of morphia have the best effect in a number of cases, but we have generally preferred the cicuta, partly on account of its supposed efficacy in allaying irritation and curing ulceration connected with a scrofulous taint, and partly because it seems to relieve the pain better, and diminishes the discharges of phthisis.

\*Study of Medicine, Vol. 2, p. 510.

\*Cyclopedia of Practical Medicine, Vol. 3, p. 367.

more than any other narcotic, while it is free from a constipating, and some other of their bad effects. Administered with due regard to the stage of the disease, habits of life, temperament and idiosyncrasy of the individual it has none of the uncertainty in its operation which has been frequently assigned to it, while it exerts a very salutary effect in diminishing the force and frequency of the pulse and allaying the violence of the cough. It may be safely said that if we ascertain by experience the condition of the system in which cicuta has no untoward effect, and keep it in view, we shall be able to prescribe and continue the use of it in consumption with a generally useful effect.

**Mercury** is the lowest in the list of electro negative substances, for which any well founded claim of efficiency in the treatment of tubercular phthisis can be established. In the form of the chloride, the occasional use of mercury enables us to relieve the bowels from the morbid accumulations which so frequently collect in tuberculous cases, and to restore to the liver the healthy action from which it has such a constant tendency to deviate in this disease. In that variety of phthisis in which it is complicated with an enlarged and indurated liver, and perhaps of other abdominal viscera, and which is known by Dr. Wilson Phillip's term of dyspeptic phthisis, it may have been found a valuable remedy. Mercury was much employed and strongly recommended by Dr. Rush and some other physicians, in every form and stage of the disease. In recent times there are no decided testimonies in proof of its success; and though it may promise relief in the cases referred to by Dr. Phillip, yet even in these, except when a purgative is required, a much better effect may be obtained from the article we are about to mention.

**Gold.**—The medicines which experience has shown have the most decided effect in diminishing the expansion of the extreme vessels—particularly those of the glandular system—and therefore promise the greatest advantage in tubercular phthisis, are the preparations of gold.

The oxides and salts of this mineral have experienced the influence which caprice and fashion exercise over medicines; for they have been alternately employed with high popularity, and dismissed as undeserving of any reputation. Like countless numbers of therapeutic agents, they have been brought into notice by high encomiums on their value in disorders, over which they either had no influence, or one no more powerful than cheaper and more available means, and, consequently, after an ephemeral reign, they

have passed into neglect. Properties have been attributed to them of which they are quite devoid, while, on the other hand, they are endowed with therapeutic virtues which they have not been considered to possess. As in the use of every other medicine, which cannot lay claim to the character of an absolute specific, the activity of the preparations of gold depend, greatly, on the condition of the system into which they are introduced. Besides, in examining the properties of a remedy, it must be remembered there is no one that, however useful in the majority of individuals, may not, from what is understood by the vague term idiosyncrasy, (but which should rather be called a misunderstood relation between the remedy and the affected tissue) be inactive or even injurious in the smaller number; and this is sometimes the case with the medicine we are now examining. Manifesting a salutary, peculiar and decided effect in ninety-nine cases, a hundredth would occur which would seem to be unsusceptible of its remedial action. Moreover, the expense of the material has been always a weighty objection to its use, and a frequent source of failure; for it induced the fraudulent to announce preparations as containing gold, which had none, and thus the absence of effect was assigned to the inaction of the remedy. Notwithstanding these difficulties, the deductions of science, confirmed by the observations of several physicians, have revealed to us that gold possesses qualities for subduing complaints, in which its fitness has been wholly overlooked, or considered as presenting but feeble claims upon our attention. This has been found the case in the terrible disease which forms the subject of these tracts. The important truth conveyed in this declaration we do not expect to be at present acknowledged. Until the evidence in relation to the therapeutic properties of gold becomes generally known to physicians it is not probable it will receive that fair and public trial to which its promise of utility in phthisis, and its congeneric class of affections, acknowledged to be beyond the control of any other remedial agent, intitles it.

We are indebted to Dr. Chrestien of Montpelier, as the earliest among modern physicians, for inviting the medical faculty to a re-investigation of the properties of gold as a remedial agent. He, however, limited his enquiries to its applicability to the treatment of syphilis, and a few other lymphatic disorders. Since he published his essay, the attention of the medical public has been called by Eberle, Neil, Legrand and other physicians to a more extended applicability

of the salts of Gold to the treatment of diseases. They show, with much reason, that the preparations of this mineral may be used with great advantage, not only in the diseases in which it was employed by Mr. Chrestien, but in the treatment of scrofula, particularly when it affects the soft parts of the human frame, as the skin, the serous membranes, and more especially the lymphatic glands both external and internal. The analogy between tubercular depositions and scrofulous consolidations could not fail to suggest to a philosophical mind that there was probably some common agent which would be found possessed of properties calculated to modify the state of the blood from which both diseases arise. And the discovery of the efficacy of gold in the latter class of ailments would, naturally, upon reasoning on the fact, based upon experience, that the medicines which have been found the most successful in their control, afford the best groundwork for the treatment of phthisis, give rise to the belief that it might be serviceable in that disease. Accordingly it has been introduced, with this view, by Dr. H. H. Sherwood of New York. Physicians in this country, are much indebted to him for the diffused notice he has given of its efficacy, administered on electrical or magnetical principles, in the treatment of the whole class of tuberculous ailments, and more particularly of tubercular phthisis.\*

The general effects of the preparations of gold, in moderate doses, are to improve the

appetite, produce a sensation of warmth in the system, and give increased fulness without adding to the frequency of the pulse. In addition to these a prominent effect appears to be an increase of the various secretions; commonly the urinary discharge is largely augmented, as well as the cutaneous transpiration, and there is an increase of the intestinal and salivary secretions. From the decidedly styptic taste of most of these preparations, the sensible and peculiar impression they produce on the fauces and salivary glands, they must be regarded as astringent. When introduced into the system, whether by application to the gums, an abraded surface, or through the stomach, they seem to be specially determined to the glandular system, and if their capillaries are expanded, give them tone to contract; possibly, unlike, regarded either in cause or effect, the operation of a simple astringent applied to an external sore.

The salts of gold are all, in large quantities, decidedly poisonous. According to the experiments of Orfila, when given to animals with this object, their deleterious effects are manifested by a direct action on the lungs.† He found that a very small quantity of the chloride of gold injected into the sanguiferous system proved speedily fatal from its action on that organ;—death being preceded by difficulty and rattling in breathing, cough and symptoms of suffocation. On dissection immediately after death, the lungs are found injected, and the arterial blood of a brownish red, almost black color—showing that it is in fact desanguinated and analogous to the effect produced on it by diminishing or cutting off the volume of air respired. Bichat found in experiments undertaken with this object, that while the trachea was left open, the blood of the carotid artery, laid open, flowed of the natural vermilion color; if half closed it became brownish; if wholly stopped black. Thus under the moderate use of gold, we may expect the blood to assume the appearance and character of that in an animal, which does not breathe a sufficient quantity of air, and in excess to induce as complete asphyxia as if deprived of air. The effects of agents so potent, when pushed too far remedially, be short of absolutely poisoning, are, besides those on the blood, oppression in the region of the stomach, nausea, vomiting, pains in the abdomen and diaphragm, a metallic taste in the mouth, augmented secretions of saliva, excited pulse and oppressed breathing, all affording evidences of local determination to particular organs. There may exist

\* Dr. Dickson the vain and egotistic author of a novel and ingenious publication on the theory and practice of medicine, which he calls the chrono-thermal, claims, as “exclusively his own, the electrical doctrine of medicinal agency.” When this writer first made and gave his discovery to the world we do not know, but the republication of his work in this country, affords no evidence that it was anterior to 1836. Now, it may be safely said that there has not been for the last forty years, a reflecting physician in either Europe or America, who has not surmised, at least, that the action of medicines depended upon their electrical properties; and, for a large part of that period, Dr. Sherwood has expressly taught, in numerous publications, the importance of considering the action of medicines on the human system as exclusively dependant on the evolution of their magnetical or electrical forces, (See Motive Power of Human System, by H. H. Sherwood, M. D., Page 52.) Besides, it appears to the writer, there is nothing in Dr. Dickson's application of his exclusively electrical doctrine, different from what has been for many years, explained in Treatises on Therapeutics.

† Toxicologie Generale.

besides, inflammation of some organ, commonly the lungs; and a general irritation and true febrile condition may be developed—indicating that it is capable of a general action on the system.

The consideration of the way in which a medicine, entering the general circulation, acts upon one tissue in preference to all others has been already referred to, and will be reverted to hereafter. But as it is regarded as one of the enigmas of medical science, the cause of which admits of no more satisfactory explanation than that of the motions of the planets in their orbits, we shall be excused for taking some notice of it on the present occasion. Embarrassing as this important secret has been to physicians in all ages, it appears to admit of the following simple solution—at least in regard to gold administered in phthisis pulmonalis. It has been a principle object of our labors to show that tubercles arise from an expanded state of the capillary vessels causing their engorgement, and a deposition of albuminous fluids.\* This condition, we have contended, is dependant upon an increase of electro-positive excitation in arterial blood. The administration of a medicine in an electro-negative state, must obviously tend to neutralize the state of any part or any fluid in the human body, in an oppositely electrical condition. Now, according to the division of the elements of matter by Berzelius, already referred to, gold stands at the bottom of the electro-positive class, and united with chlorine, as it commonly is in medicine, it occupies a still more decidedly negative position. The condition of the blood and the pulmonary capillaries, in a phthisical patient are, then, in an opposite relation to that of the remedy, and therefore, it must be clear to every reflecting mind, they must attract and neutralize each other. Admitted into the circulation, the electro-negative gold must alter the opposite state of the mass of the blood, and thus counteract the diathesis in which the disease arises: and its approach to the organ or tissue in which the capillaries are expanded and diseased, must, upon recognized electrical principles, cause a tendency in them to resume their natural and healthy action. Perseverance in a remedy, acting upon this principle, and administered with a proper consideration, in regard to quantity, to the living structure it has to act upon, must, sooner or later, bring the blood and the capillaries to the standard of health, and thereby afford the circumstances that are not only favorable to, but, if fatal disorganizations have not taken place, will certain-

ly admit of the natural recuperative process repairing the local injury.

It is not intended to limit the action of gold to its electrical operation, or to deny that it may have what is commonly understood by an alterative effect. While exerting the special effect due to its electrical energy, it probably has some separate general action on the various parts of the animal economy. That it has an influence independent of its electrical relation to the diseased structure is further probable from the consideration that its salutary effects are greater than that of substances of higher electro-negative powers. If there be such a class of medicines as the alterative, the influence which the preparations of gold exert over many of the secretions and excretions, and over the nervous system itself, constitute them one of a most efficacious kind. In no disease is there more need of a means of altering or checking actions, because if suffered to pursue their natural course, they must certainly produce structural changes inevitably terminating in death. Examined on the common principles of therapeutics, the *MODUS OPERANDI* of no article of the *matéria medica* promises more towards effecting these results in phthisis, than the oxides and salts of gold, and their combination with other substances to be hereafter mentioned, having a similar mode of operation.

Notwithstanding these admissions, it is proper to remark that we are not satisfied gold, in any of its forms, has any other effect on the blood in phthisis, than to change its electrical state; nor, perhaps, is any other needed;—the undue positive state of that important fluid constituting the essential feature of the disease.

Equally beneficial is the action of this medicine over some of the forms of disease that are considered independent of, but frequently complicate tubercular phthisis.—Though it is not our intention to notice in detail these various affections, yet there is one, in which the use of gold as a remedy has so salutary an effect, that it would not be proper to pass it wholly unmarked. This consists in a depraved condition of the digestive organs, and particularly of the alimentary tube. It is not only a complication of extreme frequency, but exercises so great an influence over the progress of tuberculous phthisis, that it is considered almost as important to recovery that it should be removed as that the lungs themselves should be healed. The colliquative diarrhoea which is its final consequence, may be considered as inducing death more rapidly than the most extensive suppuration of softened

\* Tract No. 2, page 91.

tubercles in the lungs—the complication, indeed, constitutes the galloping consumption of the public, and the acute or rapid consumption of medical writers. Though considered by some physicians nearly as frequent a cause of phthisis, as the affection called tubercular cachexia, and it may precede it, still it is almost always secondary to the tuberculization of the lungs. At whatever time it may originate, it is an almost certain indication of tubercular disease of the glands in some portion of the digestive tube; of the upper portion, as of the stomach and duodenum, when the symptoms are those of common dyspepsia; of the lower, as of the ileum and colon, when diarrhoea is present. The evidence of this condition of the intestines may be found by pathological examinations, but it is equally certainly known during the life of the patient, by the constant supervention of the peculiar spinal sensibility, (which we have described as the great diagnostic symptom of tubercular disease,) over the regions of the nervous ganglia, which inosculate with the roots of the great sympathetic arising in the various digestive organs.

Our view of this intestinal affection is not new, but it has been so slightly recognized by medical men, while it is so important to any plan for curing consumption, that it should be attended to, that it is not improper to give it a full consideration. Indeed, its importance is so great, that it may be said, while simple tuberculization of the lung is a comparatively curable disease, its complication with severe irritation and depraved functions of the stomach and bowels, is almost certainly mortal. Over this form of disease of the digestive apparatus—and whether existing with or independent of pulmonary affection—the preparations of gold have an influence which must be looked upon as one of their most precious attributes. This control is almost certain and facile; and being exhibited over a frequent concomitant of consumption possessing a form which by interrupting nutrition, and prostrating strength exercises a most fatal influence on its progress, it entitles the medicine to a high consideration.

The preparations of gold are very uniform in their medicinal properties, and nearly equally active in the same dose; and, therefore, the observations proper for one preparation will apply to all. In all, their operation in the proper doses, is slow, and requires a considerable time and perseverance for their full development; they are, on this account, the better adapted to constitutional chronic ailments, and such whose removal

depends rather upon an alteration of the whole system than a sudden arrest of disease. The affinity of gold for larger proportions of chlorine than for any other electro-negative element renders this combination less easily decomposable, while its medicinal properties for the object in view, are more active, and therefore, it, or the similar preparation of the ter-chloride of gold and sodium, is the form we have most commonly employed. We are aware that the diversity of opinion exists as to the activity of the ter-chloride of gold; one writer, at least, contending that it is not more powerful than the mild chloride of mercury, and others that it is more virulent than the corrosive sublimate. We have inclined to the latter opinion, because on that view, however inappreciable may have been its sensible effects, we have always found its persevering use possessed of sufficient energy; and, therefore, have never given it in larger doses than the eighth or tenth of a grain. To allay the irritation which, in phthisis, as in all diseases, accompanied with new formations always prevails, the addition of cicuta, or some other narcotic may be useful, on the principle of checking the disturbance of the nervous system—the removal of which disturbance is of secondary importance, only, to the alterative action of the gold on the morbid structure itself. But when gold is administered with the object of obtaining its exclusive effects we have made it into pills according to the following formula:—

R

Ter Chloride Auri.—grs. ij  
Chloride Sodii,— $\odot$  j  
Amyli,— $\odot$  ij  
Gum Arabici,— $\odot$  j  
Aque distillatæ q. s. m

The mass is to be divided into 16 or 20 pills, one of which may be given two or three times a day, and gradually but slowly increased. On account of their tendency to deliquescence and decomposition, they must be kept in a well stopped vial, and in a dry place.

(TO BE CONTINUED.)

ADDITIONAL REMARKS ON  
PROF. SEUTIN'S STARCH BANDAGE.  
*More Particularly in reference to a "Certain Modification of it."*

BY ALFRED MARKWICK, SURGEON, LONDON.

If I have been guilty of leaving a blank in my paper "On the Use of the Starch Band-

age in the treatment of Fractures,"\* in consequence of not having alluded to Mr. Christophers' "modification,"† I fear I shall be considered equally culpable by M<sup>r</sup>. Veljeau, Mayor, Laugier, Lafarguede, St. Emilion, and Van Meerbeck, for having taken no notice of them.

My communication was intended to point out the importance and advantages of Professor Seutin's Bandage, and his alone in the treatment of fractures, believing as I do, that all modifications of it, or additions to it, are both useless and unnecessary, and open to far more weighty objections than have at any time been raised against the original. It will not be necessary for me to substantiate this statement inasmuch as Mr. Christophers has himself already done so in that portion of his paper taken from Dr. Pigeolet's "Esquisse Historique sur le Bandage Amidonne."

It is true, no objection has been raised, either by Professor Seutin or Dr. Pigeolet, to Mr. Christophers' "Indian-rubber straps," and therefore I ought, perhaps, in this gentleman's opinion, to have made some allusion to them. I would have gladly done so had I considered that they were in any way essential or indispensable to the construction of the bandage amidonne. Had they been so, M. Seutin would have been the first to immediately avail himself of them. Now I can confidently assert that during the whole time I was in attendance at the Hôpital St. Pierre, at Brussels, I never once witnessed their application, and I may refer, for confirmation of this fact, to Professor Seutin's writings subsequent to the publication of Mr. King's paper in the *Medical Gazette*, in which Mr. Christophers' "modification" is made known, for in these we find that no mention whatever is made of them. I may however, for this gentleman's satisfaction, quote the following paragraph from Dr. A. Didot's article in the *Abeille Médicale* for July, 1844, p. 155; Et je dois avouer que je ne vois pas le moindre inconvénient à ce que leurs idées, (those of Messrs. King and Christophers,) soient adoptées dans le traitement des fractures lorsque l'opportunité se présentera. But this does not show that the "straps" are an indispensable addition to the perfection of the bandage in question; and I can but think that had they been of that importance, Dr. Pigeolet would have done more than merely mention them. He would undoubtedly have characterized them as a valuable innovation, free from objection, and would have recommended them as an

effectual means for remedying a defect which the starch bandage certainly (but for a very short time only) possesses.

These "straps" are intended to enable the apparatus to adapt itself to all the variations in size which the injured limb is liable to undergo. But it appears to me, that in employing them, we avoid Scylla to fall into Charybdis, as I shall by and by attempt to prove. And, moreover, we possess more effectual means (those recommended by Professor Seutin himself) for obviating the evil.

In his reply to the following objection to his bandage, made by M. Mayor—namely, that "it forms a case so resisting that it can neither dilate nor contract on the limb during its alteration in volume," Dr. Seutin says, (p. 195, *loc. cit.*) "How is it that after all I have said in order to show that the starch bandage is remarkably *dilatable*, and that it may be *drawn in* at pleasure,—that after having proved that its application permitted of the parts being daily inspected with the utmost facility, when such an inspection became necessary,—how is it, I say that after all this, my bandage is represented as a kind of case which must invincibly preserve its primitive form, without being able to adapt itself to the development or the diminution in size of the contained organs? I can only account for this singular circumstance by admitting that M. Mayor has not read the different memoirs which I have published on my method of treating fractures, and by afterwards supposing that the cases he has seen have given him a false idea of the true principles by which my invention has been directed." \* \* \*

\* \* \* "If an apparatus would permit us to constantly maintain the fragments in the same position, from the commencement to the end of the treatment, and is also capable of being tightened or slackened and will enable us at the same time to inspect the soft parts, and apply to them such remedies as their condition may require,—if, I say an apparatus permits all this, we shall then be at liberty to state that it fulfils all the indications that are furnished by sound therapeutic notions on the subject of fractures." "These are precisely the qualities by which my bandage is distinguished."—At pages 141 and 142 of the same work, he says, "One of the greatest advantages of my starch bandages, and one which decidedly distinguishes it from the apparatus of the French surgeon, (alluding to Larrey,) consists, then, in my opinion, in the facility one has notwithstanding its employment, for following step by step, as it were, the progress of the injuries of the soft parts, with-

\* June Lancet, page 541.

† July Lancet, page 44.

out the coaptation in the least degree suffering. Strong scissors which I have had constructed expressly for this purpose, enable me to cut, without difficulty the anterior surface of the apparatus, which for this reason I take care to render of as little thickness as possible. I thus obviate the defects of slight compression if it is badly exercised; I suppress it if it appears to augment the local stupor, or if it cannot overcome the violent reaction which ensues; on the contrary I continue it if I find on inspecting the limb, that the patient's complaints arise either from his pusillanimity or apprehension. If local therapeutic remedies are thought necessary, I make use of them, and then, in some cases apply a piece of linen on the internal surface of the apparatus in order to prevent it from being soiled by the applications employed; I afterwards bring the two valves together by means of an unstarched roller. By removing this every day, the dressings can be applied as often as it is thought necessary." . . . "When the incision is made and the limb is found to require no topical application, the two valves are united by means of a starched roller, and the original solidity thus becomes restored. When the swelling has disappeared, and the bandage has, in consequence, become too large for the member, I remove with my scissors, from its anterior part, a longitudinal band of greater or less width. After moistening it a little, I mould the pasteboard on all the inequalities of the limb, by the aid of a starched bandage."

In another place, (see *Abeille Medicale*, 1er August, 1844,) when speaking of its advantages in cases of compound fracture complicated with delirium, he says, "If the *modus operandi* of our bandage is known, the security it gives under these circumstances will be understood. By its methodical compression it puts a permanent obstacle to the contraction of the muscles; by forming with the leg, the thigh, and the pelvis, a continuous whole; and by exactly and firmly embracing these parts, it prevents the movements of the rest of the body from being communicated to the solution of continuity, and if we have that, it cannot become deranged; we shall have the principal conditions for securing such a state of immobility of the fragments, that should the patient by chance get out of bed and walk a few paces on the injured limb, few, if any, accidents would be the result." Again, "It (the starch bandage) compresses the muscles throughout their whole length, and momentarily deprives them of the greater portion of their contractile force. By embracing the whole extent of the limb and its sinuosities, it

affords to every part of it resisting surfaces which prevent the displacement that is likely to be produced by the remainder of the muscular action, and the natural elasticity of the tissues, and keeps up a degree of extension and counter-extension, which, in opposition to that of other apparatus, we will call passive. In short, by its circular contentive action, it forms resisting splints, which encircle the pelvis, extend over the limb in every direction, and cannot allow of any displacement either in its natural direction or in its diameter." "Its compression is less than in any other, *ceteris paribus*, when it is intended only as a contentive means, because it is more in harmony in its distribution with the physiological and pathological conditions of the organ, and because it more directly counteracts those forces which tend to destroy coaptation, and moreover, there is economy in its employment. It is graduated—that is to say, that in twenty-four hours after the application of the bandage, this is transformed by the longitudinal section into an exact mould of the limb, which is at once supple, elastic and resisting, and of which we are always able to determine the degree of compression."

In alluding to the space left between the limb and the internal surface of the bandage by the desiccation of the latter, M. Desoubaix makes the following remarks: "Nothing is so common as to see the inconvenience that is sometimes caused in certain parts by the compression of the newly-applied apparatus, insensibly disappear at the end of twelve or twenty-four hours. These facts seem to deprive the bandage of one of its prerogatives, by showing its compressing properties to be at an end the moment it becomes completely dry. But M. Seutin has had the ingenious idea of constructing it in such a manner as to make it represent a kind of bivalve apparatus, the sides of which though firmly united may nevertheless be brought nearer together by certain means, until their primitive relations become completely re-established. This modification appears sufficient to restore to it the properties which its desiccation has caused it to lose, and to definitively maintain its efficacy until the end of the treatment. The manner in which the starch bandage effects the restoration and the retention of the fragments in their proper relative positions, may be considered as composed of two very distinct modes of action: the first comprehends the compression of the ruptured bones; the second consists of a double effort of extension and counter-extension. The compression of the fragments presents an adaptation of the remedy to the evil—a security in



its results which would be sought for in vain in the other apparatus to which I have alluded. It is no longer as is the case with splints, that vague and uncertain property of producing coaptation that is assigned to one or more solid bodies which appear to cause the disappearance, on one side, of the abnormal bony projections, only to allow them to reappear in another. Neither is it, as in the method 'a suspension,' that contentive force attributed to a flat surface, which is to support a round body in an invariable position, and which, as it does not act itself, cannot maintain the reduction any longer than during the time the limb remains in contact with it by virtue of its own weight. On the contrary, its action is uniform, regular, and constant, adapted by its circular quality to the shape of the organs which are about to receive it, and produced by a force which seems to have calculated all possible displacements in order to oppose them on all sides at once." \* \* \* \* \*

"The projections and depressions are alike under its influence, because the starch bandage is able to present depressions to the former and elevations to the latter. The muscles being compressed on all sides with the same intensity, and in a perpendicular manner, experience an obstacle to their contraction, which would tend to produce displacements, and yet cannot in any way avoid the action of the compressing means. They remain motionless because they can find no place towards which to direct themselves, in order to exercise their functions with more freedom."

MM. Simonart and Pourcelet make the following observations, bearing on this point. "If the shrinking of the fractured limb has left too large a space between it and the bandage, (a fact to be ascertained by percussion of the starched case producing a clear sound, by inspection, and by the introduction of the finger between the soft parts and the apparatus, &c.,) or if the vacuum is trifling, the portions of the bandage intervening between the pasteboard are to be softened with water, and then by well-directed manipulations, to be adapted to the shape of the parts; assistants contribute with their hands to the contraction, which the surgeon completes, and maintains by means of a starched roller more or less tightly applied. If, on the contrary, the diminution in the size of the limb is considerable, the longitudinal section of the bandage ought to be preferred; in that case remove from one or both valves a piece corresponding to the hollow that exists, or else bevel off the borders, each in an opposite direction; moisten with warm water the parts

of the apparatus intervening between the splints, and make the thinned edges lap one over the other. The solidity and even the immobility of the bandage may, if necessary be restored by applying a starched roller round the hardened case, after it has been covered with a coating of starch."

In Dr. Pigeolet's "Exquise," we find the following paragraph, quoted from a thesis by M. Thomas: "Sur la compression de l'appareil inamovible."—Perfect contention of the fragments, immobility continued until the cure is completed, solidity in the apparatus, by which the patient is enabled to move about, simplicity in its composition, economy in time to the surgeon, and expense to the patient—such are the advantages of the appareil inamovible amidonne.—

In simple fracture unattended either by laceration of the integuments or injury to any important vessels or nerves, if the bones are not comminuted, and the soft parts are not reduced to a pulp, one of the best means for preventing the inflammation, or for arresting it at its commencement, is an uniform compression of the injured part."

These extracts will, I think, be sufficient to prove the importance and the capabilities of the starch bandage, and to show the facility with which it can be made to fulfil every indication.—*Lancet*.

#### Effect of Electro-Magnetism on the Action of the Heart,

Let an electric stream, by means of a magnetic-electric rotation apparatus, pass through the medulla oblongata of a frog, when the palpitations of the heart will cease as long as the rotation is in action; and it will begin again, in the same way as before the experiment, a few seconds after the rotation has ceased. This experiment produces, in fact, tetanus in the whole of the body. When any other part of the spinal marrow is exposed to the same electric stream, tetanus is equally produced; but the heart continues its movements without interruption. Finally, when the whole skin of the frog is subjected to this stream, so that one wire lies close to the heart, tetanus in the whole body is produced, but without affecting the heart. Directing the stream upon the ramis intestinalis nervi vagi, lying before the lungs, produces the same effect as upon the medulla oblongata.—*Lancet*.

#### On The Treatment of Chronic Diseases of the Skin.

BY THOMAS HUNT, ESQ., M.R.C.S. ENG.,  
HERNE HAY.

#### Order VII.—*Tubercula*.

THIS order comprises nine genera, six

of which—viz : *Phyma*, (boils,) *Verruca*, (warts,) *Molluscom*, (a very rare disease,) *Vertigo*, *Elephantiasis*, and *Frambæsia*, (diseases of foreign climes)—require no farther notice. The three remaining genera—namely, *Acne*, *Sycosis* and *Lupus*, deserve a separate consideration.

#### *Acne.*

*Acne* is a disease of the sebaceous glands, consisting of a process of sluggish inflammation in these organs, tending slowly to suppuration. It commences with clusters of small elevations, or pimples, with conical summits, which, having slowly completed their suppurative course, discharge their contents, die away, and give place to others. Willan speaks of four varieties—*Acne Simplex*, *Acne Punctata*, *Acne Indurata*, and *Acne Rosacea*. The first three more correctly describe the different stages of acne complex than different species. The latter (acne rosacea) has a distinct character.

*Acne Simplex* commences with small elevation in the cutis of a red color, on an inflamed base, which slowly secrete a purulent matter. Clusters of these pimples, with conoidal acuminate summits, varying in color, red, yellow, or black, are often seen disfiguring the face of young persons at the age of puberty. The disease is generally confined to the face, neck, and shoulders, and is most common on the forehead and chin.—The eruption, if left to itself, gets better and worse, but generally lasts from two to seven years, commonly disappearing at mature age, but occasionally continuing for several years beyond. Nor has it always been found an easy task to arrest the progress of the unwelcome visitor. Lotions of a stimulating kind, such as a weak solution of the bichloride of mercury, appear serviceable for a time, but rarely prove of permanent benefit.

The perils attending the usual mode of administering arsenic have hitherto presented a sufficient objection to its use in a disease attended with no danger and little inconvenience. But a long experience of the absolute safety of decreasing doses, and of the power of the medicine over cutaneous affections generally, suggested to the writer, a short time ago, the propriety of testing its efficacy in acne simplex. The few opportunities of trial which have since presented themselves have inclined him to the opinion that acne may always be cut short by persevering in small doses for a few months, provided the system be otherwise in health. The following cases will afford a sample of the general results:—

#### *Case of Acne Simplex on the face, Cured by Arsenic.*

A. B.—, a pretty servant girl, aged nineteen, has been for the last three or four years disfigured by an eruption of acne simplex, in its various stages, on the forehead, chin, upper lips, and cheeks. Her general health is excellent. Arsenic was prescribed for her on the 30th September, 1845.

October 21st, 1845.—She has taken five minims of the liquor potassæ arsenitis thrice a day with her meals, steadily for three weeks, and her face is now quite clear of pimples, excepting one or two, which have not had time to run their usual course. No fresh elevations have appeared for a week. The conjunctiva is not affected.

#### *Case of Acne Indurata on the Shoulders, Cured by Arsenic.*

Miss N.—, aged twenty-one, has an extensive eruption of solid elevations, surmounted by black points and pustules, answering to the appearance described by Willan as marking the variety called acne indurata, on the skin covering the deltoid muscle in each arm, and extending partially across the back. The pustules are occasionally sore, and irritated by the dress, and are always unsightly. The disease has existed nearly seven years. She is in good health. The face is clear and the complexion healthy.

November 25th, 1844.—The eruption is copious on both shoulders. Five minims of the solution of arsenic were prescribed to be taken three times a day with the meals, with an occasional purgative, her bowels being constipated. This was persevered in for three months, without inconvenience on the one hand, or visible improvement on the other.

March 10th, 1845.—She has now taken the medicine for three months and a fortnight; and a great improvement is visible during the last fortnight. No new pustules have formed, and the old ones look indolent and fading. The conjunctiva is inflamed. The arsenic to be continued in reduced doses, and a lotion of bichloride of mercury applied sparingly.

May 6th.—She continues to improve.—The pimples are small, and appear to partake more of the character of enlarged papillæ than of pustules.

July 2nd.—Quite well; the shoulders are as smooth as other parts of the surface.

The appearance of acne in young females has been supposed to indicate some abnormal condition of the uterine secretion. The experience of the writer has not tended to

confirm this opinion. In both of the cases above detailed, the menstruation was perfect and regular throughout, and the first appearance of the discharge seemed to have no influence over the eruption.

#### *Acne Rosacea.*

*Acne rosacea* is an inveterate form of *acne simplex*, but it differs much from that disease in some particulars. Instead of appearing at the age of adolescence, it belongs rather to the decline of life, commencing at the middle period; and instead of spontaneously disappearing after a time, it usually gets worse and worse, unless checked by medical treatment, till death. The locality of *acne rosacea* is also peculiar. Instead of appearing in the forehead and chin, its seat and centre is almost invariably the point, or, more rarely, the alæ of the nose, from which it radiates laterally, gradually extending over the cheeks, and affecting the adjacent skin in all directions. The point of the nose first becomes redder than natural, especially after meals, or on exposure to cold or heat; the veins of the part become visible, then pustules form, and slowly progressing through their stages, leave the skin permanently thicker than natural, and puckered with small cicatrices. In its advanced stages, the disease sometimes disfigures the face to a frightful extent; and being, in a few cases, the penalty of dram-drinking, it becomes particularly afflictive to the temperate, in whom however, it is at least as common. Like other forms of *acne*, it attacks both sexes, and occasionally occurs as a degeneration of *acne indurata* of long standing. But the subjects of *acne simplex* are more generally exempt from *acne rosacea*.

The treatment of *acne rosacea* has been hitherto unsatisfactory in its general results. Rayer says, the disease "almost always returns after medicines are abandoned, with a rapidity and regularity that induce despair." This is strong language, and from a man of Rayer's experience, most discouraging. Indeed, so general is the impression that it is incurable that patients rarely seek medical advice for this disease, and still more rarely do regular practitioners undertake the cure in a methodical or persevering manner. Certainly, among the numerous and ill-defined varieties of this disease there are two, the recovery of which cannot be reasonably expected. 1. The disease is in some cases hereditary, and, perhaps, likewise congenital. Early in life the

nose is slightly affected by the disease, and by degrees becomes incurably hypertrophied and deformed. The writer has more than once known it complicated with an irritable condition of the rectum and with chronic hæmorrhoidal affections, the irritation oscillating from one extremity of the intestinal tube to the other. These disorders can be *alleviated* by medical treatment, but there is something originally wrong which probably can never be rectified. 2. The *acne rosacea* of the drunkard, connected frequently with visceral disease, is placed by the habits of the patient out of the control of medical art. With these two exceptions, the varieties of *acne rosacea* present nothing which justifies an unfavorable prognosis, much less despair.

The following "very instructive case," as Dr. Chambers described it, furnishes a proof, which cannot be impugned, of the therapeutic powers of arsenic in this disease.

#### *Case of Acne Rosacea in a middle aged lady, Cured by Arsenic.*

Mrs. N——, a lady of temperate habits, clear complexion, and good general health, had been complaining for some weeks of languor, lassitude, headache, hysterical globus, and chronic diarrhœa. These symptoms were treated variously, but with little success for a time. At length, on the right alæ of the nose a small number of accumulated pustules appeared elevated upon an inflamed base, and having the genuine character of *acne*, but more closely crowded together than they usually are in that disease. These soon became covered with a purulent incrustation; other pustules appeared in the neighborhood, until at length the whole alæ, with a continuous portion of the cheek, became occupied by the disease, and presented an ugly and hypertrophied appearance. As a portion of the crust became separated, other pustules appeared underneath, and a second crust was formed, which, when detached, discovered other formations, on a larger base and involving a deeper portion of the subcutaneous tissue. There was no pain or itching, and, except on approaching the fire, no sensation of heat. The crusts were surrounded by a small areola of a dull red color, rather inclined to a brown shade, but never exhibiting the livid color of *lupus*, which disease it nevertheless, in some respects resembled.

Dr. Chambers saw the case within two or three months of its commencement. He pronounced it *acne rosacea*, gave a guarded prognosis, and prescribed arsenic, of which the first dose was taken on the third of January, 1844, and continued on the plan de-

\* Rayer's "Treatise on Diseases of the skin." English Translation, p. 476.

tailed in the preceding cases, for three months, by which time the disease had entirely vanished, and the hypertrophied cellular tissue was reduced to its normal condition. Any doubt which might have been entertained concerning the agency of the arsenic in the cure would have been dissipated by the ultimate history of the case. The patient now left her home "for a week"—was actually absent five weeks, neglected her medicine, and returned home with another tuberculous incrustation, which, commencing on the original spot, had now spread more horizontally over the cheek, and seemed to take a more superficial hold of the integuments than the former attack.

May 10th.—The arsenic was now resumed, and taken steadily till the middle of July. Before the end of May, however, the disease had again disappeared. The medicine was persisted in for two months subsequently, with a view to prevent a return; notwithstanding which precaution, the disease was only kept at bay for twelve months, not radically cured; for in the following July, (1845,) the old enemy reappeared, evidently, however, in a milder form than heretofore; for now the arsenic put him to flight in ten days, and was steadily persevered in for two months afterwards. At present there appears no probability of a relapse. A considerable indentation, like a bad variolous scar, was left by the first attack; the latter attacks left no scar.

The diarrhæa, headaches, and hysterical affections, retired as soon as the arsenic had hold of the system; and the patient has enjoyed excellent general health since the termination of the first course. The conjunctiva became affected as usual, synchronously with the subsidence of diseased action, both local and constitutional. No external application was used, nor any potent internal medicine, after the first exhibition of the arsenic.

The reader's attention is particularly solicited to three observations suggested by this interesting case:—1. The decline of the disease, on three distinct occasions, under the steady use of arsenic alone, independent of external applications, changes in diet, or other circumstances of regimen; its repeated relapses after neglecting the medicine for a few weeks, and its (probably) final disappearance after such a protracted course of reduced doses as seemed to destroy the very tendency to morbid action: these circumstances demonstrate the absolute control which this wonderful medicine exercises over tubercular diseases of the skin, and holds out a strong encouragement for its lengthened trial in cases of longer standing. 2. The

morbid condition of the nervous system, and the extreme irritability of the intestinal canal, in circumstances which would generally be held interdictory of the use of arsenic, were, in this case, not less clearly relieved by the arsenic, than the cutaneous affection itself. 3. The resemblance of this case to lupus, both in the locality primarily affected, and in some similarity of general appearance and history not easily described, seems to suggest, if not establish, some relation between this disease and certain forms of acne rosacea, and if it throws no light on their cause and origin, it indicates a morbid condition of the general system, susceptible of successful treatment by a similar alternative plan. The writer has further the satisfaction to state that he has had an opportunity of carrying out this indication with the most entire success, in a case of lupus exedens, of many years' standing.

The two varieties of acne which have now been discussed belong properly or principally, to two distinct and distant periods of life, respectively—viz., acne simplex, to puberty; acne rosacea to the meridian or decline of life. There is a third species, pertaining to the intermediate years, and seldom met with either in the morning or the evening of human life. And whereas the principal seat of acne simplex is the forehead, and of acne rosacea, the nose, the variety now under review occupies only those parts of the face which in the male subject are covered by the beard. It is known by the name of

#### *Sycosis, or Mentagra.*

This disease has all the characters of acne. It is described as confined to the male sex; but the affection, is, in fact, more commonly met with in the female, being in the fair sex generally described as acne. It is usually more severe in men, for obvious reasons. The irritation constantly inflicted by the razor, and often mistaken for the original cause, the augmented development of the hair follicles in men, which become implicated in the disease, and the incrustation resulting from the adherence of the discharge to the beard, which becomes an incidental source of inflammation,—all these circumstances contribute so much to the severity of the disease, that it often becomes truly formidable, presenting a hideous mixture of pustules, tubercles and incrustations. "Arrived at this stage," says Rayer, "sycosis is always an obstinate disease, the cure of which is never obtained but with great difficulty." Compared with this, it is mild in the female, but, nevertheless very annoying and disfiguring. The description already given of the rise and progress of

acne simplex applies accurately to sycosis, excepting that the latter disease is confined to the chin, cheeks, upper lip, and submaxillary region, and the resolution of the pustules is usually attended with a feeling of heat and tension in the parts they are to occupy. The writer has not been able to meet with any recorded case in which arsenic has been administered in this disease. Indeed, it is generally regarded as originating in external causes; the cure has therefore been attempted by local means alone, of which the most essential is the plucking out of every single hair of the beard in the affected parts. This is surely a mistake. The cause of sycosis is always constitutional, although its aggravations may be dependent upon local sources. Arsenic rightly administered will rectify the constitutional disorder; and if, at the same time, the local disease be treated with that attention to cleanliness and external management recommended by all writers on the skin, the disease will prove as tractable as the other varieties of acne. The following cases illustrate the sufficiency of arsenic alone when the disease occurs in the female:—

*Case of Sycosis in a lady, complicated with Neuralgia; both affections cured by Arsenic.*

Miss S——, aged twenty-five, (or upwards,) a brunette, of naturally clear complexion, had suffered from frequent attacks of neuralgia in the facial nerves. Early in the summer of 1844, she experienced a return of her old malady, which destroyed her rest except when procured by opiates. The chin and lower part of the face generally became affected with a sense of heat, tension and pruritus, which sensations were in a day or two succeeded by an eruption of small red points, tending to suppuration somewhat more rapidly than usually occurs in acne simplex, but yet presenting an appearance exactly similar to that disease, the dark points appearing here and there, and the subcutaneous integuments being very sore, and more or less involved in the inflammatory process. The forehead and the nose wholly escaped the disease.

June 21st, 1844.—The eruption has existed about three months, and has continued by successive crops to this time, gradually getting more troublesome. The patient is weak and thin, and is suffering from extraneous causes of anxiety; but the general health is otherwise good, and there is no interruption of any natural function. She this day consulted the writer on account of the neuralgic affection. No external application was used, but the following medicine was

prescribed—viz., Fowler's solution, one drachm; distilled water, seven drachms; mix. Forty minims to be taken thrice a day in the beverage usually taken at meals.

June 30th.—The pain has left her. She sleeps well, and is looking better. The eruption is fading, and the skin is paler and less occupied by red points. Slight conjunctivitis. The dose of arsenic was reduced to four and afterwards to three minims of Fowler's solution.

August 1st.—The eruption has quite disappeared. She has had no relapse of the neuralgic pain, and is in perfect health.

*Case of Sycosis in a female, complicated with Dyspepsia; both diseases yielding to Arsenical treatment.*

Miss T——, aged twenty-seven. The eruption in this case was so exactly similar to the one just described, (except that it was confined to the point of the chin,) as to render further delineation unnecessary. The dyspepsia was treated with aperients and alkaline tonics for a fortnight, and a diluted solution of bichloride of mercury applied to the face, without any amendment becoming apparent in the eruption, and with but little improvement in the dyspeptic symptoms.

The arsenical treatment was commenced on the 11th of August, 1845, and in little more than a week the stomach had resumed its healthy tone, and the skin was nearly well; but she neglected the medicine, and before the following Christmas, both complaints returned, and are again yielding to arsenic.

Both of these patients were of mature age, and had been free from the cutaneous affection at the age of puberty. The skin of the forehead was sound, and the disease was somewhat more acute in its character than acne simplex. It commenced too early in life for acne rosacea; besides which, the nose escaped entirely. The disease was therefore mentagra, or, more probably acne menti. In both cases the disease, with its respective complications, yielded readily to arsenic. Not a doubt can be entertained of the constitutional origin of this disease; and calm reflection on the primary characters of sycosis in the male sex, will lead the observer not only to identify the disease with acne, but to perceive the necessity of prescribing an alterative course in connection with local applications. The writer regrets that he has not as yet had an opportunity of giving this kind of treatment a trial in that aggravated form of the disease which is peculiar to men, but he cannot entertain a doubt as to the issue.

*Lupus.*

Lupus is the next genus in the order tubercula. This disease has many names; and the cognomen Lupus is applied by authors to two or three very different diseases. Rayer describes two varieties—namely, *lupus exedens* and *lupus non-exedens*, to which M. Bielt adds a third—*lupus with hypertrophy*.

The first of these ulcerates from the surface inwards, and leaves deep excavations; the second spreads and ulcerates horizontally; the third rarely ulcerates at all. The two latter are tubercular diseases and are comparatively rare in this country. The former, *lupus exedens*, or *noli me tangere*, is a frightful disease, difficult of cure, and when cured, leaving behind it more or less of deformity. To this disease the writer will at present confine his observations. He is disposed to agree with Mr. Plumbe in doubting whether this form of lupus is strictly of tubercular origin. It is, in fact, a chronic cutaneous inflammation of a peculiar character at once indolent and irritable, but often for a time devoid of pain; of a livid color, commencing generally in a small portion of the ala of the nose or the circumference of the nostril, and speedily tending to phagedenic ulceration. The ulcers are covered by dirty-looking adherent scabs, which on desquamation, discovered a surface moistened by a glutinous exudation, soon drying into a new scab; and this, on its separation, disclosing deeper excavations, until not only the sub-cutaneous tissues, but eventually the cartilaginous structure, of the nose is eaten into. The disease commonly extends to the upper lip, and the gums of the upper jaw. The whole of the nose, upper lip, gums, and incisors of the upper jaw, and even portions of the bone, have been known to be sacrificed to the ruthless invader. The lower eyelid and the commissures of the lips are sometimes respectively the seat of *lupus exedens*, the ravages of which produce suffering and deformity not less deplorable than lupus of the nose.

The causes of this horrible disease are utterly unknown. Its subjects are commonly young and previously healthy women, from the age of sixteen to thirty. The diagnosis is not difficult; but through the too general neglect of the study of cutaneous diseases, and the consequent ignorance of the symptoms of well-defined and specific diseases, the repulsive malady has very often been most inexcusably confounded with syphilis, and the disease has been aggravated by mercurial salivation. In syphilis there can always be traced, at least, a concatenation of secondary symptoms previously de-

veloped, and the disease usually commences from within, the cartilages suffering first; and the ulceration, when it appears, has a character of its own, quickly appreciated by the experienced eye. In lupus, on the contrary, the disease appears in persons who have generally enjoyed good health, and in whom neither primary nor secondary symptoms have ever appeared: it first appears in the skin, which is not copper-colored, but livid. The prognosis is generally as melancholy as the disease is horrible. The writer has sought in vain, both in books and hospitals, for a single case in which its ravages have been actually and permanently arrested; although here and there, allusions to cures are found in books. Precepts for its treatment are sufficiently plentiful; but demonstration of their utility is lacking.

The following case will show, however, that the disease may not only be arrested and reproduced at pleasure, during a certain time, but permanently and radically cured:

*Case of Lupus exedens of nine year's standing, Cured by Arsenic.*

Mrs. S——, aged thirty-two, the wife of an agricultural laborer, had been the subject of *lupus exedens* for nine years, when she first requested the advice of the writer. The disease had probably been mistaken for syphilis, for she had twice been salivated, (of course without benefit), and had submitted to escharotic applications, and a variety of treatment, both in hospital and private practice, without the slightest advantage. She had been under the care of Mr. Earle, in St. Bartholomew's Hospital, for twenty-two weeks, and reports that she was treated with sarsaparilla and caustic.

Jan. 5th, 1837.—The tip, both ala, and a part of the septum of the nose, are already eaten away. A portion of the upper lip and of the gums of the upper jaw have disappeared, and the four incisors of the upper jaw have been sacrificed to the voracious enemy. The remaining portion of the extremity of the nose, the upper lip, frænum, and gums, are in a state of ulceration, and the parts exposed to the air are covered with a dirty, dark-looking incrustation, the edges of which are of a dull livid color. The breath is offensive, indicating deep seated mischief; she has a nasal tone of voice, and there is reason to suspect the existence of a greater extent of disease than is obvious to the eye. She complains of severe burning pain in the seat of the disease, and is "troubled to get any rest." She is emaciated and weak, but otherwise in good health. The parts were ordered to be dressed with a pledget of pure fresh spermacet

cerate, thinly spread upon fine lint, simply to protect them from the oxygen of the atmosphere, and from sudden changes of temperature, no other application being used. Five minims of the liquor arsenicalis were ordered to be taken with the meals, thrice a day, which dose was persisted in with exact regularity for three months, when the conjunctiva became affected. The dose was then and afterwards reduced as occasion required. This plan was uninterruptedly pursued for two whole years, the disease meanwhile, advancing as heretofore, but she at length experienced some alleviation of the pain. The action of arsenic is slow but sure.

January 30th, 1839.—She has now lost all pain, has regained her flesh, spirits and good looks, and has undisturbed rest, but there is no appreciable improvement in the ulcerated surfaces. The disease has committed visible ravages since the commencement of the arsenical treatment, but the patient fancies it has been "at a stand still" for the last few weeks.

January 12th, 1840.—She has now steadily persevered in the arsenic for three years. The conjunctiva has been more inflamed "latterly," but the skin of the nose, lips and gums, is perfectly whole and sound. No traces of ulceration or scaliness are visible, but there are ugly cicatrices and scars, with great loss of substance, and the contaminated breath suggests the idea of disorganized cartilaginous structure.

March 2nd.—There is no visible trace of existing disease in the nose, lip, or gums, but the breath is still offensive. She thinks she has taken cold, and complains of a pain in the chest, dyspnea, and hard dry cough. There is a croupy hoarseness, as well as a nasal intonation in her voice. Pulse 96, firm; skin hot and dry. Fourteen ounces of blood were taken from the arm; aperients, salines, and low diet; discontinue the arsenic.

April 10th.—Quite well, with the exception of foul breath, and nasal tone of voice. No medicine prescribed.

August, 3rd.—She has taken no arsenic for five months. There is a slight return of ulceration in the right side of the nostril, but the livid appearance of the skin, and the foul unhealthy character of the ulcer, are not so obvious as before. A small tuberculous elevation also appeared on the left cheek near the nose, which healed over after being touched with lunar caustic. The arsenic was now resumed in small doses, and continued regularly for a month.

Sept. 5th.—The skin is again healed, and has a normal surface.

January, 1841.—She has continued in excellent health for four months, and taken the arsenic to this time. It was now considered safe to dispense with it altogether.

July.—She has taken no arsenic for the last six months. Slight return of ulceration in the nose. Resume the arsenic in doses of two minims of Fowler's solution three times a day. The ulcerated portion of skin healed in ten days, and the arsenic was ordered to be taken for six months longer, which order was faithfully obeyed.

January, 1844.—She has now abandoned the arsenic for nearly two years. There is no return of the disease, but the breath is still offensive.

September, 1845.—She remains well; less fetor in the breath,

After this patient had taken the arsenic about twelve months, a brown, dirty, and mottled appearance of the rete mucosum was observable, first, on the legs and thighs, then, at the end of the second year, on the trunk of the body, and ultimately on the arms and neck, the face only escaping. This disappeared gradually without desquamation, after the medicine was abandoned. The writer is not aware that this effect of arsenic has ever before been recorded.

In this extraordinary and highly satisfactory case, the controlling power of the arsenic is so perfectly demonstrated by repeated experiments,—the disease uniformly advancing when the medicine was withheld, and as uniformly receding under its influence, until the very tendency to diseased action was absolutely destroyed under its continued use,—that no comment can add any force to the facts. The concurrent testimony of writers on the skin to the improvement of the ulcers of lupus under the topical use of arsenic, is worthy of notice, in connexion with this case. The object for which arsenical applications are recommended is to check the destructive process of the ulceration by exerting a new action on the surface. Is it not more probable that the temporary benefit derived from the dressing is attributable to the absorption of arsenic? Mr. Plumbe seems to be aware of the influence of the internal use of arsenic in lupus, but he does not tell us that he ever succeeded in curing the disease by it. The cause of his failure is unconsciously confessed in the following sentence: "It is proper to *increase the dose gradually*, till some manifestation of tendency to disorder of the stomach and bowels occurs, when it should be *entirely withheld*, and purgatives, with opium, substituted, till such symptoms

have subsided."\* I have marked in italics certain words in the preceding extract, to indicate the rock on which practitioners generally split in the administration of this medicine. The writer has administered arsenic in hundreds of cases, but has never observed the slightest tendency to disorder of the stomach or bowels, because he has invariably reduced the dose before it has done any mischief; and probably mixing the medicine with the food has protected the stomach and bowels from injury. It is strange that some writers advise it to be taken on an empty stomach. It may not be unadvisable to repeat that the curative properties of arsenic will always be found to reside in doses too small to be mischievous.

The diseases comprehended in the eighth order of Willan, *macula*, (if diseases they may be called, being simply deviations in color,) do not fall under our notice.

*Concluding remarks.*—In reflecting upon the uniform success which has attended the right use of arsenic, in the treatment of a great variety of diseases, apparently so unlike, one is naturally led to inquire—how does the medicine act? and, what points of coincidence are apparent in this motley group, which may be supposed to indicate uniformity of treatment? To those questions full of interest as they are, the writer does not feel himself in a position to hazard a reply. His present object is to direct the attention of the profession to a series of facts, rather than risk their value on the hazard of a speculative theory. It is certain however, that there must be something in all these cases constitutionally wrong, which the arsenic has the power to rectify. In several of them there was no manifest deviation from health, functional or structural, in any organ save the skin. It may therefore be inferred, as a corollary from the above results, that local diseases may and often do, indicate a cachectic condition of the circulating fluids, where there is neither any apparent deviation from healthy vascular action, nor any palpable abnormal tone in the nervous system. Beyond this it is difficult to carry our enquiries. It is hazardous to deduce pathological conclusions from therapeutical facts, especially from those which are limited to a confined range. But the field is open for further experiment. It may turn out, at last, that arsenic, though all-sufficient, is not essential to the cure of these diseases. There are other alteratives, probably of equal power, if not of equal promise, which have never yet been tried me-

thodically, or with sufficient care to test their value. To this end it is necessary to try a medicine alone, rejecting the aid of external applications and artificial diet. Without this there can be no advance in our knowledge of the *materia medica*, whatever we may learn of the general principles of pathology. Our very natural and laudable anxiety to do the very best we can for the relief and restoration of our patients too often tempts us to a course of conduct, which, on the first appearance of difficulty, finds us at fault. If a man would know the value of a remedy, he must use it as he would an instrument determined to try its power and temper, and to operate with it unaided and alone,—not heroically or regardless of danger, but mingling discreet vigilance with a resolute determination not to abandon it.

It is now many years since the writer resolved to try what could be accomplished by arsenic in the treatment of the more unmanageable disorders of the skin, and he confesses himself astonished at the result. He has little acquaintance with other remedies beyond his knowledge of their general inefficiency. He has abjured medicated baths, ointments, and lotions, and excepting for the purpose of reducing inflammatory action where it existed he has placed no restriction upon diet. Moreover, he has, in almost every protracted case, allowed the arsenical course to be interrupted again and again, and generally found he could check the disease, or allow it to advance at pleasure. In this way he has had the satisfaction of establishing the value of this one medicine beyond the possibility of doubt and the reach of cavil, and by illustrating the efficacy of small doses, and thus securing for the medicine an innocuous operation, he has removed the only valid objection to its use—namely, its dangerous properties. Still nothing would give the writer more pleasure than to hear that any one of his brethren had discovered by sure induction, a remedy less objectionable than arsenic, but equally potent in its control over these disorders. This, however, is scarcely to be expected. A medicine, which besides being almost certain in its operation, is safe, cheap, and tasteless,—which can be taken at meal times, through a whole life, if necessary, generally without creating disgust or nausea,—which interferes, in curative doses, with no healthy function,—which gives no pain and inflicts no inconvenience,—has surely recommendations which are not easily surpassed.

There are two or three circumstances connected with the history of the preceding cases which ought not to be overlooked.

1. Especial care should be taken to en-

\* Plümbe on Diseases of the Skin. Third edition, p. 55.



sure the purity of the medicine. The necessity of attention to this point is more palpable than may appear at first sight. One would think that a medicine so cheap as arsenic would scarcely be adulterated, and that its well known poisonous properties would always secure a careful and accurate preparation of its formulæ. It is a fact, however, that the arsenous acid, (oxide of arsenic,) sold in powder, is very commonly adulterated with sulphate of lime, and although it is difficult to make the Fowler's solution of such materials, (inasmuch as the gypsum being insoluble in the solution of carbonate of potash, the former will always appear as a precipitate;) yet, that the solution is sometimes prepared in this way, or otherwise adulterated, is more easy to believe than that such enormous doses are taken with impunity as are said to have been administered.\* The solution used in all the preceding cases was procured from Apothecaries' Hall, and its operation has been found, at least, as uniform as that of medicines in general.

2. The cases were, for the most part, treated by the sea-side. Whether the influence of a marine atmosphere, or of mere change of air, may account in part for their successful termination, must be left an open question; to be decided by future experiment; but it is right to mention that most of the patients were so circumstanced.

Lastly. Having pointed out an eligible method of bringing to a happy termination these annoying and loathsome maladies, the author feels that there is yet an ulterior and very momentous question to be decided, before these results can be contemplated with entire satisfaction.

There prevails in the profession, as well as among the public at large, a *suspicion*, (to say the least) that some of these diseases cannot be *safely* cured at all; that morbid affections of the skin, though severely afflictive, sometimes exercise a salutary influence upon the system at large, acting as wholesome and natural drains, or safety-valves, to the vascular apparatus, and thus

\* Since the above was written, the writer has ascertained that it was formerly very common for wholesale druggists, in making Fowler's solution, to meet with a precipitate of white powder, which was supposed to be a residuum of arsenic remaining after the saturation of the solution. The practice was to pour off and bottle the clear liquor, and throw away the residuum. Whether, or to what extent this practice prevails at present, is a question to which her Majesty's ministers are probably very indifferent, albeit their lives may one day depend on it.

by their timely or continuous action preventing the accession of still more serious forms of disease, probably involving the vital organs and sometimes even endangering life. It is impossible to do justice to the merits of this really important and somewhat knotty question, in the limits allotted to this paper; but with the editor's permission, the point will be fully discussed in a future number.—*Lancet*.

From the London Lancet.

#### Liabilities of the Muscle in Disease.

Of epidemic influences that disturb the general health, the voluntary muscles take early and constant notice; for of life, in all its varieties of action, they are the truest, readiest, and most delicate exponents.—Rheumatism, influenza, diarrhoea, illness, of whatever kind, that is "going about," prevail, by acknowledged symptoms in the locomotive structures of the body. All the animal blights, electrical, contagious, or miasmatic, are necessarily muscular in their development. Observe your patient, then, from first to last, as he stands, walks, sits, or lies; note well his changes of posture; see what he does with his hands; watch his features at their several periods of action and repose; compare them in their separate play. Nothing, be assured, is more truly clinical than such indication, by impaired contractility of disorder in the flesh. Remember, without disparagement of the medicine that works by dissection, analysis, and the microscope, that, while engaged in the contemplation of these muscular symptoms, we have before us nothing less than the actual visible operations of disease. Observing them, we have under our wide, natural eye, not the mere segments of perverted, fast decaying structures, not the shadowy, lenticular spectra of a discharged and damaged fluid, but organs, living and complete, in active relation, through their function, with the blood and all else that is vital in the body. Here, in the Queen's ward, is a woman, (Mary Mc B—,) who tells us plainly, though not in words, of fast improvement and recovery. Near-sighted as I am, I see already, as we approach her bed, that since yesterday, she is better. I see it, and at once in the shape of her features; I know it by the very "wag of her eyelid." In this case, the buccinator and the levator palpebræ muscles express as much of encouragement as could be spoken by the mouth and larynx. Try and remember this patient as we knew her on March 11, when she was first admitted, scarcely conscious, ex-

haunted, inarticulate,—how she lay, and whined, and stared. Day after day we found her stretched, as if by palsy, on her back; her knees were never bent; her hands moved but seldom from her side. In this unnatural repose of all voluntary muscles, we could not fail to recognise the character and intensity of the disorder. The influence that operated to the prejudice of the contractile function, was, in this instance atmospheric, and of the season. It is a case, now convalescent, of the spotted epidemic fever.

J. A. W.

A late number of the *Dublin Hospital Gazette* contains an interesting lecture, by Dr. O'Ferrall, on

**Abscess with Fistula in the Female Breast Treated by a simple method of Compression.**

The single superficial abscess is a matter of daily occurrence, and requiring but little management for its successful treatment. The cases to which Dr. O'Ferrall applies his remarks are very different, and are thus described by him:—

"The breast is enlarged, discolored, and disfigured by a number of fistulous openings, discharging purulent matter. The magnitude of the part is different in different cases, but is sometimes such as to exceed two or three times that of the opposite breast. Its figure is irregular, presenting numerous prominences and depressions, giving to the organ an unsightly and mis-shapen appearance. The color of the integuments is unequally distributed, patches of a reddish hue appearing irregularly mingled with the natural tint of the skin. A number of fistulous openings are visible on the surface, each discharging purulent matter. I have counted as many as fifteen distinct orifices in a case of this kind. The pus discharged is generally what is termed healthy—that is, uniform in color and consistence. Occasionally a tinge of blood is mingled with the discharge, if the part has been subjected to much handling or pressure. The orifices near the nipple have, in some instances, yielded a milky fluid mingled with the pus."

The pain is generally very distressing. Pressure made in particular situations immediately causes an increased discharge, and a probe may be passed to a great depth, indicating the existence of sinuses in various directions. The treatment hitherto pursued has been,—1st, that recommended by Mr. Hey—namely, to lay open the different fistulous canals, a most painful and often a formidable operation; and 2ndly, that by pressure directly over the breast, or antero-pos-

terior, as called by the author. He objects to this proceeding, on the ground that many of the sinuses become obstructed by the pressure thus made, and that new and more extensive burrowings take place. He adopts, and with apparent success, the following method instead:—

"Having carefully pressed out the matter from all the fistulae, direct your assistant to grasp the breast gently in both hands, and draw it forwards as far as possible without causing pain. A breast greatly enlarged, will, in this manner, admit of a remarkable degree of elongation. While the organ is held in this position, you are to pass a strap of brown soap plaster, an inch and a quarter broad, round the part nearest to the chest, beginning underneath, and making the straps cross each other on the chest. Other straps of plaster are to follow in succession each covering a portion of the one preceding until you reach the anterior part of the mamma, where a space is to be left for the discharge of the matter through the fistulous openings. You are next day to apply small compresses over the situations where you had previously felt depressions corresponding to the depots within; over these compresses a few more straps of plaster are to be applied.

"You now take a double headed roller, and pass it from below upwards, so as to make it cross on the chest, and passing under the arms, return over the shoulders to the breast again. This roller is not to be applied with any degree of force. It is a sling—a support to the elongated mamma, and, when properly adjusted, affords immediate comfort to the patient. When speaking of it in the hospital, I term it, in contradistinction to the antero-posterior mode, circular compression of the breast. The breast is compressed in the manner so often beneficial to the limbs."

#### COMPARATIVE PROPORTIONS OF NUTRIMENT IN ORGANIC ALIMENTS.

Messrs. Schlossberger and Kemp, adopting the views of Liebig as to the distinction between the elements of food used for reproduction or growth, and those for respiration, have prepared a table, which exhibits the nutritive power of different alimentary substances, the test of this power being the quantity of nitrogen which those substances respectively contain. The proportion of this element contained in human milk dried at 212° Fahrenheit, being taken at 100, the degree of nutritive power of other alimentary substances may be expressed by the numbers placed next to them. We select a few of the principal.

"*Vegetable*.—Rice, 81; potatoes, 84; rye, 106; wheat 119 to 114; maize, 100 to 125; oats, 138; white bread, 142; carrots, 150; brown bread, 166; peas, 239; haricot beans, 283; beans, 320.

"*Animal*.—Human milk, 100; cow's milk, 237; oyster, 305; yolk of egg, 308; cheese, 331 to 447; eel boiled, 428; pork-ham boiled, 807; salmon boiled, 610; portable soup, 764; white of an egg, 845; skate, boiled, 956; Lerring boiled, 808; haddock boiled, 816; pigeon boiled, 827; mutton boiled, 852; veal boiled, 911; beef, boiled, 942.

"*Purified muscular fibre from various animals*.—Fibre of eel, 908; of salmon, 962; of herring, 914; of haddock, 988; of pigeon, 775; of lamb, 916; of sheep, 928; of calf, 993; of ox, 935; of sow, 893.

"*Proximate principles of animals calculated from the quantity of nitrogen, as determined by Mulder*.—Pure proteine, 1006; pure albumen, 996; pure fibrine, 999; pure caseine, 1003; pure gelatine, 1128; pure chondrine, 910."

It should be observed, that this is a purely chemical way of considering the question. The facility with which these different substances submit themselves to the digestive process, dependent on various circumstances, must greatly modify the nutritive power.—*Edin. Med. and Surg. Journal*.

#### ON THE USE OF ERGOT OF RYE IN UTERINE HÆMORRHAGES.

At a late meeting of the Dublin Obstetrical Society, Dr. Beatty, read a communication on the subject.

"Having stated the beneficial effects of ergot given after hæmorrhage had set in, he alluded to the injury likely to be produced by the indiscriminate and premature administration of opium in these cases, and pointed out the different times at which the ergot of rye and opium are to be given with advantage, the former in the early stage, when we want to induce uterine contraction; the latter in the last stage, when we wish to restore the exhausted vital powers and nervous energy. He recommended the employment of ergot in cases where there is reason (from experience in former deliveries) to expect hæmorrhage, so as to prevent the occurrence of this formidable accident. He prepares an infusion of one drachm of ergot in four ounces of boiling water: when the child's head has cleared the external orifice, he gives one half of the dose, including the powder, and when the child is entirely expelled, the remainder is given. Dr. Beatty

gave the details of several cases in which this practice was followed by complete success. The placenta was thrown off in all without any difficulty, and in none did hæmorrhage appear, although in former labors the greatest danger to life had been experienced.

"He alluded to the power possessed by the ergot of restraining after-pains, and mentioned some cases in which he had given the medicine with this view, and with the best effect.

"He concluded by bearing strong testimony to the value of this medicine in cases of very obstinate menorrhagia when given in doses of five grains three times a day; and he mentioned having witnessed on some occasions, when the medicine had been thus given, the production of severe cramp-like pains in the hips, and upper part of the thighs."—*Dublin Hospital Gazette*.

#### RECURRENCE OF MENSTRUATION AT AN ADVANCED AGE.

MM. Murynck and Klutsens relate two cases in which menstruation recurred several years after it had ceased, and continued to a very advanced age. The subjects of both cases were nuns. In one, menstruation had ceased at the age of fifty-two, recurred at the age of sixty-two, and continued when the case was recorded, at the age seventy-three, with perfect regularity. What is curious, the patient was attacked on the cessation of her menstrual discharge with gastralgia, which persisted in spite of various remedies, until the recurrence of the discharge, when it left her and her health became perfect. In the second case, the menstrual discharge ceased at the age of fifty-two also; it recurred at the age of sixty, and had continued up to the date of the report, when the patient was ninety years of age. This patient was attacked on the cessation of the menstruation with violent colics, followed by tic douloureux, which resisted all treatment, but ceased on the recurrence of the menstrual discharge, and the patient at the age of ninety, was in the enjoyment of health with all her faculties perfect, and with the tastes and ideas belonging to youth."—*Dublin Hospital Gazette*.

#### THE SHAPE OF THE EXTERNAL EAR IN RELATION TO MENTAL DISEASE.

Dr. Conolly, in one of his admirable letters on French lunatic asylums, makes the following remarks:

"M. Foville has made curious, and, I believe original observations on the shape of the ear in different forms of insanity, and has noticed an analogy or resemblance between

the development of different portions of this organ and the brain of the patient. Of these views he was so obliging as to give me some explanation, illustrated by an extemporaneous diagram, and afterwards by corroborative examples. In some of the cases of dementia, or of the lowest degree of intelligence, the flatness and defective form of the helix, anti-helix, and tragus and the disproportionate enlargement and pendulosity of the lobe of the ear, and rounded clumsy shape of the outer edge of the auricle, were very striking. Subsequent observations have led me to believe these views to be exact as well as curious; and they exemplify the abundance of external evidence available to the physician in relation to internal disorder."

In support of the view here proposed, he relates the following anecdote:

"Not very long ago, M. Foville was called upon by an intelligent and philanthropic person who appeared to take much interest in the management of lunatic asylums; and he was greatly struck with a conformation of ears in this gentleman which he had never previously observed, except in cases of mental irregularity or disorder. I happen myself to know that the individual who was the subject of this observation has had several attacks of insanity, and although now at large, and exhibiting considerable mental activity, has repeatedly been in confinement; circumstances of which M. Foville had no knowledge when he remarked what seemed to him to be an anomalous peculiarity."—*British and Foreign Review*.

#### THE AGE AT WHICH INSANITY IS MOST PREVALENT.

"To determine the period of life which furnishes the greatest number of insane persons it is sufficient to bring together the records made up under different circumstances. One of them, made at the Bicetre, where poor men only are received; another, at the Salpêtrière, an hospital destined for poor women; the third, at an establishment devoted to the wealthy. From these reports we may conclude:—1st, that the age which furnishes the greatest number of insane, is, for men, that from thirty to forty years; whilst for women, it is that from fifty to sixty years; 2nd, that the ages which furnish the least, are, for both sexes, childhood, youth, and advanced age; 3rd, that among women, insanity appears earlier than among men—indeed, from twenty-nine to thirty years of age; 4th, that the rich are afflicted, in comparison with the total number of insane persons, in a greater proportion than the poor."

#### THE SYMPTOMS AND DIAGNOSIS OF ANEURISMS OF BONES.

*Symptoms.*—Sometimes the pain and uneasiness of this disease is long in establishing itself, but for the most part it comes on suddenly, with a sense of cracking near the joint. After continuing two or three months, a tumor is perceived. This is at first very small, and may escape notice; but after a while becomes prominent, the skin over it then becomes violet colored, and transparent, so as to exhibit the numerous sub-cutaneous veins. On examining the tumor we find it connected with the bone, and presenting different degrees of consistency at various points. Frequently, on pressing the more resisting portions, we are sensible of a sensation which has been compared to the crackling of parchment, or the breaking of an egg-shell, a sign dependent upon the depression and re-elevation of the thin osseous shell of the bone. One of the most characteristic symptoms consists in well-marked pulsations synchronous with those of the heart, and which are suspended when the principal vessel leading to the part is compressed. There is no *bruit de soufflet*. The disease has always been observed in young persons or adults, and has, in different cases, been attributed to various acts of external violence, although, doubtless, the changes in the bone had already commenced. The progress of the disease is generally slow. There is no authentic example in which rupture has occurred, for the ulcerations and hæmorrhages spoken of by some authors probably arose from pulsating cancerous degenerations.

*Diagnosis.*—An aneurism of a bone may be confounded with one of the soft parts, the symptoms of the two being so very similar; and before post mortem examinations had explained the true nature of these cases, the mistake was inevitable. In the cases treated by Pearson, Scrapa, and Lallemand, the disease was supposed to be an aneurism of the articular arteries of the knee, or of the anterior tibial. The osseous aneurism forms one body, as it were, with the subjacent bone, a thin shell of which imparts a sense of crepitation; when the tumor is reduced by slow pressure, we perceive the loss of substance in the bone.—The aneurisms unconnected with the bone are more mobile, and impart the *bruit de soufflet* to the ear. A malignant pulsating tumor is distinguished with greater difficulty. The chief points are, that it cannot be partially reduced by pressure to the same extent as an aneurism, while it usually gives the *bruit de soufflet* in auscultation."—*Medico-Chirurgical Review*.

REMARKABLE CASE OF  
ABSCESS OF THE HEART.

*Pain in the Leg the only Symptom of disease during Life.*

BY T. HOWITT, ESQ., SURGEON.

Observing in the *Lancet*\* the history of a "rare case of abscess of the heart," by Mr. Chance, I am induced to send the particulars of the subjoined case. I have transcribed it just as it was entered in my note-book at the period it occurred. I still possess the morbid specimen; and as it appears from Professor Owen's statement to Mr. Chance, that there is not one similar in the museum of the College of Surgeons, I purpose to deposit it there.

On November 18th, 1833, at eight P. M., I was requested by my lamented friend, Mr. John Merriman (then house surgeon to the Lancaster Infirmary) to visit Samuel P—, eight years of age. I found him suffering from most acute pain, which he described as deeply situated towards the centre of the calf of the right leg, having commenced suddenly about twelve hours previously. So far as we could learn, it had not been produced by any external agent, he having had neither blow nor fall. Upon a careful examination of the part, we could detect neither swelling nor redness, nor any symptom indicative of inflammation, neither was there any spasmodic action of the muscles to account for it. Occasionally the pain remitted in severity. When he complained of violent throbbing, our examination did not appear to cause any increased pain; his bowels had been relieved by a dose of castor oil exhibited by Mr. Merriman this morning; no headache, no pain in the chest or abdomen, no thirst, pulse 110;—in fact, this pain in the leg was the only complaint the boy had to make.

Supposing, from the history, that matter might be about to form under the periosteum, we directed six leeches to be applied over the seat of the pain, and small doses of calomel and opium every four hours.

19th.—Nine A. M.: No relief; the pain as acute as yesterday, yet no swelling or redness, except around the leech bites, which had bled pretty freely. Having during the night voided two large lumbrici, he was ordered a turpentine injection, and the calomel and opium to be continued; pulse 120.

20th.—Nine A. M.: The pain in the leg still continues; his general condition is much the same, but he appears a little dull and stupid, not answering questions very readi-

ly, though quite correctly; pulse 130, more feeble. The mouth not being at all affected by the calomel, we imagined the dulness he evinced to be the effect of the opium, and mercury with chalk, combined with rhubarb was substituted for the calomel and opium. The bowels had been twice relieved by the turpentine enema, and three more lumbrici voided.

21st.—Nine A. M.: No mitigation of the pain in the leg, nor any further evidence as to its cause; the limb preserves its natural heat and size. I directed it to be well rubbed with hot turpentine, and then enveloped in a warm poultice. In other respects, little variation from yesterday. Pulse 130, feeble.—Eight P. M.: Decided symptoms of coma now making their appearance. Pulse 140; pupils contracted; the patient lying upon his back, constantly moaning; with difficulty roused, but when roused, quite sensible, and still complaining of his leg.—Ordered a small blister to the nape, and a teaspoonful of wine to be given occasionally. Bowels relieved by an enema.

22nd.—Nine A. M.: Rallied a little; less stupor; perfectly sensible, and answered questions more readily; blister discharging; pulse 130. No cessation of the pain in the leg. Wine to be continued.—Eight P. M.: Much the same, but in addition he complains of pain in the bowels, which have been relieved, and are soft upon pressure.

23rd.—Nine A. M.: Considerably more stupor; when roused he answered a question correctly, but instantly relapsed. From this time he gradually sank, becoming quite insensible to all stimulants; tongue and mouth dry; lips, gums, and teeth, covered with sordes; he lay upon his back, constantly uttering a low moan; his legs and arms occasionally convulsed until the evening of the 24th, when, death closed the scene.

The case being one which had interested me a good deal, and being anxious to make out, if possible, the origin of the severe pain which, throughout, had been the only symptom of any disease whatever, until the supervention of coma, with some difficulty I prevailed upon the parents to allow an inspection.

*Post-mortem, sixteen hours after death.*—

Our attention was first directed to the seat of the pain—the calf of the right leg, where we could discover nothing abnormal, there not being the slightest alteration in any of the tissues, nor any indication of inflammation in the bone, periosteum, nerves, vessels, or muscles. Abdomen: the intestines free from any trace of disease; kidneys and bladder healthy; but all the mesenteric

glands considerably enlarged, some of the largest, when cut into, containing a cheesy matter; the mesenteric vessels gorged with dark venous blood; pancreas indurated; liver and spleen healthy. Upon opening the chest, the pericardium instantly attracted our attention as appearing very much distended; and, on cutting into it, there gushed out, as near as we could guess, a pint of grumous fluid and pus, containing a number of curdy flakes, the whole interior surface being lined with a layer of cheesy, scrofulous-looking matter, apparently soft, coagulated lymph, one-sixteenth of an inch in thickness. The pericardium investing the heart was covered with the same matter, and to the same degree of thickness. On examining the external surface of the heart more particularly, we discovered a rounded eminence, situated just at the junction of the right auricle with the right ventricle, and which was darker in color than any other portion. Upon making a crucial incision into this prominence, there flowed out about a tea-spoonful of ill-conditioned pus, with a few curdy flakes. This small abscess communicated, internally, by a small, ragged opening, with the right auricle, which contained a mixture of pus and blood; there was no communication with the sac of the pericardium; the lungs were perfectly sound. Head not examined.

The above case has frequently been named by me to many of my professional brethren, as a most anomalous one; yet in many respects it bears a striking similarity to the one detailed by Mr. Chance. The publication of such cases, although, perhaps, leading to no very useful practical result, (in the present state of our knowledge,) demonstrate to us what very formidable disease may be progressing in a vital organ, even to the rapid destruction of the life of an individual, without the manifestation of any symptom likely to lead to the detection of so fatal and insidious an enemy—a fact I have several times seen exemplified in disease of the brain. Are we in the present case to consider the pain in the leg as sympathetic of the diseased heart?—*Lancet*.

#### REMARKABLE MESMERIC CURE.

At a lecture given at Derby, on Wednesday week, Mr. S. T. Hall related the following remarkable case:—It is that of a young lady of whose mind and disposition, to say the best I could, would be no compliment; but whose bodily powers were so worn down by a grievous internal disease and a natural delicacy of constitution, that

some years ago, she was unable properly to balance herself when walking, and so fell from the top to the bottom of a flight of stairs, severely bruising the back of her head, and various portions of her spine, step after step, during the entire descent. From the description I have heard, the paroxysms and tortures to which she became subject, must have been most awful. Notwithstanding her previous debility, so powerful were the convulsions she afterwards for some time underwent, that it often required the efforts of two or three strong men to prevent her being thrown by them off the bed. To the relief of these, nature came at length with an attack of paralysis, which entirely prostrated her, and for nearly three years she lay unable to help herself, as it was even with difficulty she could be helped by others, since the slightest application of a camel hair pencil to the region of the spine, was sufficient to occasion the most excruciating pain. The best advice that could be obtained, afar or near—every remedy that medical authority could suggest to her kind and anxious friends—had been tried, and had left her little better than it found her; and when I was first introduced, she was not only suffering from exceedingly acute pain, but appeared to be as weakly and as inert as an infant. The results of my visits have since been attributed by some of our opponents, to the effect of a powerful imagination. But as ever since the cessation of her convulsions, one of the young lady's legs had become permanently foreshortened, so that when she was made able to stand, she could not bring the heel within two inches of the ground; and as this physical, and not imaginary contraction, has now been entirely removed—further, as a constant and anxious medical friend of the family had such faith in the patient's integrity and sound judgment, that he had declared long before, if mesmerism could produce any effect upon her, he should fully believe her report of it—such an interpretation is as preposterous and pitiful as the spirit that dictates it. Whatever the agent between my passes and her frame, or whatever name it may be called by—and the rose by any other name would smell as sweet—this truth is clear to all who know her, and though her sufferings had been all and more than I have described, up to the commencement of my present series of visits to Derby, and though my treatment has been without the aid of drugs of any kind, she is not only now comparatively free from pain, but goes freely about the house, enjoying the society of her delighted friends, and occasionally walks, unsupported, in the garden, gathering flowers with her own hands, and

thankfully reaping additional health from such a renewal of her acquaintance with nature." We believe, says the Derby Reporter, that we are perfectly in order, in saying that the patient thus far restored, is Miss Longdon, of Friar gate, well known in Derby as a kind and intelligent member of the Society of Friends, whose parents, and others of the family connexion, were present at the lecture, and concurred in all that was advanced in relation to the case by Mr. Hall.—*Bath Herald, England.*

**The Treatment of Chronic Enlargement of the Bursa Patellæ.**

Dr. Adams submitted to a recent meeting of the Dublin Pathological Society (Dublin Hospital Gazette) several casts and specimens illustrating the pathology and treatment of this troublesome affection. Much condensed, his observations are to the following effect:—

"E. B——, aged twenty-two, was admitted into Richmond Hospital, under the care of Dr. Adams, having a chronic enlargement of the bursa over the right patellæ, from which she experienced so much inconvenience, that she was anxious to be relieved of it by any means thought advisable. The tumour was about the size of a hen's egg; the skin covering it had a natural appearance; fluctuation was evident, and small foreign bodies could be distinguished in the fluid.

On the second day after her admission, Dr. Adams opened the tumour by a free longitudinal incision, extending from above downward, throughout the whole extent of the enlarged bursa. A fluid of an oily appearance escaped, carrying with it numerous small pipin-shaped bodies of a whitish color. The interior of the cyst was examined, and some few small bodies were found adherent by slender pedicles to the interior of the cyst; these were detached from the lining membrane of the bursa and removed: an oiled dossil of lint being introduced; light compresses and bandage were applied. On the eighth day suppuration was established and a poultice applied. No inflammation nor constitutional disturbance whatever were excited. Granulations were thrown out from the bottom, and the cyst gradually became obliterated. On the twentieth day the granulations were so much raised to the level of the skin as to need the application of nitrate of silver. She was discharged on the twenty-fifth day from that of the incision having been made, and for the last ten days she has been walking about without feeling any inconvenience.

Excision of the bursa, which is situated over the patella, when in a state of chronic enlargement, has been recommended as the best mode of proceeding. Dr. Adams has known this to have been done; and although he admitted that there might be some cases in which such an operation may be judicious, still he believed that such cases should form the exception, and that, as a general rule, the operation by a free incision was preferable. He has observed the dissection to be a very painful proceeding, and in very large tumours, if not conducted with caution, the knee-joint might be endangered. For example, put a case in which the enlarged bursa measured in its circumference thirteen inches, projecting from the patella seven inches, and consequently completely covering it above, below, and laterally. Dr. Adams remarked, that while a free incision from above downwards could be made in a few seconds, with but little pain to the patient, and without any immediate danger of injuring any of the subjacent parts, excision of such a tumour would be a most severe operation, and it is quite possible that the synovial membrane of the knee-joint might be opened; whereas the incision is quickly and easily done, is infinitely less painful, and in those cases Dr. Adams had lately under his care, quite satisfactory—the deformity which might be supposed to remain after the operation of the incision, from the thickened cyst which remains, being found by experience to be really nothing. He prefers the operation of free longitudinal incisions to punctures, injection or seton; because although these last means may excite sufficient inflammation, so as to produce a radical cure, they are by no means so certain; and he thinks that any operation which leaves foreign bodies behind, is likely to fail in radically curing the disease, because when these foreign bodies are pressed upon while the patient is kneeling, new irritation and inflammation arise, with a consequent recurrence of the disease.

Another great advantage is this, that there is no constitutional disturbance following the operation. There is less novelty in the practice here recommended, than justice in the argument by which its propriety is urged.

**Calculi of the Prostate Gland.**

A discussion which occurred recently at the "Societe de Chirurgie," on prostatic calculi, and which is reported by the *Gazette des Hopitaux*, elicited the following remarks on the subject:—

M. Lenoir stated that a patient, fifty-five years of age, had been addressed to him by a provincial surgeon, under the impression that he was laboring under vesical calculus. On introducing the sound, he found an obstacle which gave a clear sound, and which he thought was a vesical calculus, but on examining digitally by the rectum, he failed to recognise its presence. On exercising pressure, however, on the prostate, he caused the escape of about fifteen small calculi. They were of a dark yellow color, and presented facet surfaces; burnt, they gave a decided animal odour. The patient, who, when he entered the hospital, had all the symptoms of serious vesical catarrh, left nearly well. A few months later he was again sent to Paris, under the idea that he was laboring from vesical calculus, and a number of small stones were again emitted, by pressure of the prostate. Vesical catarrh was present as on the first occasion. M. Lenoir thought that the calculi were formed in the ejaculatory ducts, and that it was because they occupied the orifice, that these produced, when touched with the sound, the sensation of a stone in the bladder.

M. Nelaton had met with a case at the Hotel Dieu, similar to the one of M. Lenoir. The friction of the sound over a hard substance in the region of the prostate had led him to recognise the presence of prostatic calculi. He managed to withdraw several by means of lithotritic instruments, and the patient left apparently cured. Two months afterwards he returned with the same symptoms, indicating prostatic calculi, and, in addition, with a vesical calculus. He was not able to lay hold of the latter, in order to crush it, and was obliged to perform the operation of lithotomy. On scratching the surface of the incised prostate with his nail, he managed to make several calculi fall, similar to those described by M. Lenoir. The patient was cured. M. Michon, M. Guersant, and M. Langier, thought that prostatic calculi were not rare; M. Malgaigne was of a contrary opinion.

**Case of Ulcer, Accompanied with Varicose Veins of the Leg,  
Treated with Cajeput Oil.**

John C——, aged 32, admitted an in-patient, under the care of Mr. Hancock, 5th March, 1845, with ulcer on the right leg. States that he has had a sore on the right tibia since 1831; he had it first in Jamaica, where he was in the habit of drinking large-

ly of rum. He has had varicose veins of the leg for three years. When admitted the ulcer was two inches long by one inch wide, and the surface of the sore without any appearance of granulation; above the wound was a considerable swelling, caused by enlarged varicose veins. He suffered so much pain that he could not put his heel to the ground. Ordered, cajeput oil, twenty-four minims; syrup, two drachms; distilled water, eight ounces, Mix. An ounce three times a day. Sore to be dressed with water-dressing, and patient to remain in bed.

March 9th.—Swelling has disappeared; sore granulating veins much diminished in size: quite free from pain; passes more urine than usual. Says, that although he has frequently rested the limb before, he never observed such a diminution in the size of the vessels.

20th.—Has gone on improving up to this date; the ulcer is now very nearly healed. The veins have resumed the natural size, and the swelling above the ulcer, caused by the collection of varicose veins, has entirely subsided.

Discharged cured.

ON THE

**Use of the Starch Bandage in various Surgical Diseases.**

BY A. MARKWICK, ESQ., M. R. C. S., LONDON.

In a paper lately published in *THE LANCET*, I called the attention of its readers to the use of the starch bandage in the treatment of fractures, and attempted to prove that its advantages were due to the great solidity and support it gave to the fractured limb; to its preventing the displacement of the bones; to the facility with which it can be split open, for the purpose of examining the state of the injured member, and applying such remedies as the case may require; and though last, not least in importance—to its enabling the patient to leave his bed, and move about from place to place, and attend to his accustomed avocations, without either risk or danger, in the majority of cases: his strength being by this means kept up, while those cachectic and debilitated states of the constitution consequent on a prolonged decubitus are prevented.

In the present communication, I propose adverting to its application in those cases in which, as in fractures, the chief indication is to keep the part motionless. These are—dislocations, sprains, and other injuries of the joints; diseases of these parts; ruptures of the muscles and their tendons; re-sections



of bones; necrosis and caries; certain deformities, either congenital, or acquired, or from vicious cicatrization; aneurisms; varicose veins; hernia; indurated testicle, &c. I shall consider each of these in the order in which they are here given.

It is not my intention to enter into a full description of every species of luxation: I shall continue my remarks to the subject of treatment, and more particularly to that portion of it which more directly concerns us in this paper.

There are some dislocations in which it is almost impossible to prevent a repetition of the displacement by the ordinary means—as, for instance, in the dislocation, forwards, of the sternal end of the clavicle. Now with the starch bandage we can effectually overcome this difficulty.

The indications in this accident are, to keep the shoulder outwards and forwards, and the sternal end of the clavicle in its proper situation. The best apparatus for fulfilling these indications is a starch bandage, consisting of a combination of a portion of Dessault's bandage for fractured clavicle and the anterior figure-of-8-bandage. The former, which should only be sufficiently starched to prevent it from getting slack, will keep the shoulder outwards by means of the axillary pad, while the latter will bring it forwards and keep the sternal end of the bone in its place by its firmness and solidity—properties that are due to the starch with which it should be abundantly covered, especially over the sterno-clavicular articulation. Should more firmness be required to effect this object, a piece of paste-board or stiff leather, previously soaked in warm water, and starched, may be applied, and secured by a second figure-of-8 bandage. The arm is then to be supported in a sling. As the axillary pad, by pressing on the vessels of the arm, has a tendency to produce œdema, it is always advisable to commence by passing a roller round the limb, from the fingers upwards.

This example will, I think, sufficiently show the importance of the starch bandage in the treatment of luxations. I may, however, state that it does not, as in fractures, constitute a distinct apparatus; on the contrary, the contentive means and mode of treatment, in each particular case, remain the same, the only difference being in the starch with which the bandage is covered, for the purpose of increasing its solidity and strength, and preventing it from becoming loose.

*Sprains and other injuries of the joints constitute the next class of cases. When called to a case of sprain immediately after*

it has happened, the first thing to be done is to elevate the limb, and place it in the most easy and comfortable position for the patient, and then to adopt such measures as are calculated to prevent, if possible, the occurrence, or, at all events, to check the violence of the inflammatory action. The immediate application of cold, and persevered in for a sufficient length of time, seems to be the most effectual means of preventing the afflux of the fluids towards the part upon which the inflammation depends. When the inflammatory period has passed, no time should be lost in placing the joint in a starch bandage, which is to be applied in the manner directed in the first paper, with or without the pasteboard splints, as the case may be. This apparatus, by accurately moulding itself on all the inequalities of the articulation, forms for it a continuous, permanent, and immovable splint, which not only keeps it perfectly free from all motion, but likewise gives it that support by which the patient is enabled to get about much sooner, and with far greater safety, than he, by possibility, can do when a *moveable apparatus* is employed. If, instead of being sent for immediately after the accident, as I have supposed to be the case in the foregoing paragraph, we do not see the patient until some time afterwards, when there is considerable tumefaction and ecchymosis, the same precautions are necessary with respect to the perfect quietude of the joint; but the employment of cold, which was so beneficial in the preceding instance, is here more injurious than useful. Recourse should, in these cases, immediately be had to either general or local blood-letting, or both to the extent required by the severity of the injury, and the size of the joint affected, followed by warm, emollient, sedative fomentations, and poultices, and then, when the inflammation has been subdued by these means, the application of the starch bandage should be forthwith proceeded with. If the case has become chronic, and there is effusion of serum into the synovial membrane, together with considerable stiffness and weakness of the articulation, then the remedies recommended as applicable to the preceding stages must be replaced by others of a stimulating character, such as friction with camphorated and ammoniated liniments, blisters, &c., with a view to promote the absorption of the effused fluid, and the joint placed as quickly as possible in a starched bandage, which will, in the majority of cases, be found the most powerful and effectual resolute means. In this stage, the ligaments are considerably relaxed and weakened, and, in order to regain their strength and firmness, require

to be kept perfectly quiet and well supported. Nothing can be better suited for this purpose than the starch bandage, from the uniform pressure it produces, and the solidity and immobility it possesses.

*Pulpy thickening of the synovial membrane.*—From the nature of this affection it is evident that perfect rest must constitute the only means upon which we can at all calculate for producing any benefit. Mr. Scott employs for this purpose strips of plaster, but they are not sufficiently efficacious, and, moreover, are not free from disadvantages. One of these, is their great tendency to produce excoriation, and hence to necessitate their frequent removal; and another, if possible, still greater is, that when abscesses are present, they prevent the free escape of the matter, and become filthy and offensive in consequence. The starch bandage is an admirable remedy in these cases, as it can be so applied as both to produce the effect desired, and to allow a free discharge of all purulent matter, and, at the same time to check its further accumulation.

*Ulceration of the cartilages.*—As ulceration cannot be put a stop to, but on the contrary is aggravated by friction, it is clear that the only means by which we can arrest or check its progress is to keep the joint in a most perfect state of immobility. This constitutes the most important part of the treatment, and must not be neglected. By adopting this course, we sometimes succeed in entirely curing the disease, provided we are called upon to treat it at a sufficiently early period. But if our advice has not been sought until the process of destruction has farther advanced, and caries has, in all probability, commenced in the heads of the bones, then we have but little if any chance of effecting a perfect cure; and we must endeavor, by every possible means, to stop the further progress of the disease, so as to bring about ankylosis. The starch bandage is the best apparatus that I know of for restoring the joint in the first stage, and for arresting the ulceration, and securing the termination by ankylosis in the second. It may be applied either entirely round the joint, or openings may be left in it, for the purpose of applying such remedies as the nature of the case may require, or for the escape of the matter from the various sinuses. Nothing can be more congenial to the patient, or more likely to produce beneficial results, than the moderate but equal pressure which this bandage produces on all parts of the joint. "It will," as Sir B. Brodie says, when speaking of pressure in scrofulous diseases of the joints, "promote the healing of the sinuses, and by more completely preventing

the motion of the joint, will lessen the chance of fresh suppurations, and favor the union of the ulcerated bony surfaces."

*White Swelling.*\*—This disease has its origin in the cancellated structure of the bones, consequently is generally met with in those situations in which this tissue is the most abundant—viz., in the knee and elbow joints, and in the small bones composing the tarsus and corpus. The tarsus and the knee are the most frequently affected.

The treatment in this affection is much the same as that required by the last-mentioned disease, the indications at the commencement being, to arrest the progress of the ulceration and prevent the other structures from becoming affected; and, at a more advanced period, when these have become diseased, and abscesses have formed, to endeavor to save the limb by promoting ankylosis. Absolute repose, therefore, of the affected joint is of the utmost necessity, as the slightest motion irritates the diseased bone, accelerates the ulceration in them, and hastens its extension to the adjoining parts. The starch bandage will prove an invaluable apparatus to the surgeon in these cases. It readily admits of the application of external remedies, such as issues, blisters, or other counter-irritants, and also of the free exit of the discharge produced by these, or resulting from the abscesses that may have formed; while at the same time it gives to the joint the necessary support, and prevents all motion between the articulating surfaces of the bones. In cases where large abscesses have formed, it will be found of great service, by the uniform pressure which it produces, in dispersing the purulent matter which they contain, and in suppressing its further secretion, and by this means bringing the parts into the condition necessary for the production of ankylosis.

For the therapeutic treatment of the diseases of the joints, I must refer to the various surgical works, and especially to Sir B. Brodie's elaborate treatise, in which it is fully described.

*Rupture of the muscles and tendons.*—As the perfect restoration of the use of the limb will depend on the close approximation of the lacerated parts, it follows that in the treatment of these injuries, the member must

\* White-swelling is a term that has been applied by various authors to very different diseases, such as inflammation of the synovial membrane, pulpy thickening of the same, ulceration of the cartilages, and caries of the heads of bones. It is, however, to the last that it is the most applicable, from the circumstance that the color of the skin remains the same.

be placed in such a position as will perfectly relax the ruptured muscle or tendon, and bring its several extremities in close apposition, and a suitable apparatus must be employed to maintain them in this condition. The starch bandage will be found the most efficacious one for this purpose. It retains the limb in the requisite state for the perfect coaptation of the ruptured surfaces, and prevents the contraction of the muscles, upon which a separation frequently depends.

Let us take, by way of illustrating its advantages, one of the most serious of this class of accidents—viz., a case of rupture of the tendon of the rectus femoris muscle. In this, there is generally considerable subsequent weakness and lameness of the limb, owing to the inability of the ordinary remedies to keep the parts in a necessary state of extension. Now if a starch bandage be employed, it will overcome every difficulty, and fulfil every indication. During its application, the limb must be completely extended, and the coaptation made, by depressing the upper portion of the muscle, and raising the patella by means of graduated compresses. The starch bandage will also be found of great service in cases of spasmodic affections of the muscles, as in chorea, &c.

*Re-section of the heads of bones.*—This operation is had recourse to when we wish to remove the disease in them without sacrificing the limb. It must therefore be performed before the surrounding soft structures become implicated, and before the patient's health is seriously affected. After the operation, when the wound has nearly or quite healed, the joint requires to be confined in a certain position, and kept perfectly quiet for some time, during the formation of the fibrous tissue, by which the bones eventually become united. The starch bandage in these cases is a very useful apparatus.

In caries and necrosis of the bones also, and in the inflammation which precedes them the firm and equable pressure which this bandage produces will be of great service in checking the accumulation of matter, and in securing the perfect repose of the limb, by which means a considerable degree of irritation will be prevented.

*Congenital Deformities.*—The first of these that I shall mention is spina bifida. The treatment consists in evacuating the fluid of the spinal tumor, then replacing and maintaining the protruded membranes within the vertebral cavity. The advantage of pressure and puncture in these cases was fully exemplified by the success the late Sir

Astley Cooper obtained from it in two instances.\*

Although I have not had an opportunity of witnessing the effects of the starch bandage in the affection under consideration, I can but think, that if properly applied, and care is taken to protect the integuments, covering the tumor with some soft material, in order to prevent inflammation and excoriation, it would prove an exceedingly useful and effectual apparatus. It certainly recommends itself for trial.

Another frequently congenital deformity is club-foot, of which there are three varieties. In these cases, the object in the treatment is to overcome the inordinate contraction of the muscles, by which the different varieties are produced. This can be effected in many instances, when the child is not too old, by apparatus, which both restrain the further action of the muscles, and tend forcibly to bring the foot into its normal position. In some cases it is necessary previously to divide the tendons. Most of the mechanical contrivances that are employed for this purpose are costly, and consequently beyond the reach of the poorer classes. In the starch bandage we have a cheap and convenient remedy, one equally efficacious, and therefore equally, if not more valuable.

There are certain other non-congenital deformities, produced either by the permanent contraction of the muscles or by the shortening and rigidity of the fascæ, or by the gradual contraction of the cicatrices, resulting from burns or extensive ulceration, for which the starch bandage will be equally applicable, after an operation has been performed, for the purpose of overcoming either the contraction of muscles or of the cicatrices, or counteracting the gradual shortening of the fascæ. To this class belong contracted fingers and various kinds of spurious alkylosis, as of the knee and elbow joints.

The deformities arising from burns are frequently very considerable, and often perfectly irremediable. Thus the bones have been known to be dislocated, the joints firmly flexed or bent backwards, the head drawn on one side, the chin united to the integuments covering the sternum, and the thigh to the abdomen. It is always advisable to prevent these sad results as much as possible, by the application of bandages during the process of cicatrization, so as to keep up a constant extension in the opposite direction to that in which the deformity is about

\* For a detailed account of these cases, see the second volume of the "Medico-Chirurgical Transactions," and Cooper's "Dictionary," article, spina bifida.

to be produced. I know of no apparatus that will be found so effectually to attain its object, and with so little inconvenience to the patient or the practitioner, as the bandage under consideration. It may be applied over the ordinary dressings.

In aneurisms and varicose veins it is extremely useful. In the former, its even, but firm pressure, equalizes the circulation through the limb, and by lessening the impetus with which the blood is sent into the aneurismal sac, prevents its dilatation, and promotes the coagulation of its contents, and its subsequent obliteration. In the latter, the support it gives to the limb prevents any undue accumulation of blood in it, and enables the dilated and distended veins to contract on their contents, and propel the blood onwards towards the heart, while its firm and unyielding nature effectually secures them from all external injury.

In umbilical and ventral hernia there is no more certain means of preventing the protrusion of the bowel than the starch bandage. It is applied in the following manner:—The little patient being suspended in the air, in the horizontal position, by two assistants, the surgeon proceeds to return the intestine into the cavity of the abdomen, and having done so, places over the hernial aperture the apex of a graduated compress, upon which firm pressure is made by an assistant. He then takes up a fold of the integuments on each side of the graduated pad, while another assistant passes round the body a linen band, six or seven inches wide. The whole then is firmly secured by a well-starched roller.

The application of this bandage may be extended to other herniæ, both in children and in adults.

In indurated testicle its advantages are very apparent. It produces much more firm and equal pressure than any strapping can do, and does not cause that painful excoriation of the skin which this does invariably.

I might mention several other cases in which it would be beneficial; but I have already given sufficient examples to show its value and importance.—*Lancet*.

#### PRACTICAL REMARKS

*On some points of Trichopathy and the Chemical Pathology of the Human Hair.*

*By Thomas Cattell, Esq., M. D., M. R. C., S. E., &c., Braunston.*

No reply having yet been furnished to the wish of a subscriber expressed in the *Lancet* of March 28th last, as to the ingredients

used, and the practices adopted, in dyeing the hair," I am induced to enter upon some consideration of the subject.

In this are necessarily involved, trichodyschroia, decoloration; trichocrology, coloration; and the general pathology of the hair. The only other trichopathical affections to which I shall here refer are, alopecia, canities, and calvities, or baldness, hoariness, and fall of the hair.

Tricho-dyschroia is a pathological condition of the hair, which may arise from constitutional changes induced by inadequate diet, or disease, the influence of emotions or passions, hereditary influences, &c. There is, however, no cause so manifest as that of chemical reactivity in decolorizing the hair; for example, if the hair of a person be for some time exposed to gaseous chlorine, its natural color disappears, and there is perceived the presence of a bitter adhesive compound. That systematic changes, ushered in by the constant use of a diet, deficient in the elements of the hair may alone, or associated with physical affection, stand as the proximate cause of tricho-dyschroia, is a point, to say the least, which theory justifies us in supposing. In corroboration of the supposition, that tricho-dyschroia is often induced by the direct and powerful influence of emotions and passions, there are not wanting the record of many striking coincidences.

It is, I believe, generally admitted, that old age is an essentially proximate cause of tricho-dyschroia and canities. But to establish the hypothesis, it is necessary to prove that such is uniformly the case. To suppose otherwise, is to suppose this essentially as essentiality, which is a contradiction. We cannot speak of the cause of a physical change as essentially proximate, unless we admit the uniformity of this cause. To affirm, therefore, that old age is the proximate cause of either tricho-dyschroia or canities, is to affirm what is directly contravened by the evidence of numerous facts; still, it is perplexing to offer a solution of the absolute cause of that change which so often occurs in the extremes of apparent juvenility and real decrepitude. We are, however, confident that the effect is the same, whether it occur in the ascension, meridian, or declination of life, as the chemical pathology of each will give us no room to doubt. It is scarcely necessary to observe, that hereditary influence greatly modifies the color of the hair.

With this slight reference to the causes which operate in producing changes, varieties of color, and conditions of the hair, it is here incumbent that we should inquire

what, in a chemical view of the case, constitutes the nature of such changes, varieties, and conditions.

Vauquelin asserts, that the varieties in the color of the hair depend on the presence of a colored fatty matter; but such notion appears to be controverted by the fact, that black hair chiefly recognises for its color the existence of iron in a state of sulphuret. If this colored fatty matter be the proximate cause of all the varieties in the color of the hair, then it is evident that of what color soever this fatty matter is, so must be the color of the hair. Besides, the supposition is opposed to too much factor-alvidence. For example, if we take hair, exhibiting the different varieties of black, auburn, red, or brown, and by chemical reagents deprive it of its sulphur or iron, we deprive it of these colors or varieties. How could this be, if the color in all its varieties depended entirely on the presence of the fatty matter. Again, if we apply to the hair stains of lead or silver, or silver with iron, we immediately recognise a change of color. What is the cause of this change? If it be dependent on the fatty matter, then must this fatty matter assimilate the new color, and produce such a change. But such cannot be the case, though we suppose the sulphur which combined with the metallic oxide existed in the fatty matter.

It is, then, I think, the existence of sulphur in the hair, and not the presence of any supposed colored fatty matter, that may be considered the cause of all the varieties of its color. And this probably not on the mere fact of the existence of sulphur in the hair, but from a variation of its quantity in different hair.

Besides, this opinion may receive additional corroboration from evidence negative as well as positive—that is, suppose we deprive the hair by any means of its sulphur, or suppose the sulphur non-existent in the hair, of what color would it be, or of what utility would it be, to apply in any case stains of silver, lead, or silver with iron?

The supposition, that the relative quantity of the sulphur of the hair to the metallic oxide constitutes the proximate cause of all its natural varieties of color, is moreover, warranted by the fundamental principles of chemistry; for if all substances combine in definite proportions, and if the color of the hair be dependent on the presence of a metallic sulphuret, may we not rightly pronounce, that in proportion to its relative quantity and diffusion will be variety or degree of color?

Tricho-croscology is a compound Greek term, which I have devised appositely to ex-

press the chemical processes employed in reducing some of the unseemly varieties of color to which the hair is subject, to a supposed standard or standards of natural or ideal beauty. These embrace the formation of paste, pommade, and liquid.

1.—Phumalform hair dye.

1. Oxide of lead, three ounces; carbonate of lime, two ounces; mix into a proper consistence with hot water, and apply it to the hair, enveloped in oil-skin.

2. Carbonate of lead in the place of oxide of lead, and proceed as in the other case. The efficacy of this stain depends on the formation of a plumbite of lime.

11.—Steariform hair dye

Nitrate of silver, a drachm; nitric acid, two drachms; iron filings, two drachms: mix. After the lapse of a few hours, pour the supernatant liquor on two drachms of oatmeal. Lastly, well mix with three ounces of lard.

111.—Chulosiform hair dyes.

1. Silver, two drachms; iron filings, half an ounce; nitric acid, one ounce; water, eight ounces: mix. When the metallic substances are dissolved, pour off the supernatant liquor which constitutes the dye.

2. Nitrate of silver, eleven drachms; nitric acid, a drachm; distilled water, twenty ounces; soap, (*sap. viridis*), three drachms; gum-arabic, a drachm: well mix.

3. Nitric acid, a drachm; nitrate of silver, ten drachms; soap, (*sap. viridis*), nine drachms; mucilage, five drachms; water, thirty-seven ounces and a half: mix. This differs from the foregoing only in proportions.

4. Lead filing, two ounces; hartshorn shavings, an ounce; oxide of lead, two drachms; camphor, a drachm; water, a pint. Boil for half-an-hour, and when fine, pour off the supernatant liquor on di-acetate of lead and rosemary leaves, of each one drachm. Again boil, and when sufficiently fine, pour off the supernatant liquor which constitutes the dye.

Of these preparations, as stains for the hair, none claims so decided a preference as the last. It can produce injury to neither the hair, skin, or brain, and possesses the advantage of communicating a beautiful color and curling property to the hair. Whatever objection there may be to the use of dyes containing the nitrate of silver, from their liability to darken the skin, still I regard them preferable to the employment of caustic earths, owing to the depilatory action of the latter.

Before the application of any liquid stain, it is necessary that the hair be freed from all greasy matter. A close brush and a comb are all the requisites in staining the hair.

Connected with the general pathology of the hair, the only two points to which I shall now refer are alopecia and calvities—baldness and the fall of the hair.

Alopecia may arise from any cause destroying the vitality of the bulb of the hair—as, various fevers, the wearing of silk hats, the existence of what, in common parlance, is called worm at the root, neglect in cleansing the head, &c.

Calvities follow precisely analogous causes, and merely differ from alopecia in degree.

To remedy these affections, it would appear, by our daily advertisements, that every advertiser had discovered some secret process—had, in fact, ransacked the whole arcana of science. But leaving these, and the victims that use them, I will mention a general remedy or two which will be found uniformly efficacious, and infinitely more satisfactory in their results than bears'-grease, Macassar oil, or any other advertised preventative or curative:—

1. Rosemary, maiden-hair, southern-wood, myrtle-berries, hazel bark—of each two ounces. Incinerate, and with the incinerated substance make a strong ley, with which to wash the hair at the roots every day, Keep the hair cut short.

2 Carbonate of potash, (perlash,) two drachms; water, a pint: use as the preceding. The efficacy of both these remedial applications depend upon their alkalescent character.

But where a greasy substance is required for the hair, I would suggest the substitution of the elaine of olive oil; though expensive, it will, in many cases, well repay the use, as it never thickens, engenders scurf, or in any way produces detriment to the hair, like common oil or pomade.

The only other greasy matters which I would suggest as substitutes for the elaine are ox-marrow, well agitated in a mortar, and castor-oil, freed from all its adhesive matter.

I trust that, for the future, professional men, and not nostrum-mongers, will take charge of the diseases and affections of the hair.—*Lancet*.

#### Cases of Varicocele treated by Pressure with Observations.

BY T. B. CURLING, LECTURER ON SURGERY, &c., LONDON HOSPITAL.

The author states that, three years ago, a case of varicocele, cured by the application of pressure to the spermatic veins, came under his notice, and being struck with the

peculiar adaptation of this plan of treatment to counteract the injurious effects of the dilated veins, he determined to give it a trial. He has since treated many cases of varicocele by pressure, and as a sufficient period has now elapsed to enable him to form a just opinion of the value of this plan of treatment, and of its advantages over other methods, he ventures to submit the results of his experience in the management of this complaint to the consideration of the fellows of this Society.

The author details three cases of varicocele cured by pressure; the first, at the end of nineteen months; the second at the end of seven months; and the third a case of double varicocele, in ten months. He also alludes to four other cases, in which this plan of treatment was successful in curing the disease. He remarks, that in these cases the dilation of the veins had taken place at a comparatively early period of life, was neither excessive nor of long duration, but was productive of inconvenience and uneasiness, which could be only partially remedied by the suspender; they were precisely the cases in which it was presumed that pressure, by relieving the veins of the superincumbent weight of the blood, would enable their coats to recover their proper size and tone.

Two other cases are related in which great and immediate relief of the distressing symptoms occasionally attendant on varicocele was afforded by pressure, but the patients had not remained under treatment a sufficient period to enable him to judge of the ultimate results.

The author remarks, that little attention is paid to constitutional treatment on varicocele which is commonly regarded as exclusively a local disease. In the class of cases in which the benefit derived from pressure is most apparent, the patients are persons between eighteen and thirty years of age, of weak frame and constitution, and subject to dyspepsia, and whose venous system and circulation are feeble. In these cases the operation of local remedies may be aided materially by general treatment.

After noticing the liability of this disease to relapse, and for this reason recommending the continuance of the truss for some time after all symptoms of the affection are removed, the author adverts to another class of cases, in which the application of pressure is capable of giving considerable relief, though not of curing the disease. They are cases met with at a somewhat advanced period of life, in which the plexus of dilated veins is of large size and of long standing, but productive of only slight inconvenience,

which may be remedied by the suspender. The application of pressure, however not only removes the slight uneasiness but also counteracts the tendency to further dilatation, and prevents the wasting of the testicle, though the enlargement is too great to admit of the vessels being reduced to their former size.

From these observations, the author considers the treatment by pressure to be applicable, either for the cure or relief of the majority of cases of varicocele occurring in practice, and its simplicity, freedom from all risk, and efficacy, in his opinion, render it superior to every other method of treatment that has hitherto been tried. In all the cases which he has treated, he has employed the moxain-lever truss, which seems better adapted to make the necessary pressure at the abdominal ring than any other instrument that he knows of. In general the truss need be worn only during the day. When the scrotum is pendulous, or the plexus of dilated veins considerable, he advises the addition of the silk-net suspender.

Mr. Lloyd was always able to relieve varicocele without employing a truss. Dilatation of the veins alone in varicocele did not cause pain or inconvenience, any more than a simple varicose condition of the veins of the leg produced suffering. It was when inflammation came on that the pain and inconvenience were experienced. Alay that inflammation, and you relieved your patient.

Mr. Curling in answer to a question, said that he had seen one case in which the use of the truss had been discontinued for four months, and there had been no return of the complaint. In answer to Mr. Lloyd, he observed, that the treatment recommended in the paper had reference only to those cases in which the patient really suffered from the disease. These sufferings might exist independent of inflammation, as the sense of weight &c., experienced by patients in this disease, and the means taken to prevent it, would testify.

Mr. Solly referred to the case of a hard-working smith, who, after wearing a truss for six months had been cured.

Mr. Coulson, though he had not employed a truss in his own practice had known instances in which varicocele had been relieved by such application. When varicocele became troublesome, he was in the habit of drawing the scrotum through Wormald's "scrotal ring," by which means the testicle was drawn up close to the abdominal ring, and this with a suspender, succeeded in affording relief. The apparatus was removed at night.

Mr. Partridge had seen a gentleman who suffered from varicocele complicated with a hernia, which it was difficult to return, and in whom the scrotum was so painful that he could not bear even the pressure of a suspender. The hernia was so difficult to return, that he was ordered to lay in the recumbent position for six months. The hernia was then reduced; he wore a truss, and the varicocele had since much diminished in size.

Mr. Streeter alluded to the remark of Sir C. Bell, to the effect, that he had known varicocele much relieved, when, having been mistaken for hernia, a truss had been applied to it.

ON THE INTERNAL STRUCTURE OF THE HUMAN KIDNEY, AND ALL THE CHANGES WHICH ITS SEVERAL COMPOUND PARTS UNDERGO IN "BRIGHT'S DISEASE." By Joseph Toynbee, Esq., Senior Surgeon to St. George's and St. James General Dispensary.

This paper contains the result of the author's researches into the structure and into the nature of Bright's disease of the kidney, since 1838, during between two and three years he was engaged in pursuing investigations in conjunction with Dr. Bright, but as a variety of circumstances prevented the publication of a work, the result of their joint labors, the author details but the principal facts which have been elicited. Feeling how much is due to the assistance and cooperation of Dr. Bright, at whose expense the greater part of the extended series of drawings elucidating the paper were made, the author states, that it is not without some degree of diffidence that he prefixes his name to the communication.

In the division of the paper on the "Anatomy of the Kidney," the author successively describes minutely the result of the examination into the parenchyma, the tubuli uriniferi, the arteries, veins, and nerves of the organ, in each of which departments views are advanced, varying considerably from those of modern and former anatomists.

In the pathological observations, the author adheres to the opinion advanced by Dr. Bright, and lately so ably advocated by Dr. G. Robinson, that a congested condition of the organ precedes the important changes which subsequently occur in the three stages of disease. The author then proceeds to demonstrate that the arteries first become diseased and that the tubuli veins and parenchyma of the organ follow.

The three stages of the disease are illus-

trated by an elaborate series of drawings in which the various successive changes are indicated, and the paper concludes by pointing to the various plans which should be carried out for the prevention of this disease at present so formidable in all classes of society.

Dr. C. J. B. Williams said that at that late period of the evening, and of the session he would not intrude long on the attention of the Society; but before noticing the subject of the last paper, he could not but express his regret at the *embarras de richesses* with which they had been overwhelmed to-night; almost each one of the interesting papers, of which only either abstracts or the titles had been read, might have afforded a sufficient scope for an evening's digestion and discussion; as it was (no doubt unavoidably), the subjects were scarcely intelligible, and the valuable pathological drawings and specimens were rendered useless.

The last paper treated of a most important subject; and admitting as he did the great value of Mr. Toynbee's researches, he would not lose the opportunity of expressing dissent from the concurrence which Mr. Toynbee expressed with the views of Dr. Johnson, as conveyed in a paper read at the commencement of the session. He (Dr. Williams) not only did not consider that fatty deposit in the kidney to be the first stage of Bright's disease, but he could not admit that it is an essential part of the disease at all. Further he would state as the result of careful microscopic investigation by Dr. Richard Quain, confirmed by his own examination of numerous specimens, that the deposit in this disease is not confined to the uriniferous tubes, but appears on their exterior interstices between the vessels. This corresponds with the views which he had long held and published on the subject, that the deposit consists of albuminous matter like that effused from vessels affected with inflammation or a certain amount of congestion, and may, like such fibrinous effusions, present considerable varieties in its mechanical and chemical condition. This deposit mostly consists of granular matter; but the granules in one case are contained in cells, resembling exudation corpuscles rather than the proper epithelium cells of the uriniferous tubes, and are seen without the tubes as well as within them, and therefore cannot be a multiplication of these cells. The distinction may be further seen on contrasting a healthy kidney with one diseased; but here he begged to observe, that it is a rare thing to find a perfectly healthy kidney in the dead body in this metropolis. A change of structure, the extreme of which

constitutes Bright's disease, is in slight degrees exhibited in a large majority of the kidneys of adults examined in hospitals. But if we contrast the healthy kidney of a young subject, we see in its beautiful regular, oval, nucleated epithelial cells, an appearance quite different from the large round granular cells which stuff the tubes, and block up the parenchyma in the early stages of Bright's disease. It is this stuffing and obstructing that interrupts the function of the kidney, and eventually alters its structure. In the more advanced forms of the disease, the granular matter is seen without its cell walls, and sometimes interwoven with filamentous tissue. The facts which he (Dr. Williams) would adduce against the notion, that the deposit is of a fatty nature, are derived from its optical and its chemical properties. Although, occasionally, fat globules in considerable numbers may be seen in it, this is an exception rather than the rule. The granular matter, in most instances, is far less refractive than oil globules are, such for example, as are commonly seen in the cells of the liver, as may be made obvious by comparing them in the same field. The chemical reaction of the matter also differs from that of fat, for the granules resist the action of caustic potash and of æther, separate or combined, whereas, acetic acid partially dissolves them, a fact mentioned in the abstract of Mr. Busk's paper read to-night. He (Dr. Williams) was aware that Mr. Gulliver and others entertained the opinion that the molecular base of all nucleated cells is of a fatty nature, but that was a subject foreign to the present question, which was whether or not the morbid deposit in Bright's disease is chiefly fat, like that in fatty degeneration of the liver. This question he would answer in the negative, and conclude by the additional argument, that it is by no means low in specific gravity.

#### On the action of Imperceptible Agents on the Living Body

BY PROFESSOR D'AMADOR.

The above is the title of a paper read by the distinguished Professor of Pathology in the University of Montpellier, before the scientific Congrès at Nîmes. Professor D'Amador though occupying the Pathological chair in an Allopathic University, is a declared adherent of Homœopathy; and the European reputation which his profound learning and brilliant talents have gained him, render peculiarly interesting any thing proceeding from his pen. Want of space forbids us giving more than a brief analysis



of the memoir whose title we have given above; but a careful perusal of the original, which is to be found in the 2nd vol. of the "Bulletin de la Société Homœopathique," p. 131, will amply reward all who take an interest in the truly scientific developement of Homœopathy.

The author commences by asserting, that all actions and impressions whatever in a living body are entirely vital or dynamic. Hence, food, poisons, viruses, miasms, and all the different kinds of stimulants that are applied to the economy, as well internally as externally, cannot have, and, indeed, have none other than a dynamic action; and hence, almost all that has hitherto been attributed to absorption, is destitute of foundation, and on examination is found to be false.

In proof of this assertion he cites various facts from the domains of hygiene, physiology, toxicology, and pathology. It may be said that light, heat, water, and oxygen,—that is to say, all that is most subtle, most ethereal, and least material in creation, are the true aliments of life. Not to mention those extraordinary but authentic cases where life has been prolonged, during months and even years of total abstinence, other and more familiar examples of this fact are not wanting. The developement of the chick, strictly secluded from all external influences; the production of a beautiful flower from the bulb, which receives no other nourishment than the vapour of water; the growth of vegetables, on cloth, in well washed sand, in litharge, in flowers of sulphur, in unglazed leaden shot, supplied with no other nourishment than distilled water; but, nevertheless, presenting on analysis all the constituent parts of the same vegetables growing in the richest soils, as shown in the experiments of M. Braconnot, are striking illustrations of this fact; and the observation of them drew from M. Braconnot this remarkable expression: "Oxygen and hydrogen—that is, water aided by the heat of the sun, appear to be the only elementary substances whence the universe was formed."

The function of digestion, apparently the most material and most chemical of all functions, is the most purely vital in its causes. Hence it is that the quantity of the nutritive substance is often the least important part, and that attention should be more particularly paid to its exciting quality and stimulating power. The dynamic effect of fluid aliments is still more evident, their result is rapid, often instantaneous. Set before a person worn out with fatigue, the most substantial viands, he will scarcely touch them, and will not at first experience any benefit from them; but give him the smallest quantity of brandy,

and in an instant he feels its beneficial effects.

The subject of fecundation furnishes our author with a fruitful source of illustrations for his doctrine; and the experiments of Spallanzani with the ova of the frog, the impregnation of women where the hymen was still perfect, the observations of Harvey, with respect to the fecundation of bitches and rabbits, in whose wombs no trace of semen could be discovered, are successively adduced.

"And again," he asks, "what are relative greatness and smallness in the case of the seeds of vegetables, but a mere *usus natura*? Who could believe that invisible seeds of plants are continually suspended in the atmosphere?—that those of mosses, fungi, of lichens elude our eye, and float invisible in the circumambient air? Who could believe, if experience did not prove it to us every day, that within the case of a seed, which, from its minuteness, cannot be perceived by the microscope itself, there is contained the power which shall one day produce a vegetable? Who could believe, in fine, that in the embryo of the acorn there exists, in infinitely little, the largest tree of the forest, which only stands in need of developement? According to Dodart, an elm can produce, in a single year, 529,000 seeds; Ray counted 32,000 on a stalk of tobacco. If all these seeds should come to perfection, it would only require a few generations, and a very small number of years, to cover the whole surface of the habitable globe with vegetables. If, then, atoms can produce an entire being, why should we tax them with impotence when the question is about merely modifying a being? If an atom gives life, is it more difficult to conceive that it may change the mode of being? When the *greater* exists and starts up before us in the processes of nature, why should the *less* be declared impossible?"

From the department of toxicology the learned Professor instances, in support of his views, the violent effects of a drop of prussic acid; the arsenical preparation celebrated in the 16th and 17th centuries, under the name of *Aqua toffana*, which killed with the rapidity of lightning; the poison of the wasp, hornet, and bee, the smallest atom of which placed on the tongue burns it as severely as the most concentrated mineral acids; the virus of the scorpion, of certain spiders, and of serpents; the fresh water polypus, which, of all poisonous animals, possesses the most active venom. The experiments of Fontana show that the *thousandth part of a grain* of the poison of the viper, inserted in a muscle, suffices to kill a sparrow. Some plants furnish poisons which surpass in their effects

the most corrosive metallic poisons. De la Brosse in his *Voyage aux régions intertropicales*, has these words:—"There arrived seven or eight negroes in palanquins, the principal personages of Lowango, who presented their hands to be shaken by the French and English officers. These negroes had previously rubbed their hands with an herb, which is so extremely poisonous that it takes effect in a moment. They succeeded so well in their nefarious designs, that five captains and three surgeons fell dead on the spot." De la Brosse does not mention how the negroes preserved themselves from the effects of the deadly poison they had in their hands.

The effluvia exhaled by certain plants, the dew or drops of rain that fall from the leaves, can produce injurious effects, as is said to be the case with the mancinilla and the rhus toxicodendron.

From pathology the Professor cites the following facts:—The minute quantity of matter from the malignant carbuncle, and of saliva from the rabid dog, which are sufficient to transmit these diseases; the imperceptible nature of the miasms, which produce respectively syphilis, small-pox, the plague, cholera, and the instantaneous manner in which they infect the organism; for although the morbid state is not manifested, it may be, until after the lapse of a considerable time, this only proves that internal disease requires that time to ripen and fructify, in the same manner as the flowering of the vegetable announces its maturity, or the development of the fœtus shows that conception has taken place.

The comparison of the disease to the flowering of a plant has given rise to some useful practical reflections by Professor D'Amador, which we shall here quote:—

"An individual is affected to-day with some morbid germ, but the products of the infection do not appear externally until after the lapse of four, six, eight, fourteen days, or even a month. The interval which elapses between the moment of infection and that in which the disease manifests itself, is the period of the germination and growth of the inoculated germ: it corresponds exactly to the latent and unnoticed stage during which the seed buried in the earth undergoes a fecundating incubation. The eruption and all the other symptoms are but the development of the morbid germ, as the flowering and fructification of the plant represent the visible evolution of the germ.—Hence I affirm, that what modern pathology regards as the root of diseases—*e. g.* the exanthemata, is the veritable, the sole cause of the terrible ravages they commit on mankind. What should we say of the agricul-

turist who in order to modify the life of the tree, should direct his attention to the flowers and fruit, and neglect the roots? The therapists of the present day do this; and I shall leave it to your sagacity to say what will be the ulterior consequence of such conduct.

In truth, the destruction of its flowers or fruit does not cause the death of the vegetable; and thus it is with syphilis, and poena, and other eruptive diseases. To canterize, dry up, or otherwise forcibly destroy chancres, is but to give new strength to the disease; as plants acquire fresh vigor from being pruned, and in the following spring shoot forth more luxuriant flowers. After the material destruction of their external signs, which may be regarded as the product of fructification, they send forth new flowers, which medical men have the simplicity to regard as a new disease."

The above is a brief outline of the facts presented to our attention in the paper of Professor D'Amador; but its chief interest lies in the conclusions to which the author arrives, which although somewhat opposed where theoretical, to our own physiological faith, can hardly fail to attract the attention and convince the understanding of the numerous adherents of the Montpellier or dynamic schools, which boasts of following out the principles of Hippocrates, and whose ablest exponent finds in the writings of Flahennann the complement of the doctrines of the sage of Cos.

After adducing the well known facts of the chemical purity of the air in localities where ague, the plague, the cholera, or epidemic diseases are committing their ravages; after observing that the contents of the poison-bag of the viper resembles in chemical composition sweet almond oil; that the pus of the pestiferous bubo, the lymph of the vaccine pustule, differ not, save in their effects, from ordinary pus and lymph; he infers that the material we subject to our analysis is but the vehicle in which an immaterial ethereal virus resides, analogous in this respect to the vivifying principle of the organized being. But we shall give his own eloquent words:

"What, gentlemen, can we conclude from all this, but that pathology resembles other branches of our science? what can we conclude, if not that a morbid cause is always, and under all circumstances, the product of a force, and that a material form in which it presents itself to our view, is but the gross covering that conceals it from us: that external forces only act on our organs when they meet with forces in us on which they can act: hence the invisible, the instantaneous

ous character, the celerity of pathogenetic actions, whether of contagious, or of epidemics, or of the natural or artificial inoculation of diseases. In all cases it is forces which meet, combat, combine, repel, neutralize each other, or mutually regulate one another. Our health, disease, death, our very existence, is but the result of these forces. Thus it is that nature, in the immense scale of being, has sketched, as it were, an entire system of forces, and that passing from forces which are not precipitous to those that are, from inanimate to living forces, she has, by gradually progressive shades, at last developed in man the supreme type of forces, and the most elevated degree of existence. In man, indeed, life does not exist solely in sensible and irritable organs, in the involuntary motions they execute, nor in the connected chain produced and maintained by the combined actions of life. In man true life consists in thought, in that intellectual something which gives us consciousness of our existence, and in that power of will which renders us masters of ourselves. Such is life at its culminating point, *force par excellence*, the greatest, the most profound, the most inexplicable of all mysteries. Life, which not only gives us the enjoyment of ourselves, but which attaches us to all that surrounds us. It is by means of it that the grand spectacle of nature attracts our attention, that our ideas dart from pole to pole more rapidly than lightning; it is by means of it that thought embraces in its grasp in a moment of time the whole expanse of worlds, all the vast extent of the universe, and loses itself in infinity.

"There is, then, in every science, and particularly in medicine, both sensible facts which are seen, and invisible facts which can only be conceived, both demonstrable and inductive facts, both facts which are apparent, and such as are more concealed, which, without being seen, regulate and govern the other facts. It is these invisible and only essential facts that alone are important, for they are the generators of other facts; and in every case that which is not seen governs that which is visible. These facts are the various forces of nature. These forces are at the bottom of all visible phenomena, they produce them, they modify them for good or for evil, and, since they are the true causes, if we modify them we shall modify the phenomena themselves. 'For the true springs of our organization,' as Buffon remarks, 'are not those muscles, those veins, those arteries, which are described with such exactness and care. There exist in organized bodies internal forces, which do not follow the gross mechanical laws we imag-

ine, and to which we would reduce everything.' This thought has been expressed in different terms, by a man as great in the astronomical, as Buffon was in the physical sciences, whose name corresponds in France to that of Newton in England. 'Beyond the limits of this visible anatomy,' says Laplace, 'commences another anatomy whose phenomena we cannot perceive; beyond the limits of this external physiology of forces, of action, and of motion, exists another invisible physiology, whose principles, effects, and laws, it is of greater importance to know.' And, we may add, that beyond the limits of these material and voluminous therapeutics, there are other therapeutics far more important to know, and far more useful to practice.

"Thus the greatest men, of whom the sciences usually opposed in spirit to medicine can boast, are unanimous in the admission of a vital dynamism; and I imagine, gentlemen, I have a fair title for obtaining your assent to this great dogma, by placing it under the ægis of these illustrious names.

"I have thus, I conceive, proved to you that the most active agents in nature are imperceptible entities, which, like electricity, magnetism, heat, and light, have neither odor, savor, color, volume, dimensions, determinate shapes, nor definite proportions; which pervade all things without being any where perceptible; which govern all things without being seen themselves; which penetrate every where, but whose essence we cannot penetrate. Agents of life, of health, of death, and of disease, nature has disseminated them every where throughout the immensity of space, under the graceful form of flowers, in the fluids which are appropriated or rejected by animals and plants. To these invisible agents, to these forces we owe our earliest breath; to them also is due our latest sigh; from them alone is derived the continuance of our existence, and they are the source of the derangements we are subject to. Physiology, hygiene, toxicology, and pathology, in other words, the sciences of life, of health, of death, and of disease, are all dependent on the same principle; for it is a force, a breath, that creates, kills, preserves us, that produces our diseases, and occasions our sufferings.

"It remains to be proved, gentlemen, that the therapeutics are, and ought to be, similar to the other departments of our art,—that it is also a breath, a force, that cures and relieves our disorders. It remains to be proved, in order to trace the complete scientific circle, that the therapeutics of forces, the dynamic therapeutics, the vitalist therapeutics, (for they are all the same,) are like-

wise, of all possible therapeutics, if not the only true, at least the speediest, the surest, the most appropriate, and, in the vast majority of cases, the most efficacious of all therapeutics; that they are the most rational in theory and the most successful in their practical application; that they alone ought to be, that they alone are, able to realize the three grand conditions that Celsus, even at the early period when he flourished, demanded of all useful therapeutics, to cure diseases quickly, certainly, and agreeably. In a word, it remains to be proved that if there be a dynamical, a vital physiology, hygiene, toxicology, and pathology, there ought to be therapeutics of a similar character."

After quoting some facts from Allopathic observers to prove that such is the case, among others the experiments of M. Lafarge, who has always succeeded in producing an eruption of a specific character by the inoculation of the most minute portions of laudanum—1-500th, 1-1000th, 1-2000th of a grain, and the observations of M. Seubeiran with respect to the efficacy of extremely minute doses of a certain ferruginous preparation, our author goes on to say:

"But it will be said, these facts may be true, but they are repugnant to common sense. Gentlemen, if the action of imperceptible agents is opposed to common sense, that is as much as to say that experience is opposed to it; but as common sense and experience are not, and cannot be contradictory, if common sense refuses to believe in the action of imperceptible agents, common sense stands in need of a thorough reform, which experience will be able to effect.—Science, which is nothing else than the reflection of experience, has, in this manner, reformed common sense several times. Common sense believed for centuries that the world was fixed, and astronomical science corrected common sense, and brought it to its own way of thinking. The virtue of vaccine was repugnant to common sense, at the period of its discovery: but, now-a-days, experience has so completely demonstrated it, that any one who doubted it would be held to be destitute of common sense. In fine, common sense rebelled and with some reason, against the frightful doses of the Italian school. It could not be comprehended how twenty grains of tartar emetic would not produce vomiting, when two grains caused copious evacuation; but here again, as elsewhere, science—that is to say experience, has advantageously put common sense to rights.

"And should we, with this before us, treat with contempt a system of the thera-

peutics which is but the application of one of our most certain maxims? To the diseased vital forces let us oppose the forces of natural substances, but divested of all material covering; these forces will thus be brought face to face; they will act directly on each other, without any interposing agent; and hence will ensue more rapid, more certain, and more agreeable cures.

\* \* \* \* \* Observe, finally, gentlemen, that the vital therapeutics of which I speak are to medicine what the study of electricity and the imponderables has been to chemistry,—what the study of motive powers has been to mechanical art. \* \* \* \* \* Far from overthrowing Hippocratism, or the true vitalism of Montpellier, our modern therapeutics confirm, complete, extend, and apply it, add what was wanting to it and supply its deficiencies. The Divine Old Man bequeathed to us, so to say, the code of medicine, in which its great laws were laid down, its principles registered, its fundamental dogmas established; the work of ages is and ever shall be to deduce from these premises the most remote consequences; to bring all the great facts which subsequent discoveries may reveal and produce within the Hippocratic domain. Some of these discoveries have been already gathered in, and can never more be lost; others have been sown, and as yet exist but in the germ; but *nought* can blast this germ; on the contrary it will grow, and the tree will yield its fruit to us and to all posterity."

#### Cases of the Pathogenetic Action of Sulphur and Cantharides.

The following two interesting cases were observed at the Liverpool Homoeopathic Dispensary:

##### CANTHARIDES.

F. T., aged 17, had been all day engaged in making the "Emplastrum Cantharidis" of the shops. He had been standing over the pan in which the material was boiling, but toward the close of the day he was affected with the following symptoms: Great dimness of sight, attended with smarting and burning round the eyelids, and round the balls of the eyes; constant lachrymation; the eyes turned towards the nose; twitching of the eyelids; he could not close his eyes without great pain, from smarting of the lids chiefly; there was considerable redness, and an apparent distress from the inflammation of both eyes.

On hearing how he had been engaged, the

suffering was at once attributed to Cantharides; but, whether he had been affected by the mere effluvia, or any particles of the powder had got into his eyes, he could not tell.

Some drops of the strong camphor tincture were at once given him.

The next morning every thing appeared to him to be yellow. The nose was also considerably affected; some swelling with redness and heat, within as well as without, with the appearance of suffering from very severe coryza. He took spirits of camphor every hour.

The third day his eyes were quite well; the dimness and haziness of sight had given place to the usual clearness of vision; slight appearances of the affection of the nose only remained. The day following he returned to his usual occupations.

#### SULPHUR.

John Kerney, aged 21, had severe tooth-ache; and having read in a newspaper that smoking Sulphur was a certain cure for tooth-ache, he smoked three pipesful in rapid succession; he then went to bed, and fell asleep, but awoke in an hour in great fright and distress; his symptoms were dyspnoea to a sense of suffocation, with severe constriction of the chest, extreme faintness, vehement palpitation of the heart, and horror of instant death. There were universal tremors; his head seemed to him distended, with loud noises in the ears; he distinguished especially a boring pain over the left eye; his bowels were obstinately obstructed for four days, and no action could be produced by various aperients which he took. The day after smoking the Sulphur he had intolerable itching over the whole body; this was followed in a day or two by the appearance of reddish blotches over the trunk and extremities; he had severe pain across the loins.

He was seen, as a dispensary patient, for the first time, on the 18th September, 1845. At that time, his face was very pale, and collapsed with an expression of great anxiety; there was still vehement palpitation, the pulse feeble and very irregular; considerable dyspnoea, with sense of constriction; intense head-ache, with sensation that his head and ears were stuffed; loud noise in the ears; tremor of the limbs, with considerable itching of the arms and legs, but no eruption was to be seen; he complained of pains throughout the body. Pulsatilla 3 was given every four hours, and this medicine was continued through the treatment, (with the exception of a few doses of Aconite.)

September 27. No symptoms remaining, except a very slight uneasiness on taking a deep inspiration. He was allowed to return to his employment.

## THE DISSECTOR.

NEW-YORK, OCTOBER 1, 1846.

The Principal Articles in the Present Number.

In this number of the *Dissector*, we have the pleasure of presenting our readers with several articles of unusual interest and value. In the three original "Tracts on Consumption" which have enriched the previous numbers of the present volume, we now add the fourth and most practically interesting. These remarkably able and learned papers have commanded great attention and won for their unobtrusive author a high degree of respect from many minds of an exalted order. They are distinguished not less for the originality, completeness and cogency of their method of investigation, than for the perspicuity and general terseness of composition. The reader will be gratified to perceive that they are to be continued into a portion, at least of the next volume of this Journal.

Among the other articles which we consider worthy of special consideration is the one extracted from the British Journal of Homeopathy, "On the Action of the Imperceptible Agents on the Living Body."—The paper does not assume to be an elaborate and thorough development of the subject, and it would not be difficult to furnish a multitude of additional and more striking illustrations even of its main positions. But it affords most gratifying and exhilarating evidence of the curiosity which this most profound and comprehensive—nay, substantive field of philosophy is enkindling in intellectual Europe.

With this number of the *Dissector* closes its third volume. The friends of untrammelled inquiry into the principles and practice of medicine and the collateral sciences, which this Journal was established to exemplify and promote, will be gratified to

learn that, even in the utter neglect of the usual artificial and business efforts to ensure the success of a new periodical, and notwithstanding the professional hostility which it has rather courted than evaded, it has acquired a support and influence which justify its continued publication under prospects of increasing its sphere of usefulness to a most flattering extent. And the Editor ventures to hope that the improvements which he contemplates making in the diversity and originality of its matter, will render it more deserving of the unwonted and truly cordial support it has received.

#### Mesmeric Surgery.

On Tuesday morning last, at 40 Hudson street, a boy nine years old, was put in the mesmeric sleep, and the operation for *strabismus* performed, without his evincing any sensibility, until nearly through, and then but in a very slight degree. During the operation, the boy was lying on the table without any restraint, and made not the slightest movement, and after waking up, was wholly unconscious of the operation having been performed.

The boy was put in the mesmeric state and operated upon by Bro. Dr. James Ashley, before quite a number of gentlemen.

#### Another Mesmeric Surgical Operation.

We have been rather sceptical, heretofore, regarding those mysteries of mesmerism, but expect now a strong disposition to believe. An operation for *strabismus* (squinting) was performed on Monday, 14th inst., at 40 Hudson street, upon a girl, while in the mesmeric sleep, with admirable success.—She knew nothing of the operation until it was over. Several medical gentlemen were present who appeared to be much gratified.

The operation was performed with admirable science and skill, by Dr. James Ashley, a young physician and surgeon of great talent and industry, and ardently devoted to his profession. His office is No. 40 Hudson street.—*Golden Rule*.

We were present at the last of the above operations, and although the girl knew nothing of the operation until it was over and she was informed of it when in her nat-

ural state, yet she retained her sensibility in the magnetized state as many others do, and felt the operation severely in that state.

#### HOMŒOPATHY.

The following case is extracted from the American Journal of Homœopathy, of Aug. 15, 1846, p. 101.

#### A CASE.

Mrs. B., aged 55, of a sanguine, nervous temperament, had been sick for three years. One year ago a record was made of her case, and seemingly the most appropriate drugs administered, with only an occasional partial mitigation. The attacks became severe, and were wearing out one of the best constitutions. This lady is intelligent and one of the firmest advocates of Homœopathy, notwithstanding she could, herself, procure no relief from it. The *law of cure* she knew to be true: but the remedy was wanting.

Lately another record was taken of this case, which was as follows:

Pain on the top of the head in the morning, swimming in head when stooping or rising, cloudiness of the eyes, soreness of mouth and throat, dry cough in the morning, attacks of tearing pain, sometimes stinging and sharp, commencing in the stomach and extending to the sides, and shoulders and nape of the neck, with stiffness; distress in stomach like a weight, mitigated by eating; sense of fullness in stomach; wind on stomach, eructations; cannot bear the pressure of even light clothes. Pain in the bowels, bearing down or pressing pain; pain in the left side, as if something adhered to the lower ribs. Constipation; sense of dragging and falling in abdomen; pain as if in the bones, like rheumatism; jerking of the feet in the evening. Numbness of the arms, with pricking in the fingers. Sleep disturbed, frequent wakings; pain in the stomach at night. Fatigue from walking; excessive debility; sufferings aggravated on change of weather. The pains are tearing, stinging, pressing and shifting—sometimes on the left, and sometimes on the right sides; and then on both sides at the same time; some of them aggravated by movement, and others mitigated by lying down and rest.

The attacks had occurred daily at five o'clock, P. M., and almost invariably at night, awaking her from sleeping, there had been no intermission for months.

As I had been trying *rhus radicans* on myself for some weeks, I was struck with the

peculiar stinging, pricking pains of this case as corresponding to those I had experienced in my own person by the above drug. On the 26th of June last, at 4 o'clock P. M., I gave her three globules of the third dilution of *rhys radicans*. She had no attack that day, nor has had any since;—her health improved, and it is now good.

S——.

The above is a plain case of chronic-tubercula of the muscles, (chronic rheumatism) and is invariably distinguished in an instant by the pain produced by pressure with the thumb and fingers on the back of the neck. This would not, however, answer for the homœopathist. He must make a minute record of every old astrolgical symptom he can find in each case, and then commence a search in his books for the medicine which is homœopathic to them, or produces the same symptoms in a state of health. It will uniformly require from three to four hour's search to find the medicine, and in the meantime the wind has often changed, and the symptoms of which the doctor has made a record have also changed entirely with the wind, as every old woman knew they would, before the record was made, and this was the reason why the "seemingly most appropriate drugs were administered with only an occasional partial mitigation." The doctor, however, had fortunately been trying *rhys radicans* on himself, and was struck with the peculiar stinging, pricking pains of this case, as corresponding to those he had experienced on his own person in a healthy state, by the above drug, and gave the lady three globules of the third dilution when the disease disappeared—"her health improved, and it is now good," or in other words the disease was cured with one homœopathic dose of *rhys radicans*.

On reading this case, we sought for, and luckily obtained a few doses of the precious drug, and soon prescribed it in ten cases of chronic rheumatism, with the "peculiar" or "stinging and pricking pains." In six of these cases the symptoms were apparently palliated temporarily, but in the other four cases, no effect whatever was observable.

We could give a great number of cases of chronic tubercula of the organs, and also of chronic mucosis of the organs and muscles, which have been under the treatment of the most distinguished homœopathists from three months to three years, with no other effect than that of an occasional partial mitigation of the symptoms. Yet the homœopathic treatment of diseases is greatly superior to the old allopathic practice in curing acute, and mitigating the symptoms in chronic diseases.

#### BIRMINGHAM LYING-IN HOSPITAL.

##### Medical and Statistical Report.

BY J. M. WADDY, M. D.,

London, M. R. C. S., Senior Surgeon to the Hospital.

Before entering on the following statistics, it is well to remark, that as the benefits of the charity are limited to married women, many injurious complications of labor are to a great degree avoided; but the class of patients attended upon are, for the most part, poorly fed, clothed, and lodged, and many of them are employed in manufactories, and exposed to circumstances, of a moral and physical nature, extremely detrimental to their health and comfort.

The early age at which some marriages appear to have taken place, will strike the reader; but the freedom of intercourse between young persons of both sexes employed in factories, especially at meal times, and after work is over in the evenings, tends to the early development of sexual inclinations, and often induces early, ill-assorted, and compulsory marriages. These early marriages are extremely prejudicial to health—are embittered by constant disappointments, and are often associated with extreme poverty and wretchedness. No wonder, then, if in persons thus circumstanced, labor should often prove tedious, difficult and dangerous, and the offspring weak and sickly, having in birth the germ of future ill-health and premature old age, and the promise of an early grave.

The marriage of factory girls with apprentices, whose low wages are scarcely sufficient to procure subsistence for themselves, and which are quite inadequate to the support and proper maintenance of a family, produces very often scenes of misery

and wretchedness, surpassing, in their cold reality, the woes of fiction. Such scenes rarely leave their victims untainted in morals, never unprejudiced in health; and it is a subject worthy the attention of the statesman, to find a remedy for a system so burdened with social evil, and which, whilst it continues, must in many instances constitute an almost impenetrable barrier to the reception of moral and religious truth.

In Manchester, and in many other of our large manufacturing towns, the nature of the employment, together with the great number of hands employed, are such as to admit of a system of strict moral discipline being enforced, with a proper separation and classification of the sexes. This however cannot be done to any great extent in the number of small manufactories with which Birmingham and its neighborhood abound. The following are some of the results which presented themselves in the practice of the hospital during the last year:

TABLE I.

*Age of Marriage.*—Of 528 females, 1 had married at fourteen years of age; 4 at fifteen; 13 at sixteen; 44 at seventeen; 85 at eighteen; 81 at nineteen; 97 at twenty; 76 at twenty-one; 55 at twenty-two; 36 at both twenty-three and twenty-four; and 33 at twenty-five; beyond which age the number of marriages greatly diminished, and only 1 married respectively at the ages of thirty-two, thirty-four, thirty-seven and thirty-eight.

Of 574 males in Birmingham, it was also ascertained that 1 had married at fifteen years of age; 3 at sixteen; 12 at seventeen; 28 at eighteen; 42 at nineteen; 84 at twenty; 52 at twenty-one; 60 at twenty-two; 52 at twenty-three; 51 at twenty-four; 44 at twenty-five; 34 at twenty-six; and 31 at twenty-seven; beyond which period there was a material diminution; and only 1 married respectively at the ages of thirty-nine, forty, forty-two and forty-four.

TABLE II.

*Age at the commencement of menstruation.*—Of 623 females, in 1 the catamenia occurred at nine years of age; 2 menstruated at ten; 15 at eleven; 46 at twelve; 87 at thirteen; 130 at fourteen; 115 at fifteen; 105 at sixteen; 67 at seventeen; 43 at eighteen; 10 at nineteen; and 2 at twenty.

TABLE III.

*Ages of 708 women registered for attendance during confinement, (at the drawing out of the table.)*—One at sixteen years of age; 2 at seventeen; 4 at eighteen; 6 at nineteen; 27 at twenty; 21 at twenty-one; 33 at twenty-

ty-two; 36 at twenty-three; 45 at twenty-four; 37 at twenty-five; 38 at twenty-six; 35 at twenty-seven; 41 at twenty-eight; 34 at twenty-nine; 52 at thirty; 28 at thirty-one; 27 at thirty-two; 39 at thirty-three; 40 at thirty-four; 31 at thirty-five; 23 at thirty-six; and 20 at thirty-seven; beyond which age a marked diminution in the numbers took place, except that at forty years 21 women were registered.

TABLE IV.

*Previous labors.*—Of 641 of the above women registered, 38 were primiparous; 104 had had one child; 94 two children; 70 three; 75 four; 77 five; 53 six; 28 seven; 43 eight; 25 nine; 20 ten; 7 eleven; 8 twelve; 2 thirteen; 1 fourteen; and 1 sixteen children.

TABLE V.

*Previous abortions.*—Of 268 women, 32 had aborted at two months; 139 at three months; 48 at four months; 22 at five months; 12 at six months; and 15 at seven months.

TABLE VI.

*Intervals between deliveries.*—Of 275 women, 3 had an interval between their confinements of ten months; 1 of eleven months; 51 of a year; 100 of a year and a half; 156 of two years; 87 of two years and a half; 51 of three years; 16 of three years and a half; 19 of four years; 6 of four years and a half; 5 of five years; 8 of five years and a half; one of eight years; and 2 respectively of ten, twelve and thirteen years.

TABLE VII.

*Duration of labor.*—Of 470 labors, 10 had terminated in an hour from their commencement; 32 in two hours; 34 in three hours; 63 in four hours; 51 in seven hours; 26 in eight hours; 28 in nine hours; 18 in ten hours; 17 in eleven hours; 27 in twelve hours; 17 in thirteen hours; 8 in fourteen hours; 12 in fifteen hours; 2 in sixteen hours; 2 in seventeen hours; 3 in eighteen hours; 5 in nineteen hours; 3 in twenty hours; 3 in twenty-two hours; 8 in twenty-four hours; 1 respectively in twenty-three, twenty-seven, thirty-three, and forty-four hours; and 5 in forty-eight hours.

TABLE VIII.

*Presentations.*—Of 487 presentations, 468 were of the vertex, in six of which the face was towards the pubis; in five, prolapse of the funis occurred, in three of which the children were still-born, and the hand presented with the head in two instances; six were shoulder or arm presentations, in which



cases four of the children were still-born; sixteen were breech-presentations, in which cases five children were still-born, and five were footling cases.

The vectis was used once, and the forceps twice—once in impaction of the head, and once in a retarded labor.

TABLE IX.

*Time of expulsion of the placenta.*—In 334 cases, this happened in five minutes after the birth of the child; in 22 in eight minutes; in 85 in ten minutes; in 51 in fifteen minutes; in 18 in thirty minutes; in 4 in forty minutes; in 3 in an hour; in 1 in an hour and a quarter; in 2 in an hour and a half; and in 1 in four hours, (this patient died with puerperal mania.)

Four placenta were decomposed; five adherent, of which one was extracted in half an hour; two in an hour and a half, without hæmorrhage; and two in three hours, with hæmorrhage.

TABLE X.

*Intervals between menstruation and confinement.*—In 11 cases, there was an interval of six months; in 6 of seven months; in 42 of eight months; in 110 of nine months; in 70 of ten months; in 2 of eleven months; and in two of twelve months. Ten patients had not menstruated since their previous confinement; three menstruated up to the period of quickening; and two menstruated during their entire pregnancy.

In one case, in the first year's practice of the hospital, convulsions took place three weeks before labor; the patient was relieved by bleeding, &c., and did well.

Puerperal convulsions occurred in two patients.

Two cases of monstrosity occurred, and a child was born with but one ear.

Death took place in one child from hæmorrhage from the funis, which had been carelessly tied by a midwife.

Severe hæmorrhage occurred in four cases; hour-glass contraction in one instance.

Slight hæmorrhage in three patients; hæmorrhage before birth in one.

A child was suddenly expelled, and labor quickly terminated by a severe rigor.

One patient died a few weeks after childbirth, from the combined effects of hæmorrhage and starvation; from being an affectionate mother, she gave her children what she ought to have had herself.

One patient walked to the hospital, a distance of four miles, during her labor, and was safely delivered within ten minutes after her arrival.

One female has had seven preternatural presentations, and only one cranial. Two

of her sisters lost their lives by cross birth.

Labor commenced in one instance, with a severe rigor, lasting two hours; rupture of the membranes cured the rigor, and the child was born with one long continued pain. This woman has had six children, all born in the same manner.

In one case, a tumor occupied the pelvis; but receded prior to the birth of the child. In another case, a tumor situated apparently in the uterus, was attached to the parietes of the abdomen. Both women did well.

One woman suckled three months; another four months; and a third during the whole term of pregnancy; but in the last case the infant was very feeble, and died within a few hours of its birth.

One woman had great obliquity of the uterus, and the pains were suspended for twenty-four hours after its full dilatation.—Ergot was given, and the labor terminated rapidly and favorably.

Among the deaths were, one from phthisis; one from typhoid pneumonia, during the presence of which delivery took place; one from puerperal mania, (this patient had previously been afflicted with insanity;) and one, as mentioned above, from the effects of hæmorrhage and starvation.—*Lon. Lancet.*

## MEDICAL SOCIETY OF LONDON.

MR. DENDY, PRESIDENT.

MAY 4, 1846.

### Remarkable Case of Purpura.

Dr. Clutterbuck had lately seen an extraordinary case of purpura, which, from the extent of the disease, might almost be called "morbus niger." The patient was a Belgian, 19 or 20 years of age, and a few days before the appearances on the skin presented themselves, was afflicted with pains in the limbs; the surface then became studded with purple spots, which spread over the entire surface of the body. The patient was inclined to dose, but was sensible when roused. The affected parts were painful to the touch, but gave no evidence of increase of heat, and there was no swelling. There had been nothing in the habits or mode of life of the patient to explain the unusual disease which presented itself. He had never been so attacked before. The mouth inside was affected with livid spots. The treatment at first had been that usually employed for scurvy, as vegetable acids, &c.; but this failing to afford relief, and free acid being found in the urine, alkalies were substituted and he (Dr. Clutterbuck) believed with good effect. He had, however only seen the case

for a few minutes, and could not speak more authoritatively respecting it; he had seen it merely as a curiosity, which it certainly was. In a subsequent part of the evening, in answer to various questions, Dr. Clutterbuck said that the disease began in the legs and more distant parts; it first appeared in the shape of elevated, hard, inflamed pimples, about as large as peppercorns, and these spread laterally, until the entire surface became one black mass. The pulse was feeble, the patient lay prostrate, and exhibited the usual symptoms of low spotted fever.

The President remarked that the headache in this case tended to show that the disease was associated with venous congestion, as supposed by Dr. Hartry and others. Upon this principle, that practitioner had employed bleeding and drastic purgatives with the best effect. Connected with this congestion, no doubt there was some change in the circulating fluid itself, the crisis of which had been broken up, so that it became like the mere *liquor sanguinis*.

In reference to the nature of purpura generally, Mr. Hilton had recently found it associated with a low condition of the system, and reduced quantity of the blood. Treatment to improve this condition was usually beneficial. He had seen, however, one or two cases in which there was a large quantity of blood in the system. These were benefited by depletion, generally, but were exceptions to the rule.

Mr. Roberts did not believe there was any analogy between purpura and scurvy; in purpura there was no sponginess of the gums.

Mr. Dendy made some remarks to show that apparently opposite modes of treatment, as adopted by various practitioners in this disease with equal success, might be explained by the facts of these modes tending to produce the same result—viz., an improved state of the secretions, by which the general health was improved.

A member mentioned some cases that were cured by small repeated bloodlettings, which tended to show, as the President had formerly remarked, that the disease depended on congestion.

Dr. L. Stewart mentioned a case of malignant small pox which proved fatal in thirty-eight hours. The pock did not mature, and the entire surface assumed a purple hue like that present in purpura,

† Mr. Barlow believed that facts were against the suggestion that purpura depended on venous congestion, inasmuch as anasarca and other results of obstructions to the veins were not associated with purpura.

#### Tubercular Meningitis.

Dr. Willshire laid before the Society portions of white matter of each hemisphere of the brain of a young girl, containing a tubercle, and made the following remarks upon the case. When first seen by him, she complained of great pain at the top of the head, the suffering often being very intense; pain also along the neck, left side, and at the epigastrium; the hands hung listlessly at her side, and she was continually sighing; every now and then she was seized with violent trembling; the countenance was exceedingly anxious, and expressive of much suffering. The tongue was foul, the bowels were costive, the pulse was feeble, and the child somewhat emaciated. There had been vomiting also. On inquiry of the mother, it appeared she had sought advice for her child a week before, as she then had diarrhoea and severe cephalalgia; she was told that the girl had slight fever, of which she would soon recover. In her opinion however she had been daily getting worse. The head was now ordered to be shaved, and rubbed night and morning with compound iodine ointment; a blister was applied behind each ear, and dry cupping at the nape of the neck. She was directed to take eight grains of aloes, and five of the sulphate of potash, night and morning; and one-sixth of a grain of iodine, with two grains of iodide of potassium in distilled water every four hours. From this period until the day of her death, nineteen days afterwards, though gradually getting worse, the symptoms constantly remitted; stupor, slight delirium, dilated pupils, apparent blindness, difficulty of swallowing, coma; slight convulsions, however, finally closing the scene. In addition to the therapeutic measures already alluded to, it was found necessary to blister the scalp which was afterwards dressed with tartar emetic ointment, and the iodine being omitted, nitrate of potash was given in medium doses instead; injections of turpentine and castor-oil were ordered to be administered. On inspection of the contents of the cranium, twenty-four hours after death, the following pathologic conditions were observed: Slight congestion of sinuses and veins, very distinct flattening of convolutions and raising of the sulci; on pressure the brain felt very firm. Along the edges of the convexities of the hemispheres lymph was deposited, along with numerous yellow granular tubercles. No increased vascularity, no congestion of the pia-mater, or of the cerebral substance itself. In the white substance of each hemisphere, rather superficially, was a tubercle of the size of a pea, in a soft cretaceous condition, surrounded by a sort of cyst. Ves-

tricles much distended, containing not less than eight ounces of fluid, perhaps more. No softening of the central portions of the brain. At its base, from the junction of the medulla spinalis with the pons varolii to the commissure of the optic nerves, was a considerable amount of yellowish-green gelatiniform serosity. At one part of the edge of this latter were numerous granular tubercles. The skull was not symmetrically developed round its axis. Dr. Willshire remarked that the case offered the following points of interest:—1st. The cephalalgia not being frontal, as is usual in tuberculous meningitis, but felt at the vertex. 2nd. The disease putting a stop to the diarrhœa, and costiveness supervening as illustrative of some cases recorded by Gerhard, Pilt and Green, in which diarrhœa was arrested by the supervention of meningitis. 3d. In agreeing with the statement of Rilliet and Barthez, that tubercles of the brain proper are more frequently found in the hemispheres. 4th. That yellowish-green gelatiniform serosity in tuberculous meningitis is more common at the base. The great trembling, the sighing respiration, the peculiar expression of the child, denoting severe cerebral disorder, the absence of certain lesions of motility, which in these cases are common, were also alluded to as points for discussion.

Dr. G. Bird inquired whether, previous to death, the lungs had been examined in this case, and if so, whether there were dulness under the clavicle, or any other sign of tubercular disease. Such sign was often a valuable assistance in our diagnosis of tubercle of the brain; dyspnoea, or even orthopnoea, was often present in these cases; was it so in the present instance? He inquired also as to the presence of reflex action.

Dr. Willshire alluded to a peculiar sighing present in this case, and analogous to the "cerebral breathing" of Dr. Graves. There were no reflex phenomena. He had examined the chest, not with the view of determining the presence of tubercular disease, which in general was not sufficiently advanced to aid us, by its physical signs, in diagnosing tubercular meningitis, but rather with the view of determining whether pneumonia were present. There was however no sign of that disease.

Mr. Barlow enumerated three circumstances which were observable in this case, and which led him at once to suspect serious mischief of the brain. The first was the peculiar character of the pain, the second repeated sighing, and the third an extreme distress of countenance.

Some discussion afterwards took place between Mr. Linecar, Dr. Bird, and others, respecting the connexion which the tubercular deposit bore to the symptoms, and whether it was really a cause or effect of them.

MAY 11.

*Copaiba in Inflammation of the Mucous Membranes.*

Mr. Roberts related a case of nephritis, in which, after bleeding, and the ordinary treatment of that disease, some inflammatory symptoms still remaining, and suppression of urine more particularly, he exhibited copaiba in ten drop doses three times a day, with the effect of restoring the secretion.

Dr. Willshire regarded the practice in this case as a fresh fact in favor of the use of balsams. In America it was given with good effect in the acute stage of gonorrhœa; eminent surgeons had given it in sub-acute cystitis. In Dublin, turpentine was administered with benefit in cases of chronic inflammation of the air passages.

Some discussion took place respecting the use of balsam of copaiba in the acute stage of gonorrhœa.

Mr. Linnecar never employed it until after antiphlogistic remedies had been resorted to, as it had a tendency to produce a metastasis of the inflammation to the neck of the bladder, owing, as he believed, to its extreme diuretic power.

Mr. Middleton remarked that there was no doubt the balsam, when given in the acute stage of the disease, immediately relieved the pain; but whether the practice was a good one, was another question.

Some conversation afterwards took place respecting affections of the air passages in which several members took part.

MAY 18.

*Ovarian Disease; Colloid Matter in the Cyst.*

Dr. Waller detailed the particulars of a case of ovarian disease occurring in a woman fifty-two years of age, in which all the symptoms and signs of the affection were well marked. It was eventually determined to draw off the fluid, but on introducing the trocar for that purpose, no fluid whatever came away, and only a small quantity of a substance resembling calves'-foot jelly. It was evident that the tumor was full of this substance. It was agreed, after a consultation with Mr. Walne, to remove the tumor entire—a proceeding not before contemplated in consequence of the very depraved state of health of the patient. Before this operation, however, could be resorted to, inflammation of the cyst and peritonæum came

on, and the patient died. On examination after death, the cyst filled almost the entire abdomen, and contained a jelly-like fluid, in a quantity so large, as to fill a pail. There were adhesions to the left side of the abdomen, but none above or below. Would this patient have survived an operation earlier performed? He (Dr. Waller) believed that she would not, and was glad no such step had been resorted to.

Dr. G. Bird had seen more than one such case, and several had occurred in the practice of his brother, Dr. F. Bird. The mass filling the tumor was of colloid character and pinkish hue, intersected by a thin, hyaloid-like membrane, containing a jelly similar in substance to the vitreous humor of the eye. There were no means of distinguishing this substance from the fluid whilst in the abdomen. Dr. F. Bird had a notion that this class of cases was peculiarly adapted for operations, and that they usually did well. He (Dr. G. Bird) referred to a very interesting case of the kind lately exhibited to the Society, and reported in *The Lancet*.

Dr. T. Thompson made some remarks on the treatment of ovarian dropsy by medicines, and believed that he had seen benefit in this disease from the administration of alkalies in long and continued doses. He briefly referred to two or three cases in which during the use of the solution of potash, ovarian tumors disappeared. He thought the potash did not act simply as a diuretic, but had a specific property in these diseases.

Dr. Waller and Dr. G. Bird believed that no kind of medicine had any effect in ovarian disease.

Dr. Theophilus Thompson gave some particulars of a case of cancer of the lung, in which all the signs and symptoms of the disease were clearly developed, but no post-mortem examination could be obtained.

#### MAY 25.

##### Statistics of Consumption.

Dr. Theophilus Thompson gave a short report of some particulars which he had observed, during the last twelve months, as visiting physician to the Hospital for Consumption and Diseases of the Chest.—The number of patients treated by him during the year was 760, of which 286 were phthisis, in various degrees of advancement. Amongst seventy-seven cases of advanced phthisis, fifty-six were men, only twenty-one women; but of the cases of incipient phthisis, the number of males and females was nearly equal—a fact leading to the conclusion, that the apparent preponderance of the former was attributable to the unwill-

ingness or inability of women to leave their homes under circumstances of advanced disease. He remarked on the importance of prolonged expiratory murmur, when unconnected with bronchitis or emphysema, as an early indication of phthisis, and a sign, which, when once established, rarely disappears. He also particularly noticed, as a phenomenon of great interest and practical importance, the "inspiration saccadee" of some French authors—not the jerking respiration of spasmodic asthma, nor the interrupted inspiration of diffused pleurisy, but the division of the inspiratory murmur, as though the entrance of the air into the cells required several successive efforts. He had occasionally observed this sign at the back, as well as the front part of the chest. It sometimes disappeared under treatment; but there was reason to think it characteristic of a condition of the lungs which frequently immediately proceeded, or accompanied, tubercular infiltration. It was remarkable that of ten cases recorded during the year, the phenomenon had been in nine instances confined to the left side. He had during the last twelve months, taken notes of eight cases in which a murmur was heard in the second intercostal space, on the left side only, and was probably referrible to the pulmonary artery. In two of these patients the murmur disappeared under the use of iron; but in most, it was succeeded by more or less distinct manifestations of tubercular disease. He deferred any comments on cases of heart disease, bronchitis, and other pectoral affections, and concluding by mentioning the results of his observations regarding cod-liver oil, which he had administered in thirty-seven of the recorded cases. In three, the medicine was discontinued in consequence of the distressing nausea which it occasioned; in twelve, the reduction of strength appeared to be slightly retarded; in twelve, there was no perceptible effect; in ten, the increase of strength, plumpness, and energy was remarkable. When the fattening process was established, it generally became obvious within a fortnight. The author did not attribute to the oil any specific influence on the local disease; but believed it to be singularly efficacious in promoting nutrition. He had found it most useful to the pallid and phlegmatic, and, in private as well as public practice, had observed more decided amelioration under its employment than could be referred to any other remedial means with which he was conversant.

This being the last night of the session, the Society adjourned, after a short address from the President, until September next.

From the Transcript.

#### HUMAN MAGNETISM.

Mr. Editor:—As this all-absorbing theme appears to be the order of the day at present, we hope it will not be out of order to submit a few thoughts upon the subject, for public consideration, through the medium of your paper, together with some facts which occurred a few evenings since under our own observation. A number of young gentlemen of this city, on one evening of last week assembled for the purpose of witnessing, privately, an exhibition of some of the wonders of the above science. The experiments were conducted by a Mr. Keely, who has been engaged for the past week in public lecturing and demonstrating on Human Magnetism. Mr. K., by the way appears to be a man of considerable intelligence, and much of a gentleman in his deportment. Each of the gentlemen assembled, was requested to submit to a trial of the process by which the Professor brings about this mysterious influence. After consent had been given the magic coin was distributed, one piece being placed in the hands of each individual, and his eyes fixed closely upon it according to direction. He only succeeded, however, upon two of the persons present, one a resident of this, and the other of a neighboring city. Upon the latter of whom I shall endeavor to give briefly the results of the experiments, which were truly astonishing, and looked upon with a great deal of interest.

The gentleman in question was a firm believer in the truth of the science, in its early and more undeveloped forms, as presented by those who first agitated it. He has also been frequently operated upon by clairvoyance demonstrators, but averred most positively his conviction, that he could not be operated upon in the manner proposed by Mr. K., assigning as a reason that his manner of operating was in direct opposition to an established and fundamental principle of the science, viz: That the natural senses of the subject (while under the influence) were entirely destroyed, and that he only saw, heard, tasted, &c., through the senses of the operator, consequently the subject could not see any person or things, which the operator did not first picture vividly in his imagination.—After gazing, however, a few minutes upon the coin placed in hand, Mr. K. pronounced him fully under the magnetic influence. He requested him to rise to his feet and observed, that when he (Mr. K.) counted two, he would be compelled to open his eyes, and that he would be fully aroused mentally, but that his physical system would remain entirely under his control, which effect took

place immediately after counting. He then went through his usual course of experiments, illustrating the fact that he thus held such control; such as requiring his hands to be thrown upon his head and fastening them there, until he willed their relief, and numerous other experiments of the same character. Mr. K. then wished to know if he desired to see any friend, he replied he did, and named two relations, both of whom were brought immediately before his imagination, and a near one who had been absent for five years. The scene which opened up at this imaginary meeting was indeed thrilling, we shall not attempt to describe it, as it would occupy too much space. The subject was then aroused but still averred that he was not convinced as to the point in controversy, i. e., that Mr. K. could not bring vividly to his mind any person or scene, unless he (Mr. K.) first pictured clearly and distinctly such person or scene in his own (Mr. K.'s) imagination he was not convinced from the fact that Mr. K. knew his relatives. Mr. K. then requested him to give his consent to be placed again under the influence, declaring that he would convince him beyond the possibility of a reasonable doubt. The gentleman refused at first, assigning as a reason, that he felt unwell and that he did not wish to go through the first process of looking at the coin as it was very fatiguing. Mr. K. remarked that although he felt perfectly relieved and fully aroused, yet his physical as well as mental powers were still under his control, here another controversy arose, and to settle the point, Mr. K. requested him to look him fully in the face; when he should command his hand to be fastened upon his head, and in spite of all the power and resolution he could sum up to resist it. He did so. He then required that after he should have counted four the subject should pass fully under the influence—which he did, closing his eyes. He then required that his eyes should be opened and fixed upon his, which was done forthwith. He then asked him if he had any friend in any quarter of the world that he desired to see. He replied he had, and after naming him was immediately introduced to one of the company as that friend by Mr. K., who declared very impressively as he introduced him, that it was the person named. He immediately approached him shaking hands in the most familiar manner, exhibiting most striking and true to nature, all those agreeable emotions awakened by the unexpected meeting of the warmest friends after a long absence. He conversed freely and familiarly for perhaps fifteen minutes, passing all the usual congratulations upon such occasions, made numerous enquiries in relation to his business—wished to know if he had seen any old friends while absent, the individual replied he had not. However in the course of the conversation, the name of an old friend was mentioned as the subject, upon which Mr. K. immediately draws his attention and introduced him to another person as, such friend. He approached him in the same manner and conversed as before. These experiments were repeated with the most perfect satisfaction, until he had introduced him to every person in the room. He expressed the utmost pleasure and satisfaction at meeting so unexpectedly the many friends that surround him. There were, I think, twelve gentlemen in the room. Then in conclusion as a cap aeaf to the entertainments, Mr. K. was requested to draw his attention from the crowd for a short time, and see if he could be brought back into it, and single out each individual by their respective names, as he had been introduced to them. Mr. K. remarked that he was not absolutely certain that the result would be perfectly satisfactory, as it was a class of experiments new to him, as well as to us, but that he was well convinced that satisfaction would be given, merely from inductions from well ascertained facts and other experiments, in the course of his practice, it was tried and the subject succeeded in every instance to the satisfaction of all.

AN INVESTIGATOR.

# INDEX

## TO THE

# THIRD VOLUME.

## 1846.

---

|                                                                                                                                                                                                    | Page. |                                                                                                              | Page. |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|--------------------------------------------------------------------------------------------------------------|-------|
| Fallacies of the Faculty. Lectures delivered at the Egyptian Hall, Piccadilly, London, 1840, by S. DIXON, M. D. Lecture VIII. The Senses—Animal Magnetism—The Passions—Baths—Exercises—Homœopathy. | 1     | Prof. Mott's Clinique, Saturday, Sept. 27th, 1845. ....                                                      | 36    |
| The late Epidemic of Puerperal Metritis in the Paris Hospitals. ....                                                                                                                               | 18    | Prof. Parker's Clinique, Monday, Sept. 29th, 1845. ....                                                      | 37    |
| Tracts on Consumption, No. 2—On some new Pathological Views of Tubercular Phthisis. By J— G—, M. D. ....                                                                                           | 20    | The New York Hospital—Attendance of Dr. JOHN H. GRISCOM. Violent Chorea St. Vitti: Cured by Strichnine. .... | 36    |
| Communication for the Dissector--Swedenborg not a Clairvoyant. ....                                                                                                                                | 25    | Prof. Parker's Clinique, at the College of Physicians and Surgeons, Monday Nov. 24th, 1845. ....             | 36    |
| Swedenborg's Animal Kingdom.—Introductory Remarks by the Translator, JAMES JOHN GARTH WILKINSON, Member of the Royal College of Surgeons of London. [Continued from page 204. ....                 | 27    | Dr. Mott's Clinical Lecture, Saturday, Dec. 6th, 1845. ....                                                  | 42    |
| The Radical cure of Hernia by Injection Phosphorus Paste for the Destruction of Rats and Mice, by M. SIMON of Berlin. ....                                                                         | 34    | Dr. Parker's Clinical Lecture, Monday, Dec. 8th, 1845. ....                                                  | 44    |
| Public Rewards for New Medicines. ....                                                                                                                                                             | 36    | Medical Sciences in New York. ....                                                                           | 45    |
| Prof. Mott's Clinique, at the Medical Department of the University of N. York, Saturday, Sept 6th, 1845. ....                                                                                      | 35    | Behind the Age. ....                                                                                         | 47    |
| Prof. Parker's Clinique, at the College of Physicians and Surgeons, Monday, Sept. 8th, 1845. ....                                                                                                  | 36    | Cancer of the Lip. ....                                                                                      | 48    |
|                                                                                                                                                                                                    |       | Tubercula of the Uterus, terminating in Cancer—Menorrhagia, terminating in Cancer. ....                      | 48    |
|                                                                                                                                                                                                    |       | Magnetic Sleep. ....                                                                                         | 49    |
|                                                                                                                                                                                                    |       | Paralysis in Magnetic Sleep. ....                                                                            | 49    |
|                                                                                                                                                                                                    |       | A Word on Magnetic Machines. ....                                                                            | 49    |
|                                                                                                                                                                                                    |       | Prof. Grant's Premium Electro Magnetic Machines. ....                                                        | 51    |
|                                                                                                                                                                                                    |       | New Discovery in Medicine. ....                                                                              | 52    |
|                                                                                                                                                                                                    |       | Reviews. ....                                                                                                | 53    |
|                                                                                                                                                                                                    |       | Hereditary Disease. ....                                                                                     | 56    |
|                                                                                                                                                                                                    |       | The Giant again. ....                                                                                        | 56    |

# Index.

|                                                                                                                                                                                                                                                                                                                      | Page. |                                                                                                                                                                                                                       | Page. |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| Incision of the Tunica Albuginea, in inflammation of the Substance of the Testicles .....                                                                                                                                                                                                                            | 56    | On Hooping Cough, by Dr. KASEMAN, of Lich, in the Grand Duchy of Hesse .....                                                                                                                                          | 102   |
| The Debris furnished by Pavements...                                                                                                                                                                                                                                                                                 | 56    | Zymotic Diseases—Fever. ....                                                                                                                                                                                          | 105   |
| Fallacies of the Faculty.—Lectures delivered at the Egyptian Hall, Picadilly, London, 1840, by S. DIXON, M. D.—Lecture IX. Physic and poison identical—Remedial means include everything in nature—Action of medicinal substances proved to be Electrical—Particular Remedies, and why they affect Particular Parts. | 59    | New Evidence on the Extensive Range of Tuberculosis .....                                                                                                                                                             | 107   |
| Swedenborg's Animal Kingdom.—Introductory remarks by the Translator, JAMES JOHN GARTH WILKINSON, Member of the Royal College of Surgeons of London. [Continued from page 33] .....                                                                                                                                   | 68    | True Science, vs. "Young Physic" ..                                                                                                                                                                                   | 108   |
| Practical Remarks on the Treatment of Cynanche, with cases, by CHARLES TRAVERS MACKIN, Esq., M. D. Battersea .....                                                                                                                                                                                                   | 74    | Remarkable Phenomenon .....                                                                                                                                                                                           | 111   |
| On Constipation, from Indolence of the Bowels, and its Treatment .....                                                                                                                                                                                                                                               | 87    | Animal Electricity .....                                                                                                                                                                                              | 112   |
| On the Pathology and Therapeutics of Asthma by M. GONDRIN .....                                                                                                                                                                                                                                                      | 80    | Fallacies of the Faculty.—Lectures delivered at the Egyptian Hall, Picadilly, London, 1840, by S. DIXON, M. D.—Lecture X. Principal Chrono-Thermal Remedies, Summary of the Chrono-Thermal Doctrines of Disease ..... | 113   |
| Reviews.—Animal Chemistry, or Organic Chemistry in application to Physiology and Pathology, by JUSTUS LIEBIG, M. D., &c., London; Taylor & Waston, 1842, p. 1845. Continued from p. 56. ....                                                                                                                         | 82    | For the Dissector.—Tracts on Consumption, Number 3. On the Cause and Prevention of Tubercular Phthisis. By J—— G——, M. D. ....                                                                                        | 125   |
| Peculiar Cases in Midwifery, by THOMAS TORRANCE, Esq., Surgeon, Andre. ....                                                                                                                                                                                                                                          | 85    | Magnetising Medicine.—Triumph of Science .....                                                                                                                                                                        | 137   |
| Homeopathy. ....                                                                                                                                                                                                                                                                                                     | 86    | Researches on Magnetism .....                                                                                                                                                                                         | 137   |
| On the use of Sabina in Uterine Hæmorrhage, by Dr. ARAN, of the Hotel Dieu .....                                                                                                                                                                                                                                     | 87    | Curative Effects of Mesmerism .....                                                                                                                                                                                   | 143   |
| Cantharides in Eczema and Psoriasis, by Dr. SICK .....                                                                                                                                                                                                                                                               | 88    | Tubercular diseases of the Organs and Muscles .....                                                                                                                                                                   | 144   |
| For the Dissector.—Tracts on Consumption, No. 2. On some New Pathological Views of Tubercular Consumption. (Concluded.) By J—— G——, M. D. ....                                                                                                                                                                       | 88    | Baron Reichenbach's Experiments ....                                                                                                                                                                                  | 145   |
| On the Pathology of Tuberculosis, by Dr. CLESS, Practical Physician at Stuttgart. ....                                                                                                                                                                                                                               | 92    | Remarks by the Author .....                                                                                                                                                                                           | 150   |
| Autograph Letter of the King of Prussia .....                                                                                                                                                                                                                                                                        | 97    | On Nature's Temporary Hæmostatics. By C. H. HALLETT, Esq., Assistant Demonstrator of Anatomy in University College, Edinburgh .....                                                                                   | 152   |
| Professor Roger's Lectures and Experiments on the subject of "Animal Magnetism" or "Mesmerism," "Clairvoyance," &c. ....                                                                                                                                                                                             | 98    | A few Observations on the use of Professor Seutin's Starch Bandage, in the Treatment of Fractures.—By ALRED MARKWICK, Esq., Surgeon, London .....                                                                     | 154   |
| Dreaming a Translation .....                                                                                                                                                                                                                                                                                         | 99    | A Sketch of the relation of the Spinal Marrow to Parturition and Practical Midwifery.—By W. TYLER SMITH, M. D., London—Lecturer on Midwifery in the Charlotte street School of Medicine .....                         | 157   |
| Communications .....                                                                                                                                                                                                                                                                                                 | 100   | Laternal Curvatures of the Spine. ....                                                                                                                                                                                | 162   |
| Miscellaneous Items .....                                                                                                                                                                                                                                                                                            | 101   | Magnetic Machine—Pretended Improvements .....                                                                                                                                                                         | 163   |
|                                                                                                                                                                                                                                                                                                                      |       | Consumption .....                                                                                                                                                                                                     | 163   |
|                                                                                                                                                                                                                                                                                                                      |       | On some Electrical Effects Developed chiefly by the Galvanic Battery.—By GEORGE P. T. HILL, Esq., Filey ...                                                                                                           | 164   |
|                                                                                                                                                                                                                                                                                                                      |       | On the successful Treatment of Ovarian Dropsy.—By WILLIAM ECCLES, Esq., Surgeon to the Royal Free Hospital, London .....                                                                                              | 165   |
|                                                                                                                                                                                                                                                                                                                      |       | Diseases of Children .....                                                                                                                                                                                            | 165   |
|                                                                                                                                                                                                                                                                                                                      |       | M. GUERSANT on the Influence of Rachitis on Fractures in Children. ....                                                                                                                                               | 165   |
|                                                                                                                                                                                                                                                                                                                      |       | M. Bricheteau on the Antagonism of Ague and Pulmonary Consumption. ....                                                                                                                                               | 166   |
|                                                                                                                                                                                                                                                                                                                      |       | Abscesses in the Liver—Ulceration of the Intestines .....                                                                                                                                                             | 167   |

# Index.

| Page.                                                                                                                                                                                                                             | Page. |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| Sub-Cutaneous Division of the Sphincter in Anal Fissure.....                                                                                                                                                                      | 167   |
| M. Valleix on the treatment of Difficult Dentition.....                                                                                                                                                                           | 167   |
| M. Ricord's Treatment of Indurated Lymphatic Ganglions.....                                                                                                                                                                       | 167   |
| On the Contagious Nature of Puerperal Fever and its connection with other Diseases.....                                                                                                                                           | 168   |
| Homœopathy.—Testimony of Dr. E. Humphrys, Utica.....                                                                                                                                                                              | 168   |
| For the Dissector.—Tracts on Consumption. Number 4. On the Sanability and Treatment of Tubercular Phthisis. By J— G—, M D.....                                                                                                    | 169   |
| Additional Remarks on Prof. Seutin's Starch Bandage. More particularly in reference to a "Certain Modification of it." By ALFRED MARKWICK, Surgeon, London.....                                                                   | 182   |
| Effect of Electro-Magnetism on the Action of the Heart.....                                                                                                                                                                       | 185   |
| On the Treatment of Chronic Diseases of the Skin. By THOMAS HUNT, Esq., M. R. C. S. Eng., Herne Bay. Order VII.—Tubercula.....                                                                                                    | 185   |
| Acne.....                                                                                                                                                                                                                         | 186   |
| Case of Acne Simplex on the face, Cured by Arsenic.....                                                                                                                                                                           | 186   |
| Case of Acne Indurata on the Shoulders, Cured by Arsenic.....                                                                                                                                                                     | 186   |
| Acne Rosacea.....                                                                                                                                                                                                                 | 187   |
| Case of Acne Rosacea in a middle aged Lady, Cured by Arsenic.....                                                                                                                                                                 | 187   |
| Sycosis or Mentagra.....                                                                                                                                                                                                          | 188   |
| Case of Sycosis in a lady, complicated with Neuralgia; both affections cured by Arsenic.....                                                                                                                                      | 189   |
| Case of Sycosis in a female, complicated with Dyspepsia; both diseases yielding to Arsenical treatment.....                                                                                                                       | 189   |
| Lupus.....                                                                                                                                                                                                                        | 190   |
| Case of Lupus exedens of nine years standing, cured by Arsenic.....                                                                                                                                                               | 190   |
| From the London Lancet—Liabilities of the Muscle in Disease.....                                                                                                                                                                  | 193   |
| Abscess with Fistula in the Female Breast Treated by a simple method of Compression.....                                                                                                                                          | 194   |
| Comparative proportions of nutriment in Organic Ailments.....                                                                                                                                                                     | 194   |
| On the use of Ergot of Rye in Uterine Hemorrhages.....                                                                                                                                                                            | 195   |
| Recurrence of Menstruation at an advanced age.....                                                                                                                                                                                | 195   |
| The shape of the external Ear in relation to mental Disease.....                                                                                                                                                                  | 195   |
| The Age at which Insanity is most prevalent.....                                                                                                                                                                                  | 196   |
| The Symptoms and Diagnosis of Aneurisms of Bones.....                                                                                                                                                                             | 196   |
| Remarkable case of Abscess of the Heart. Pain in the Leg the only Symptom of Disease during life. By T. HOWITT, Esq., Surgeon.....                                                                                                | 197   |
| Remarkable Mesmeric Cure.....                                                                                                                                                                                                     | 198   |
| The Treatment of Chronic Enlargement of the Bursa Patellæ.....                                                                                                                                                                    | 199   |
| Calculi of the Prostate Gland.....                                                                                                                                                                                                | 199   |
| Case of Ulcer, accompanied with Varicose Veins of the Leg, Treated with Cajeput Oil.....                                                                                                                                          | 200   |
| On the use of the Starch Bandage in various Surgical Diseases, by A. MARKWICK, Esq., M. R. C. S. London.....                                                                                                                      | 200   |
| Practical Remarks on some points of Trichopathy and the Chemical Pathology of the Human Hair. By THOMAS CATTELL, Esq., M. D., M. R. C. S. E., &c., Braunston.....                                                                 | 204   |
| Cases of Varicocele treated by Pressure with observations—By T. B. CULLING, Lecturer on Surgery, &c., London Hospital.....                                                                                                        | 206   |
| On the Internal Structure of the Human Kidney, and all the Changes which its several Compound parts undergo in "Bright's Disease." By JOSEPH TOYNBEE, Esq., Senior Surgeon to St. George's and St. James' General Dispensary..... | 207   |
| On the action of Imperceptible Agents on the Living Body. By Professor D'AMADOR.....                                                                                                                                              | 208   |
| Cases of the Pathogenetic Action of Sulphur and Cantharides.....                                                                                                                                                                  | 213   |
| The Principal Articles of the Present Number.....                                                                                                                                                                                 | 214   |
| Mesmeric Surgery.....                                                                                                                                                                                                             | 215   |
| Another Mesmeric Surgical operation.....                                                                                                                                                                                          | 214   |
| Homœopathy.....                                                                                                                                                                                                                   | 214   |
| Birmingham Lying-In Hospital. Medical and Staistical Report.....                                                                                                                                                                  | 215   |
| Medical Society of London, May 4, 1846.—Mr. DENY, President. Remarkable Case of Purpura.....                                                                                                                                      | 217   |
| Tubercular Meningitis.....                                                                                                                                                                                                        | 218   |
| Copaiba in inflammation of the mucous Membranes.....                                                                                                                                                                              | 219   |
| Ovarian Disease; Colloid Matter in the Cyst.....                                                                                                                                                                                  | 219   |
| Statistics of Consumption.....                                                                                                                                                                                                    | 220   |
| Human Magnetism.....                                                                                                                                                                                                              | 221   |



# THE DISSECTOR.

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NO. I

## THEORY OF PATHETISM.

BY LA ROY SUNDERLAND.

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### I.

#### Consciousness.

CONSCIOUSNESS is the foundation of all knowledge, and it may be divided into two degrees or kinds, both of which are *in*ate in living organisms.

I. The first, and highest *consciousness* is the knowledge which the mind takes of itself, and the power by which it distinguishes between itself and the objects of its knowledge: *knowledge* is the conscious perception of the nature and relations of things. The *functions* of consciousness and knowledge appertain to the *highest NERVOUS ORGANISMS* of living bodies; and are usually excited by agencies operating upon them through the *external senses*.

The highest degrees of *consciousness* and *knowledge* appertaining to *animal* existence, are manifest in the *HUMAN SPECIES*, where, also we find the highest developments of *nervous organisms*.

*Consciousness* may exist in various degrees, in different persons, and in different degrees in the same person at different times, according to the size of the brains, and the proportionate size and activity of the different mental organs. It exists in the highest degree in those brains where the cerebral developments are the nearest to perfection as it regards the *size* and *quality* of the nervous matter. It is, therefore, evident that *knowledge* must be highest in those brains that are of a determinate size, and which have been excited sufficiently with a healthy action. We must, hence admit the *competency* of such minds, when in a normal waking state, to judge of any given proposition whether it be true or false, and also what *mind* or class of minds, as a general rule, it is the most safe to follow:

1. The brains should be perfectly developed, that is, all the organs should correspond in their different degrees of power.

2. They must have been sufficiently exercised, or educated. The person must have had the necessary opportunities for information upon the subject for which his opinion is to be taken, and he must have made use of them.

3. He must be free from all those *associations* which would have a tendency to prevent a just and accurate judgment.

4. His brains and all his organs must be in a healthy condition.

II. The second kind of *Consciousness* is manifest in the spontaneous action of the nervous functions, without observation or experience, which constitutes *INSTINCT INTUITION* or *Clairvoyance*.

### II.

#### Mind—Soul—Spirit.

*Mind, Soul* or *Spirit* are synonymous terms and signify the aggregate of all the *functions* of the *nervous system*. Hence, *mind* is neither material or immaterial, but *functional*. *Mind* is excited, drawn out, nurtured and manifested through the external senses, and when either of these senses is wanting, in so much the mind itself is wanting. Mental manifestations depend upon the *qualities, size, composition, developments, age, and conditions* of the *cerebral system*, including the external senses. The organisms peculiar to *MIND*, are located in two distinct brains, and are made up of a congeries of groups, the exercise of whose *FUNCTIONS* constitute *thought* and all the *sensations, emotions, conceptions*, and feelings common to animals and to men.\* And thus, while

\* The best work on *PHRENOLOGY*, which teaches the science of the mind, is that by George Combe, the greatest of mental philosophers living. With the exception of the immortal Gall, to no one person is the world so much indebted for an exposition of the true science of the mind, as to Mr. Combe. And his *Phrenological* writings, together

we become conscious of the *connection* between the mental functions, by which they constitute one *aggregate*, we perceive and act upon the reality of our own *personal identity*, though some of the faculties in both of the brains, may and often do, (especially in cases of disease) act independently of each other.

There are just as many *mental susceptibilities* and *FACULTIES* as there are *functions* in the combined *nervous organisms*. The organs purely *mental* exist in corresponding pairs and groups in both brains, and the functions of some *antagonize* each other as may be seen in the *alternate* exercise of *Combativeness and Sympathy*; *Firmness and Submission*; *Adhesiveness and Aversion*; *Love and Hatred*; *Joy and Grief*; *Destructiveness and Conservativeness*, &c. &c.

### III.

#### Animal Life—Functions—Susceptibilities.

The essential nature of *Animal Lives*, it may not be possible for the human mind to comprehend. Life is manifested from certain *associations*, and it controls matter, suspends the laws of chemical affinity, and extends its power over each of the imponderable fluids, known under the terms of *Magnetism, Electricity and Galvanism*. It carries on a *series of revolutions* in the *animal and mental economy* which correspond with the *alternative forces or states* of everything else in *nature*. Hence we have the *alterations* of the "Breath of Lives," by which "Man became a living soul." The air in breathing, generates the *heat* which, by expansion, produces the circulation of blood. The action of the blood on the lining membranes of the heart, excites the alternate expansion and contraction of that organ, by which its valves open and shut for the passage of the blood *back and forth* through the system. In this way the current of the blood is *assisted*, the same as the *waves* may assist in the passage of a stream of water. The application of cold air to the surface of the body, assists in driving the blood back again through the veins, and in these *alternate conditions of motion and rest, cold and*

with his "Constitution of Man," and "Moral Philosophy" should be read and studied by all who would make any proficiency in anthropology. Much has been published on Phrenology in this country, of late and many discoveries are said to have been made, correcting the labors of Gall, Spurzheim and Combe; but I have seen nothing of this kind which is worth a moment's attention from any one.

\* Genesis 2: 7.

*heat, sleep and wakefulness, life and death*; we have a perfect correspondence with the other phenomena of nature, and the constitution of things.

*Life*, together with the *associations* which constitute the *nature of things*, give to the nervous system in every case its determinate *size, qualities*, and consequent *powers*. And with the *quantity* of the *grey nervous matter*, and the comparative size of the different cerebral organs, (other things being equal,) the *mental or intellectual power* and manifestations, will, invariably be found to agree.

### IV.

#### Nervous Energy.

The essential nature of the nervous energy, the mind may not have any faculty for comprehending any more than it has for knowing what *life* is. It is a *functioned power* supplied by the *vital forces*, and is modified, increased, or diminished in the system or its various parts, by the air, food, cold, heat, light, darkness, sound, color, odor, bodily and mental exercise, associations, and in a word, by everything in nature, real or imaginary, which may be brought in contact with the body, or occupy the mind. Impressions are conveyed by vibrations from one nerve to another, through the various associations between the different nerves, ganglia, and the parts which they supply.

### V.

#### Health—Disease.

When the due amount of *nervous energy* is communicated at the proper time, the heart dilates and contracts regularly; the voluntary and other muscles obey without obstruction, the several wants of the various organisms, which call them into action. The various secretions are made at the proper period, the vital forces predominate in their tendencies to preserve all parts of the system against the destructive power of oxygen which tends to break them down, and thus the balance of power is duly maintained between the *breathing, circulating, assimilating, absorbing, and excreting* functions. This we call a state of perfect health.

Disease is a disturbance in the nervous energy; when more or less is communicated to any part than is necessary to supply the natural wants of the system, the circulating, assimilating, absorbing and excreting processes are interrupted, and inflammation, or congestion ensues: one part is wasted for the want of a due supply, and another is enlarged with unhealthy deposits. The

temperature is now increased or diminished, and hence as health consists in a regular series of alternating conditions or motions, each embracing a special period of time, so disease in all cases, must be nothing more nor less than an increase or diminution of the amount of the same motions or conditions, and is universally alternative with a period of comparative health. And the amount of motion or temperature makes the difference in chronic or acute diseases.

## VI

### Intuition—Clairvoyance—Instinct.

When either of the moral or intellectual organs are constituted with a certain amount of the grey nervous matter and reach a determinate size, the knowledge appropriate to those faculties is intuitive, and but little or no mental labor is necessary for its acquirement.\* A purely instinctive action is not determined by experience or observation; it is perfect, and not susceptible of any improvement. The instinctive power in man is (in the acquisition of knowledge) superceded by the development of the intellectual faculties, through the external senses. But in certain states of the nervous system when the external senses are suspended, this power becomes active, and is then what is denominated clairvoyance. Some mental actions are of a mixed character, combining something of instinct and the exercise of the mind through the external senses.

The first and highest susceptibility, short of consciousness, is that quality of living organisms which is operated on by the appropriate agencies, when they are excited to action; as that quality of the optic nerve which is affected by light, and by which we become conscious of the presence and nature of objects. It is in the stomach, and affected by food; in the ear and affected by sound. And in the different organs of the living body which renders them susceptible to changes, from the relations which exist between them, or from certain external agencies.

Each of the external senses are conditioned upon that quality of the nervous system which gives the sense of feeling. It is the foundation of instinct and consciousness, and, hence, when either sight or hearing, taste or smell, are suspended or inactive, as in somnambulism, catalepsy and trance, this sense, so generally diffused over the system, becomes highly exalted and acts for each of the others. In this may we account

for presentiments and prophetic dreams; and by this power somnambulists are often able to distinguish the nature and the difference in objects.

## VII.

### Temperaments.

The degrees in which we find the different qualities of the nervous matter, apportioned in each system, together with the qualities and quantities of the fluids, muscles, bones, and the digesting, circulating, absorbing, and breathing organs determine what we call the temperament or idiosyncrasy, in each case. From this it will be seen that there may not be any two persons of precisely the same temperament, and the reasons, also, why one person is more easily affected from any given cause than another.

## VIII.

### Mental Influence.

The influence which one person or thing may have upon another, depends upon the temperaments or the constitution of man, and the nature of things. In chemistry, certain results follow the association of two known properties, as an acid and alkali.—But no two minds may be constituted precisely alike. That is, there is a difference in their temperaments, the fluids, the nerves and muscles of no two persons, may be apportioned just alike. Hence no two are precisely alike in the different degrees of their different susceptibilities. Each has the same number of mental organs, but in their qualities, maturity, size of the organs, education, and many other things which go to make up the idiosyncrasy of each person, there will be a variety of differences, which tend to make them unlike, and give one an influence over the other. It is from these contraries that, as a general thing, the two sexes have more power over each other, than either can now have over another of the same sex. From this may be seen upon how many different considerations does the influence which one mind has over another, depend. The comparative size of the brains, the size of the different organs, the views of the person, the skill, tact, intelligence, firmness, time, place, circumstances, motives, and many other things are to be taken into the account before it can be determined how much power one mind would be able to exert over another.

## IX.

### Associations.

Minds affect each other by associations. By establishing an agreeable association or

\* Thus we account for prodigies, such as Zera Colborn, Eliza Burritt, Ole Bull, Vaux Tempe, Sivori, Swedenborg, and others.

relation between two persons, the mind of one may thereby control the susceptibilities of the other; or by applying the hand of one to any part of the other, different mental and physical changes may be produced. Hence it follows that the only influence extended from one mind or body to another, depends upon the kind of relation established between them, and the same is true with regard to any influence felt by the living body, from any other cause.

Associations are often formed and controlled by the mind, between itself and real or imaginary things or beings; so that the mind, and consequently the nervous system, is affected one way or another by the views or the belief entertained of persons or things. When the mind has been once impressed with an anticipation of an influence from any cause, it takes cognizance of this law of association, and in cases of high susceptibility, it does sometimes either create, or transfer it from one substance or agent to another; and hence the system is affected precisely according to the anticipations of the mind, and not according to the real qualities of those things to which the association has been transferred.

A peculiar association or connection between two minds or two functions which are not precisely alike, produces a positive or sympathetic relation, by which one mind affects the condition of the other. When the mind or organs are precisely alike, the relation is negative and no results are produced except a state or feeling of antipathy, and when two minds, bodies, or substances are brought together which do not come up to a certain degree of difference, in quality or functions, a neutral relation, or a state of apathy, is the result.

Where the association between two different nervous organisms, is sufficiently strong, one may become lost in the susceptibilities of the other, so as not to be really or normally conscious of anything except the states of the mind or power by which it has become fascinated or spell-bound.

The nature of the relations or associations between two or more substances, organs, or entities, depends upon the difference or likeness in their qualities or functions, and the difference in the nature or qualities of things. This accounts for the difference in the susceptibilities of different persons, to be influenced by any given substance or agency which is associated with the mind, or any part of the body (as the stomach) for the purpose of bringing about a change.

By changing the associations we may by design or incidentally change the mental or

physical powers and thus by exciting one sense we may suspend each of the others; as neither two of the senses can be excited to a certain degree at one and the same time. Hence it is, that the thought or idea of a state or condition of the mind or body, when fixed in the mind for a sufficient length of time, suspends the senses and brings on that very change or state.

## X.

### Sympathy.

The laws of association or sympathy between the vital organs and the substances which nourish the system, such as air, and food, keep up the phenomena of life. Their disturbance produces disease, and their destruction, death.

The muscles, limbs, and organs, are controlled by the brain on the opposite side of the body; that is, the right brain corresponds with the left side, and the left brain with the right side, and the muscles are moved through these associations or relations, which exist between different portions of the same muscles, and also, between these and the sympathetic nerves whose activity constitutes the mind. From which it follows, that there is a reciprocal influence between the different nerves and the other organs of the entire system; and hence it is that the state of one organ or part is changed by the state of another, with which it is associated.

These sympathetic relations or associations exist between the mental organs and the nerves and muscles of the face; they shape the features, and thus lay the foundation for all that may be known of Physiognomy; they give the contour to the entire system, so that associations may be traced between all the mental and physical developments; and from corresponding points of sympathy throughout the body, the different cerebral organs may be excited and controlled by any external agencies which may be brought in to association with their susceptibilities for that purpose.

## XI.

### The Will.

The Human will is the aggregate of the mental faculties, acting in the same sense that the mind or heart, is the aggregate of those faculties. The wants of the mind and those of the animal economy grow out of the susceptibilities with which man is endowed. One faculty disposes to the reception of food—another to worship—another to know and understand the causes and relations of things. The exercise of any one faculty affords more or less satisfaction; and the

greatest satisfaction is enjoyed when the largest number of the faculties are gratified in harmony with each other. The highest organs in the brains are those whose functions take cognizance of moral relations and dispose to the performance of moral duties. The intellectual organs perceive and show the reason why duties should be performed, why we should worship one being rather than another. Hence it is that man is most satisfied when he is governed by the highest or moral organs, and the whole of his organs are gratified in harmony, together.—It is then he fulfils all the relations he sustains to God and man. It is then he enjoys the greatest satisfaction of which his nature is susceptible, and best answers the great end of his existence.

### XII.

#### Moral Obligation—Happiness—Misery.

Moral power, when affirmed of moral beings is co-existent with moral obligation, and both are conditioned on certain susceptibilities, and relations. Duties to the Deity are conditioned on the relations we sustain to Him; duties to country, family and neighbors, are conditioned upon the relations we sustain to each, and the relations themselves are traceable to the mental and physical faculties by which each has it in his power to do the most intrinsic good to the greatest number.

Moral law is in harmony with physical and organic law, and the greatest good is secured when each of these laws are obeyed—from which it follows, that sin is the want of conformity to the moral law, and misery is the necessary consequence of a violation of either moral, physical or organic laws.

### XIII.

#### Mental Phenomena.

Mental phenomena may be divided into four classes:

1. Those which occur from states of disease or the constitutional tendencies of certain minds. Dreams, visions, insanity, and many other traits of character are originated in this way.

2. Those which occur incidentally from associations and causes not apprehended at the time, but which affect certain temperaments and produce the changes which occur.

3. Those which are self-induced, such as sleep, trance, somnambulism, and, in a word, each and all those changes which come within the range of faith, hope, and the power of the human will. There is no state of the mind but which may be self-induced, where there are no disturbing causes

or previous associations strong enough to prevent the attention from becoming sufficiently fixed upon the result.

4. There are phenomena which are induced by certain associations or means, designedly used for the purpose by one person in operating upon the mind or nervous system of another.

The pathology of incubus, somnambulism, trance, second sight, insanity and dreaming, is the same, or so nearly so that the pathology of one of these states will readily suggest or explain the pathology of each of the others. In each case, the balance of power between the alternating states or periods of activity and rest, is suspended or destroyed, and hence the extremes into which the mind or some of its faculties are driven, without the power of self-control peculiar to a healthy waking state.

### XIV.

#### Sleep.

Sleep is one of the alternating states of life, and it bears precisely the same relation to wakefulness, that inhaling and exhaling air bear to each other, and the ebbing and flowing of the blood. As we have seen, all the phenomena of life, alternate and are periodical; and when the lungs become periodically exhausted, they leave a larger quantity of venous blood in the cerebrum which is the physiological cause of sleep.

### XV.

#### Dreaming.

Dreaming is a state of partial activity in the mental organs, between sound sleep and wakefulness. Whatever, therefore, tends to increase the circulation and to destroy the balance between the periods of activity and rest peculiar to the circulating system, increases the mental states, analogous and peculiar to a state of dreaming.

### XVI.

#### Generation.

Intellectual and physical qualities are transmitted from parents to offspring. As the nervous organisms are generated, the activity of whose functions constitute mind, the mind itself is affected and modified, as the case may be, by all those states and circumstances which tend to affect the health, habits and mental condition of parents, and especially of mothers during the period of gestation.

### XVII.

#### Death—Resurrection.

Death is the alternation of life, and the resurrection of the human body is the alternation of death. We can trace man no farther than death without a divine revelation, and from the bible we learn that by the gospel of Jesus Christ "Life and immortality are brought to light."

## HEROIC TREATMENT.

## A SYNOPSIS,

Containing a short abstract of the most practical articles; and showing at a glance, the most important indications of treatment by different writers, published within the last half-year.

Disorders affecting the system generally.

## FEVERS.

*Typhus*.—The great indication of treatment is to produce fibrine, i. e., to separate the nucleus (the true representative of fibrine) from the envelope of each blood corpuscle. By giving chlorine (muriatic acid) and ammonia, alternately, this is accomplished. The envelope is decomposed, the nucleus remains undissolved. (Dr. Richter, p. 32.)

Dilate the system with nitrogenised matters, from the fact of ammonia or nitrogen being deficient in the system in typhus. After giving a full dose of castor oil, give 10 grains of carbonate of ammonia every six hours until the return of cerebral action, and then give aperients and quinine. Good beef tea well seasoned with spices and salt. Plenty of water and diluents. Port wine when the pulse will bear it. (Mr. Grantham, p. 29.)

When the circulation requires it, give wine under all circumstances of derangement of the functions. Two drachms of ether in the form of injections every two hours, when swallowing is difficult. Blisters in succession over the surface every six hours, over chest, abdomen, thighs, and legs, as stimulants to excite the capillary system. (Dr. Corrigan, p. 30.)

*Ague*.—Large doses of quinine (from 10 to 60 grains a-day) for four successive days, and intermitting it the six following days, thus embracing the interval comprehended in three fits; or

A large dose of quinine as soon as a fit threatens or takes place, and then omitted till another paroxysm comes on. Doses from 15 to 30 grains each day, increased sometimes to 60 grains. (Dr. Graves, p. 25.)

Before giving quinine, relieve congestions of internal organs, which may occur even in anemic subjects; and then give a large dose of quinine, followed by small doses, in order to keep up its stimulating or tonic effects on the capillaries. (Dr. R. Chambers, p. 26.)

Every sufficient dose of quinine or bark loses power by fractioning it, like a dose of wine; therefore give a large or full dose during or just after a fit, and also during the intermission: the second dose to be given on any day from the first to the sixth interval, then to be repeated after intervals of 7, 8, 9,

10, 12, 14, 16, 18, 22, and 30 days. Best time for the dose immediately after a light dinner, and the first dose just after an attack. A dose, from 15 to 20 grains of sulphate of quinine, or 3 or 4 drachms of cinchona will keep off the fit for about eight days. (Brettonneau, p. 28.)

*Scarlatina*.—As soon as the efflorescence appears, and when the fauces are red, apply a solution of nitrate of silver to the inflamed parts in the throat (10 grains to the ounce;) apply the camphor liniment combined with laudanum externally; and to a child of three years old, give half a drachm of diluted distilled vinegar, in syrup and water, every three hours; after fifteen years, give two drachms to a dose. The solution of nitrate of silver should be applied once or twice a day, by means of a bit of sponge at the end of a lead pencil. (Mr. Brown, p. 35.)

When there is dropsy, with albuminous urine after scarlatina, the epithelium separates from the mucous surface of the kidney, and there is a desquamation similar to that on the skin. Cutaneous action should be kept up until the renal secretion is restored, or all the consequences of Bright's disease may occur, and the patient die from the retention of urea in the system. It is in the mild forms that dangerous sequelæ are to be apprehended, the poison having been imperfectly, or not at all, eliminated through the skin. (Dr. Todd, p. 124.)

*CANCER*.—Use methodic compression, as recommended by Mr. Young. Apply perfectly smooth disks of agaric, laid over each other, and retained in situ by a roller (Recamier.) Use a laminated plate of lead, modelled to the tumour, surmounted by graduated compresses. (M. Begin.) Dr. Arnott's plan of applying pressure by means of an air cushion and spring, is the best, as it makes equal and regular pressure on the tumour, and is applicable whenever a bony or other solid support exists behind the growth, where a point for counter-pressure can be had. (p. 168.) Give the following internally: *R. Arsenici iodureti*, gr. j.; *ext. coarct.* ℥ i j.; *M. in pil.* xvi.; *dividend.* j. *bis die*. Diet should be light and nutritious, and exercise moderate. (Dr. Walshe, p. 169.)

*SCROFULA*.—Give muriate of barytes in doses of from half a grain to three grains. When given to infants, add a syrup to diminish its irritant effects, and if there be spasm, combine it with some aromatic or antispasmodic. The following is a good formula: Muriate of barytes, muriate of iron, of each half a drachm; water distilled, syrup of orange peel, of each half an ounce. Or give half a grain of barytes in a tea-cupful of infusion of hop, or some bitter infusion, every mor-

ning fasting, gradually increasing the dose. Or give it in pill, the best way, in doses of one-twelfth of a grain three times a day, increasing the frequency of the doses, rather than the quantity in each. Barytes does not supersede iodine in these cases, but sometimes iodine does no good, or it does good only to a certain point, and then proves noxious; it is here that barytes is of the greatest service.—Dr. Walshe, p. 170.

**Scrofulous Tumours.**—Consecutive to inflammation and suppuration of the lymphatic glands, apply the following ointment:—Oil of cod livers, 15 parts; liq. of subacetat of lead, 8 parts; yolk of egg, 12 parts: make into a homogeneous ointment.

**Scrofulous Ophthalmia.**—Smear the margins of the eye-lids with cod liver oil, twice or thrice a day, by means of a camel-hair brush, or feather.—Dr. Brefeld, p. 171.

**RHEUMATISM.**—Give colchicum, but should the fever run very high, add bleeding and mercurial purgatives; if the pain be of a nervous character, give opium or morphia. The colchicum acts by eliminating morbid matter from the system. The urine becomes increased in quantity, or specific gravity, or both; there may be a sediment, or this may be eliminated as dissolved urea, and then there is no deposit. Continue the colchicum for a week or ten days after the pain has subsided, to get rid of rheumatic matter; combine it with a mild tonic, iodide of potassium, and a good diet.—Dr. Williams, p. 165.

**Acute.**—Give one or two grains of opium every second or third hour, or ten, twelve, or more grains in the twenty-four hours.—The opium is to be increased in dose, both as to frequency and quantity, until there is decided relief, and kept at that dose until the complaint is steadily subsiding.—Corrigan.

Bleed, once or twice, in the robust only, and give gr. v. to gr. x, of calomel, with gr. iss. or gr. ij. of opium, every night, and a purgative next morning. Give also the following draught, three times a day:—vin. colchici, mx. ad. xx.; pulv. ipecac. co.; gr. v.; mist salini, 3x.; syrapi, 3j.; M. Between the second and fourth day, and sooner, if tenderness of the gum occurs, omit the calomel, and continue one grain of opium at bedtime, and in some cases at noon, as also the colchicum draught and morning senna purge. [Dr. Hope.] When sore mouth supervenes, instead of continuing the opium, if there be not much pain left, give quinine and iodide of potassium. Disease of the heart is rare under either Dr. Corrigan's or Dr. Hope's plan of treatment; if it does occur, give large and repeated doses of calomel and opium. If the disease becomes

chronic, or the attendant fever is of a hectic character, give quinine or hydriodate of potash, in full doses.—Dr. Griffin, p. 162.

**Chronic.**—Give the clear cod-liver oil, in doses of a tea-spoonful, and gradually augment the dose to a wine-glass full, night and morning. Do not give this oil where dyspeptic symptoms co-exist. The best vehicle is a thin infusion of linseed, flavored with lemon peel, and sweetened to please the palate.—Dr. Bradshaw, p. 163.

**Muscular.**—"Fire" the parts with the instrument used by Dr. Corrigan. [See Paralysis, p. 56.]

**Gouty Neuralgia.**—This affection, often called sciatic gout from its seat, is cured by an attack of regular gout. Give a mild mercurial course, with salines, especially alkaline diuretics; occasional moderate detraction of blood, either generally or locally; a light and lowly animalized diet; and a most rigid abstinence from all fermented liquors, especially porter and aleo. The clothing should be warm; and give colchicum.—Dr. Robertson.

In gouty inflammation, apply leeches, and keep up a gentle oozing from the bites by warm fomentations; then keep the part covered and apply a lotion made of one part of spirit, three of camphor mixture, and a little vinegar. Give colchicum to stimulate and increase the secretion of the mucous membrane of the bowels and to eliminate lithic acid and other nitrogenized elements from the system.—Med. Chir. Reviewer, p. 162.

**Rheumatic Gout.**—Mix phosphate of ammonia, say ℥ss., in ℥vi. of distilled water; and give half an ounce of this either combined with small doses of musk or not. It decomposes the insoluble lithate of soda supposed to exist in the blood, and forms two new soluble compounds, phosphate of soda and lithate of ammonia. Give it for a considerable time where thickening of the white tissues exists; it deprives the blood of the lithic acid and soda, and creates a demand for them, which leads to absorption of these elements from the tissues where they have been deposited. This remedy is not intended to supersede the use of the lancet, and other remedies in acute rheumatism.—Dr. Buckler, p. 154.

#### Affections of the Nervous system.

##### TETANUS.

**Traumatic.**—Give large doses of tincture of aconite prepared according to Dr. Fleming's formula. Watch the case very attentively. Dr. Fleming would not exceed a second dose of 5 minims 2 hours after the first. In traumatic tetanus this will not be sufficient. Give 18 or 19 minims in eight

hours; the second day increase the dose to 32 minims in fourteen hours; third day, 25 minims in seven hours; and fourth day, 20 minims in two hours. Watch these doses unceasingly, and diminish them according to circumstances.—Mr. Page, p. 60.

**Idiopathic.**—Do not depend so much on stimulants, but support the strength on nutritious diet, such as animal jellies. Give opium in large doses with hydrocyanic acid; also a well-sustained course of purgatives, as colocynth pills with castor oil; cupping over the spine; turpentine glysters.—Dr. Watson, p. 57.

Try the hydropathic method of treatment. Envelope the patient in a cold wet sheet; over this place three or four good blankets; keep the patient in this condition for an hour, by which time the temperature of the sheet will probably be 100°. Then remove the coverings, and plunge the patient into a cold bath; rub him quite dry, and envelope him again in blankets for six hours.—Repeat this operation if the symptoms do not abate.—Mr. Preshaw, p. 60.

**HYDROPHOBIA.**—Employ large doses of the tincture of aconite, as recommended in traumatic tetanus.—[See Tetanus, Traumatic.]

**DELIRIUM TREMENS.**—Give opium and emetic tartar. Antim. potass. tart. gr. iv.; tinctura opii. 3j.; mist camphoræ, ʒviiij. Mix, and give two table spoonfuls for first dose, and one every half hour afterward, until delirium abates or drowsiness comes on.—Dr. Graves, p. 96.

When morphia and other narcotics fail, and the case is extreme, blister the back between the scapulæ, peel off the cuticle to the extent of three inches by two, and cover the part over with a layer of pure extract of belladonna. Within ten minutes there may be twitchings of the facial muscles, intoxication, pupils dilated, and drowsiness; immediately remove the belladonna, or even sooner.—Mr. Flood, p. 39.

**Asthenic Form.**—The object is to support the strength and allay irritation. Give stimulants and opium. The attack has come on gradually, and the patient has lived on stimulants, without proper food; the system is impoverished. Give broth and nutritious diet, with moderate quantities of good wine, and full doses of opium.

**Sthenic Form.**—The patient has been intemperate for a short time only, during an election, &c.; he is otherwise robust; the case borders on inflammation. Do not give opium: apply leeches to the epigastrium or head; cold lotions. Do not commence by stimulating, nor by giving narcotics; although one or both of these methods may

be ultimately required.—Dr. Corrigan, p. 41.

**MANIA (Mental Excitement).**—In cases with great action or excitement without power, the great object is to subdue the cerebral excitement by procuring sleep. For this reason give occasionally tinct. hyosciam. mxxx.; tinct. humuli, ʒij.; camphor, gr. v. to x. Or, relieve visceral congestion by leeches to the rectum; or give a full dose of opium. In anæmic cases, it is often necessary to give a stimulant, or good nutritious food before a narcotic. A combination of opium and tartar emetic; or calomel and opium; or the infusion of opium with a bitter; or the hydrochlorate of morphia; or an opiate enema may be tried. Rub three or four tea-spoonfuls of laudanum over the stomach; or rub the shaved head with limiment, camph. fort. combined with opium.

Apply a blister to the back, peel off a small portion of the cuticle, and apply the pure extract of belladonna for nine or ten minutes. [See Delirium Tremens.] When mania is periodic, give arsenic, tinct. ferri sesquichlor., zinc, copper, or tonics. Arsenic seems to alter the sensibility of the brain. It is, perhaps, better to keep the head regularly cold, than to apply the douche.—Dr. J. Williams, p. 35.

**Puerperal.**—Give opium and tartar emetic, as recommended in the treatment of delirium tremens.—Dr. Graves, p. 96.

**PARALYSIS.**—In cases where there is no organic lesion in the central organs, "fire" the patient every day, if permissible, along the spine, thighs, and legs, or other parts. Mode of application.—"The iron consists of a thick iron wire shank, two inches long, inserted in a small wooden handle, having on its extremity, which is slightly curved, a disc or button of iron, a quarter of an inch thick, and half an inch in diameter. The face of the disc is flat, not spherical, like the French ones. Hold the button over the flame of a small spirit lamp, keeping the fore-finger about half an inch from the heated button. As soon as the finger feels uncomfortably hot, withdraw the button, and apply it as quickly and lightly as possible, at intervals of half an inch over the whole of the affected part, bringing the flat surface of the disc fairly in contact with the skin.—A whole limb or the back may thus be fired in a hundred places, if necessary, in one minute. By looking sideways at the spots, the skin should look first of a glistening white, and, in a short time, of a bright red.—Dr. Corrigan, p. 55.

When there is no organic lesion, but only a want of nervous energy, in cases of local and not general paralysis, as when a single muscle of a certain class of muscles are af-



fect, as by the action of lead, make use of magnetic electricity.—Dr. Neligan, p. 43.

In cases depending upon cold, poisons, molecular changes in the brain and nerves, give strychnine in doses from one-eighth to a quarter of a grain three times a day. Do not exceed three quarters of a grain three times a day, and cease on the appearance of poisonous effects.—Dr. Favell, p. 55.

**EPILEPSY.**—One great difference between epilepsy and apoplexy is, that in the former the respiratory movements are even more active, impeded, indeed, by the spasm of the glottis which often exists, whereas in apoplexy respiration is impaired; hence the coma of apoplexy is more dangerous; not so with epilepsy, in which respiration is even exalted. This may be owing to the circulation through the cerebrum being impeded, and by means of the circle of Willis, diverted to the medulla oblongata; hence the exaltation of the medullary functions in hysteria, epilepsy, &c. Hence also the greater liability to convulsions during sleep, the superior hypnotic influence of moderate doses of opium, which exalt the medullary while they impair the cerebral functions, and the wakefulness caused by prussic acid, which impairs the medullary functions.—The great object of treatment is to equalize the circulation; not to allow one part to monopolize the blood at the expense of another. Bleeding is very exceptionable, as the cases often occur in anæmic subjects. Improve the vigor of the circulation, and even increase the quantity of blood. Apply cold to the head and spine, and heat to other parts; purge, give diuretics, counter-irritate. Advise regular exercise, warm clothing. Subdue the action of the heart by hydrocyanic acid, digitalis, henbane, valerian. Improve the general tone of the system; give nitrate of silver, zinc, copper, chalybeates, mineral acids, bark, quinine. Perhaps the best is the muriated tincture of iron.—Dr. C. J. B. Williams, p. 49.

**APOPLEXY.**—When caused by intravascular congestion, plethora, or hyperæmia, deplete: when caused by extravascular effusion, the system is under the influence of shock, and does not bear depletion well.—How shall we know the latter case? Vertigo is a good characteristic, coming on in the act of stooping, sudden change of position, &c. But the best plan is to feel our way by a small blood-letting, and watch the effect. When caused by hyperæmia or inanition, restore the equilibrium of the circulation by good diet, and improving the health; quinine, iron. In this case the relief from depletion is transitory.—Dr. M. Hall, p. 46.

**Neuralgia.**—"Fire" the parts affected, and do it repeatedly, if necessary.—Dr. Corrigan, p. 55: see Paralysis.

Give three grains of sulphate of quinine, with one-eighth of a grain of sulphate of morphia, an hour before each expected attack, and then give five drops of tincture of Indian hemp three times a day, and rub some cajeput oil on the part affected. Continue the quinine three times a day, and increase the Indian hemp to seven and ten drops three times a day till relieved.—Mr. Hargrave, p. 66.

Give colchicum, either alone or combined with other remedies, especially in cardiac neuralgia; and in this case, apply the tobacco leaf externally over the seat of pain: it should be slightly moistened, and removed on any symptoms of giddiness or sinking appearing.—Dr. Fife, p. 67.

Make a liniment with one drachm of tincture of aconite of the shops, and seven drachms of fresh palm oil, or with two ounces of camphor liniment. Rub half a drachm or a drachm of the former, or double the quantity of the latter, into the part affected, twice or thrice a day, according to its effects. It must be watched attentively, as the medicine is cumulative. If its poisonous effects appear, give a stimulant, as wine, or get the patient into the fresh air.—Mr. Kirby, p. 65.

[See Retrospect, Part XII., Art. 9, for Dr. Fleming's interesting paper on this medicine; and for his formula for the preparation of his tincture of anconite, see the same article, page 41.]

**Facial.** (Orbital.)—Give half a grain of valerianate of zinc every eight hours, combined with two grains of extract of hyoscinum. Follow this with gentle purgatives.—Dr. Bell, p. 62.

**Periodic.**—Give large doses of sulphate of quinine, from a scruple to half a drachm daily. Combine it, if necessary, with Fowler's solution of arsenic; but omit the arsenic unless unsuccessful with quinine and other remedies.—Sir B. Brodie, p. 62.

When the sulphate of quinine fails, give the tannate of quinine in the same doses as the sulphate.—Dr. Hauff, p. 65.

**SCIATICA.**—Apply a blister to the hip, peel off the cuticle and dress the part twice a day with one grain of hydrochlorate of morphia. Repeat the blister and morphia when necessary. Give also, three times a day, two ounces of guaiacum mixture, with 40 minims, or one drachm of the tincture of guaiacum; and apply some stimulating liniment. If these fail, try the internal use of turpentine.—Dr. Taylor, p. 61.

"Fire" the parts along the course of pain,

and, also, if necessary, across the loins.—Do it repeatedly, if requisite.—Dr. Corrigan, p. 55 : see Paralysis.

#### Affections of the Circulatory System.

**ANEMIA.**—Improve the general health and strength, and the quantity and quality of the blood. Iron forms the chief part of the hæmoglobin which is contained within the external envelope of the red globules; therefore, this is one of the most important medicines by which to increase the quantity of globules. It is better to give iron in small quantities for a long time, than in large doses for a short time. The first organ to be attended to will often be the stomach and digestive organs. If the stomach will bear it, begin with mist. ferri. co. or with tinct. ferri. sesquichlor. in a bitter infusion: or give the sulphate of iron combined with ext. gent. or with ext. hyosciam., and a little aloes or rhubarb. When there is œdema, combine the potassio-tartrate of iron, with bitartrate of potass. The iodide of iron is also an excellent preparation. Sometimes iron cannot be borne at first: in this case give the bitter infusions, or, if the stomach be irritable and neuralgic, give hydrocyanic acid, with a little muriate of morphia, or the oxide of silver: in this case a belladonna plaster over the stomach, and even one third of a grain of extract of belladonna, three times a day, may be tried. It is impossible to anticipate all the symptoms which appear in anæmia: the case must be treated accordingly. (Dr. Turnbull, p. 69.)

**HEART.**—(Functional Diseases.)—Palpitation.—Owing, 1st, to a distended stomach; and thus interfering with the descent of the diaphragm, and confining the heart's motions: 2nd, a distended colon pressing on the aorta, causing fullness of blood on the left side of the heart: 3rd, a distended stomach and colon pressing on the ascending cava, and causing a deficiency of blood on the right side of the heart: 4th, hepatic disease. Each of these states will require its particular treatment. (Dr. Bellingham, p. 77.)

**ANEURISM.**—(Compression in the treatment of.)—Such an amount of compression is not necessary as to cause inflammation and adhesion of the opposed surfaces of the vessel, nor should the circulation in the artery at the point where it is compressed be entirely intercepted. To apply it successfully, the velocity of the current should be diminished, and the amount of blood in the sac be diminished, so as to encourage the deposition of fibrine, until the sac is quite filled. It has this advantage over the cure of aneurism by ligature, that the artery is obliterated at the seat of the aneurism, by which the chances

of gangrene are diminished. The cure is also more effectual, as the sac and also the artery leading from it, become filled with fibrine, whereas, after ligature, a loose coagulum remains which does not fill the sac. (Dr. Bellingham, p. 209.)

It is not unfrequently found that the artery and its accompanying vein have become adherent, which is a great source of embarrassment to the operator, when tying the artery; this is avoided by adopting the treatment by *compression*. A moderate degree of pressure is all that is necessary throughout, so as not entirely to intercept the current of blood through the vessel. (Dr. Porter, p. 211.)

**ANEURISM by Anastomosis, or Nævus Martenus.**—Tie the tributary arteries in the neighbourhood (Palletan, Wadrop. Dr. Mc Lauchlan.) Tie the arteries supplying the tumour, and then remove it by knife, securing the bleeding vessels with ligatures. (Syme.) Cut off the supply of blood to the tumour by making incisions around it, secure the bleeding vessels, and place pledgets of lint between the cut surfaces to prevent union taking place. (Dr. Gibson.) Use galvanopuncture for ten minutes at a time, with 15 pairs of plates. The pins introduced into the tumour should be numerous, and cross each other at right angles; apply ice after the operation. (Dr. Petrequin.)

**Nævi.**—Apply lint steeped in liq. plumbi, or solution of alum, and strap it over the part with a bandage; wet the lint without removing it, and keep it so applied for several weeks. Should this fail cut out the tumour, if no larger than a crown piece, and close the edges of the wound by twisted suture. (p. 231.)

**SUBCLAVIAN ARTERY.**—(Ligature of.)—When there is extensive swelling and supuration, after the lesion of an artery, it is not advisable to cut down upon it, to tie it at the seat of injury; and when this is the case after the wound of the subclavian, it is better to secure the artery beneath the scapulus, before it approaches the tubercle of the rib; it is much higher and more accessible there. (Dr. Warren, p. 222.)

**POSTERIOR TIBIAL ARTERY.**—(Wound and Ligature of.)—Take the wound as a centre, and cut down upon the vessel, and tie it both above and below the seat of injury. (Arnott.) If it be a case of secondary hæmorrhage, and there is a good deal of coagulum in the parts surrounding the vessel, it will be advisable to tie the femoral artery. When there is a wound in the calf of the leg, with sufficient bleeding to warrant a belief that the posterior tibial artery is wounded,

separate the soleus from its attachment to the tibia, cutting through the deep fascia, and secure the vessel. (Mr. B. B. Cooper, p. 217.)

**HÆMORRHAGIC DIATHESIS.**—Apply to the bleeding part pads soaked in acetate of lead mixture, and cover it also with pulverized matico. Give the following mixture: *R.* Plumbi super acet. 3ss.; acid acet. dil. 3ss. syr. rhoad. ʒss.; aqua ʒv. M.; sumat cochl. ij. magn. om̄n. tertia hora. If the acetate of lead begins to affect the system, substitute for it the sulphate of soda. You must rely upon constitutional treatment. (Dr. Clay, p. 234.)

**EPISTAXIS.**—Give the oxide of silver internally. (Mr. B. Lane, p. 103.)

#### Affections of the Respiratory System.

**BRONCHITIS.**—(In Infants.)—If very severe make use of the warm bath, and give one grain of calomel and two of ipecacuanha with a little compound tragacanth powder, every four hours; if less severe, three times a day, and lengthen the period as improvement takes place. After the first or second dose, the ipecacuanha does not act as an emetic. When necessary to apply a blister to an infant, place a piece of tissue paper between it and the skin, or dip a piece of blotting paper into acetum cantharidis; apply it to the part, and in ten or fifteen minutes you will have a blister. (Mr. Miller, p. 88.)

**Chronic or Subacute.**—Cause the patient to inhale the fumes of ammonia (p. 90.)

**PNEUMONIA.**—(Chronic.)—Cause the patient to inhale the fumes of ammonia, in order to stimulate the parts. (p. 89.)

**ASTHMA.**—Dip a charpie-pencil into pure liquid ammonia and then into water, and apply it to the velum, uvula, and upper part of the esophagus. Do not let it remain too long in contact with the soft parts, nor carry it too deeply into the throat; where there is emphysema, one application will be sufficient. The absorption of ammonia by the stomach will probably produce the same result, if given in sufficiently large doses, or its inhalation when diffused in the atmospheric air.—(M. Guérard, p. 89.)

**APHONIA.**—(Loss of Voice.)—Inhalation of fumes of pure ammonia. (p. 90.)

**ASPHYXIA.**—Use cold affusion, and when respiration is fully established, open a vein. (Mr. Noyce, p. 238.) Cause the patient to inhale the fumes of pure ammonia. (p. 89.)

**ORDEMA.**—(Of the Glottis.)—When suffocation threatens, perform the operation of **Laryngotomy.** (Mr. Drokes, p. 378.)

**TRACHEOTOMY.**—In children: lay hold of the trachea with a hook, and, having drawn

it forwards, cut out a portion with a pair of scissors; or use Mr. Millikin's instrument, by which you can both fix and hook the trachea, and then cut out a circular portion from the cartilaginous rings. Mr. Read's improved instrument is a very good one; the cutting part forms a curve or obtuse angle with the handle. (Mr. Carmichael, p. 236.)

Perform the operation early. If you cannot avoid the thyroid veins, cut straight through them; the hæmorrhage ceases on the introduction of the canula. If the case be not very urgent, keep the edges of the wound apart by some instrument, for a short time before introducing the canula, in order to allow of false membranes being expelled. You may expedite this by dropping water into the bronchi, and sponging the trachea. If the canula become obstructed, remove it immediately and empty it, and when the canula is withdrawn, introduce the dilator. After the fourth or fifth day diminish the size of the canula, and by the thirtieth day, it may be dispensed with. Drop into the air passages, fifteen or twenty drops of a solution of nitrate of silver (gr. v. to ʒj.), and cleanse the trachea with a sponge dipped in the same solution. (Trousseau, p. 237.)

**PARACENTESIS THORACIS.**—Do not allow air to be admitted through the canula if it can be avoided. It may re-kindle inflammation, or convert the adhesive into the suppurative inflammation. Unless the lung is capable of free and full expansion, do not attempt to draw off all the fluid; remove only so much as the expanding lung and the surrounding compressed organs are capable of replacing. Watch the opening carefully, especially during inspiration and coughing, and when the stream begins to fail, turn the patient on his punctured side till there is an alternate flow and stoppage of the stream during inspiration and expiration, then immediately withdraw the canula. Apply a flannel bandage with moderate firmness around the chest. **Precautions.**—1. Always introduce an exploring needle first, to know if the diagnosis be correct. 2. Do not puncture one side before it is presumed that the other is sound enough to carry on respiration. 3. Draw off the fluid slowly through as small a canula as the density of the fluid will admit. 4. Only draw off the fluid till the air seems to threaten to be admitted. (Dr. Hughes, p. 36.)

#### Affections of the Alimentary Canal.

**HARE LIP.**—[Operation for.]—Make the incision from above downwards, nearly as far as the red margin of the lip, and stop before you have detached the cut piece; then direct the incision at a right angle towards

the meridian line. Do the same on the opposite side, and then unite the two margins in their whole extent, except towards their free borders: the flaps formed by directing the incisions towards the median line are to be approximated. [Mr. Smith.] If the child be strong and healthy, and the fissure only affects the lip and not the bones, the operation should be performed a few days after birth. [Dubois.] When the features are enlarged, there is more ground to work upon, therefore defer it until the first set of teeth have appeared. [Liston, p. 239.]

**FRÆNUM LINGUÆ.**—(New Instrument for Dividing.)—This resembles a pair of scissors; its blades are perfectly blunt and curved, and do not close completely, thus leaving an interval for the reception of the frænum. [Dr. Beatty, p. 245.]

**CLEFT PALATE AND STAPHYLOGRAPHY.**—Dissect the soft tissues from each side of the fissure in the palate, to such an extent as to make a flap broad enough to join its fellow of the opposite side in the mesial line, and stitch the whole between the uvula and the anterior extremity. Re-union to a considerable extent, takes place, and towards the inner margin of the bones, and also on the upper surface of the soft portion in the middle, there will be a cicatrix analogous to mucous membrane. [Warren.]

The soft velum ought to remain in a state of perfect repose, and for this purpose the levator palati, the palato-pharyngeus, and the palato-glossus muscles should be divided. This cuts off all motor influence in an outward, upward, or downward direction. For this purpose use a knife with a blade like the point of a lancet, the cutting edge being about a quarter of an inch in extent, and the flat surface being bent semi-circularly. Make an incision half an inch long on each side of the posterior nares, and divide the levator palati muscle on both sides, just above its attachments to the palate; then pare the edges of the fissure, and with a pair of long blunt-pointed scissors, divide the posterior pillar of the fauces, and, if it seems necessary, the anterior pillar too, the wound in each part being a quarter of an inch in extent: then introduce stitches by means of a curved needle set in a handle, the threads being tied so as to keep the cut edge of the fissure in exact contact. The first incision, that for the division of the levator palati, should be made midway between the hard palate and the posterior margin of the soft flag, just above the thickest and most prominent part of the margin of the cleft. You may commence cutting either at the end nearest you, as you stand behind the patient, or that furthest off, as may seem most con-

venient. For ligatures, those of stout silk, or flaxen thread, are the best; and it is of the greatest importance that a stitch be used close to the lower end of the uvula, as there is a great tendency to separation there. The after-treatment the same as after ordinary operations, except that the parts are to be kept at rest as much as possible, and nutriment to be given by means of enemata of gruel and soups. (Mr. Ferguson, p. 240.)

**PALATE.**—(Operations on.)—In cases of small holes in the soft or hard palate, pencil their borders several times a-day with a concentrated tincture of cantharides. Inflammation and granulation come on and close the opening. Large openings are to be closed by suture, after paring the edges; and leaden wire is said to be preferable to silk, for ligatures, as it keeps the edges close together, and does not cut through the texture.

When there is adhesion between the velum palati and posterior wall of the pharynx occasioning deafness, and stopping the communication between the nares and air-passages, the adhesion must be divided transversely, by means of a long scalpel, about half an inch below the adherent border of the velum. The edge must be fixed by a hook, and drawn from the wall of the pharynx, then, with a lancet-formed knife, the surface of which is curved, directed upwards, the velum is to be loosened, and the separation completed by scissors, also curved upon their flat surface. The upper adhesions are to be destroyed by passing a blunt curved iron instrument, like a very small spatula, along the inferior nares. Next prepare a ligature with a small curved needle at each end; with one of the needles transfix the velum, a few lines from its edge, and bring it out at a high point on the anterior surface of the palate; the other needle must be used in the same manner, a short distance from the side of the other; and the edge of the velum must be brought about half an inch from the palate. All mechanical means for closing the fissured palate, are not only injurious but dangerous; but if the size of the cleft, or other circumstances, render an operation unavoidable, then it may be covered with a gold plate, fixed to the teeth. In cases of holes in the palate, the edges of which are so callous that an operation would be unsuccessful, the opening may be stopped by wearing a double piece of Indian rubber, without fear of its being enlarged. Two pieces of Indian rubber, the thickness of pasteboard, are cut about four or five times larger than the opening, and between them a small round piece, and they are to be transfixed by waxed thread; thus, one plate lies on the anterior, the other on the posterior side of the palate.

and the small middle strip in the opening. The patient can apply it himself, and it should be taken out to be cleaned once a week. [Dieffenbach, p. 244.]

**CYNANCHE.**—Make free incisions, varying them in depth and extent according to the case in the following manner: Take a long round-pointed scalpel, and having covered the blade with adhesive plaster to within three quarters of an inch of the point, firmly press down the root of the tongue with the index-finger of the left hand, and make one or more incisions in a direction upwards and outwards along the tonsil and velum to the base of the uvula. The throat to be gargled with warm water to encourage the bleeding; in other respects gargles are useless, since they cause motion in parts which ought to be kept at rest. [Dr. Makin, p. 91.]

**BOWELS**—[Acute Inflammation of.]—Where local or general depletion has been used, or where they cannot be resorted to, give two grains of opium, and then one-grain doses every two hours, until about 32 grains have been taken; watch the state of the bladder, and open the bowels with mild purgatives, combined with henbane. If the enteritis be intense, deplete; and should the system resist opium, give calomel, but substitute opium for it as soon as the symptoms give way. Do not give it in small doses, for then it checks the diarrhoea, but does not relieve the inflammation. If dysentery exists, combine it with ipecacuanha. [Dr. Griffin, p. 94.]

**DYSPEPSIA.**—When dependent on or complicated with hyperæmic or sub-inflammatory condition of the mucous membrane, direct the use of herbaceous aliment, as grapes, apples, strawberries, pomegranates, &c.; give them about an hour before breakfast, and in the intervals of meals. Should flatulence and fecal accumulation arise, treat the former with soda and ginger, and the latter with a pill of aloes, capsicum, and quinine. (Dr. Dick, p. 96.) Or, give oxide of silver in half-grain doses twice a day, in conjunction with aperients and alteratives. In gastralgia, oxide of silver acts well as a sedative.

**PYROSIS.**—Give half-grain doses of oxide of silver in a pill twice a day; where there is deep-seated pain, apply leeches to the epigastrium first. (Mr. Butler Lane, p. 107.)

**CONSTIPATION.**—Where there is no recognized stricture, strangulated hernia, or abdominal tumours, make use of an oleaginous enema, to five pints of which add an ounce of sulphate of magnesia, and a table spoonful of common salt. In giving the injection, let the patient lie on his right side, with the

pelvis considerably elevated; it should be administered slowly, so that the intestines may be filled before it is distended, and when it contracts may force away the feculent matter mechanically. Use well-boiled oatmeal gruel with common salt and butter. (Dr. Hall, p. 97.)

When it arises from obstruction near the junction of the ileum with the cæcum, inject air into the bowels. (Dr. Todd, p. 103.)

When dependent on indolence of the bowels, warm water injections are injurious. Give a pill containing one-fifth of a grain of the extract of nux vomica every morning; it acts by rousing the contractile power of the intestine. It is particularly of service to the paralytic, or where the muscular tone of the intestine is lost by over-distension. Injections of catechu, krameria, and alum are useful, as they corrugate the muscular fibres of the bowels, and diminish the size of the pouches which may be formed in the intestines by accumulated feces, particularly that in the rectum just above the sphincter. These astringent injections may be varied; they may be made of the red rose, krameria, oak bark, bistoria, catechu, alum, rhatany, nux vomica, &c. They should only be small, 10 or 12 ounces, and not retained many minutes, so that the muscular fibres may readily contract.—Or, introduce tents into the rectum. (Fleury.) Or, champoo it. (Recamier.) Or, give ox-gall; as auxiliaries, add drinks of vegetable bitters, a tonic diet, and exercise in the open air. (Dr. Teissier, p. 100.)

**CONSTIPATION DURING PREGNANCY.**—Inject into the rectum a drachm of the inspissated ox-gall, dissolved in a pint of warm water. [Dr. Allnatt.] This may be repeated every four hours until relief is produced. [Dr. Aldis, p. 102.]

**DIARRHŒA.**—[Chronic.]—Give half grain doses of oxide of silver, twice a day. [Mr. Butler Lane, p. 103.]

**DIARRHŒA IN YOUNG INFANTS.**—Give castor oil with yolk of egg, and if necessary, add an opiate. Prescribe as follows, for an infant of from two to four months old: R. Ol. ricini, ʒj to ʒiiss.; vielli ovi semis; aq. aneth. feneculi, a. a. ʒj. ft. emuls.umat coch. parv. bis die. From two to six drops of laudanum may be added, but this, as well as its amount and frequency, must vary with the case. [Dr. Thomson, p. 104.]

**HEMNIA.**—[Radical cure of.]—The means to be used are, excision of the testicle, incision of the sac, excision suture, and cauterization of the sac, ligature of the sac after incision of the integuments, acupuncture, and insertion of gold-beater's skin in the sac. These means, however, do not prevent a

fresh hernial descent, although they destroy the sac. The best means for procuring closure of the hernial aperture, are trusses, ligature of the sac, and its envelopes, and the cutaneous plug. Trusses should not press too powerfully on the abdominal parietes, or they may produce inflammation or irritation of the parts, or the walls of the abdomen may become atrophied; or if the pad be very small and convex it may produce elongation of the aponeurosis and muscle, and thus weakens the parts. The operation by ligature is attended with considerable pain, and even loss of life. There are two ways of introducing the cutaneous plug—the first, to detach a piece of integument from the neighbourhood of the ring, and introduce it into the aperture: the second is effected by drawing the loose scrotal integument into the inguinal canal, and to cause adhesive inflammation between the invaginated integument and the walls of the canal. M. Gerdy retains the invaginated integuments in situ by one or more sutures. Mr. B. Cooper, in performing M. Gerdy's operation, stitched the invaginated skin to the tendon of the external oblique muscle, and brought out the needle an inch and a half above Poupart's ligament; the needle was again passed into the canal, and brought out through the abdominal parietes as before, about four lines distant, and the skin between the two ends of the ligature was thus included and tied over a piece of bougie. [Mr. Teale, p. 247.]

**STRANGULATED.**—In order to determine whether the intestine be still living or not, wait a few moments after dividing the stricture, and see whether the discolouration becomes less intense; or press the blood out of the distended veins and see if they become rapidly refilled. If no evidence of circulation exist, cover the intestine with integuments, or with a moist sponge, and wait a little while; the surface of the intestine may then be carefully and slightly scarified with the point of a lancet, and perhaps a slight oozing of blood will take place, if so, however discoloured it may be, the intestines may be returned into the abdomen. Carefully press out the contents of the intestine and then replace it in successive portions; then pass the finger within the abdomen to determine that no portion of the intestine is engaged within the sac, and also to determine that the protruded knuckle of the intestine is not invaginated within a neighbouring portion of the intestinal canal. When gangrene has taken place, and is general, make an incision through the whole length of the gangrenous portion, and leave it to slough away. This opening allows the contents of the upper part of the canal to pass away: but if this does

not take place without dividing the stricture, this must be done with as little disturbance as possible. The wound must be left open, to facilitate the free discharge of matters, and simply dressed with wet linen, frequently renewed. Mr. Travers does not recommend division but dilatation of the stricture. Sir A. Cooper divided the stricture generally. Mr. Key also advises it. Bransford's practice of excising the gangrenous parts and uniting the divided extremities by suture is universally abandoned. Recent adhesions, if there be no gangrene, are to be destroyed by the finger or handle of a scalpel—adhesions of two coils of intestine is also to be treated in this way. [Mr. Teale, p. 249.]

It is recommended by some practitioners, as Mr. Key, &c., to return the bowel without cutting into the sac, as there is less danger of peritoneal inflammation afterwards. The objection to this practice is the possible gangrenous condition of the bowel, many of the symptoms of which are equivocal, so that it is the best practice, after all, to open the sac. The great mortality attending these operations has been increased by improper after-treatment, as the early exhibition of purgatives. [Mr. South, p. 251.]

**ENTEROTOMY AFTER OPERATION FOR STRANGULATED HERNIA.**—It sometimes happens that after the operation for strangulated hernia, and after the intestine has been returned, symptoms of strangulation remain; the part of the intestine is incapable of resuming its functions, and tympanitis comes on. Separate the edges of the incision, pass the finger into the abdomen, find the distended coil of the bowel, seize it with a pair of forceps, and by means of probe-pointed scissors, make an opening into it, through which the contents of the intestinal canal may escape; many a life may be saved by these means. [M. Maisonneuve, p. 254.]

**ANUS.**—[Artificial]—After the bowel has been strangulated so long that gangrene of a portion has taken place, and an artificial anus is formed, either by the knife or by sloughing, and the stools are passed out of the opening, try the ingenious method adopted by Mr. Trant, of Dublin, which consists of introducing a small silver tube [made by Mr. Millikin, of Dublin,] and pressing back the intermediate portion of the intestine lying between the abdominal and anal position of the artificial opening, and thus bring the parts into such relation that the stools can pass into the natural channel. In this way the opening may be gradually closed, and the functions of the part restored to the normal state. [Mr. Trant, p. 262.]

**FISTULA IN ANO.**—Pass a ligature through

the fistula, bringing it out at the anus and gradually tightening it upon the included part; use a catheter wire, about as thick as small twine. [Dr. Colvan, p. 261.]

**HÆMORRHOID.**—Where the case is recent, and the protruded piles not large, the bleeding small, and the constitution not affected, give a few grains of blue pill and rhubarb at night, and a little infus. rosæ and epsom salts in the morning, for a few days; after which give the ordinary electuary of senna, sulphur, cream of tartar, and mel rosæ, or, what is better, treacle, as the mel rosæ often gripes. Also inject into the rectum a pint of cold water with a drachm of nitre dissolved in it; enjoin steady exercise, and moderation in diet. In thin delicate subjects, give tonics, particularly mist. ferri aromatica; and if there be any serious organic mischief, particularly of the chest, interfere with the piles as little as possible. When the patient is becoming debilitated from the pain and irritation, as well as from bleeding, then remove the protruded hæmorrhoidal portions of the bowel, having secured them by ligature. [Mr. Hamilton, p. 257.]

**INTERNAL BLEEDING HÆMORRHOIDS.**—Inject after every alvine evacuation, solution of acetate of lead 3j. to 3viij of distilled water; use two ounces of the solution for each injection; give an occasional blue pill, followed by a dose of castor oil and extract of tamaracum. To remedy the constipation usual in these cases, give the following confection: common resin, well powdered, one ounce; clarified honey, five ounces; half an ounce of balsam of copaiba renders it more efficacious, but is apt to disagree with the stomach. [Dr. Watson, New-York, p. 257.]

**LIVER.** [Congestion of.]—In diminished secretion, with pale or white stools, give mercury. In excessive secretion, increase the amount of oxygen inspired, and thus, during respiration there will be consumed materials that would otherwise be left for the liver to excrete; for while the carbon of the lungs is united to oxygen, and excreted in a non-combustible state, the carbon of the liver is non-oxygenized, is still combustible, and is intended, not for excretion, but absorption. Limit the supply of food which contributes to form bile, as spirituous liquors, butter, cream, fat, sugar, &c. The patient ought not to sleep immediately after a full meal, nor take suppers. [Dr. Budd, p. 106.]

**Affections of the Urinary Organs.**

**URINARY DEPOSITS.**—*Apparatus.*—A microscope, with a power of 300 diameters; test glasses; phials containing nitric and acetic acids, water of ammonia, and potash; some slips of blue and reddened litmus paper, and an urinometer.

*Diagnosis.*—Notice whether it be colorless, amber, saffron, red, &c., transparent or turbid; ascertain by litmus paper whether it be acid, alkaline, or neutral; note its specific gravity; set it aside to see if it deposit a sediment, or throw up a cream to the surface, or crystallize on the sides of the vessel. The urine should be recent, and if the patient have leucorrhœa or be menstruating, should be drawn off by a catheter; take care to have the vessel clean.

*Urates* are in excess when the urine is acid, deposits on cooling, a red, pink, buff-colored or white precipitate, covering the bottom of the vessel with an even powdery deposit, usually copious, and dissolving by heat; viewed by the microscope, a powdery appearance; dissolved in nitric acid by a gentle heat, evaporated to dryness, and held over the fumes of ammonia, murexide of a beautiful red color is formed.

*Uric Acid.*—Urine highly acid, and deposits on cooling, a red, pink or buff-colored sediment, adhering to the sides of the vessel in hard crystalline grains, having the appearance by the microscope of diamond-shaped plates or prisms; the precipitate is generally scanty; forms murexide the same as the urates, with nitric acid and ammonia.

When the urine is acid, alkaline or neutral, but turbid on emission, and deposits a white or yellowish sediment, and is not rendered transparent by heat, there will be present, phosphates, oxalate of lime, cystine, mucus, pus or blood; if the

*Phosphates*, it is rendered apparent by acetic acid; the earthy phosphates appear as amorphous powders by the microscope, the ammoniaco-magnesian, as triangular prisms.

*Oxalate of Lime.*—Not affected by acetic acid or ammonia, but rendered transparent by nitric acid; deposit when viewed by the microscope consists of octohedral crystals.

*Cystine.*—Rendered transparent by solution of ammonia; viewed by the microscope it consists of five-sided plates, clouded in the centres.

*Pus or Mucus.*—The sediment is whitish, and not dissolved by any of these agents; viewed by the microscope it consists of minute, irregular, spherical bodies with granulated surfaces.

*Blood.*—Sediment red, and not dissolved by nitric acid, heat or acetic acid; by the microscope it consists of minute yellowish bodies, the shape of a shilling.

The dissolved constituents in diseased states of the urine, are:

*Bile.*—To detect it, drop the urine and nitric acid a short distance from it on a plate of glass: as they meet examine them with

an achromatic microscope, and if bile be present, a green color will be produced.

**Albumen.**—Sp. gr. 1.014, or lower; heat coagulates the albumen, and this cannot be redissolved by nitric acid; nitric acid coagulates the albumen.

**Sugar.**—Sp. gr. 1.025, or above; taste sweet; boil the suspected urine with an equal bulk of water of potash, if sugar be present the liquid will assume a deep porter or beer color.

**TREATMENT:**—*Lithic Acid deposits.*—Give gr. x. or ℥j. of bicarbonate of potash or soda, three times a day, and if the deposit be in the form of rhombic prisms, indicating gout, give colchicum, using local antiphlogistic measures, if the urine be sanguinolent or albuminous, and there be pain in the loins. If the deposit be amorphous, there is either excessive secretion of the solid constituents of the urine, or a deficiency in the secretion of water. In the former case, the sp. gr. is increased in proportion to the quantity; give iodide of potassium three times a day in doses of 5 or 10 grs. In the latter, the quantity of urine is decreased, there will be fever either idiopathic or symptomatic, which must be removed, or dyspepsia, in this case give a scruple of alum three times a day in half a pint of water. If the sediment have a pink color, attend to the biliary functions.

*Weakly Acid or neutral urine.*—This shows that the kidneys are inflamed. If acutely, use general and local depletion, and exhibit emollients and contrastimulants; give ℥j. doses of iodide of potassium. If the inflammation be chronic, use local depletion and counter-irritation; setons are very useful; occurring during typhus, apply blisters to the loins, and give wine.

*Oxalate of Lime deposits.*—At first give tonics, the mineral acids, vegetable bitters, astringents, &c.; and after some time give alkalies largely diluted. Alternate these plans, and persist steadily in their use. The following is a good tonic in these cases:—Infus. cascarrill. ʒvj; potass. nitrat. ʒj.; acid. nitrici dil. ʒiss.; tinct. opii ʒj. M. sumat. cochl. duo ampla ter in die.

*Albuminous Urine.*—Use active depletion, both local and general; give nauseating doses of tartar emetic, and hydragogue purgatives; use the warm bath; give alkalies. Persevere in this treatment, but should the strength fail, and a cachectic state come on, depend on active counter-irritation, especially by setons. (Dr. Aldridge, p. 134.)

*Albuminous Urine after Scarlatina.*—If seen early, adopt antiphlogistic measures; and when active is succeeded by passive congestion, give two or three grains of ace-

tate of lead three times a day, to prevent the insidious drain on the system, and then give muriated tincture of iron, to repair the anæmic state of the system. (Dr. O'Ferrall, p. 124.)

*Diabetes Mellitus.*—The sugar in this disease is formed not only in primary but also in secondary assimilation from the tissues, as the emaciation proves; hence the rigorous exclusion of non-azotized substances is not advisable, as it forces the diseases to attack the living tissues, therefore allow at least farinaceous food. (Dr. Dick, p. 122.)

Exalt the tone of the secreting capillaries of the kidneys by balsams, ammonia, strychnia, and other excitants, when the perspiratory secretion is suppressed; if it be not, give chalybeates, alum, sulphate of zinc, or other metallic astringents; give a moderate portion of animal food, porter, &c., but do not enjoin a strictly animal diet.

*Diabetes Inosidus.*—Give anti-spasmodics and mineral tonics, and apply stimulating liniments to the spine.

*Purulent Deposits in Urine.*—Give tonics, to subdue the asthenic inflammation of the mucous membranes; decoction of the leaves of chimaphila corymbosa, diosma crenata, arctospaphylos, uva ursi, or the root of cisampelos pareira, combined with mineral acids; also give chalybeates.

*Hæmaturia.*—Treat this disease in the same way as other vicarious discharges; give astringents, as tannin; or styptics, as oil of turpentine; when you give the latter be on your guard against nephritis. (Dr. Aldridge, p. 135.)

*Bright's Disease, or Albuminuria.*—Enjoin a general tonic regimen, avoid as articles of food, fat and other highly carbonised materials, attend to the functions of the skin and bowels, relieve congestion of the gland, and, if necessary use small bleedings. (Dr. Johnson.) Make use of cautious small blood-lettings in the early stages, particularly if acute; give hydragogue cathartics, and improve the general health; do not deplete where the disease is chronic. (Dr. Williams.) In the very early stages change the mode of life and habits of the patient, enjoin pure air and careful attention to diet and exercise; in this stage application for relief is seldom made. In the second and third stages, relieve congestion; promote the flow of urine and the action of the skin, and prevent the disposition of fatty matters by a diet which contains neither fat, nor butter, nor any of those non-azotized substances nearly allied to it, as starch, sugar, potatoes, &c. (Dr Todd, p. 110.)

In the acute form, remove congestion of the kidneys by blood-letting, regulated ac-



cording to the intensity of the disease and the patient's strength; restore the function of the skin, by keeping the patient in a warm atmosphere, giving mild diaphoretics, and the use of the warm or vapor bath.—Dr. Barlow gives tartar emetic. Next, remove the dropsy, by diuretics and purgatives, nitrate of potash, in doses of two scruples or more, with digitalis and cream of tartar; the nitrate should be largely diluted.

In the chronic form, first attend to the function of the skin by warm clothing, diaphoretics, and the warm bath. Give tincture of cantharides in doses of from four to twelve drops, in some emulsion (Dr. Bright;) Dr. Wells and M. Monneret advise thirty to sixty drops in twenty-four hours; or give ioduret of iron (M. Gutbrod;) or hydriodate of potash, and use iodine ointment [M. Alken;] or give chalybeate tonics, saline purgatives, and nutritious diet [Dr. Reese;] or equal parts of tinct. of cantharides and tinct. of sesquichloride of iron [Dr. Copeland.]

Treat the dropsy with cream of tartar and digitalis [Dr. Christison, give from a drachm to a drachm and a half of the former three times a day, and at the same time a pill containing one or two grains of powdered digitalis, or twenty drops of the tincture in cinnamon water; give a blue pill [grs. 5] every night for four or five nights. Diuresis may often be established by an emetic of ipecac. and tartar emetic, or by a hydragogue cathartic; should these fail, give squills, broom, spirit of nitric ether, or Hollands and water, or carbonate, nitrate, or acetate of potash; or decoction of horse radish [Rayer]. Diuretics do not cure the disease, they can only relieve the dropsy.

Try Seidlitz or Pullna water; cream of tartar in half ounce doses [Rayer]; give five, seven, or nine grains of gamboge, once every two days, triturated with bitartrate of potash, to prevent griping. Combat the concomitant affections of the digestive organs with creosote [Dr. Christison]; give it as a pill, one drop of creosote, two grains of rhubarb, and one grain of extract of gentian, for the mass; or with the sedative solution of opium; or with extract of opium and nitrate of silver, half a grain of each in a pill. Apply sinapisms, turpentine epithems, or a cantharides blister, externally; sprinkle the blistered surface with muriate of morphia; check diarrhoea by chalk, astringents, and opiates; or give acetate of lead with opium, or strychnine with opium.—Dr. Wood, p. 120.

**INCONTINENCE OF URINE**—(the result of stricture.)—Endeavor to remove or relieve the stricture by bougies or catheters; when

these fail, the lancetted stilette, Mr. Stafford's, may be sometimes resorted to with advantage. It is a dangerous instrument, and should be used with great caution. It should be firmly pressed against and then through the stricture, and after it be withdrawn a catheter should be introduced, Lawrence. The tone of the bladder, after retention of urine, may be restored by giving ergot of rye in two-scruple or drachm doses, twice a day, about an hour or two before the bladder begins to feel uneasy from the accumulation of water.—Braithwaite, p. 297.

**LITHOTRITY.**—The best instrument for performing this operation with, is the two-branched curved instrument of Baron Heurteloup. A new instrument, by means of which a large calculus may be ground to powder in a few minutes, by oscillatory movements, it is worthy of attention.—M. Leroy, p. 273.

Prepare the patient for the operation by enjoining a light diet, abstinence from fermented liquors, clear out the bowels, and order the hip-bath; if the urine be acid, give alkalies combined with uva ursi or Peruvian bark, if alkaline, give the mineral acids; and if mucous deposits, infusion of Pareira brava; enjoin absolute rest, and use occasionally an anodyne enema. The urethra is to be gradually dilated, if necessary; when preternatural contraction of its orifice exists, divide it. Introduce the catheter frequently, as it allays the irritability of the bladder and urethra. The objects of the operation are to reduce calculi within the bladder to such a size that the portions may be removed or discharged through the natural passages, to effect this by such means as shall excite no dangerous irritation in the urinary organs, and to free the bladder from the small fragments which remain. Great care should be taken that the case be a suitable one for the operation, as in some cases cystotomy must be preferred. Lithotripsy may be performed where the bladder is perfectly healthy and the stone is small; and it is decidedly advantageous where there is phthisis or albuminuria. It is a great and valuable addition to surgical therapeutics, but cannot be considered as a substitute for cystotomy, since there are numerous cases in which the last operation will prove the safest and most effectual.

Cystotomy, for example, is preferable in boys before the age of puberty: it is so simple and the urethra is so small as not to admit of the lithotrite. Cystotomy is also preferable in the female; also where the calculus has attained a very large size; also where the prostate gland is enlarged, unless

the calculus be of very small size.—Sir P. Crampton, p. 266.

**PROSTATE GLAND**.—Enlargement of.—Charge a bougie with iodine, or iodide of potassium, and then dip it into melted tallow, so that a coating may be formed upon it; then introduce it up the urethra to the part desired, and let it rest upon it until the tallow melts, and the iodine, &c., comes in contact with the diseased part. The preparation of iodine must at first be very mild; a grain of iodide to the drachm of lard, gradually increased in strength as the patient can bear it, to two, three, four, five, and even ten grains, or a scruple to the drachm; after this, add iodine to it, half a grain, gradually increased. The bougie must be introduced with great care.—Mr. Stafford, p. 273.

#### Affections of the Organs of Generation.

**SYPHILITIC AFFECTIONS.**—(Chancres).—Wash the part well with warm water, and then apply the solid nitrate of silver; it will completely destroy the affection, if not more than three days' standing. If it be a pustule, evacuate its contents, and the walls of the pustule are to be well cauterised. When there is a chancre of the frenum, it is more readily healed by dividing it, and cauterizing the whole of the divided surface. To check discharge, apply a solution of pure tannin.—two grs. to the ounce of water; or sulphate of zinc solution, in private practice, as the former tells tales by staining the linen. The caustic should be reapplied as soon as the eschar is removed, or about once in twenty-four hours. If lint have been applied after the caustic, take care to soak it well before you remove it, or the eschar may be detached, and the part made to bleed. If the case be seen early, one or two burnings will suffice; if at a more advanced period, it must be repeated at intervals of twenty-four hours—for a week or ten days, or as long as we consider any virus is secreted by the sore, which is known by the ulcers remaining stationary, and the surface being covered with a yellow pellicle; when becoming healthy, granulations spring up and the sore heals. Caustic is not so efficacious when the chancre is situated on the frænum, orifice of the urethra, around the prepuce, or on the fourchette in the female;—enjoin rest and strict attention to cleanliness, and avoid rupturing the cicatrix. (Acton, p. 274.)

**BUBOES.**—Apply a blister the size of a crown for twenty-four hours, then raise the cuticle, and apply a pledget of lint of corresponding size, well saturated with a solution of bichloride of mercury, (a scruple of the salt to one ounce of *spt. vini rectif.*); keep it in situ

from two to four hours, and then apply cold applications for some hours; an eschar is formed, which will be thrown off, and the tumour will be dispersed. (Malapert, p. 283.)

**GONORRHEA.**—Inject the urethra with a solution of copaiba. (Ricord, p. 294.)

**CHORDEE.**—Give from 25 to 50 minims of the *vin sem. colchici*, for several successive nights. (p. 295.)

Or, *vin. colchici*, 3ij.; *magnes. carb.* 3j.; iodide of potassium, 3ss.; *aqua*, 3vss. *M.* 3j *quartis horis sumend.* Or give a combination of iodide of potass and decoct. *sarsæ comp.* (p. 295.)

**GLEET.**—Apply the following ointment, which answers much better than the nitrate of silver: kino, ten parts; sulphate of zinc, one part; lard twenty parts. (Dr. Leroy, p. 290.)

**STRICTURE.**—DILATATION.—There are three modes of performing dilatation. 1. Slow or permanent; the catheter is left in the urethra and changed every three or four days. 2. Continuous or sudden; changing the catheter every six or seven hours. 3. Temporary or progressive; retaining the catheter or bougie, from five minutes to one hour. Never employ force in introducing a bougie, and when you increase the size do not do it from day to day, but at the same sitting, i. e., commence with that which passed freely the day before.

When a bougie cannot be passed, but the urine flows off, use Dr. Leroy's apparatus for keeping the pressure of a bougie constantly against the part; or press the end of the instrument against the obstacle for a quarter or half an hour daily, and after each sitting, try to pass a small bougie: when these means fail, apply the caustic bougie.

When the stricture produces complete retention of urine, endeavor to pass bougies in conjunction with bleeding, baths, &c.: by the application of tobacco smoke; should these fail, press a small catheter against the obstacle for an hour. Cut down upon the urethra posterior to the obstacle, but should a calculus be there detained, cut through the rectum. If necessary to puncture the bladder, do it through the rectum. M. Lallemand cuts down on the strictured part itself. (Dr. Leroy d'Étiolles, p. 286.)

**SECONDARY FORM OF SYPHILIS.**—Give the proto-iodide of mercury, and should it occasion irritation, in the bowels with diarrhoea, combine it with opium. Let the diet be simple, avoiding all stimulants whether solid or fluid; the diet, however, should not be debilitating but nutritious. Cold and damp air is

very injurious, fresh air is highly necessary. (Ricord, p. 280.)

**TERTIARY FORM OF SYPHILLIS.**—The characteristic of these symptoms, is their not being transmissible hereditarily. They are manifested chiefly in the subcutaneous or submucous cellular tissue, in the fibrous, osseous, cartilaginous, muscular or nervous tissues, and in organs in their locality. The remedy most to be depended upon is mercury. (Ricord, p. 280.)

**PARTURITION, AND DISEASES OF WOMEN.**—

**Placental Presentation.**—Whenever the condition of the mother permits, turn the child, and extract the placenta. The placenta should never be detached first, unless the danger to the woman is so great from exhaustion, as to render turning hazardous; or, unless there exists some obstacle to the extraction of the child, either from distortion of the pelvis or from tumours.

Neither delivery by turning, nor detaching the placenta, ought ever to be attempted, until the cervix and os uteri will safely allow the introduction of the hand. Until this is the case, strict rest, the application of cold, and the use of the plug, will be required.

Detaching the placenta will be found the best line of practice, 1st, in severe cases of unavoidable hæmorrhage, with placenta previa, complicated with an os uteri so insufficiently dilated and undilatable, as not to allow of turning with safety; 2nd, in many of the cases in which placental presentation is connected with premature labor, and imperfect development of the os and cervix uteri; 3d, when the uterus is too contracted to allow of turning; 4th, when the pelvis or passages of the mother are organically contracted; 5th, in cases of such extreme exhaustion of the mother, as forbid immediate turning or forced delivery; 6th, when the child is dead, and when it is premature and not viable. (Drs. Simpson, Radford, &c., p. 316.)

**Galvanism.**—This powerful agent may be used to induce or increase uterine action in cases of hæmorrhage, before, during, and after labor; in cases of placenta previa where it is inexpedient to rupture the membranes and turn; in internal hæmorrhage, depending upon uterine inertia. Its effects are instantaneous and much more to be depended upon than ergot, although it is advisable to try the secale first, and it will be found especially useful in those cases where exhaustion is so great as to render it dangerous to deliver the child in the ordinary way.—(Mr. Dorrington.)

In cases of accidental hæmorrhage, in the latter months of gestation, where the os uteri is rigid and nearly closed, and the flow of

blood cannot be arrested by ordinary means and more especially if there be uterine inertia, galvanism will be useful. In applying galvanism, one conductor should be passed up the vagina to the os uteri, in which a moistened sponge is introduced, and the other to the abdominal parietes, over the fundus in order to pass the current through the long diameter of the uterus, or they may both be applied externally in the short axis. The galvanic action should not be continued too long, and should be interrupted, so as to allow the uterus intervals of rest, and so to imitate nature's operations. (Dr. Radford, p. 334.) Galvanism may also be used as a dernier resort in hæmorrhage during the first months of pregnancy. [Mr. Wilson, p. 336.] Electro-magnetism may be applied in cases of uterine inertia during labor. [Mr. Clark, p. 337.]

**UTERINE HÆMORRHAGE.**—When danger to life is imminent, give opium freely; five grains for the first dose, and two or three every hour or half hour afterwards, until the pulse becomes distinct, the breathing easier, and the tossing about in bed allayed. At the same time, give warm wine and brandy, and apply heat to the extremities. [Dr. Grifflin, p. 338.]

**UTERINE HÆMORRHAGE AFTER DELIVERY.**

—In cases where on previous occasions, there has been hæmorrhage after the birth of the child, prepare an infusion of secale, ʒj. to ʒiv. of boiling water, and when the child's head has just cleared the external orifice, give half of it [along with the powder]; and when the child is entirely expelled give the remainder. [Dr. Beatty, p. 338.]

Give ergotine in doses of two grains every two hours. It has been found serviceable in cases of uterine hæmorrhage, whether acute or chronic, and dependent on a dynamic or an organic cause.—Ebers, p. 339.

When hæmorrhage becomes alarming after the expulsion of the placenta, turn the patient on her back, and grasp the uterus firmly with the hand, through the abdominal parietes, until it contracts; then take a small bowl or basin capable of holding twelve or fourteen ounces, having a thick smooth edge, and invert it over the body of the compressed uterus, taking care that the whole of it is compressed within the cavity of the basin, which is to be confined in situ with the bandage.—Mr. Harvey, p. 339.

Mr. Pretty has invented an apparatus by which he applies pressure to the abdomen to avert hæmorrhage after delivery; it consists of a central and two side pads, fastened by a strap, and tightened by means of a tourniquet; it is portable and easy of application.—Mr. Pretty, p. 340.

**TRANSFUSION.**—This should be adopted as a last resource when the patient is sinking. Mr. Brown reports a successful case in which he performed it, where there was the most alarming prostration, but no extraordinary discharge of blood.—p. 341.

**FORCEPS, APPLICATION OF, IN OCCIPITO-POSTERIOR POSITIONS.**—In these cases the forehead should be made to rotate backwards, and the occiput forwards; i. e., the extraction of the head with forceps should be an exact imitation of the mechanism of the expulsion of the head by nature.—Dr. Simpson, p. 343.

**FORCEPS, HOW TO APPLY.**—Having ascertained the exact position of the head, introduce the hand, well smeared with lard, within the os uteri; search for, and pass the fingers over the ear, so as to guide the blade over that organ, whatever may be its position. When the instrument is locked do not tie up the handles with tape, as it keeps a degree of pressure on the child's head not consistent with its safety. In acting with the forceps, always bear in mind the different axes of the pelvis, viz., of its brim, cavity, and outlet; therefore keep the handles of the instrument back to the perineum, till some part of the occipital bone has cleared the arch of the pubis, and when this occurs, gradually bring the handles towards the pubis, when the chin will pass over the perineum. The three powers of the forceps are brought into operation, viz., compression, traction, and leverage; but compression ought never to be made beyond diminishing the child's head to three inches, indeed, instruments are seldom constructed to admit of more.—Dr. Wilson, p. 349.

**UTERUS, INVERSION OF, FROM SHORT FUNI.**—When this occurs, lose no time in separating the placenta from its attachments, and with clenched hand replace the uterus; taking care not to withdraw the hand until the uterus contracts.—Mr. Smith, p. 359.

**PROLAPSE UTERI.**—Mr. Eagland, surgical instrument maker, of Leeds, has constructed a very efficacious instrument for keeping the prolapsed womb in position.

**SPECULUM UTERI.**—Dr. Protheroe Smith's new speculum uteri consists of a glass cylinder fitted to an outer one of metal, within which it slides. The inside of the metallic tube is highly polished, the reflecting powers of which are increased by the glass cylinder; the edge of the smaller or uterine extremity, is carefully rounded into a smooth ring, which projects slightly from the inner surface. In its side is cut an oval aperture of about three inches in length and two in breadth, extending to within half an inch of the end of the cylinder. Its other extremity

consists of a rim which projects about a line from the external surface of the tube, having its surface blackened for the absorption of any rays of light, which might otherwise be reflected, and impede the view by the dazzling effects. There is also a corresponding rim to the glass tube, by which it is more conveniently withdrawn from the metallic cylinder.—Dr. Smith, p. 352.

Dr. Adam Warden has invented a new speculum uteri, particularly adapted for examining the posterior lip of the os uteri.—p. 353.

Mr. Ferguson of King's College, has also recommended a speculum uteri, in which the reflecting surface, which is very brilliant, cannot be tarnished with any discharges or lotions. It is a very cheap instrument.—356.

Ricord's speculum uteri consists of two valves, united about the middle point, allowing both extremities to be widely opened; the narrowest part is thus placed at the vulva. To each valve a handle is attached, by which means space is gained, and the light falls upon the interior uninterruptedly, and pressure upon them causes a dilatation of the two extremities which can be maintained, diminished or increased by means of a screw.—p. 481.

**MENORRHAGIA.**—Give oxide of silver in half grain doses twice or thrice a day. It will be of the most use when the hemorrhage is of a secretive character, occasioned by local excitement, and not from the rupture of blood-vessels.—Mr. Butler Lane, p. 103.

Give nitrate of silver internally. Argent nit., gr. iij.; aquæ distillat. ℥ij; solve.—Give ten drops three times daily, and gradually increase the dose to fifteen drops.—Dr. Ditterich, p. 361.

**PRURITUS VULVÆ.**—Apply thrice a day to the affected parts, by means of a piece of sponge, the following lotion; Sodæ borat. ℥ss.; morphinæ sulphat., gr. vj.; aquæ rosæ distillat. ℥viij. M. ft. sol. p. 361.

#### Affections of Joints.

**KNEE JOINT.**—Inflammation of Synovial Membrane.—Keep the joint perfectly at rest; for this purpose, when the disease is chronic, apply splints of thick leather, one on each side of the joint, keeping them in place with a bandage. Steep the leather well in hot water, so as to make it exactly fit the joint. When the cure is nearly completed, the patient should wear an elastic bandage, so as to allow of a little motion, within certain limits, and the heel of his shoe should be raised a little, to keep the knee slightly bent. In the acute disease, use general antiphlo-

gistic measures, as well as the local abstraction of blood. After giving a brisk purgative, then give twelve minims of vin. colchici in a saline draught three times a day; in two or three days stop its exhibition, and after an interval of a day or two give it again; it is most useful when there is a gouty diathesis, with lithates in the urine; an occasional purgative is necessary during the administration of the colchicum, and also small doses of blue pill to keep up the secretion of bile which colchicum diminishes. Give mercury so as to affect the system; this may be done not only in the gouty diathesis, but also where there is rheumatic inflammation, and combine it with opium, as in iritis.

In chronic inflammation the same measures as in the acute, only not quite so active; leeches; blisters, apply them in succession, or keep one open with savine cerate; give colchicum as an alternative, two grains of the extract with as much blue pill, every night, and an aperient every third or fourth morning; or give the acetous extract, with calomel and comp. ext. of coloc., every second or third night. Give, also, iodide of potassium in small doses, combined with alkaline remedies. In slight cases, use liniments to the joint, lin. vol. camph. and sp. terebinth.; or olei olivæ ʒjss.; acid sulph., ʒj., and sp. terebinth. ʒss.; or paint the knee with a solution of iodine. When ulceration of the cartilages is going on; give mercury so as to affect the system, calomel and opium two or three times a day; mere alternative doses will not do; in a few days the pain will be quite relieved.—Sir B. Brodie, p. 185.

**Abscess.**—Make a free opening, and keep the joint in a state of absolute repose, by means of leathern splints, or by supporting it with pillows and cushions. The articular cartilages will have become absorbed, and recovery by ankylosis is the result; the joint during recovery must be supported with leathern splints: or if the leg be bent on the thigh, use the screw instrument, with splints at the posterior part of the leg and thigh.—Sir B. Brodie, p. 188.

**Gouty Inflammation of.**—Some of the smaller joints are affected first, and there is seldom much effusion within the joint.—Give a grain of acet. ex. of colchicum, a grain of blue pill, and three grains of ext. of hop. every night, with a gentle aperient every third or fourth morning; after giving these pills for a fortnight, stop them for two months, and then give them a fortnight again, and so on; give also a grain and a half, or two grains of iodide of potassium, with ten or twelve grains of bicarbonate of potash twice a day, for six or eight weeks

at a time. This system must be continued, with occasional intermissions, for one or two years, or even longer. This chronic gouty affection is not in itself dangerous, but it shows a bad constitution, and the person thus affected is liable to other diseases.—Sir B. Brodie, p. 185.

**Scrofulous Disease of.**—Never abstract blood, nor make use of counter-irritation. Here, as in all diseases of joints, a state of perfect repose is necessary; use the leather splints. As soon as the digestive organs are brought into a proper state, give tonics, particularly chalybeate tonics. To children give the vinum ferri of the old Pharmacopœia, for three weeks, and then omit it for ten days, and so on for several years, so as to improve the weak constitution. If fever be produced, decrease the dose, or omit it altogether for a while; or give the tinct. ferri. mur.; or the syrup of iodide of iron; or the latter and the vin. ferri alternately.—When you have a patient with whom no form of iron will agree, then give quinine, bark, or alkaline solution of sarsaparilla; the latter is very useful to delicate children. Change of air is highly beneficial, the seaside; when the joint has become stiff, do not use force to straighten it; it should be done gradually, by means of a screw apparatus; if an abscess forms in the joint, continue the use of the splints; but have them lined with oil-silk. If the disease have been neglected, or it has been found impossible to save the joint, amputate as soon as possible. If, by examination with a probe, it is found that there be a piece of dead bone within the joint, so that it cannot exfoliate, the sooner the limb is amputated the better. Bony ankylosis takes years for its completion, so that if the limb be bent there will be plenty of time to get it into its proper place.—Sir B. Brodie, p. 190.

**Primary Ulceration of the Cartilages.**—Keep the joint perfectly at rest, and use sedatives, issues, blisters, and counter-irritants. The great remedy is mercury; two grains of calomel and one-third of a grain of opium, three times a day, until the gums are affected. Where mercury cannot be borne, give sarsaparilla and iodide of potassium; sarsaparilla should also be given after the course of mercury. Ung. hydiarg. may be rubbed into the thighs where it cannot be borne internally.—Sir B. Brodie, p. 191.

**Morbid Alteration of Structure of the Synovial Membrane.**—Apply pressure by means of several alternate layers of diachylon plaster and bandage; and afterwards by leathern splints, and a firm bandage; attend also to the general health.—Sir B. Brodie, p. 192.

**Loose Cartilages in the Knee.**—Remove them by operation; get the cartilage fixed over the outer or inner condyle, and while it is retained in that situation, divide slowly the skin, cellular membrane, fascia, ligaments, and synovial membrane; hold the knife with a loose hand, or the cartilage will be pressed into the joint; lay hold of it with a tenaculum, but should it recede within the joint, never grope for it, but bring the edges of the wound together, and perform the operation at some other time. A valvular operation has been proposed.—Sir B. Brodie, p. 193.

**HIP-JOINT, Inflammation of.**—Put the patient under mercurial influence. Before commencing treatment determine the probable duration of the disease, as the efficacy of the action of mercury depends much on the stage in which it is used.—Dr. O'Ferrall, p. 194.

**DISLOCATIONS.**—Instead of using extension by the hands of assistants in reducing dislocations, make use of a little click wheel, fixed to the wall, and a rope attached to it; the extension is not only made more easily, but much more gradually.—Mr. Terrey, p. 202.

**Compound dislocation of the Astragalus.**—When it is necessary to remove the astragalus, or saw off the end of the tibia, in order to return the bones to their place, never make a fresh incision to effect it, if there is already an extensive wound in another direction; rather amputate the limb at once, the chances of recovery will be so much greater. [Sully.] The late Mr. Colles, of Dublin, was opposed to amputation in compound dislocation of the ankle joint; and when advisable, he thought it best to wait until the symptomatic fever had subsided.—p. 200.

**Immobility of the Lower Jaw.**—Keep up mechanical extension for a considerable period, gradually increasing it. An excellent instrument for this purpose has been constructed by Mr. Gay, of Leeds, under the direction of Mr. Teale. [See wood cut.]—Mr. T. P. Teale, p. 197.

#### Affections of the senses.

**EYE, Inflammation of.**—Acute.—Bleed and give nauseating medicines, purgatives, and low diet, and stimulate the liver, kidneys, and skin, to rid the fluids of pernicious ingredients. In the second stage, to prevent or arrest the consequences of inflammatory action, give mercury or iodine, bark, colchicum, turpentine, &c. In the third stage, when the inflammatory action has subsided, apply belladonna, and give mercury or iodine in smaller doses, and for longer periods

with local stimulation and cutaneous irritation.

When the disease has been treated with mercury, and returns, try depletion and antimonials, with confinement to bed, and low living, for two or three days before you again resort to that remedy. Give tartarate of antimony or James's powder, so as at first to cause nausea, and afterwards diaphoresis. Mercury is the sheet anchor, given so as just to effect the gums; at first, give three grains of blue pill, three grains of compound colocynth powder, and one-eighth or one-tenth of a grain of tartarate of antimony three times a day, for a couple of days; then five grains of blue pill, with the same quantity of antimony, for two days more; and finally five grains of blue pill three or four times a day. If it affect the bowels, add a little opium to it. This produces a mercurial effect upon the system in seven or eight days. Or two grains of calomel and a quarter of a grain of opium may be given every four or six hours, if we wish to affect the system sooner. The length of time we are to continue the mercury must be decided by its effects.

Iodine, turpentine, colchicum, and bark, are valuable where the inflammation is modified by specific disease, or constitutional derangement, or where mercury has already been given, or cannot with safety be used.

From the very commencement of an attack of iritis, extract of belladonna should be used. Mix it with water until it acquires the consistence of cream, and paint the eyelid, brow, and upper part of the cheek with it; let it dry, and then apply it again, and cover it with a little damp linen, and keep it moist by applying a lotion made with two drachms of the extract to eight ounces of the water. If its application be not found comfortable, it need not be applied more than once or twice in twenty-four hours. When its application to the skin does not affect the pupil, drop a little of the solution upon the conjunctiva, even during the inflammatory attack; its effects soon pass off. It is best to apply it in the morning.—Dr. Jacob, p. 308.

In the external forms of ophthalmia, apply an ointment of oxide of silver, a drachm to the ounce. This is very analogous to Mr. Guthrie's black ointment.—Mr. B. Lane, p. 103.

**Accidental Cataract.**—Two modes of treatment; 1st.—To allow absorption to take place; the inflammation to be reduced by leeches and mercurials, as in internal ophthalmia; apply belladonna so as to dilate the pupil.

2d.—Remove the fluid mass of cataract

by extraction of the lens through a small incision in the cornea, (Barton and Gibson); make the puncture at the temporal margin of the cornea with the extraction-knife, or with Mr. Walker's instrument, which combines the properties both of scoop and knife, and carry the point of the instrument into the pupil, when the lens will be discharged with the aqueous humor.—Mr. Walker, p. 314.

**Depression of the Crystalline Lens.**—The lens should be disengaged from its capsule in depressing it. To accomplish this, introduce the cataract bistoury through the coats of the eye, about a line and a half from the margin of the cornea; it penetrates the vitreous humor, and forms a breach in it, at the proper place for the reception of the lens when depressed; the point of the instrument directed towards the lens, is to be pushed across the eye to its opposite side, then penetrate the posterior part of the capsule, and, by drawing it outwards, incise it across its middle; then push the point of the needle between the lens and the iris, its flat side placed on the lower part of the lens, and press it backwards and upwards, then shift the point of the needle forwards upon the lens, and this presses it backwards into the breach of the vitreous humor, from whence it does not rise.—Dr. Watson, p. 314.

**Wounds of Eyelid.**—If a large piece of skin be lost, and the edges cannot be united, subsequent ectropium is avoided by making an incision a quarter of an inch from the edge of the wound, which then allows the edges to be united.—p. 313

**Fistula Lachrymalis.**—Dilate the nasal duct by means of Morgan's sound and catheter; pass the sound along the floor of the nose, directing its point outwards, until it lies fairly below the inferior turbinated bone, then direct the point of the instrument upwards, and move it gently backwards and forwards along the inferior surface of the turbinated bone, until a little cartilaginous ridge is felt—this is the orifice of the duct; depress the handle of the instrument, and its point glides into the duct. No force must be used, as the bony structures are very delicate; repeat it daily until the resistance is overcome, and then keep the passage clean by injections of warm water. When well, the patient should be taught to pass the instrument, to clear away collections of mucus. This instrument supersedes the use of the style.—p. 312.

**SKIN DISEASES.**—Chronic Eczema of the Face.—Give three or four drops of liq. arsenicalis three times a day, and cover the part day and night with lint spread with

zinc ointment, or with ung. hyd. precip. alb.; or, give five grains of Plummer's pill every second night, and a saline draught twice a day, giving at the same time a course of Harrogate waters; regulate the diet, avoiding all stimuli. Where the temperament of the patient is irritable, arsenic and cantharides aggravate the disease.

It often attacks the ears of young females in whom menstruation is irregularly performed; this fuction must be established by the usual means; apply bread and water poultices to the part during the night, and cover it with rags spread over with zinc ointment during the day; and give ten grains of pil. aloes c. myrrh. every second night at bed time. After using these means for a week or two, give five minims of tinct. of cantharides, and thirty of liq. potass. twice a day.—Mr. Erichsen, p. 297.

**Eczema of the Scrotum, Penis and Anus.**—Cover the parts with lint, wet with lead lotion, and enclose them with oil-silk, in order to keep off the air, and to prevent urine getting upon the part. Give a small dose of hydr. c. creta at night, and a dose of castor oil in a morning; in a few days substitute zinc ointment for the lotion, and give small doses of liq. potassæ, and five grains each of calomel and magnesia, twice a day. If it be of long standing, enjoin a strict diet, abstinence from fermented liquors, salted and heating articles of food, and give 20 minims of liq. arsenici et hydrarg. iodidi twice a day, with five grains of Plummer's pill at bed-time, and apply a mixture of zinc ointment and the ung. plumbi acetat, to the parts by means of a piece of lint cut to the proper shape. The treatment must be persisted in for a length of time. A little extract of belladonna rubbed down with the ointment, often succeeds in allaying the irritation.—Mr. Erichsen, p. 299.

**Eczema of the Scalp.**—If occurring to a child, otherwise healthy, about the period of dentition, be careful how you check the eruption. Cut the hair, apply bread and water poultices, and subdue irritation by the application of rags dipped in olive oil, or smeared with zinc ointment; or sprinkle the part with the nurse's milk. Give small doses of hydrarg. c. creta and castor oil, and lance the gums, if necessary. Fluid magnesia is often useful. If it becomes inveterate, wean the child on beef-tea, broth, and a nutritious diet, and give mild tonics, a few drops of tincture of ammon-chloride of iron, or iodide of iron, twice a day (from half a grain to two grains of the latter); a great part of the treatment consists in keeping the scalp so covered as to prevent the access of air.

When it becomes chronic and inactive, and presents a furfuraceous appearance, have recourse to gentle stimulants; a lotion composed of from one to two drachms of sulphuret of potass, either alone or combined with an equal quantity of the carbonate of the same alkali, in a pint of plain or of lime water; wash the head with this lotion three times a day; at the same time, every night after the last application of the lotion, apply an ointment composed of from a scruple to half a drachm of carbonate of potass to an ounce of lard, or one of creosote in the same proportion, or of white precipitate; or use the ung. hydr. nit. dil., or the sulphur ointment, or a mixture of this and tar or creosote ointment. Do not use the oiled-silk cap; it confines the perspiration and soddens the skin, producing a state of passive congestion which we wish to get rid of.—Mr. Erichsen, p. 301.

**Chronic Eczema of the Hands.**—In the early stages apply water-dressing by means of oiled-silk gloves or finger stalls, and at a more advanced period, a solution of nitrate of silver (grain j. to the ounce), instead of the water dressing; or a solution of carbonate of soda, (grain ij. to iv. to the ounce); or the following lotion: acid hydrocyan., 3ss.; zinci oxidi, 3j.; aquæ rosæ, ʒviij.; or cover the hand with the ung. hydrarg. precip. alb.; either alone or mixed with citrine ointment.

If the disease only occupy a small patch, cover it with a slice of lemon. Its spreading may be checked by applying the solid nitrate of silver around the part. Constitutional treatment must also be adopted: remove any gastric, intestinal, or uterine disturbance, and give vegetable bitters, nitric acid diluted, or small doses of bichloride of mercury; the two latter may be given in infusion of bark. If the disease be of very long standing, give Fowler's or Donovan's solution. The hands should be kept at rest.—Mr. Erichsen, p. 304.

**Chronic.**—Apply tar externally; give it also internally in capsules.—p. 305.

**Pityriasis.**—External applications of a soothing nature; baths medicated with mucilage of linseed, milk, yolk of egg, &c.; at the same time give demulcents, diuretics, &c., to increase the renal secretion. Cover the parts over with glycyrrhine; it remains fluid, and resists evaporation under any temperature to which the body is exposed. It is abundant in the refuse of the soap-maker.—Mr. Startin, p. 306;

**Itch**—Immerse the hands of the patient in an alcoholic solution of stavesacre for half an hour together, two or three times, and the *acarus scabiei* will be destroyed. [Dr.

Burgess.] Use a lotion made of an ounce of sulphate of copper to a pint of water; wash off the scabs before using it. It is an almost certain cure. [Mr. Lloyd.] Use a lotion of iodide of potassium in the day, and sulphur ointment at night; a cure may be expected in seven days. The lotion should be ʒi. of iodide to ʒviij., or ʒxvj. of fluid.—Dr. Ward, p. 307.

**Warts.**—Apply hydrochlorate of ammonia dissolved in water, or hydrochlorate of lime; persist in their application for some time.—p. 308.

**Syphilitic Alopecia.**—Cut the hair close, and use warm baths; and then apply the following liniment: Equal parts of rectified spirit, Eau de Cologne, and castor oil; or equal parts of honey-water and tinct. of cantharides. Should little red spots or blisters be produced, cease the application for a short time.

**Lichen, Lepra, Psoriasis, Impetigo, &c.**—Frequent warm baths, taking care to soak the head well; and cover the spots night and morning with olive oil, ʒss.; citrine omit ʒi.; M. Make a liniment, or use the following ointment: purified beef marrow, sixteen parts; sulphur ointment, sixteen parts; turpeth mineral, two to four parts; essence of lemons sufficient to scent it.—Ricord.

**Mucous Tubercles.**—Use a dilute solution of chloride of sodium; dry the parts and sprinkle them over with calomel.—Great cleanliness is necessary; do not use ointments.

**Eczema Impetiginoides.**—Cut the hair close, and apply water dressing, or lint dipped in an aqueous solution of opium; do not apply ointments. It should be a rule never to apply greasy substances to any eruption attended with oozing of fluid, since it mixes with the secretion, becomes rancid, forms a crust, the edges of which become excoriated, and what was an effect becomes a cause of irritation. Paint gummata and nodes with tinct. of iodine: it may also be applied to unhealthy tertiary ulcers.

Give internally, in secondary forms of syphilis, iodide of potassium or mercury; some prefer the former, as Dr. Williams, others the latter, as Sir B. Brodie. The following should be our guide in giving the iodide of mercury: Secondary symptoms occurring after a course of mercury, will be benefited by a course of iodide of potassium. Secondary symptoms occurring where mercury has not been used, will not yield to the iodide, but will to mercury. In order to prevent the iodide from causing pain at the pit of the stomach, or heat at the back of the throat soon after swallowing it, dis-



solve two drachms in three ounces of water, and let the patient take a teaspoonful of this solution night and morning in a large cup of tea, and the same quantity in half a pint of beer, or other fluid, at mid-day; the dose to be continued, and increased according to circumstances. It is of no use increasing the dose, or indeed of continuing this remedy beyond a week or ten days, if no amendment is visible. If mercury has not been given for the primary symptoms, begin with it immediately when secondary symptoms appear. Ricord gives the pure mineral, but the hydr. c. creta will answer best. If the organs of digestion be impaired, use friction; direct the size of a horse bean of ung. hydr. to be smeared on the inside of each calf of the leg every night; do not rub it in, as you irritate the hair bulbs by doing so, and you produce subsequent tenderness. Direct your patient to sleep in old drawers, so as to keep the bed clean. Do not use the ointment to the thighs, as is usually recommended; it gets between the thigh and the scrotum, producing eczema; it also dirties the patient's linen, and excites the attention of the washerwoman. Get the patient firmly under its influence, before you discontinue the use of mercury.—Acton, p. 274.

#### Toxicology.

**Poisons.**—Purified Animal Charcoal, an Antidote to all Vegetable and some Mineral Poisons.—This substance may be used as an antidote to opium and its active principles, morphia, &c.; nux vomica and its active principles, strychnia and brucia; henbane, deadly nightshade, bitter-sweet, thorn apple, tobacco, hemlock, bitter almonds, prussic acid, the aconites, &c. &c., in fact to all vegetable poisons; to animal, also, as cantharides. The carbo animalis purificatus of the pharmacopœia should be used, and in the proportion of half an ounce to a grain of morphia, strychnia, &c. It combines with and renders inert vegetable and animal substances, and absorbs some mineral poisons, especially arsenic, and renders them harmless, and exerts no injurious effects on the body.

It should be rubbed in lukewarm water, so as to form a fluid of slight consistency, and thus given in quantities of from one to four ounces. Emetics also should be given; ipecacuanha, however, will not do, as the charcoal renders it inert. Give sulphate of zinc in scruple or half drachm doses, or use the stomach pump, and then give more of the charcoal.

Might not this substance be tried to prevent the injurious effects of animal poisons, such as rabies, syphilis, poison of serpents.

&c., applied in the form of poultice to the parts?—Dr. Garrod, p. 142.

**Prussic Acid, Poisoning by.**—Dash cold water on the patient; apply ammonia to the nostrils, and heat to the spine and feet; give an injection containing tincture of assafoetida, use friction with a flesh-brush to the skin; and as soon as the jaws become relaxed, and the patient can swallow, give an emetic, and afterward some weak brandy and water, and strong coffee.—Dr. Gray, p. 145.

Cause the patient to inhale the fumes of ammonia, when he has ceased to be able to swallow.—Mr. Hicks, p. 146.

**Opium, Poisoning by.**—After the stomach has been well evacuated, should the vital energies sink, make use of electro-magnetism; pass the current through different parts of the body, and gradually increase its power until it reaches its maximum intensity. Continue its use for a considerable period, until sensibility is not only evident but complete.—Mr. Colahan, p. 153.

#### Materia Medica and General Therapeutics.

**AQUE COPAIBÆ VEL CUBEÆ.**—1. Ol. copaibæ, or cubebs, two ounces; water, five gallons and a half: draw over from three to four gallons. 2. Oil of copaibæ, or cubebs, two ounces; magnesia carb., six drachms; rub together, and add four gallons or less of water; filter.

**Saccharised Caustic Solution of the Oils of Copaiba or Cubebs.**—Oil of copaibæ, or cubebs, one drachm; caustic potash or soda, half an ounce; white sugar, six drachms. Twenty-four ounces of water to be added gradually.

**Saponiform Solution of these Oils.**—Oil of copaibæ or cubebs, two ounces; caustic solution of potash or soda, one ounce. Rub together in a mortar, and add water as may be required.

These forms are not attended with the gastric and nephritic irritation usually met with while administering copaibæ or cubebs.—Dr. Cattell, p. 294.

**BROMINE**, a substitute for Iodine.—Where it is wished to substitute bromine for the tincture of iodine, use bromine one part, distilled water forty parts, and give from five to six drops in some aqueous vehicle three or four times daily; for external use, make the solution four times as strong as this.

**Bromide of Potassium.**—Dose from four to eight grains three times a day; for an ointment, rub four parts with thirty-two parts of lard.

**Bromide of Barium.**—Dose from one to five grains three times a day.

Bromide of Calcium.—Dose from three to ten grains in a pill with conserve of roses.

Bromide of Iron.—Dose from one to three grains in a pill, with conserve of roses and gum arabic.—p. 172.

DIGITALINE.—This substance may be given wherever digitalis is indicated; its advantage is, that it can always be exactly known what quantity of active principle is being employed.—p. 173.

STRAMONTUM CIGARS are said to be a good remedy for asthma.—p. 174.

AMPUTATION at the Middle of the Leg.—The mortality attending the operation performed just below the knee, is much greater than that lower down; it is also much more painful and not so easily performed; whilst in the latter case there is insured to the patient the use of the knee-joint. The two best methods of amputating the leg below the knee, are by the double circular and anterior and posterior flap operation. In doing either, take care to leave sufficient muscle to cover the bones; and in the latter operation, the anterior flap, composed entirely of skin, should be at least half a diameter in length, and the projecting ridge of the tibia should be pretty deeply sawn off in a slanting direction. The middle of the leg, or just below it, is the best point at which the bones can be sawn.—Dr. Lawrie, p. 202.

Venous Hæmorrhage during Amputation.—Apply a bandage from the extremity of the limb nearly to the point at which it is to be amputated; it must be applied carefully and exactly, and with all bearable firmness.—Dr. Hannay, p. 205.

Circular Amputation.—Let an assistant dissect back the skin on one side, whilst the operator does the same on the other; this shortens materially the most painful and unseemly part of the operation.—Dr. Hannay, p. 206.

Sutures after Amputation.—If the parts will not meet without dragging or putting on the stretch, do not use sutures, and never pass them through the muscular structure.—Dr. Hannay, p. 206.

First Dressing after Amputation.—Give thirty or forty minims of laudanum before the first dressing after amputation, particularly of a large extremity; it alleviates the shock which the nervous system is sure to receive; give it half an hour before the dressing.—Dr. Hannay, p. 206.

ULCER.—To an irritable ulcer apply oxide of silver in the form of ointment of powder.—Mr. Butler Lane, p. 103.

SORE NIPPLES.—Apply ung. argenti oxidi, 3i. to the ounce.—Mr. Butler Lane, p. 103.

[For the N. Y. Doctor.]

## REVIEW.

"MESMER AND SWEDENBORG; or the Relations of the Developments of Mesmerism to the Doctrines and Disclosures of Swedenborg. By George Bush, New-York. Published by John Allen, 139 Nassau-st. 1847."

The position assumed in this work is this: "If Mesmerism is true Swedenborgianism is true." I am a believer in Mesmerism, but, as I cannot admit the claims put forth in this work, with your permission I will state a few of my objections; and, in doing this, I propose to show, that Professor Bush has misapprehended, not only what he calls the "Mesmeric phenomena," but, Swedenborg himself, and, consequently the inferences he draws from the latter, when contrasted with Swedenborg's state, are unfounded, and likely to mislead those who believe what he has said about them in this work.

I. As to the state of Emanuel Swedenborg. The Baron's own account of himself is as follows:

"There are two kinds of visions, differing from those which are ordinarily experienced, and which I was let into, only that I might know the nature of them, and what is meant by its being said in the word that they were taken out of the body, and that they were carried by the spirit into another place. As to the first, viz., the being taken out of the body, the case is this: man is reduced into a certain state, which is mediate between sleeping and waking; when he is in this state he cannot know but that he is wholly awake, all his senses being as much awake as in the most perfect state of bodily wakefulness, not only those of sight and hearing, but what is wonderful, that of touch, also, which is then more exquisite than it is possible for it to be in bodily wakefulness. In this state, also, spirits and angels are seen to the life, and are also heard, and what is wonderful, are touched. scarce any thing of the body then intervening. This is the state described as being "taken out of the body," and in which they know not whether they are in the body or out of the body. I have only been let into this state three or four times, just in order that I might know the nature of it, and that spirits and angels enjoy every sense, even touch, in a more perfect and exquisite degree than that of the body. As to the other kind, viz., the being carried by the spirit to another place, the nature of this, also, was shown me, by lively experience, but only twice or three times. I will merely relate

the experience. Walking through the streets of the city, and through the country, and being at the same time in discourse with spirits, I was not aware but that I was equally awake and seeing as at other times, consequently walking without mistaking my way. In the meantime, I was in vision, seeing groves, rivers, palaces, houses, men, and other objects; but after walking thus for some hours, on a sudden I was in bodily vision, and observed that I was in another place. Being greatly amazed at this, I perceived that I had been in such a state as they were of whom it is said, that they were carried by the spirit to another place. It is so said, because, during the continuance of this state there is no reflection on the length of the way, were it even many miles; nor on the lapse of time, were it many hours or days; nor is there any sense of fatigue; the person is also led through ways which he, himself, is ignorant of, until he comes to the place intended. This was done that I might know, also, that man may be led by the Lord without his knowing whence or whither.

"But these two species of visions are extraordinary, and were shown me, only with this intent, that I might know the nature and quality of them. But the views of the spiritual world, ordinarily vouchsafed me, are all such as, by the divine mercy of the Lord, are related in the first part of the present work, being annexed to the beginning and end of each chapter.—These, however, are not visions, but things seen in the most perfect state of bodily wakefulness, and now for several years."—A. C. 1882-1885.

From the above it is plain—

1. That Swedenborg means to be understood that his ordinary state, in which he says he conversed with spirits, was his normal, waking state.

2. That he was "let into," and "out of" two other states, which were both "extraordinary," and in both of them he had not the use of his "perfect consciousness," as in the waking state. He says, in one of them, he was "reduced into a certain state which is mediate between sleeping and waking," and in which he did "not know" but that he was "wholly awake," and when he did "not know whether he was in the body or out of the body."

Speaking of the other "extraordinary" state, he says he was ignorant of its nature at the time; he "was not aware but that he was equally awake," and he was "led through places of which he himself was ignorant of," till he came to the place intended.

From the above it is evident, that Swedenborg, according to his own account, was some five or six times in an abnormal state, in which he was not in the "perfect possession" of his waking "consciousness."—These states I suppose to have been somnambulate, or so very much like those states denominated "mesmeric," that it would, perhaps, be impossible to show any difference between them, especially when the somnambule or transic state, comes on spontaneously, as we know it often does.

The conceptions that Swedenborg says he had of the spirit world, in his normal, waking state, are to be accounted for by a knowledge of the innate and constitutional tendencies of his own mind. His organs of "wonder" were enormously large, as may be seen from his busts, and the portraits, published of him. In addition to this, there are conclusive reasons for believing that these organs were not only abnormally developed, but they were, consequently abnormally excited, and hence he dwelt so constantly in the regions of the "wonderful," and made so frequent use of this term in describing the things which he says he "saw and heard." That the phenomena of different minds are to be accounted for in this way, see the writer's "Theory of Pathetism" published in the present No. of the New-York Dissector.

Now, that Professor Bush has misapprehended, and consequently misrepresented the case of Swedenborg, the following extract from his book will show:

"The point at issue can only be determined by presenting the ordinary characteristics of the mesmeric state by the side of those which distinguished the case of Swedenborg. His state was not a state of sleep—nor was it marked by the least absence of recollection upon coming out of it, if indeed there was any such thing as coming out. On the contrary, he was in the perfect possession of his consciousness during the whole time. Unlike the magnetic seers who are in a state of internal, but not, at the same time, of external consciousness, Swedenborg was in both at once. His prerogative was the opening of a spiritual sight which left him still in the full enjoyment of his natural sight.—Page 23-24.

The reader will see in the above, a flat and palpable contradiction of the account which Swedenborg has given of his own state.

1. The Professor asserts that Swedenborg was not in a state of "sleep" at all. Swedenborg says he was "reduced into a certain state which is mediate between sleeping and waking."

2. Prof. B. thinks there was no "such thing" as "coming out" of any peculiar state, with Swedenborg. The Baron himself speaks of being "let into" certain states, and of coming out of them, for afterwards, he says "he perceived that he had been in such" states.

3. Prof. B. says, on the part of Swedenborg, "there was no absence of recollection." The Baron affirms to the contrary, when he says, he had "no reflection," and did not recollect whether he was "in the body or out of the body."

4. Prof. B. says Swedenborg was in the "perfect possession of his consciousness during the whole time." The Baron says, of himself, that he was some of the time, half sleep, as it were, in a state that was "mediate between sleeping and waking," a state in which he was not "conscious, whether he was in the body or out of the body."

5. Prof. Bush contradicts himself in the further accounts, which he gives of Swedenborg's states. He says:

"It is obvious, that Swedenborg's extatic state was of a vastly higher order than any that come under the ordinary denomination of Magnetic or Mesmerism."

"Swedenborg recognizes an immense difference between the power with which he was gifted, and that which is developed in the case of ordinary clairvoyance. He speaks with the knowledge of one who had experienced both; for he tells us that, although he was three or four times "let into" what was virtually the magnetic state, it was only that he might know the nature of it, while his ordinary state was incomparably more elevated."

Thus, it will be seen, the Professor not only contradicts Swedenborg's account of himself, but he contradicts his own account of him; and not only so, but he asserts a philosophical absurdity or impossibility, in what he says:

(1) If Swedenborg was "let into" the mesmeric state, then the Professor's representation that there was "no such thing" as his passing into, or "out of" it, is not to be reconciled with the above admission.

(2.) He represents Swedenborg as having been in two different and perfect states, at one and the same time. He was in "both at once!" How could one mind be in two perfect states, at one and the same time?

6. Professor Bush is at fault, also, when he represents Swedenborg's state as being "vastly higher" than those of "ordinary clairvoyance." So far from this, it is not true, that one of Swedenborg's so called "visions" has the testimony of a single witness, to prove its reality. But Prof. B. has

given numerous cases of clairvoyance, that are proved by multitudes of competent witnesses who were present, and tested in various ways, the truth of the clairvoyant descriptions.

The mesmeric clairvoyant descriptions (not of spirits but) of real objects of sense, without the use of the eye, quoted by Prof. Bush, are proved by competent witnesses who were present at the time; but not so with Swedenborg's "visions;" and hence, instead of Swedenborg's state being "vastly higher," it was far below that of any well attested case of clairvoyance.

So much for the Professor's account of Swedenborg. I now proceed to show—

II. That Professor Bush is equally at fault in his assumptions with regard to "Mesmeric Phenomena."

His assumptions with regard to these phenomena are thus set forth in his own words:

"The reports of clairvoyants whenever they touch upon the marvellous things of the spirit-world, are usually found to be in marked analogy, so far as they go, with what Swedenborg himself says in regard to the same class of subjects.—Page 23.

"Persons thrown into the Mesmeric trance, invariably make the same report, as far as their perceptions extend, that Swedenborg does in regard to the laws and realities of the spiritual sphere, however ignorant beforehand of his disclosures."—Professor Bush's Statement of Reasons, &c., page 73.

On the above I remark:

1. That the only way in which Professor B. could demonstrate the truth of what he here asserts, would be, by collecting accurate reports of a majority of all the mesmeric reports that have ever been made of the so called "spiritual sphere." This, he has not done, and I venture to say, it is what he will never attempt to do, even if the thing were supposed to be possible.—And, if he were to collect a majority, or even a small proportion, of such "reports" which have been made in different parts of the world, it is by no means certain or even probable, that they would bear him out in his assumptions.

2. As the case now stands, none of the cases quoted by Prof. B. can help him at all, because it has been shown that he himself does not rightly apprehend Swedenborg's state or states; and hence, he cannot show how far the "mesmeric phenomena," agree, or disagree with Swedenborg's states.

3. As a matter of fact, it is by no means true, that persons in the "mesmeric trance" "invariably make the same reports," that "Swedenborg does in regard to the spiritual

sphere." My own observation is decidedly against this representation. Out of some three thousand natural somnambulists and "mesmeric subjects" whom I have examined more or less, I have not found any two who invariably made reports alike, about any other state of existence besides the present. When they speak of another state of existence, they give various accounts, which are changed, from one time to another, according to the state of the patient's brains, and the surrounding circumstances at the time.

4. The "reports" of Jackson A. Davis, (who, as Professor Bush himself asserts, "possesses both physically and mentally, in an eminent degree, the requisites for a clairvoyant of the highest order,") do not agree with Swedenborg's so called "disclosures." Speaking of Davis, Professor Bush says:

"In this state, I do not perceive that there is any definable limitation to his power of imparting light on any theme of human inquiry. The range of his intuitions appears to be well nigh boundless! Indeed, I am satisfied, that, were his mind directed to it, he could solve any problem in any science."

Now, it is susceptible of the clearest demonstration, that this same remarkable and most extraordinary clairvoyant, contradicts, not only what Swedenborg has taught in relation to "life," the human "mind" and "vital heat," but, also, the account which Swedenborg has given of the spirit world.

A pamphlet has been published, containing what purports to be "All the Mysteries of Human Magnetism and Clairvoyance explained," in four lectures "by the celebrated Jackson Davis." These lectures purport to have been uttered by Davis in a state of clairvoyance. A few quotations will show wherein he contradicts Swedenborg. Page 16, he says, "Mind is the principle of all life and animation." Swedenborg says, (intercourse soul and body, 21,) that "love, together with wisdom, is life." Davis says, (page 21), that "Magnetism is animal heat." But Swedenborg says, (Int. Soul and Body, page 11,) that "vital heat of men is from no other source, than from love."

Davis says, (page 15,) that the "breath of life" which God breathed into man, is his "mind."

Swedenborg says, (Ib. p. 23,) that the human mind is constituted by "understanding and the will."

Davis says, (page 15,) the "breath of life" constituted the living soul."

Swedenborg says, (Ib. p. 14,) "the soul is not life in itself."

The above, with numerous other contra-

dictions of Swedenborg, may be found in Davis's book, and which were uttered in a "state of clairvoyance," a state of which Davis himself says, (page 36) "when in the state (of clairvoyance) that I now am, I am master of the general sciences—can speak all languages—impart instructions upon those deep and hidden things in nature, which the world [not excepting Swedenborg of course,] have not been able to solve, as I have done in these lectures, can name the different organs in the human system—point out their office and functions; and, as I have often done, tell the nature, cause, and symptoms of disease, and prescribe the remedies that will effect a cure."

And here let it be remembered that Professor Bush has endorsed for the pretensions of Mr. Davis; he is "satisfied," he tells us, "that, were his mind directed to it, he could solve any problem in any science!" Very well! We have seen how his mind has been "directed" in a "state of clairvoyance," to a few things in natural science, and in which he contradicts Swedenborg; and I will now show that, according to Professor Bush's own account, in his book, Davis has had his mind "directed" to Swedenborg, and has given an account of him, which flatly contradicts Swedenborg's representations of the spirit world!

Swedenborg says that the spirits or angels were once men, (A. C. 4227,) and hence Swedenborg's spirit is now an "angel."—He has further said, (H. & H. 237,) "That it is impossible for the angels to utter one word of human language." "Angelic language has not any thing in common with human language."

Now, on turning to Professor Bush's work we find more than fifty of its pages devoted to the exhibition of what he represents as a "supernatural" communication, which he, (Prof. B.) received from Davis, in which he (D.) gives an account of an interview he says he had with the spirit of Swedenborg on the 15th of June, 1846. In this interview, he addressed Swedenborg in the English language, and he also received "impressions" from Swedenborg's spirit, which are stated in English. Davis not only addressed Swedenborg in English, but he tells him how his "eye" looked, and describes what Swedenborg had taught in some of his writings, which he (D.) says he never read. Without attempting to show, as I might do, that Davis may have read Swedenborg's writings when he was in an abnormal state, and consequently not be able to recollect any thing about it, it will be sufficient to refer to the fact above shown, that in this assumed "supernatural revelation" of which

Prof. B. makes so much, Davis has completely overthrown Swedenborg's "disclosures" about the laws which govern the angelic world, because the communications which Davis says passed between himself and Swedenborg, were in "human language," and hence Swedenborg's representations, that angels could not converse in "human language," is not true! From this conclusion there is no escape.

5. It remains for me to show that Professor Bush begs the question from beginning to end, in what he says about "phantasies" being "transferable" from one mind to another, precisely in the manner stated in Swedenborg's writings. The Professor knew that many of what are called the "mesmeric phenomena," are mere phantasies, mere creations of the fancy. These, of course, would not prove the truth of Swedenborg's visions; and so the Professor takes it for granted, that these vagaries of a disordered brain are accounted for in what Swedenborg says of devils in another world!—Nay, that when Swedenborg describes devils throwing serpents and binding with cords, he had in view, precisely, what has often taken place in the form of "mesmeric phenomena!"

It seems never to have occurred to Prof. Bush, that his numerous quotations from Swedenborg and writers on Mesmerism, would amount to just nothing at all, till he had first proved that Swedenborg did ever really see one devil, and that he ever actually saw the devils do all he describes!—And had he done all this, I would then show that there is another—a far better way for accounting for cerebral action, and the mental phenomena that follow, than by attributing them to devils, as Swedenborg did his toothache.

But it would swell this article to an undue length to notice all the objectionable features in this book. With a certain class of minds, like that of Swedenborg and the Seer of Provost, it will doubtless gain admirers, while those who are at the trouble to test its claims, in the light of unperverted reason, will agree, I doubt not, in classing it with the pure offsprings of "wonder," which have appeared and disappeared in preceding ages of the world.

LA ROY SUNDERLAND.  
New-York, Dec. 11, 1846.

On the Internal use of Lime in Fractures,  
WITH INSTANCES OF ITS SUCCESSFUL EMPLOYMENT.

Sir:—Will you have the kindness to insert the following account of the use of lime in fractures? Should you or any of the pro-

fession wish for further information, I shall be most happy to give it; and if any are induced to try the remedy, shall feel obliged by their letting me know the result

I am, Sir, yours respectfully,

T. S. FLETCHER.

The following accident first gave rise to my using lime in fractures:—A favorite Canary had its leg broken, and this brought to my recollection, that, when a boy, I saw at a farm-house some eggs without shells, and was told they were laid by a fowl with a broken leg; and, as it was natural to suppose the lime went to supply the fracture instead of forming the shell, I was induced to give the Canary a good supply of lime, (egg-shells), hoping it would facilitate the bony deposit. It exceeded my utmost expectations; for after having been told by a bird-fancier that it would be three weeks before union could take place, I found, on the sixth day after the accident, the bird had not only got the leg loose, but feathered or scratched its head with it. It required a few more days before it could stand on the broken leg, and feather itself with the same one. Since then, I have given lime in fractures, in the form of burnt bone, prepared chalk, and lime-water. Of the burnt bone and prepared chalk I gave a scruple, three times a day, in the form of chalk mixture, and the lime-water as a common drink, Gated and flavored with lemon-peel. I have found chalk and burnt bone equally efficacious.

The following are among the cases in which I have used lime:—

CASE 1.—George S—, aged eight years, fracture of the upper arm by a fall on the elbow when running. In eight days he could move the arm, so as to satisfy any one that union had taken place; and in fourteen days it was sufficiently firm for him to raise and support the arm. In five other cases of fracture of the forearm, I have used lime with equal success—the ages of the patients varying from ten to thirty.

CASE 7.—Levi J—, aged ten, broke his leg at the lower third by jumping off a high wall. In eight days he could rotate the foot, and get about with splints on; and in fourteen days he could raise it, and bear the weight of the foot.

CASE 8.—William C—, aged twenty-eight, had a compound fracture just above the ankle-joint, from the bursting of a cannon. On the tenth day, he could rotate the foot, on the sixteenth he could raise it, and on the twenty-eight, he was at work again in the shop as a sailer.

**CASE 9.**—Richard H—, aged forty-eight, broke his leg at the lower third by falling down some steps with a tub. On the tenth day he could rotate the foot, and with the splints on, could move it about, and on the twenty-first could raise it.

**CASE 10.**—Richard D—, a boat-boy, aged sixteen. Fracture of the thigh from the kick of a horse. Was twenty-one days before he could rotate the leg, and thirty ere he could raise it. I attribute the length of time required in this case to his being a poor delicate boy, in a very bad state of health.

**CASE 11.**—Thomas M—, aged ten.—Fracture of the thigh, by falling off a bank with a boy on his back. He was in very good health, and in seven days could rotate the limb, and in fourteen, raise it.

**CASE 12.**—B—, aged fifty-two.—Compound fracture of the leg, about the middle of the calf, by the falling over of a railway engine. There was a wound of about four inches on the inner side, and one of an inch on the outer side of the leg. He was also much crushed about the pelvis and abdomen, and inflammation of the bowels followed on the second day. This prevented the use of lime during the first week.—He afterwards took it, and on the seventeenth day from the time of the accident, could rotate the foot, and in twenty-eight, could raise it.—*Lancet*.

#### The Stupifying Gas.

For some years past, numbers of surgeons (chiefly those of the Dental Art,) have occasionally used a number of the gases, for rendering their patients insensible to pain. At first, I believe, nothing more than the *nitrous oxide* was used, but as this generally produces *exhilarating* effects, another kind was sought by which persons could be *stupified*, sufficiently to render them insensible to pain, while surgical operations were performed upon them. Mr. Wells of Hartford, Conn. and Mr. Flagg of Boston, Mass., affirm, that they have, for some time, been in the habit of using sulphuric ether, with great success for the above purpose.

Various reports have appeared, recently, in the papers, in relation to the claims of discovery put forth by Mr. Morton of Boston, in which he assumes to have originated in connection, with Dr. Jackson of the same city, the use of a gaseous compound, which he calls "Morton's Lethæon," and by which very good results are said to have been produced. Mr. Wells, however, of Hartford, tells us, that he used the same, "long time

ago," and that he communicated this fact to Messrs Jackson & Morton long before they pretended to any such discovery. And, Mr. Flagg, also, has published accounts of his having operated with pure sulphuric ether, before Mr. Morton made his discovery, and he supposes that Mr. Morton uses the same, and nothing else. Quite a number of cases have been reported, in this city, in which this gas has been used, it is said, with more or less success. From all that I have witnessed, myself, and heard on this subject, I come to the following conclusions:—

1. In a large number of cases, sulphuric ether, may be used with good results in ordinary surgical operations. But, it is not, and cannot be made available, in a larger number of cases, than that influence generally known under the term of "Mesmerism." When, for want of time, or, for other reasons, mesmerism cannot be applied, the gas may be used.

2. There is, as a general thing, as much if not more, *uncertainty*, in the results produced by the gas, than can be affirmed of mesmerism. I have seen the gas administered to six different persons, only; and in every one, it was a decided failure.

In each of the reports I have seen in the papers, cases are mentioned, in the proportion of about one third, which were failures. And, when the gas is represented as having been perfectly successful, it is said, the patients were more or less conscious, all the time, though not sensible of pain.

3. It would seem quite impossible to secure a state of insensibility for any length of time, by the gas, alone. Its force is exhausted in a very short time. Hence its use, might, in some cases, be attended with danger, because, the patient *might* come back to a conscious state, before the surgical operation was half completed.

From the above it is plain, that in cases where "Mesmerism" can be applied successfully, it is far preferable, and, for obvious reasons.—

(1.) In cases where mesmerism is available, patients may be rendered wholly unconscious, while difficult and protracted, surgical operations are performed upon them. I have had more than five hundred cases of this kind, mostly extracting teeth, when the patients were unconscious, during the whole of the operation, and so much so that no change could be noticed in the pulse.

(2.) The gas cannot be depended upon, in cases of protracted operations. Its force is spent in a few minutes, and should a patient come to consciousness, after being stupified with the gas, while under the knife, it might be at the peril of life! But this danger could

scarcely occur in a case where the patient was properly magnetised.

(3.) Another reason which places magnetism before the gas, is, the latter does sometimes, leave the system in a disturbed, unpleasant condition. A gentleman took it in Brooklyn, a few days ago, and he has been indisposed ever since, and I have known of other cases where persons have been injured by it, while I have never known or heard of a case where any one was injured, in the least by magnetism, when it was applied for rendering persons insensible to pain.

It is worthy of remark, how ready some of the medical faculty appear to be, in welcoming the use of the gas, who have so strenuously opposed the practice of mesmerism. The "gas" they hail as a great discovery, and some of the papers are quite ready to publish accounts of the surgical operations performed on persons, who had taken it; but, these same papers, scout the idea, of a person's being rendered insensible to pain, by mesmerism.

Finally, I have no doubt, but that the stupifying gas will have a "good run," for a while, when it will fall into comparative neglect, and be used in a few cases, only, especially where magnetism is well known. Indeed, thus far I believe it will be found, that the gas has been successfully applied, only, in those cases where the patients were of that temperament which renders them the most susceptible of the mesmeric influence; and in such cases we know, they may be rendered insensible to pain, much better without the gas than with it.

LA ROY SUNDERLAND.

N. Y. Dec. 23d. 1846.

#### On the Treatment of Gonorrhœa with Nitrate of Silver.

BY C. D. ARNOTT, M. D., M.R.C.S., & L.S.A.,  
GORELSTON.

My paper, published some months since in "The Lancet," on the "Ectrotic or Abortive Treatment of Gonorrhœa," has been noticed by Mr. McDonald, of Bristol, between whom and myself there appears to be complete accordance in the principal fact, viz. the efficacy of nitrate of silver as a remedial agent in gonorrhœa. On two points, however, we differ, namely, "the cases in which this remedy is most efficacious," and "the best mode of its exhibition."

In the paper alluded to, I advocated the employment of a strong injection of the salt for the attainment of a particular object, that of arresting the disease while yet in its crescent stages, and so preventing the acces-

sion of purulent urethral discharge, which constitutes true gonorrhœa. Experience had taught me that the remedy possessed such power; experience and theory conjointly strongly dictated the propriety of limitation of the remedy within this range of applicability, and I accordingly stated, that the supervention of purulent discharge must indicate the inapplicability of the injection, and the propriety of consigning the case to the ordinary tedious treatment.

The disease having advanced so far as copious purulent elimination, renders ectrosis unwarrantable. Sudden arrest of the discharge, far from being expedient, is, of all things, most likely to prove untoward; to effect it, therefore, should certainly never be attempted. If it occur spontaneously, more especially if it be artificially coerced, aggravation of the original mischief is imminent, indeed almost certain; some of the severe complications of the malady can scarcely fail to supervene; orchitis of a most intense type, or it may be cystitis, and this extending upwards, producing nephritis, appear a metastasis of the inflammatory action having occurred with the implication of parts, involving the question, not of convenience or inconvenience merely, but it may be, even of life or death.

A gradual declension only from the inflammatory height, when this has been attained, is safe; and this is to be achieved by the agency of the ordinary antiphlogistic means of known efficiency. A partial subsidence being effected, nitrate of silver again becomes most useful; not to be employed, however, as previously advised, to abort the disease, but as a most effectual stimulant to relieve the existing abnormal congestion of the urethral lining, and impart to it natural tone and function. For this purpose a solution of three, four, or five grains of the salt to the ounce of water will be found of sufficient strength, highly beneficial, and incapable of producing those aggravations to which the strong injection would, at this period, be most liable.

With reference to the supposed danger of urethral injection, a word of explanation is necessary. Mr. McDonald approves rather of the use of ointment, introduced by means of a bougie; thus, as he believes, more completely averting the danger of noxious matter entering the bladder, and there producing serious results. The force of such apprehensions is materially lessened by bearing in mind that the urethra is not normally a patulous canal, but one offering considerable resistance to the backward passage of fluids, at all times more than sufficient to resist the propelling power of the ordinary urinary or



glass syringe; and when, in addition, the more forcible and complete occlusion insured by the advised urethral compression be taken into account, the force of the apprehension is, in my belief, altogether annulled. I must also still retain my impression of the advantages of injection. I cannot concede any greater ones to ointment. Injection possesses these qualities: equability of admixture,

ease and efficiency in application and operation, and, in my experience, complete immunity from danger. Ointment can boast the possession of no more. The inference deducible from the whole is the great efficacy of the nitrate of silver as a remedial agent in gonorrhœa, in different stages of its course, when applied judiciously and with discretion.—*Lancet*.

### ANATOMICAL PECULIARITIES OF THE HEART AND SPLEEN.

Mr. Jackson presents his compliments to the editor of the *Lancet*, and will esteem it a favor if he will permit the enclosed to appear in an early number of his valuable and ably-conducted periodical.

Melton Mowbray.

#### A CONTRAST.

##### HEART—ARTERY.

##### SPLEEN—VEIN.

1. The soluble and nutritious portion of the food passes from the digestive tube into the lacteals, and through the mesenteric glands and thoracic duct into the left subclavian vein.
2. It is a large artery which takes the blood to the lungs.
3. To this artery a heart is prefixed.
4. Into the heart large venous roots go—the cava.
5. Out of the heart comes an artery, the pulmonary or cardia-pulmonic.
6. The reverse or contrary of the artery is the vein.

1. The soluble nutritious portion of the food, as well as the drink, passes from the tube into the intestinal capillaries, and through the mesenteric veins into the middle of the trunk of that great vein whose roots are in the spleen and whose branches are in the liver.
2. It is a large vein which takes the blood to the liver.
3. To this vein a spleen is prefixed.
4. Into the spleen small arterial branches go—the branches of the splenic artery.
5. Out of the spleen comes a vein, the splenic or splenohepatic.
6. The reverse or contrary of the heart is the spleen.

Diametrically different anatomical causes produce diametrically different physiological effects.

7. The blood-vessel going to the lungs, consisting of a heart and an artery, produces a constant and rapid motion of the blood through the capillaries of the lungs.

7. The blood-vessel going to the liver, consisting of a spleen and a vein, produces an intermittent and slow motion of the blood through the capillaries of the liver.—*Id.*

#### Effects of Alcohol on the Animal Frame.

When alcohol is introduced into the circulation, its elements combine with the oxygen of the arterial blood; and the globules, becoming thereby deprived of this vivifying principle, no longer assume a floral red color. The animal becomes asphyxiated; and if the quantity of alcohol be large, it dies as speedily as if it had been plunged into an atmosphere deprived of oxygen. Car-

nivorous animals, as the dog, which has a large stomach, compared with the rest of the alimentary canal, are very easily affected by alcohol, and may be destroyed by a moderate dose; for the liquor is rapidly absorbed, and is not carried beyond the duodenum. Herbivorous rodentia, as rabbits, are, in like manner, easily killed by small quantities of alcohol and is not found in the intestines. Granivorous birds, such as chick-

ens, will bear comparatively larger doses of alcohol. The inner cavity of their stomachs is of limited extent, and the organ itself is formed of powerful muscles. When alcohol is injected, it is soon expelled from this cavity and is found in the intestines; it is thence carried to the liver by the vena porta, and reaches the great mass of the circulation slowly. Fish will live at a temperature of 41 degrees in water, which contains one half-hundredth part of alcohol.—*Dublin Medical Press*, from the *Comptes Rendus*.

#### **Destructive effects of Camphor on the Teeth.**

SIR.—It may be interesting to your correspondent in the last *LANCET*, and probably to some others of your numerous readers, to know that the action of camphor upon the teeth has been noticed by another observer. Mr. Tearne states that he has consulted many eminent professors of the dental art on the subject, but none (one excepted) had noticed this fact. However: this may be, my attention was first called to the subject about seven years ago by observing in a family the prevalence of decay in the teeth at that part of the tooth where the enamel terminates and the protection of the gum commences. Now it is well known that the enamel, as it approaches this point, is gradually attenuated, until it terminates almost imperceptibly; and, as a necessary consequence, the effect of any menstruation or agent, would be more readily displayed there than at any other part of the tooth. In the cases in question, the enamel was extremely friable throughout the entire series of the teeth, (but more particularly in the molars, and easily shattered and removed with the slightest touch of the point of an instrument. On inquiry, the parties were found to be vigorous employers and defenders of camphor in the form of dentifrice and lotion for the teeth. Now, an hereditary or constitutional tendency to this form of decay of the teeth may be suggested as a probable explanation of the circumstance in this case; and I should have thought so too, had I not from that time to this noticed frequently—I had almost said constantly—these results go *pari passu* with the application of camphor; so much so that I cannot consider the coincidence otherwise than as cause and effect.

There is another way in which camphor displays its disorganizing effects on enamel. In the case of aching teeth which have for some time been treated with a solution of camphor, (a common domestic remedy,) in the hope of avoiding extraction, it commu-

nicates such brittleness to the tooth as greatly to increase its liability to be crushed during the operation, when no longer to be postponed.

In conclusion, I cordially agree with Mr. Tearne, that "society should be cautioned against the use of camphor as a dentifrice;" and I recommend those who entertain any strong penchant for its employment, and have had recourse to it for any length of time, to examine their teeth at the points above indicated; and they will find at least such intimation of danger as will induce them to substitute a less stimulating and destructive agent, if not abundant reason for recourse to the dentist. I am Mr. Editor, your obedient servant,

WILLIAM HUNT.

Yeovil, Somersetshire, Sept. 1846.

## **THE DISSECTOR.**

NEW YORK, JANUARY 1, 1847.

#### **Magnetic Light and Magnetic Poles.**

In magnetizing with the vibratory magnetic machine, we become familiar with magnetic light—with its color, and intensity, &c. Its color is that of the *aurora borealis*, and its intensity increases from the smallest glimmering to the greatest brilliancy, with the increase of the strength of the poles in the magnet and piston, and consequently with the power of the instrument. This light does not emanate from a process of combustion requiring oxygen to support it, but is equally brilliant when enveloped in water, or in an exhausted receiver, and is the light which is seen by clairvoyants to issue with the greatest intensity from the poles of magnets, and the poles of the organs and muscles, &c. Clairvoyants see with the light which emanates from the great pole in the centre of the brain, and they see the internal parts of animals, and of the human body, lighted up with the light from the poles of the organs and muscles, &c.

The organs and muscles are thus seen in the most clear and distinct manner in their healthy state, but when they are diseased, the light becomes dim in proportion to the

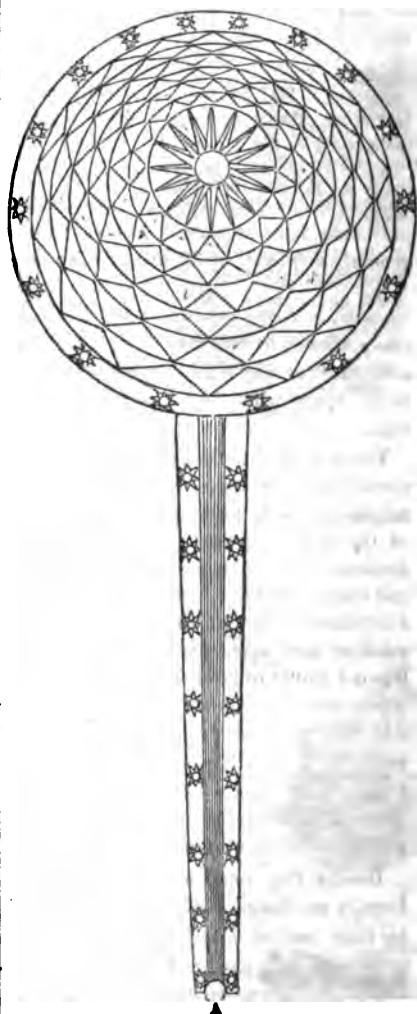
intensity of the disease, and in some extreme cases becomes extinct in an organ or limb, with the strength of their poles, according to the concurrent testimony of clairvoyants, and the fact that these organs and limbs are feeble, in proportion to the decrease of light, and are paralysed when it is extinct, is strongly confirmatory of this testimony.

There is a great difference in the size of these poles. The largest in the human system is that in the centre of the brain, and is of course of the first magnitude. There is one in the hollow of each foot, of the second magnitude, and one in the palm of each hand, of the third. Those in the organs of causality, and amateness—in the lungs, heart, stomach, kidneys, testicles, ovaries, and vagina, are of the fourth magnitude.—Those in the liver, spleen, pancreas, solar plexus, uterus, and ileo-caecal valve are of the fifth magnitude. Those in the joints of the limbs are of the sixth, and those in the eyes, in the phrenological organs, ganglions, of the spinal nerves, and in the angles, or convolutions of the intestines, of the seventh magnitude, and those in the skin of the eighth magnitude.

These poles in the organs, joints, muscles and skin, &c., show radiations from a centre or nidus, like those from the poles of magnets, and are, like them, connected with magnetic axes and interlacings, and thus make a magnetic or spiritual form, like the human form, on which matter is laid in the construction of the human system. These poles are endowed with motion, power, light, sensation, inclination, and consciousness, as is seen and demonstrated in the clearest manner.

The following engraving is intended to present a view of the great pole in the centre of the brain, as seen by clairvoyants. It occupies the whole space between the circle of small poles of the phrenological organs. It is very light, especially the nidus in the centre and summit, which has the same intensity as the sun, and is always in motion, excepting in natural sleep, when it is in a quiescent state. The form in a situation

corresponding to that of the spinal marrow, is a continuation of the nidus, or nest of magnetic forms, and the small poles on each side, are those of the ganglions of the posterior spinal nerves in the intervertebral spaces, which gives them sensation. This great pole is surrounded with six great circles, and six small, intermediate circles of light, and the other large poles, from the first to the fourth magnitude, are surrounded with a certain number of similar circles of light, as those of the lungs, heart, and stomach, &c.



## CLAIRVOYANT POWERS.

A great difference in the clairvoyant powers of different persons in the magnetic state has often been noticed, and is the consequence of various causes. Among these is a difference in the organization of the brain—in the phrenological organs, and in the relative quantity of grey or cortical substance around these organs. Besides, some are in the lower or first, second, or third degrees, while others have been raised to the fourth, or fifth degrees. Another cause of difference is that of a difference in their education; and another, that of a difference in the education, *minds*, and theories of their magnetisers, or those who conduct the examinations of the different subjects presented to them, and this last cause of difference may often produce the most discordant results.

The only manner of obviating these differences in the cases that are remediable, is to educate them, or at least to give them a general knowledge of the arts or sciences to which their attention or business, as clairvoyants, is mostly devoted, and this object is easily affected by teaching them in the magnetic state, as they remember when in it, and rarely forget what they once learn in that state.

Those devoted to the practice of medicine, should be taught anatomy, physiology, and magnetism, with the magnetic organization of the human system, and the two great divisions of diseases, or those of the serous and mucous surfaces, and their magnetic or dyodynamic treatment, or with the magnetic machine and magnetised medicines. And this is a matter of great importance, as there is no longer any doubt that the effects of medicine, whatever they may be, is the consequence of the action, of imponderable, or imperceptible agents condensed in them, upon the nervous, spiritual, or magnetic organization of the system.

Besides the common clairvoyants who literally see things as they appear to them in their natural state, and besides, have intuitions of the past and future, there are others who do not see literally, but have im-

pressions more or less vivid, that things or objects appear, and are as they describe them. Jackson Davis is an example, or one of those who have impressions, instead of literal sight in the magnetic state, and we know other examples of the same kind in this city. Some few clairvoyants recollect in their natural state, very distinctly, many of the objects they see in the magnetic state, and some of the impressionists recollect, in the natural state, many of their impressions in the magnetic state, and on a full investigation of the subject, there appears to be no doubt but clairvoyants see literally, and the impressionists have impressions or intuitions common to both, without literal sight, or clairvoyance.\*

The present, past, and future knowledge daily displayed by a great many persons in the magnetic state, leaves no room to doubt but they have an intuitive knowledge in that state, which is more or less perfect, besides the knowledge they obtain from literal sight or clairvoyance, and the evidences on this subject having been frequently described, and often observed by a great number of the most intelligent persons in almost every community, it is deemed a useless task to enumerate them here. It would also be useless to enumerate the evidences of the great superiority of clairvoyants to mere impressionists, as it must be self-evident to every sane mind; besides the lucidity and accuracy of the former, and the illusive and phantasies often displayed by the latter as proverbial.

On an examination of the subject of these intuitions, or of immediate knowledge without the deductions of reason, they are plainly seen to be the natural emanations from the exalted organs of the magnetised brain, and not from supernatural agency, as suggested by the marvellous. They are not, in fact,

\* We recollect, distinctly, many objects we see in the magnetic state, and know that we see them literally as we do with our eyes in the natural waking state, and we have been in the habit of thus seeing them during the last ten years, and cannot possibly be mistaken.

confined to persons in the magnetic state, but are common to many persons in the natural waking state, numerous examples of which are familiar to persons of observation.

CLAIRVOYANT EXAMINATIONS OF DISEASES.

There is rarely anything presented to the mind of a physician which is so unintelligible as the reported examinations of diseases by clairvoyants when those examinations have been conducted by persons who have little or no knowledge of diseases, anatomy or physiology, and they are consequently unable to form an opinion of the good or bad effects that may be expected from the prescriptions of clairvoyants in such cases, yet it is the opinion of many well-informed persons, that these prescriptions are generally more successful than those of the best physicians. When, however, these examinations are conducted by physicians, they are generally very satisfactory, and in a great variety of cases are very useful, and in many others indispensable to forming a true diagnosis as well as a correct prognosis of diseases. The prescriptions of clairvoyants under such circumstances are generally well understood, and their value duly appreciated. As an example, we may refer to the cases of deafness, the causes of which in any given case is almost always unknown, and would always remain so, without a clairvoyant or post mortem examination.—The eustation, or auditory tube, through which the sound passes from the ear to the throat, may be obstructed by hardened wax, by tuberculations, or by false membranes, or the deafness may be the consequence of paralysis (more or less complete) of the auditory nerve. Now it is easy to be seen that the treatment, to be successful, must be different in each case, for the hardened wax must be removed, or melted with steam, the tuberculations must be reduced with the remedies for tubercula, the false membranes must be broken up with an instrument, and the paralysis must be removed by the remedies for mucosis or atrophia, including the action of the magnetic machine, and hence

the great importance of clairvoyant examinations in these cases.

Although we can determine in an instant the character of the disease of an organ or limb by the magnetic symptoms, yet we cannot always tell how far the disease has advanced, whether it is curable, or too late to be cured without a clairvoyant examination, and this is often a matter of great importance. It is also often a matter of great importance to observe by clairvoyance the changes that occur in the appearance of a disease during the process of cure from changes of temperature, from colds, and from various other causes. Clairvoyance is also a matter of great importance to females—in diseases peculiar to their sex, and in enabling ladies to avoid the most revolting examinations with the most perfect safety, and with credit to themselves and their families. Besides the examination of patients when they are present, clairvoyants examine patients at great distances from them, and in fact in any part of the world, and generally with the same accuracy as if they were present. It is the magnetic forms, or *spirits* of these clairvoyants that travel over any part of the world, and are present with those patients when they examine them.—We know that their spirits travel, and are present with the patients in these examinations, from the fact that they have the full exercise of all their senses while travelling to different places, and during the examinations of these patients. They see the country and towns they pass through, feel the changes in temperature and climate, hear any uncommon or strange sounds, as the blowing of horns, the noise of steamboats, or the roaring of the falls of Niagara, &c.; notice uncommonly pleasant or disagreeable odors, visit places of amusement, and have a sense of fatigue, hunger, and thirst. Besides, if one of these patients have a paralysed limb, a corresponding limb of the clairvoyant becomes paralysed the same as if the patient was present and having hold of the hand of the clairvoyant. Such are the well ascertained facts, and such is the evi-

dance on this subject, which is deemed perfectly conclusive, no matter how extraordinary it may appear to those who are not initiated into the mysteries of the magnetism of the human system.\*

When clairvoyants are tired, unable or unwilling to travel to the places where patients reside, the magnetisers can direct the magnetic forms, or *spirits* of these patients to appear before them, when *they do so appear* with their diseases, and in the proper form and dress, or costume of these patients where they are examined with the same accuracy they are under the other circumstances before described, and are then directed to return to their several places of abode, when they soon disappear. Such are the well-ascertained facts in these cases, and such is the power of the human will.†

We have been engaged in the examination of patients by clairvoyants about four years, and in the daily practise of it during the last two years, and have during all this time, examined a great many hundred cases, and cannot possibly be mistaken in any of the facts above mentioned.

The great and universal accuracy of these examinations has uniformly elicited the most flattering commendations, as well from persons residing at great distances as from those of this city and vicinity, and among these there are many who rank with those of the highest order of intellect. These results of these examinations, with the success of the practice founded upon them, has so increased our correspondence as to make it a matter of some importance to us in the saving of labor, to explain these mysteries in this

\* The magnetisers must always conduct the clairvoyants home before they demagnetise, or wake them, but if they should forget to do so, they must magnetise them again, and then conduct them home.

† The magnetiser must always be careful to direct the spirit of the patient to return to its place of abode, and see that it departs before he demagnetises or wakes the clairvoyant, but if he should forget to do so, he will soon learn his mistake, as the clairvoyant will probably be very much frightened, and may go into convulsions, and he should therefore magnetise the clairvoyant again as soon as possible.

work for the benefit of our correspondents, and to enable them to furnish us with the means for examining patients at great distances with great facility, or in the shortest time.

#### EXAMINATIONS OF DISEASES AT GREAT DISTANCES.

When we wish to examine a patient residing at a great distance from us, we can put a person present who has been at the abode of such patient in communication with the clairvoyant, and direct that person to conduct the clairvoyant to the patient, or in the absence of such person, we can place a letter from the patient, or from a person in the family of the patient, in the hands of the clairvoyant, with directions to find the patient, when a light starts off in the form of the great pole in the centre of the brain with its train of small poles,\* followed by the spirit of the clairvoyant, which sees a narrow strip of country, or of water, when passing over it, and in passing through the streets of towns and cities, often sees the houses on either side of a street by its guiding light shining upon them. After having found and examined the patient, it returns home in the same manner, and enters into its place of abode. Such is the concurrent testimony of clairvoyants, and such are the extraordinary facts.

We are aware that it may be said that the constant presence of the spirit of the clairvoyant is necessary to maintain life, and as the clairvoyant does not die, the spirit does not travel in the manner described, because it is impossible for it to be in two places at the same time. It should, however, be remembered that the clairvoyant was magnetised (no matter how) and that to magnetise a body is to make a magnetic form or spirit in that body, as is easily demonstrated, and this spirit may and does maintain the body of the clairvoyant in a healthy state in the absence of its own spirit.

As the examinations of patients in the manner above described is a legitimate business

\* See cut on page 35.

ness of great importance to the community, it should not be mixed up with and degraded with vain experiments that are foreign to it, and injurious to the sight of clairvoyants. They should not therefore be required to answer questions on the subject of such experiments, but should leave them for the solution of the clairvoyants of private parties.

In finding and examining patients with a letter, every facility should be afforded by the patient, or friend of the patient residing in the same house, where the letter should be written, as the spirit of the clairvoyant will always go directly to that house. The spine of the patient should be examined in the manner described in "The Motive Power of the Human System," page 43 and the result stated in the letter, and besides if there are any swellings of the joints, limbs, or any other part of the body, or any ulcerations, they should be mentioned, as they might be overlooked in the examination.

If there is any pain or tenderness from pressure along the spine, we shall know that it is a case of tubercula, and if the number and situation of the painful or tender spots are stated as near as may be, we shall know if the spirit found the patient, or some other person, and if some other person, we can direct the continuation of the search until the patient is found.

If on examination there is no tenderness found along the spine of the patient it should be so stated, when we shall know it is a case of mucosis or mucous disease, but we should not know what organ was diseased, and it should consequently be mentioned in the letter.\*

On having the information [we have described, which is easily furnished, we can easily know by means of clairvoyance, how far the disease has advanced in each case, and whether they are curable or incurable, or as well as we could if we had the body of the person open before us. All the cases are curable in the first stages of the disease,

\*There are about fifty cases of tubercula to one of mucosis.

and about ninety-five out of every hundred in the last stage, including tubercular consumption and white swellings of the joints and limbs, as we have demonstrated in the clearest manner, and we shall continue to undertake the cure of the curable cases presented to us for that purpose, and have the fullest confidence that with the means in our power, we shall continue to cure chronic diseases in the above mentioned proportion to the whole number of cases.

Such is the result of the duodynamic or magnetic practice. Now it is well known to those who are initiated into the mysteries of the practice of medicine, that there is not more than about five per cent., or five cured out of every hundred cases of chronic diseases, by the old astrological or common practice, and the number of cures out of every hundred by the Homoeopathic practice is about the same, or five or six out of every hundred cases.

The remedies we use in these cases are magnetic and specific, and are perfectly safe for persons of all ages and conditions, and are forwarded to any part of the Union and the Canadas, by mail, express, or otherwise, according to order, free of postage or expense, with full directions for their use.\*

\* Temporary remedies, as bleeding, blistering, emetics, cathartics, low diet, &c. &c., are prescribed by alapathists, or old school physicians, and aconite, bryonia, rhustox, belladonna, &c., by the homoeopaths in acute or inflammatory diseases, which produce sudden derangements in the system, and run through their course in a few days or a few weeks, and these prescriptions are often necessarily and very properly changed every day, or every one, two or three weeks; when the disease has run through its course, and the patient either cured, dead, or the disease has become chronic; but no man who deserves the name of a physician ever prescribes in this manner to cure chronic diseases, which come on very slowly, and gradually changes the old, and forms new parasitic, or other unnatural structures as tubercles and white swellings of the serous and mucous surfaces, &c., as the plainest common sense would, and does teach him to learn and prescribe the specific remedies that will act slowly and safely on the old and natural forms of the system, and gradually reduce in a few months or more, the parasitic or other unnatural structures, and thus restore the gen-

When it is known that our time is necessarily occupied every day, from morning untill night, with the examination of patients by clairvoyance and otherwise, in our office, or in this city, and that we are consequently compelled to examine patients at great distances in the evening, it is hoped and believed that such patients and their friends will reflect upon our situation and have so much mercy upon us as to give us as much information in regard to each case (no matter what it is) as to enable us to distinguish and find the patient with as little delay as possible, so that we may get through with the examinations of such cases in time, each night, to have some rest from our labors.

It may also be useful to observe here that the examinations of the letters from patients is conducted in the most secluded and confidential manner, and the notes of the clairvoyant examinations of the cases taken down at the time of such examinations, and the letters answered as soon thereafter as possible.

The clairvoyant will visit and re-examine these patients under our direction, once in four or five weeks, and as she always recol-

eral health. Nothing, therefore, so much distinguishes the accomplished physician as the readiness with which he distinguishes and prescribes for acute and chronic diseases, and on the contrary there is nothing that so much distinguishes the ass or ignoramus as the frequent changes in his prescriptions, in chronic as in acute diseases, and these rules are arbitrary and admit of no exceptions, and are equally applicable to physicians and clairvoyants. When, therefore, reputed clairvoyants change their prescriptions in chronic as in acute diseases, or even once in 3, 4, 5, or 6 weeks, it is conclusive evidence that they have no clairvoyance on the subject, but are governed by impressions transferred from the brain of some miscellaneous personage, and these impressionists may also be known by the miscellaneous character of their prescriptions in chronic diseases, as "catnip, sage, hslp, and pond lily—white pine and wild cherry bark, squaw-vine, golden seal and spikenard—cohoash, skunk-cabbage, prickley-ash, ver vain crowsfoot, and Solomon's seal," &c.

Now such prescriptions of reputed clairvoyants, are not only legitimate sources of amusement to physicians, but they have a strong tendency to make new and confirm old skeptics in their skepticism.

lects the previous examinations and compares them with the last, it is a matter of great importance in enabling us to know the progress of the cure in each case, and to correspond with any patient on the subject, if it should become necessary to do so.

In the meantime patients should communicate to us freely any information supposed to be overlooked or unknown to us, and deemed of great importance in the successful treatment of any particular case.

We shall employ a clairvoyant of the greatest power, and of a high order of intellect for the examination of patients at home or abroad, who will often give our patients fine specimens of [the] all-seeing eyes and spiritual powers of the magnetized brain.

The following is a specimen of Clairvoyance which occurred a few evenings since. When we had got through with the examination of letters from patients, on the evening of the 8th inst., and at about 8 o'clock, we requested the clairvoyant to look and see if there was any money coming on the way in the mails for us, and in two or three minutes, she answered yes! I see a fifty dollar bill for you in a letter, and the letter is in a bag coming from the west. Are you not mistaken in the amount? No, it is fifty but it is not a bill but a draft. Look and see if it is not 70 instead of 50 dollars. No, it is 50. Why, how fast it comes!—whiz!—it is coming on the railroad! The cars arrived here between 10 and 11 P. M.

We were expecting a draft from New Orleans of 70 dollars, but instead of that, our clerk on returning from the post-office on the morning of the 9th inst., brought us a letter from a gentleman in Pittsburgh inclosing a draft for 50 dollars.

On the evening of the 10th inst., after having again got through with the examination of letters from patients, I directed the attention of the clairvoyant to the subject of the above draft, and inquired whether she knew from mere intuition it was a draft of 50 dollars for me and coming in the mail on the railroad from the west, or saw it literally!—When she answered that she saw it literally!



ly, as she saw things with her eyes in her natural waking state.

**Rev. La Roy Sunderland and his Theory of Pathetism.**

We have published in this number of our Journal, Mr. Sunderland's Theory of Pathetism, a new name with which he has christened Mesmerism, or plain Animal Magnetism. He performed these rites in this city in 1843, and described the ceremonies and the reasons for their performance in a book of 247 pages, called Pathetism.

Mr. S., soon after the publication of his book, went to New England and commenced lecturing on Mesmerism under this new and strange name and succeeded in obtaining audiences at his call, which was unheard of in this city a few months before, when he repeatedly invited its citizens to hear him lecture on Mesmerism or Animal Magnetism.

Mr. Sunderland's success in obtaining audiences opened a fine field for the sale of his book at the door of his lecture room to his marvelous hearers, and he soon began to feel the most substantial benefits of his new enterprise, and satisfied himself if not his audience of the great importance of changing the name if not the facts of Animal Magnetism.

In his Theory of Pathetism he commences first with *consciousness*—of which he tells the reader there are two kinds. "The first and highest consciousness," he says, "is the *knowledge* which the mind takes of itself and the *power* by which it distinguishes between itself and the objects of its *knowledge*." "The second kind of consciousness is manifest in the spontaneous action of the *nervous functions* without observation or experience, which constitutes *INSTINCT, INTUITION, OR CLAIRVOYANCE*."

We should observe here that *consciousness* is the mere perception of what passes in the mind—of wakefulness—of our existence, *without* certain knowledge; and that *knowledge* is certain perception, learning,

information, and skill in anything. *Consciousness* is not there ore knowledge or power, and ought not to be thus confounded.

Instinct is a mere natural desire or aversion not determined by reason, while intuition is immediate knowledge obtained without the deduction of reason, and clairvoyance is seeing in the magnetic state, with magnetic light as we see with our eyes by the light of the sun in our natural state, yet Mr. S. confounds them all together, like consciousness, knowledge and power, and what he says upon these subjects is therefore manifestly without knowledge and consequently deserving no more attention than the most common twaddle.

**"MIND—SOUL—SPIRIT."**

"*Mind, soul, or spirit, are SYNONYMOUS terms, and signify the aggregate of all the functions of the nervous system. Hence, mind is neither material or immaterial, but functional.*" This is another specimen of Mr. S.'s habit of confounding facts and fictions.

Now the *spirit* of a man is a living spiritual form in the likeness of the man that acts and is acted upon by its system, called the nervous system, and is not therefore a mere *function*; action or nonentity as represented by Mr. S., but is endowed with sensation, inclination, motion, power, consciousness and knowledge. Its vital forces and physical power is represented in the muscles, and its mental power in the mind. The mind is not therefore synonymous with, but a function of the spirit.

**ANIMAL LIFE, ETC.**

"Life is manifested from certain associations, and it controls matter, suspends the laws of chemical affinity, and extends its power over each of the imponderable fluids known under the terms of magnetism, electricity and galvanism. It carries on a series of revolutions in the animal and mental economy which correspond with the alternate forces or states of everything else in na-

ture." Chemical affinity depends upon the magnetism in inanimate matter and it is a fact that life controls the unorganised magnetism in inanimate matter, but it is a fiction to suppose that it also controls the organised magnetism in animate matter; for *living* magnetism carries on a series of revolutions in the animal and mental economy, which correspond with the alternate forces or states of everything else in nature, and these are well known to be the magnetic forces, and states depending on them.

#### INTUITION—CLAIRVOYANCE—INSTINCT.

"The instinctive power in man is superceded by the development of the intellectual faculties, through the external senses. But in certain states of the nervous system when the external senses are suspended, this power becomes active, and is then what is denominated clairvoyance."

We are told here that *instinct* or a mere natural *desire* or *aversion* in certain states of the nervous system when the external senses are suspended is clairvoyance, and this is Mr. S., theory, or the theory of pathetism.

#### MENTAL INFLUENCE—TEMPERAMENTS.

"The influence which one person or thing may have upon another, depends on temperaments or the constitution of man, and the nature of things. That is, there is a difference in their temperaments, the fluids, the nerves and muscles. Hence no two are precisely alike in the different degrees of their different susceptibilities."

The magnetism of one person is as necessarily different from another as their temperaments or the quality and quantity of the fluids and solids in their systems, and hence the cause of the different degrees of their different susceptibilities. Inanimate or unorganized matter or unorganised magnetism in inanimate matter, does not act on organised or magnetised matter in its normal state, but magnetised matter acts upon other magnetised matter as one person acts upon or influences another. This action is that of the magnetic or vital forces which radiate great distances in every direction from magnetised bodies, and are called the magnetic *spheres* of

our bodies. These spheres are odorous and the odor of each is as different as our faces, and these odors are often recognised at great distances by man and other animals. Besides the *motions* of the forces in man and other animals, and those *made* by man and other animals, are beyond all doubt identical with those of the magnetic forces.

#### ASSOCIATIONS—SYMPATHY.

Mr. S. gives us another hash of facts and fictions under these captions. The following paragraph is one example.

"A *peculiar association* or connection between two minds or two functions which are not precisely alike, [but one negative and the other positive] produces a positive or *sympathetic* relation, by which one mind [or one mind and body] affects the condition of the other. When the mind or organs [or the body] are precisely alike, [or both negative or both positive] the relation is repulsive and no results are produced except a feeling of *antipathy*, and when two minds, bodies, or *substances* are brought together which do not come up to a certain degree of difference, in quality or functions, a neutral relation, or a state of *apathy* is the result."

We have italicised a few words in this paragraph, and we have added the words in brackets—the rest is twaddle—for it is a fact that a positive or sympathetic relation may be and is often established between persons who are unlike or of opposite forces, so that one may affect the condition of the other, and it is also a fact that in case the two persons are precisely alike or both are negative or positive no results are produced, but it is a fiction to suppose that these positive and negative results are from any other cause than that of the action of magnetism in the first case, and its non-action in the last in accordance with the laws of these forces.

#### MENTAL PHENOMENA.

"Those which are self-induced, such as sleep, trance, somnambulism, and, in a word, each and all those changes which come within the range of faith, hope, and the power of the human will. There is no

state of the mind but which may be self-induced, where there are no disturbing causes or previous associations strong enough to prevent the attention from becoming sufficiently fixed upon the result"

Mr. S. has unfortunately often proved that the converse of this statement is true, as he has always failed in his lectures, as others have, in magnetizing any considerable portion of his audience, notwithstanding his untiring and tedious efforts to do so. In fact he has only succeeded in magnetising a very few only of the most susceptible persons in his audience, and besides has in fact so little confidence in his own ability to succeed always in magnetizing even one person in his audience, as to induce him to take the necessary precautions to prevent such an unfortunate failure in the history of Pathetism.

"The pathology of incubus, somnambulism, trance, second sight, insanity and dreaming, is the same, or so nearly so that the pathology of one of these states will readily suggest or explain the pathology of each of the others."

Mr. S. must, we think have written this sentence of fictions in a state of incubus or night-mare, as he has not given the reader a solitary fact in the sentence or in any way connected with it, to support his assertions, or make his usual hash of facts and fictions. The sentence consequently appears in all the deformity depicted by the evil spirit who presides in incubus, and who disappears in an instant, the moment its victim is jugged.

#### DEATH—RESURRECTION.

"Death is the alternation of life, and the resurrection of the human body is the alternation of death. We can trace man no farther than death without a divine revelation, and from the bible we learn that by the gospel of Jesus Christ "Life and immortality are brought to light."

This paragraph, like the last sentence we have quoted, appears also to have been dictated by an evil spirit, for we have already numerous revelations on death and the resurrection, in which man is traced farther than death, and in one of which it is said, "so

also is the resurrection of the dead. There is a natural body, and there is a *spiritual* body. It is sown a natural body, it is raised a *spiritual* body," but this did not accord with the theory of Pathetism, and consequently a new revelation was required.—Such are the absurdities of this theory Mr. Sunderland knows very little of the magnetism of the human system, or of its phenomena excepting its phantasies which he studies and develops in his lectures for the amusement of his audience.

#### LATERAL CURVATURES OF THE SPINE.

William W. Kinne, M. D., of Trumansburgh, Tompkins Co., N. Y., has been treating lateral curvatures of the spine and also distortions of the spine and of the limbs, during the last year (1846) with great success. The Doctor took plaster casts of the curvatures and distortions before he commenced the treatment, and also at different periods during its progress and at its termination. The following engraving, Fig. 1, is from a drawing by C. Muyr, of the first cast of Miss Mary B. B., of Ithaca, N. Y., aged 16 years.

FIG. 1.



The curvature commenced seven years before the cast was taken, and at the end of four and a half months thereafter, another cast was taken of Miss M. B. B., showing a very great improvement in the case, as seen in the engraving, Fig. 2, and leaving little doubt but that in a month and a half more, or six months from the time of the commencement of the treatment the spine would be straight and the form perfect.

We have also a cast of a lateral curvature, taken by the Doctor at the commencement of the treatment of Miss M. P., of Hector, N. Y., aged 17 years. The curve commenced when she was between four and five years old, and grew with her growth.—The cast shows it to be a very bad case, and the spine, at its greatest curve, an inch and a half from the median line. The second cast of this case taken after nine months treatment shows the spine straight.

A cast of lateral curvature of the Spine, which the Doctor took of Miss M. V. S., of Ithaca, N. Y., aged 13 years, and of three years standing shows a deviation of the spine of one inch from the median line, a very bad form and poor health. Another cast taken after eight weeks treatment of the same case shows a straight spine, improved health and a perfect form.

There was in all of these cases, like every other of lateral curvature, a contraction and thickening of the muscles or venable white swellings on the outside of the curves. They are all cases of tubercular disease of the muscles, and it is the contractions of the muscles on the outside of the curves and consequent atrophica of those on the inside that make the deviations from the median line.

FIG. 2.



The white swelling of the right scapula or shoulder-blade in the case of Miss M. B. B., Fig. 2, which produced the deviation in her spine, is not, it will be seen, entirely re-

duced, and consequently the spine has not entirely resumed its natural position.

The course the Doctor adopted to relieve these curvatures, was first to reduce the

white swellings with the specific remedies for tubercula and the action of the magnetic machine, when the spines resumed their natural positions, and this is the only philosophical and only successful practice in these cases.

In consequence of the great increase of the business of reducing lateral curvatures of the spine, and distortions of the spine and limbs, Dr. Kinne has been invited to establish himself in this city, and in a letter from him a few days since (Dec. 12), he informs us that he has concluded to accept the invitation, and will have rooms in this city to accommodate his patients, in the course of the month of March next.

**DISTORTIONS OF THE SPINE AND CARIES OF THE VERTEBRÆ.**

Fig. 3 is the form of a cast taken by Dr. Kinne, at the commencement of the treatment, of Almond Beach, of Cuba, Alleghany Co., N. Y., aged 13 years. The distortion commenced when he was five years old, and grew with his growth. Fig. 4 is the form of a cast taken from the boy after three months' treatment, and Fig. 5 is the form of a cast taken from the same boy after four and a half months' treatment.

FIG. 3.



FIG. 4.

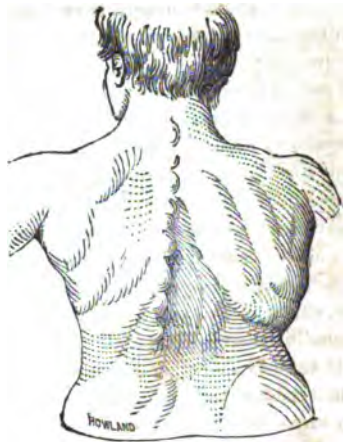


FIG. 5.



There is a very great and progressive improvement in this case for the time it has been under treatment, which will astonish every physician who is unacquainted with the magnetic practice by which such extraordinary results are obtained.

It will be observed that the 3d figure and form of the first cast from this boy shows the most extreme atrophy of the muscles, with very great distortion of the spine, and that in figures 4 and 5 the atrophied muscles are progressively developed in the

same proportion with the reduction of the distortion, and these changes have progressed in the same manner in all the cases we have treated.\*

We see the same progressive changes and in the same order, in lateral curvatures of the spine, as seen on a comparison of Fig. 1 with Fig. 2, and of the other casts in our possession, before described, and these changes have also progressed in the same order in all the cases we have treated; and in all of which allopathy, homœopathy, hydrophathy, chronopathy, and all other pathies, are equally and entirely at fault. And now it should be remembered, and never be forgotten, that the magnetic or duodynamic practice reduces in the most safe and prompt manner, the enlarged, thickened, swelled, hypertrophied, or tuberculated portions of the organs in the same order as in the above cases of tuberculated and atrophied muscles in lateral curvatures and distortions of the spine, as we have demonstrated in the clearest manner time out of mind. Yet the professors of our medical colleges continue to teach the old antiquated astrological practice

and the people are apparently doomed to be drugged to death like their fathers in all future time; but the study of anatomy and physiology is being introduced in our primary schools, and the manikins and magnetic machines are abroad with the lecturers on the magnetic symptoms and treatment of diseases, and the magnetizers are raising their signs in town and country, and are curing diseases in a prompt, safe and satisfactory manner. In the meantime the people are obtaining a general knowledge of anatomy, physiology, and of the magnetic symptoms and treatment of diseases, and will soon learn the professors of these colleges the necessity of keeping pace with the improvements in the practice of medicine.

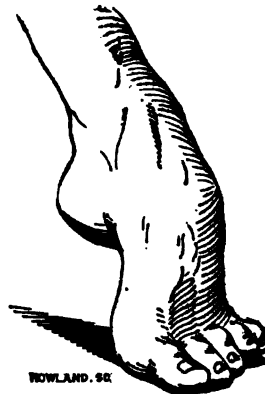
#### DISTORTIONS OF THE LIMBS.

Fig. 6 is the form of a cast of the lower part of the leg, foot and ankle, of a girl aged 11 years, taken by Dr. Kinne, at the commencement of the treatment; and Fig. 7 is the form of a cast taken from the same leg, foot and ankle at the end of six weeks thereafter.

Fig. 7.



Fig. 6.



The girl used the limb many years in the form and manner seen in Fig. 6; and the

\* We have always on hand cases of distortion of the spine and caries of the vertebrae. We had 16 cases in 1844, aged from one to eight years, and they are now all well and their spines straight, excepting 2 who were too far advanced in the disease to be cured.

Doctor observes that, "in the treatment of the foot with which I presented you casts, one taken six weeks after the other, without any cutting of tendons, or other operation, we relied entirely upon the magnetic machine and frictions to restore the action of the paralyzed muscles."

**MR. SUNDERLAND'S REVIEW**  
*Of Professor Bush's work on Mesmerism and Swedenborg; or the relations of the developments of Mesmerism to the doctrines and disclosures of Swedenborg, page 26 of this Journal.*

We have read this review very carefully, and have compared the quotations with the original works, and we must say that the objections to the conclusions drawn by Professor Bush are well taken and are fatal to them.

The Professor has been greatly deceived, and especially unfortunate in the selection of his oracle, Davis, who, instead of being as the Professor represents, "a person of remarkable clairvoyant powers in the investigation of disease," and possessing, "both physically and mentally, in eminent degree, the requisites for a clairvoyant of the highest order," *is in truth and in fact no clairvoyant at all*, but a mere impressionist, or a person who, in the magnetic state, has impressions or intuitions more or less perfect, but not literal sight or clairvoyance, and unfortunately these facts are "*well known to a wide circle*" in which is our professor, as will be seen, who says (page 174) that "early in June last Mr. D. while in the midst of one of his lectures came to a sudden pause, and remarked that he received no farther impressions—the usual language in which he speaks of his internal communications—(not of what he sees,) saying at the same time, that he perceived that he must go immediately to Poughkeepsie, and that something very extraordinary was going to happen to him there. What it was he was unable to say, but observed that it would be known in New York in three or four days, and that his associates might freely inform others of the fact, but it must be kept from him while in the waking state, as it would produce an undue excitement in his mind which he must carefully avoid. His wishes in this respect were strictly complied with, and accordingly shortly after, when in the natural state, he announced the purpose of starting the next day, (Saturday) for Poughkeepsie. On Saturday he left the city in company with Dr. L., his constant compan-

ion, and on the Wednesday following—the fourth day from the announcement, I received unexpectedly the ensuing letter

The following are extracts from the letter, dated

"Poughkeepsie, June 16th, 1846.

Dear Sir:—Yesterday morning after eating breakfast at No. 49 Washington street, I went down to the bookstore, to get some paper to write a letter to ———; soon I had a desire to go down to the river—what caused it I don't know—but went down. I soon lost all knowledge where I was—recollect of being about the river, and also ascending a hill, and being in the mountain opposite Poughkeepsie about 4 miles. I am conscious of meeting the same person that I had seen in the grave yard in Hyde Park. I also remember conversing with him and taking out my pencil, and writing all the thoughts given me. I remember him leaving me suddenly and I came out of the state. I was surprised to find myself wet with rain, the paper on my lap, and dry—the paper had not been wet. The very moment I came into the natural state, I felt you should have the paper immediately,"—*of course.*

This was certainly a very natural feeling or inclination, as he undoubtedly went up to the mountain for the express purpose of making a revelation for the Professor from that elevated position.

The Professor supposes that the communication, as written is addressed to what he (Davis) regarded as the spirit of Swedenborg, but still has his doubts about it. We have however no doubt at all but it was really the spirit of the Professor, and none, but he read from the Professor's mind through his spirit before him, whatever part of the revelation was really written by him in the magnetic state, and not by his "*associates.*"—Neither have we any doubt but that when his impressions ceased upon the subject on

\* Persons in the magnetic state can easily bring the spirits of other persons before them whenever they choose to do so, and especially those in close communion with them as in this case.

which he had been speaking, and he "perceived" that he must go or be *taken up into a high mountain*, he got that perception from the mind of the Professor, and this accounts for his haste to be off, and also in sending his revelation to the professor as soon as it was possible to do so. It is besides a fine example of what the Professor calls the *influx* of what passes in one mind into that of another and nothing else.

We, hope that the doctrines of Swedenborg and those of other christians will never require such support.

In the meantime it should be observed that the Professor's knowledge of magnetism is very limited, and that he is consequently liable to have gross impositions practised upon him by speculators on the subject who make periodical announcements of their marvels in present and future prospect.

We should also observe here that we have read attentively the whole of the Professor's long account of Davis' marvels, to which he imputes supernatural agency, than which nothing could be more ridiculous, as there is nothing in them but what is common to impressionists as well as to clairvoyants, and they are all easily as well as satisfactorily accounted for on the most simple and natural principles, as every one knows who is familiar with these magnetic phenomena.—Even the discovery of the new planet, or that it was in process of discovery as pretended is nothing new or really marvelous, as that planet had not only been discovered by many clairvoyants long before it is pretended to have been discovered by Davis, but the number of its moons were also discovered and the time not only given and correctly too, when the planet would be discovered by astronomers, but the time that would elapse before they would make successive discoveries of its moons.

#### DECLINATION AT THE CITY HALL, N. Y.

6°, 56', 34" West declination at the City Hall, New York, January 1, 1847, Latitude 40°, 42', 40".

#### THE MAGNETIC MACHINE.

The interest the medical profession and the public generally have evinced in this machine is still on the increase, and is the strongest evidence of the great estimation in which it is held in the treatment of diseases. Its extraordinary, prompt and often apparently magical effects in a great number and variety of diseases, both acute and chronic, are of daily occurrence in almost every part of the country; and the introduction of the magnetic symptoms of diseases, with the magnetic machine, is marking every where, in an indelible manner, the commencement of a new era in the practice of medicine, and of the reign of science after a mournful interregnum of more than two thousand years.

We should here again caution physicians and others against purchasing the various imitations of our MAGNETIC machines under whatever name, as they will be found of little or no value, and will soon be laid aside as useless lumber, as experience has already shown.

#### PROF. BUSH AND THE MARVELS OF DAVIS.

We copy the following very just remarks on these marvels from the New York Observer of the 19th of December, 1846.

##### Gross Delusion or Imposture.

Those who are in the habit of observing the movements of the present day, are aware that there is at this moment a most powerful effort in progress to unsettle the foundations of christian faith, and introduce a semi-infidel philosophy in the place of divine revelation. In this work two classes of men are engaged. The one includes the open enemies of the truth, the other embraces those who have been deceived by the glare of these new doctrines, and are more efficient and successful in the work of mischief, than they who avow themselves and their objects.

Impelled by a strong conviction that duty requires us to expose the tendency of these various doctrines we have devoted considerable space to the work during the year past, and notwithstanding the present indifference to the subject on the part of the religious community, we intend to follow it up. In



the pursuance of this work, we published a communication two weeks ago signed "T. L." demonstrating that the case of Davis, a pretended clairvoyant, is one of the most remarkable instances of delusion or imposture ever exhibited. Professor Bush, having assumed to be the endorser of Davis, very properly feels that his moral or mental sanity is involved in the matter, and desires to be heard in reply. We have therefore allowed him his own space for that purpose and on the fourth page of this paper we give his professed reply to the article of our correspondent.

We ask our intelligent readers to peruse that article with attention, and admire with us the entire absence of all proof of the positions which "T. L." had assailed. Prof. B. commences by saying that he does not regret that an occasion has arisen for him to exhibit the evidence on which he relies.—And then he proceeds through two columns, saying "I affirm it then as a fact," "I affirm it," &c., while there is not the slightest shadow of evidence presented from the beginning to the end of his article; nor does the writer pretend to offer any proof that the man Davis has not gathered from books, periodicals, lectures, &c., the "snatches" of "revelations" which he assumes to make. The testimony is nothing more than the naked assertion of a man that he has not read the books from which he professes to make extracts, while the extracts which he does make have been shown to be within his reach, and the rhapsodies which are called scientific lectures and claimed to be original, are mere incoherent jargon, unworthy of the slightest regard. This is proved by the testimony of scientific men who have heard his utterances.

There is one assertion made by Professor Bush which enables the reader to form a proper estimate of the value of his testimony in this matter. In his book, p. 171, he says of Davis:

"I can also testify that having been occasionally present at some of these Lectures, I have heard him quote with the utmost accuracy, from the Hebrew, Greek and Latin languages, of none of which has he the least knowledge in his normal condition.—He has also quoted long extracts from the Sanscrit, the substance of which I have been able to verify from a French translation of the Vedas. Whether the same thing exists in an English version I have not learned."

In this passage the impression is clearly sought to be made and is made that Professor Bush has heard Davis quoting with the utmost accuracy from the Hebrew and other languages. But "T. L." showed that this

pretended quotation from these languages was nothing more than the repetition of *one word* which he might have picked up, and even in the case of the Greek that the words were anglicised and of common use in newspaper reports. And now Prof. Bush says "It is true that I did not myself hear the utterance of but one Hebrew word"—what then must be our opinion of Professor Bush's state of mind, when after hearing a man repeating a Hebrew word, often seen in English letters, he says that he has "heard him quote with entire accuracy from the Hebrew language," and on such evidence he builds the pretension that the man receives his Hebrew revelations from the spiritual world. We were induced to allow Prof. Bush to make his defence in our columns that it might be shown as it is now, and will be more fully next week, that he has been deluded without the least shadow of reason, and when put on the defence has not even the appearance of an argument on which to build.

#### ENLARGEMENT OF THE LIVER AND SPLEEN, WITH DISEASE OF THE BLOOD.

In the same journal, Dr. Fuller, gives at length the history of this case, and the principal points of interest are—1st. That the blood being microscopically inspected before and after death had taken place, presented, in addition to the natural blood-globules, the appearance of

"A number of abnormal globules, spherical in form, finely granular in appearance, colorless, and apparently possessed of no investing membrane or nucleus. These globules varied greatly in size; some were about the size of ordinary blood corpuscles, but the greater number of them were much larger, some of the largest measured varying from 1-1500 to 1-2000 of an inch in diameter, the blood globules in their immediate vicinity having a diameter of 1-4500 of an inch. They were so numerous as to constitute about one fourth or even a larger portion, of the entire globules of the blood.

"The mass of the blood after death presented very abnormal characters. The splenic veins and arteries were greatly enlarged, and it was found that all the veins constituting the portal system were enormously dilated, and distended with semi-coagulated blood, of the consistence of that substance which may be squeezed out of a soft pulpy spleen, but of a peculiarly greyish purple color. Some of the omental veins were so dilated as to equal the femoral in size, and their coats were remarkably thin. Further examination proved that all the vessels contained in the abdomen were

greatly dilated, and filled with this same grumous blood."

The writer speculates, without arriving at any positive conclusion, as to the origin and progress of this change, and he usefully indicates the propriety of ascertaining how far a similar condition of the blood exists in all cases of enlarged liver and spleen.

#### ON THE TREATMENT OF BURSAL DISEASE OF THE KNEE-JOINT.

In a communication to the same journal, Mr. Skey describes the practice which he has found useful in the inconvenient and painful malady known as housemaid's knee. Counter-irritation by blisters he believes an inefficient mode of treating the disease, and excision barbarous and unnecessary. His practice may be learned from the following paragraph:—

"If such amount of inflammation be excited in a diseased bursa as will produce suppurative action, an abscess will form, which may be brought to a crisis, if necessary, by puncture; but in soft or fluid bursæ this crisis is not requisite. The effect of a thread passed through the sac is similar to that of the same agent in the case of hydrocele or ranula—viz: the secretion is absorbed without being discharged by a wound and the cavity is obliterated. But in the hard and consolidated form of the disease, the effect of the thread is that of producing suppuration. The hard mass, as it were, breaks down into a common abscess, which, when punctured, discharges its contents, and heals. In this manner, I have treated diseased bursæ for many years. A common thread of silk should be passed through the centre of the tumour, especially so in the hard form, in order to insure its including the central cavity, for this I believe to be necessary. The time it should be allowed to remain will depend entirely on the effect produced. Occasionally, the tumour shows great indifference to its presence; at other times, and in other persons, smart inflammation follows, accompanied with considerable pain, in the course of a day or two. The inflammation may extend over the front of the joint. The thread should then be removed, and the knee fomented or poulticed; and from that period the disease may date its onward march towards a final cure.—Nothing can be more satisfactory than the steady progress these cases generally make. When the bursa is large and hard, the thread should remain until a good deal of inflammation is produced, even though suppuration be established, which will be indicated by the oozing of pus from the punctures. The thread being then removed, either the

abscess will become more matured, and demand relief from the lancet, or the whole mass of the disease, now become fluid, will undergo gradual absorption. I have cured many cases in the early stage in three weeks, but they more frequently require a month or five weeks, particularly when the absorption of a large mass of lymph forms a necessary part of the process of cure."

When the bursa is too deep to allow of the application of the thread, Mr. Skey recommends injection and pressure. The injection, it may be inferred from Mr. Skey's desultory style of writing, is to be composed of a weak solution of sulphate of zinc.

#### ANALYSIS OF KIDNEY IN BRIGHT'S DISEASE; VERY LITTLE FAT, BUT AN EXCESS OF ALBUMINOUS AND FIBRINOUS MATTER FOUND.

"Dr. Black read an account of a chemical analysis of Bright's kidney in the advanced stage. The kidneys were larger than in health, and mottled, and to the naked eye presented well-marked appearances of what had been called granular kidney; on inspection with the microscope, however, only very few oil-ovules could be seen.

"355.5 grains of the kidney, after gentle pressure between folds of linen, were cut into very small and thin pieces, and subjected for two hours to boiling in water, in a Florence flask. He obtained in this manner a milky-looking fluid of the sp. grav. 1008 at 62°, which was filtered.

"147.7 grains of firm residuum remained upon the filter, showing that 207.8 grains of the portion of kidney subjected to boiling had been taken up in solution or suspension by the water.

"No fat or oil-ovules, beyond a mere trace, appeared on the milky looking fluid, which was neutral in its reaction on test paper.

"Half of this fluid was evaporated to dryness, and thirty grains of dry residuum were obtained, which residuum was not at all soluble in ether, but entirely dissolved in liquor potassæ.

"The other half of this fluid was treated with nitric acid, which threw down a cloudy flocculent precipitate.

"The firm matter, weighing 147.7 grains which had resisted the action of boiling water, was digested in pure liquor potassæ: a thick brownish colored solution was thus obtained, which, on being filtered, left ten grains of dense and thready animal fibre upon the filter.

"After filtration, the solution was precipitated by hydrochloric acid; and the white

cloudy precipitate, when dry, weighed thirty grains.

"As the principal results of his analysis, Dr. Black ascertained that one thousand parts of the diseased kidney were composed as follows;—

|                                  |         |
|----------------------------------|---------|
| Albuminous and fibrinous matters | 281.6   |
| Hydrogenous constituents         | } 718.3 |
| Salts                            |         |
| Free oil-ovules—a trace          |         |
|                                  | 1000    |

"He was disposed to apportion 40 per cent. of the albuminous and fibrinous matters as the healthy constituents of the renal structure, whilst he believed the remainder would represent the adventitious albumen resulting from the pathological state.

"Dr. Black spoke of this as being the first of a series of analyses of the kind which he is about to undertake."

We take the above extract from the proceedings of the Manchester Pathological Society. The conclusions of Dr. Black are highly interesting, and quite opposed to the view which has been lately taken of the nature of Bright's disease—viz: that it is the result of an increase of the fatty elements of the kidney. Dr. Black shows experimentally, that this deposit is absent; it therefore cannot be the cause of the disease: the same experiments show the presence of an excess of albuminous and fibrinous matter. These observations confirm, in a remarkable manner, those made by Dr. Quain on this disease, and published in this journal some time ago.—*Lancet*.

#### DR. FORBES ON MESMERISM.

The October number of the British and Foreign Medical Review, published in London, quarterly, by Dr. Forbes (author of *Young Physic*), "Physician in Ordinary to Her Majesty's Household, Physician Extraordinary to his Royal Highness Prince Albert," contains a long review of Dr. Esdail's "*Mesmerism in India, and its practical Application in Surgery and Medicine*." Dr. F is a man far advanced in life, and is placed by common consent at the very head of the Medical Profession. Up to the commencement of this year, he has been considered ultra-sceptical in reference to all new things. In the January number, 1846, he made a clean breast of his views upon Medicine, and publicly repudiated the system (Allopathy)

he had all his life pursued. In the number before us, he intimates to the professional brethren that the evidences in favor of Mesmerism can no longer be "philosophically disregarded." We give an extract:

"Having, however, fully admitted the high probability of some of Dr. Esdail's statements concerning the painless character of the surgical operations; and being, indeed from many circumstances, well convinced that a great depression of outward sensibility, if not its temporary abolition, will in some constitutions, result from practice of the Mesmeric art, we will now proceed to the consideration of what we deem to be reasonable corollary, from this admission on our part. We conceive, then, that the evidence attesting the fact of certain abnormal states being induced by Mesmerism, is now of such character that it can no longer be philosophically disregarded by the members of our profession, but that they are bound to meet it in the only way in which alleged facts can satisfactorily be either verified or confuted—by observation and experiment. When it is positively affirmed that the Mesmeric processes will sometimes render a patient utterly insensible to the surgeon's knife, when detailed illustrations of this fact are recorded almost every day, how can we fairly reject such statements, unless we go to Nature, observe for ourselves, and demonstrate the source of the monstrous fallacy that is deluding members of the profession and the public alike? Indeed, we hesitate not to assert that the testimony is now of so varied and extensive a kind, so strong, and in a certain proportion of cases so seemingly unexceptionable, as to authorize us, nay, in honesty to compel us to recommend that an immediate and complete trial of the practice be made in surgical cases. If experience like that which Dr. Esdail relates to us be but true in one-tenth, nay, one-hundredth of its particulars, we hold that a case is made out demanding searching inquiry. If Mesmerism, even in its humbler pretensions, be absolutely untrue, let it be proved to be so. If careful observation and repeated experiment lead to the detection of some hitherto hidden cause of error and mistake that has deluded and mystified the more honest class of Mesmerists, what a service will be rendered to humanity and to truth if this can be proclaimed on perfectly just and adequate grounds. In how much better a position shall we be after investigation for confuting the imposture, if such it shall turn out ultimately to be, than in continuing to treat the subject with contemptuous disregard! Of one thing let us rest assured, not only that

public, but the more sober thinking of the profession will, ere long, hold those at a disadvantage, who, in opposition to facts, apparently well authenticated, can or will but adduce mere unsupported argument, or ridicule.

"There would appear to be to conditions attaching to any novel practice in medicine, independently of the authority by which it comes recommended, that should influence its title to a fair trial; first, the extent of the anticipated benefit, and, second, the degree of possible mischief attending its employment. Now, the promised advantages of Mesmerism in surgical operations correspond with these requirements in an eminent degree. If the statements be corroborated, and if insensibility can be produced artificially, surely the immense acquisition both to operator and patient is obvious at once; and, according to all the evidence that exists upon this subject, mischief very rarely follows the practice of Mesmerism in the event either of success or failure. "I beg to state," says Dr. Esdail, "that I have seen no bad consequences whatever, ensue from persons being operated on in the Mesmeric trance. Cases have occurred in which no pain was felt, even subsequent to the operation, and the wounds healed by the first intention and in the rest I have seen no indication of any injurious consequences to the constitution. On the contrary, it appears to me to have been saved, and that less constitutional disturbance has followed than under any ordinary circumstances. If then good is possibly to ensue, and mischief is but little to be feared from the experiment, why not candidly make it! Assuredly experiments in therapeutics are constantly made on grounds far less reasonable. If a single practitioner of any eminence recommend some novel and heroic treatment in serious disease, multitudes are ready to try it; however perilous to the patient the trial, a priori may appear. Although at the present day, it is pretty well made out that pneumonia, in many instance, will come to a successful issue with little depletion some dozen years since large numbers of the profession, especially in France, did not hesitate, on the recommendation of M. Bonillard, to bleed coup sur coup; and, about twenty years ago, when Dr. Armstrong bled largely, and administered heroic doses of calomel in the incipient stage of fever, many persons felt themselves authorized in adopting the treatment experimentally. Yet, in these instances, a degree of risk to the patient was incurred in the attainment of the possible benefit, and there was, moreover, an uncertainty in deciding

upon the exact nature of the result, which, as regards Mesmerism in surgery, would not be experienced. Again, we may, let it be tried upon patients about to be submitted to the knife; if true, let us have the benefit of it, and if false let the falsehood be demonstrated."

## ON ELECTRICITY

### CONSIDERED

*As a Physiological and Heat-Producing Agent. The purposes answered by food taken into the System, and the Refrigerating Influence of Respiration.*

BY J. W. LAKE, ESQ., HOLBEACH.

As the theory of animal temperature still remains one of those points in physiology not yet clearly demonstrated, the following suggestions, explanatory of this phenomenon, may not prove unacceptable.

A long course of observation has enabled me to arrive at the conclusion that every operation of nature, both in the organic and inorganic kingdoms, is occasioned, either directly or indirectly, by that power or agent already known to us under the term electricity; that this subtle principle acts, as it were, as the link connecting these functions with the fiat of the Creator. Taking this enlarged view of that mysterious power which

"Lives through all life, extends through all exist,  
Spreads undivided, operates unspent."—Pope.

I have, by identifying it with heat in the inorganic kingdom, been enabled to throw some additional light on many of the physiological functions. But for the identification: Sir David Brewster has proved to us that there are, in the northern hemisphere, two poles of extreme cold, and that these poles are also the magnetic poles or spots at which the needle assumes a perpendicular position. He has shown also that lines drawn equidistant round these poles, are isothermal, or lines of equal temperature. Again: the magnetic equator does not correspond with the terrestrial equator, and the isothermal line follows the course, not of the terrestrial but of the magnetic equator. Who then can doubt the intimate relation existing between heat and electricity? and if, coupled with this, we regard the sun as the source of both, we have the conviction of their identity still deeper impressed within us. But more than this, Derbeck has shown us how to convert heat into electricity; and Peltier has taught us how to convert electricity into heat. What more than such proofs can be wanting to convince the most sceptic.

cal that heat and electricity are one and the same agent? And if we are at present unable to determine the exact laws which govern its access in these varied states, it is a proof, not that these laws do not actually exist, but rather, that our ignorance and misdirected research have hitherto been a barrier to their discovery. Still, however, as it is of the highest importance to the stability of the theory I am about to propose, that this identity should be completely and undeniably established, I will further trespass upon attention to add what I might almost term a mathematical proof of the fact. For instance, let us take a pound of water at the ordinary temperature of the atmosphere; by the passage of a stream of electricity this water is converted into a certain bulk of the mixed gasses, which we must represent by water, the electricity consumed in its transformation. If we combine these gasses so as again to form water, we find no trace of electricity given off, but their reunion is accompanied by an intense degree of heat. Now, as heat and electricity are finite agents, which can neither be created nor destroyed, the questions to be solved are—Where has the electricity gone to?—Where did the heat come from? It is clear that the electricity absorbed in the decomposition of the water has been again given out as heat on the reunion of the gasses; in short, we have it as an established fact that electricity and heat are identical. Now it is by a conversion of electricity into heat that I intend to account for the phenomenon of animal temperature, and it will therefore be necessary for me first to show that the body is continually receiving a supply of that agent.

It is an admitted fact in physiology, that the particles which form our bodies are continually undergoing a change; and although the softer portions are more frequently renewed than bone and cartilage, yet an attempt has been made to fix the average length of time for such change to be effected, and at a low calculation seven years is the time fixed upon—that is, it is computed that in seven years we shall, by means of the nourishment derived from our food, have formed an entirely new body. But during that period, we shall have consumed on a low calculation, between 4000 and 5000 lbs. of solid food. Now the average weight of a man, including fluids, is 150 pounds, and yet, to form a new body, he must consume nearly a couple of tons of solid food, exclusive of liquids, every particle of which is capable of being converted into animal substance. It is evident, then, that while food comes to nourish our frames there must be

some other great purpose answered by it, or nature must have been very remiss in her workmanship. The size, too, of the thoracic duct, the channel by which nutriment is received into the system, bears a very small proportion to the bulk of food necessary to appease the sensations of hunger.—It is clear, then, that while nutrition is a very necessary function, it is yet only secondary to some other great end which the bulk of food is destined to answer. For if we refuse to admit this mode of argument, if we consider nutrition as the only service derivable from food, and then see, as is above shown, that a man must take thirty ounces of food to supply one ounce of waste—do we not perceive at once a great apparent departure of nature from the admirable and economic system in which all her operations are conducted? Are we not compelled to exclaim with the poet—

“Reasoning I oft admire,  
How Nature, wise and frugal, could commit  
Such disproportions!”—MILTON.

Now as electricity is elicited by chemical decomposition and as chemical decomposition of the food occurs immediately it is received into the stomach, in the process called digestion, there is every reason to suppose that the purpose which a bulk of food is destined to serve, is, to afford by its decomposition a sufficient supply of animal electricity; and this seems to be, in a great measure, borne out by observation. Food is very variable in its nature. Spirits afford a large amount of heat while burning—a proof that their chemical decomposition in the stomach affords a large amount of electricity. Meat and all kinds of stimulating and animal food afford a much greater supply of this agent than does a bread or vegetable diet. Hence we find that a great drinker is but a little eater; and why? He supplies a sufficiency of electricity from spirituous liquors, and he therefore only requires a small amount of solid food to answer the purposes of nutrition. A person living on a good supply of animal food requires much less bulk than those compelled to subsist wholly on vegetable diet. The bulk of a good meat meal is very disproportionate to the mass of oatmeal porridge consumed by the Highlander, or the potatoe diet of the Irishman. Food, then, is intended to serve the great purpose of keeping alive the vital spark, by supplying the subtle agent on which its existence depends; and this carries with it the conviction, that it is the electricity thus eliminated that constitutes the nervous agent, and that it is a diminution of this subtle principle in our system that oc-

casions the sensation of hunger; for we cannot suppose for a moment that this motion arises from any wasting of the body requiring reparation, whilst the languor and debility occasioned by abstinence, and the soul-reviving invigoration produced by refreshment, clearly point out that muscular debility, and not muscular diminution, was the cause of hunger, and that it was a fresh supply of animal spirit, and not animal fabric, that was needed.

We have the stomach, then, as the laboratory in which the vital agent is eliminated, and we must view the brain, not with Dr. Arnott, in the light of a galvanic battery, but merely as a receptacle or reservoir, in which this agent is received, and from which it is dispensed—the par vagum, or pneumogastric nerves, being the medium of communication. This view will readily explain to us why a state of collapse, or deficiency of nervous energy should be occasioned by a blow upon the stomach, as also the unpleasant sensations, termed headach, produced in the brain, when, by means of spirits or high seasoned food received into the stomach, too great a quantity of the vital agent has been directed to it. Now, with regard to animal temperature, space will not permit me to allude individually to the various theories which have been put forward explanatory of this phenomenon; but classing them as those which refer the source of heat to the changes occurring in the lungs during respiration, and as those which refer it to the contractions and dilatations of the heart and arteries, I will briefly endeavor to prove their fallacy.

Respiration is essentially a cooling process. Witness the respiration of a dog, who perspires almost solely by the tongue, and whose quick panting respiration is the chief means of cooling its overheated body. I do not for a moment deny that the decarbonization of the blood is attended by an evolution of heat; but I assert that the heat thus produced is insufficient even to raise the bulk of air inspired from the temperature of the atmosphere to that of the lungs, and as the expired air is of a temperature equal to that of the body, it follows that at every expiration heat must be carried off, and that the process, so far from imparting heat, is one of the means by which the cooling of our bodies is effected. Another class of theorists suppose, with Dr. Winn, that the alternate contractions and dilatations of the heart's arteries prove an efficient source of animal temperature, in the same manner as that a piece of caoutchouc becomes heated when suddenly stretched. But are these theorists aware that heat is a finite agent, and must have a source? That

if this contraction and dilatation produced heat, in the absence of any chemical change taking place in the parts themselves, the heat must be derived from the surrounding parts, and therefore this process, while it might, perhaps, elicit heat, could not in any way be considered as its generator.

The only theory worthy of consideration is that proposed by that eminent physiologist, Sir Benjamin Brodie, whose experiments have clearly proved that animal temperature is dependent entirely upon the nervous system. But increased nervous excitement is attended not only with increased temperature but also with increased circulation and increased respiration; and this accounts for the error into which so many have fallen in searching for the cause in these latter functions. Assuming, then, electricity to be identical with the nervous agent, the following I conceive to be the *modus operandi* of its heat-producing properties;—we find throughout the system that the necessary apparatus for carrying on organic life consists in a vein, an artery, and a nerve. The nerve conveying the peculiar principle of vitality, exerts a decomposing property, and effects a decomposition of the parts to which it is directed, the results of which are taken up by the veins, which here act the part of scavengers of the body, while the arteries furnish fresh matter to be converted into animal fabric; and it is the chemical combinations which here take place that prove the efficient source of animal heat. This I consider to be the *modus operandi* of the healthy state. Now the production of heat in fever appears to arise from a different source, and I should conceive it to be in great measure dependent upon the immediate conversion of the nervous agent into heat, arising from the nerves being too highly charged, in the same way that a wire becomes red hot if it be insufficient to conduct the amount of electricity attempted to be passed along it. But then the question arises—Where does the electricity originally come from? In fevers no food is taken. Though in the healthy state, the stomach is the chief source of supply, still there are other channels by which this agent can be received into the system—the pointed fibres of the hair, for instance, thus explaining the good effects resulting from shaving the head, and insulating it by an oilskin cap with the use of evaporating lotions, which all prove such serviceable remedies in the severer forms of febrile affections.

Now if nervous influence be the source of heat, mental emotions, which produce such sudden changes in the nervous system, should also exert an influence over the temperature of the body, and we find that a

sudden flush or a death-like chillness are the effects of the exciting or depressing passions. For instance, in the case of extreme fright there is generally a loss of heat, accompanied with contractions of the muscles, and a bristling sensation of the hair. Painters in depicting this emotion, have it variably done so by these characteristics! and Shakspeare, one of the greatest observers and analyzers of man that has appeared, especially alludes to them.

*I could a tale unfold, whose lightest word  
Would harrow up thy soul: freeze thy young blood!  
And make  
Each individual hair to stand on end,  
Like quills upon the fretful porcupine.*

Now, in this bristling sensation, the veriest tyro in electrical science cannot fail to observe an electrical phenomenon—the escape of electricity by the pointed fibres of the hair, whilst the loss of heat indicates the loss of electricity, and the contraction of the muscles indicates its passage. This, too, affords a convincing proof that the mental and physical agents are the same. Here mental emotion produces physical disturbance; in that physical disturbance we recognise electricity, and therefore we conclude that this agent is productive alike of our mental and corporeal faculties; that the human mind is mysteriously connected with it; in short, that electricity is the vital principle. That electricity is the vital agent is an idea by no means new or original; but the causes which have presented a more clear demonstration of the fact have been the limited views which philosophers have taken of this mighty agent. The snap and the spark have been too much regarded as the sole test of its presence, and therefore when they have recognised it in the rolling thunder and withering lightning of the tempest they have failed to discern it in the secret power that governs the reins of the whirlwind, or in its milder character, as the instrumental means of tempering and regulating climate, and as producing by its varied action, all that is delightful, mournful, or terrible in Nature. They have traced it as the silent agent, which, deep in the bowels of the earth, is productive of mineral formation; but they have forgotten to follow its workings through the various grades of vegetable and animal life, till they should arrive at the crowning feature of creative skill—*man*.

*\* Connexion exquisite of distant worlds!  
Distinguish'd Man in being's endless chain!  
Midway from nothing to the Deity."—YOUNG.*

To study man aright, he must be considered, not as a machine, complete and perfect

in itself, but as a being connected with external objects, and influenced by external causes; as a part, in short, of that creation, of which it is happily said, that

*"One common soul  
Inspires, and feeds, and animates the whole."*  
DANTE.

This is the view which a philosopher must take of creation, before he can comprehend its mysteries; this is the only means by which he will be enabled to penetrate into the secret recesses of Nature; and although the possession of the Promethean fire must ever be ranked with the impossibilities of the elixir vitae and philosopher's stone, yet Nature, viewed in this light, will open up to us new themes for our admiration, new wonders for our amazement, and as the great scheme of creation becomes more unfolded to our view, we shall exclaim in the impassioned language of Byron.

*"Are not the mountains, waves, and skies, a part  
Of me, and of my soul, as I of them?"*

HOLBEACH, OCT. 1846.

# PATHOLOGICAL SOCIETY OF LONDON.

DR. C. J. B. WILLIAMS, PRESIDENT.

October 20th, 1846.

This was the first meeting of the new Society. The rooms (No. 21 Regent-street) were crowded. Among the gentlemen present we noticed, Drs. Copland, Babington, Clendinning, Bence Jones, Roget, Owen Rees, Barlow, Bennett, Ramsbotham, Lever, Hughes, Golding Bird, Johnson, Peacock—Messrs. Arnott, Liston, Benjamin Phillips, Partridge, Macmurdo, Kingdon, Hilton, Simon, Cock, Hewett, Fuller, Crisp, Critchett, Dalrymple, Poland, Busk, &c.

The President opened the proceedings with the following address:—

GENTLEMEN,—In opening the public proceedings of the Pathological Society of London, in this first year of its existence, I cannot but feel the painful disproportion between the vastness and importance of the objects which are contemplated in its formation and my power to do them due justice. But the obvious merits of our cause set aside all personal considerations, and confiding in

their own greatness and strength, rather than in my feeble advocacy of them on this occasion, I beg to submit to your attention a few remarks on the uses and difficulties of the study of pathology, and the modes in which the proceedings of this Society are calculated to advance it.

That practical medicine, as a science, and as an art, is a most intricate and difficult subject, will be admitted by all who have conscientiously engaged in its pursuit,—from the zealous student, who, when he leaves the comparatively easy and pleasant paths of the introductory sciences, struggles in the thickets of the practical department to the veteran practitioner, who after much toil and disappointment in trying to thread the labyrinth, has been compelled to work his way by some short cut of empirical routine.

That practical medicine is unsatisfactory, as well as difficult, is obvious, not only from the notorious popularity of empiricism, in any new form, but also from the avowed scepticism in its utility, of many who stand high in the profession, and, I lament to add, from the desertion from its ranks of some few estimable men into the erratic bands of homœopathy, hydropathy, mesmerism, or some such specious chimera.

It would detain you too long were I to go through all the steps of the argument, by which, as I think, it may be proved that one, if not the great reason why the study of medicine is so difficult and so unsatisfactory is because it has hitherto been taught and treated too metaphysically,—too much by closet speculation,—too much by book description, mystified, or cramped, as this often is, by a vague or Procrustean phraseology, derived from ages in which it would be vain to expect language commensurate with the advanced knowledge of the present day.—Too little has been done by physical demonstration—too little by appeals to the senses—too little by direct observation and experiment—too little by habits of that careful and accurate investigation of phenomena, to which, alone, Nature discloses her truths.—Hence the knowledge obtained by the student is that of abstract kind that helps him little at the bedside of the patient. It has not upon it the stamp of Nature; he finds much more or much less than what he expects from the description of others, and his senses are unpractised to discern for himself.—Herefrom arise confusion, vacillation, and failure in practice; and distrusting all scientific medicine, he either falls into a narrow routine of empiricism, or becomes a ready advocate for any partial hypothesis which applies some universal remedy, or easy line of treatment to all diseases.

We want then the means of rendering the study and science of medicine more personal and practical, more a subject of individual observation and demonstration; and for this end, we look first, to clinical medicine, and guided by the experience and applied skill of former observers, our understanding enlightened by the standard truths of anatomy and physiology, our senses sharpened and aided by all that optics, acoustics, hydraulics, mechanics, and chemistry can do for us, we examine signs and symptoms, and make ourselves acquainted with disease in the living body. But our research stops not here: we pursue disease even to the field of its triumph in death; and there in the sad havoc which the destroyer has made in the organization, we find out the mode of his warfare, trace out his weapons and plans of attack, and thus prepared, seek for means of counteracting them in due time.

Such appears to be the proper method of study; but we soon find new difficulties in carrying it out. Those encountered in clinical medicine I pass by, and proceed briefly to notice the chief difficulties in the study of pathological anatomy.

One great cause of the difficulty of mastering morbid anatomy is its great variety and the want of means to illustrate it by demonstration. No one questions the necessity of demonstrations and actual dissection, in order to obtain a due knowledge of healthy anatomy, and much time and labor are properly bestowed on these studies. Yet one healthy body dissected is a type of all.—It is quite different with morbid anatomy: disease and its results present infinite varieties, which yet require to be seen to be properly understood; and no one can hope to obtain a comprehensive knowledge of the anatomy of disease without witnessing post-mortem examinations for a series of years. The ordinary career of a student at a hospital enables him to see but a tithe of this extensive subject; and even hospital physicians, with years of experience, are frequently encountering something new. I have myself been at the work a quarter of a century, and have assisted in the examination of more than two thousand bodies, yet even now I rarely attend one without finding out something that is new and instructive. How little chance is there, then, for practitioners to become conversant with this most instructive branch of medical science, with their scanty opportunities, reduced, too, as they are, by want of time and inclination for the pursuit, and by the difficulties arising from popular prejudice!—*Lancet*.



# THE DISSECTOR.

VOL. IV.

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NO. 2.

## ALLOPATHY:

OR, OLD PRACTICE OF MEDICINE.

### A SYNOPSIS,

Containing a short abstract of the most practical articles; and showing at a glance the most important indications of treatment by different writers, within the last six months of the year 1846.

#### Diseases Affecting the System generally.

**FEVERS—Typhus.**—Besides light, ventilation, and good air, shave the head; apply four or six leeches to the temples, which will not be contra-indicated even with general debility, requiring the exhibition of wine; do not apply intense cold. If insomnia persist, this local depletion acts, as in some forms of ophthalmia, by relieving the distended capillaries, while tonics, at the same time, give them and the general circulation, strength. If you decide on applying cold instead of ice, take a single fold of linen, dipped in cold lotion. Do not continue the use of opium unless it procure sleep, or it will act injuriously upon the nutritive functions, both secretion and excretion. If the tongue be moist, and urine abundant, give opium if required; but if it become dry and brown in the centre, urine high colored and scanty, and the nutritive and secretive functions be deranged, opium will act as a poison, and mask your diagnosis. Hyosciamus, as it does not interfere with these functions, will be more advisable. In the coma, without strong vascular action, use blisters rather than persist in bleeding; the blistering plaster may be cut in strips of an inch wide and applied from ear to ear. Counter-irritation, also, by means of croton oil and ung. hydrarg. mixed, may be used. Look well to the bladder; do not trust to nurses, and, when necessary, introduce the catheter. Mark well the crisis, as shown by the secretion of urate of ammonia, or urea, or by long sleep and perspiration; where the latter is too profuse, about the sixteenth or seventeenth day, there is much risk. In common inflammatory fever, it is advantageous about the second or third day, but in typhus it depresses the system to extreme exhaustion. (Dr. Corrigan, p. 1.)

Diarrhœa should not be stopped too soon. Let the bowels be well cleansed. Give a little magnesia or lime water, or, after repeated dejections, the cretaceous remedies, with opium. If too violent, stop it by calomel and opium; a

grain, half, or quarter doses may be given at intervals, according to circumstances. If there be attendant tenesmus or dysentery, give an opium enema; and in the worst cases it may be composed of three or four grains of acet. of lead, and a half or one grain of acet. of morphia, with an ounce and a half of aq. distillata. For the typhoid fever after diarrhœa, the best treatment is the expectant. Allow plenty of fresh air, and cool, simple diluents to drink. Change the bed linen frequently, and often sponge or douse the skin all over with cold water, if practicable. Consider it a rule, that what is agreeable to the patient is useful, and allow him in reason what he likes. If head symptoms be present, use the cold douche: wrap the patient up to his neck in a blanket, and pour three or four pitchers full of water from a height of a few feet upon the head three or four times a day. Apply counter-irritants to the neck, or behind the ears, in extreme cases. Arrest any irritation of the bowels which proves debilitating, with the cretaceous mixture, 3j., every three or four hours. Where there is aphthæ, wash the affected parts with a lotion, composed of two grains of the nitrate of silver, a few drops of nitric acid, and eight ounces of distilled water. For the diarrhœa which supervenes, give small doses of sulphate of quinine, sulphuric acid, and one-sixth gr. doses of sulph. copper, dissolved in any suitable vehicle; or acetate of lead combined with opium, or acetate of morphia in pills, made with bread-crumbs. These also may be administered in enemata. (Dr. Laycock, p. 32.)

Iron in fever may be given in form of mist. ferri. c., made with the sesqui-carbonate of ammonia instead of carbonate of potash, in cases of urgent debility, as soon as gastric disturbance will admit, and where an adynamic condition of constitution and sinking of the vital power is threatened, which is evinced by a dull or dusky color of the eruption, and a cool state of the skin. The iron may also be combined with the valerian. If coma supervene, turpentine internally, or by enema, as recommended by Dr. Copland, is valuable. Symptoms of inflammatory fever contra-indicate the use of iron. (Mr. Tuckwell, p. 40.)

**SCROFULA.**—Iodide of iron in syrup, four grs. in twenty-four hours, continued not longer than a fortnight or three weeks at a time, then give aperients, and resume the iodine. The hydri-

odate of potash may be given more freely. Chloride of barium is very useful in cases of tallow-like complexions, pale tongue, and languid circulation, with irritability of the mucous surfaces. Make a solution of one gr. to 3j. distilled water, and ten drops of tinct. gent. c., then take half oz. twice a day, and increase the dose if necessary to three grains daily.

Hydrochlorate of lime, 3i. to 3xx. aq. dist., and give a teaspoonful in milk two or three times a day. The dose may be increased to two teaspoonfuls. It, as well as the alkalies and burnt sponge, is of doubtful value.

Cod-liver oil is useful by improving digestion and nutrition, rather than by the specific value of the iodine or bromine it may contain. (M. Phillips, p. 121.)

In Scrofulous abscesses, white swelling, chronic eczema, goitre, ulcerated ganglia, herpes, lichen, ulcerated lupus, maculæ, ophthalmia (chronic) complicated with ulcerating keratitis, have received much benefit by treatment with the new triple compound of chlorine, iodine, and mercury. "Iodhydrargirite de chlorure mercureux." (M. Rochard, p. 124.)

GOUT.—Mr. Donovan strongly recommends Sir Everard Home's formula for the procuration of the most active and best effects of the powers of colchicum. He directs two pounds of recent bulbs to be macerated with twenty-four ounces of sherry wine in a gentle heat for six days. He, however (with Professor Quadri), thinks the use of the proximate principle, colchicina, would be the most invariable in strength and therapeutic effect. If Sir E. Home's formula should be adopted, it should be kept in two states, one with the deposit and the other without it. He says, colchicum bulbs contain both extractive and mucilage; when the vinous solution is strained and allowed to stand, a considerable deposit is soon separated. This deposit, he adds, is not only active, but virulent, as six grains given to a dog produced twenty-four hours' vomiting and purging. It operates in every respect like the eau medicinal, in removing the pains of the gout. It may be given in small doses first, and increased to 90 drops. The seeds beaten into a mass with mucilage, and divided into pills, act as a brisk cathartic, and give complete relief in facial neuralgia. The acetum colchici, neutralized with magnesia, and combined with some sulphate of magnesia, is considered by Sir C. Scudamore, the best formula for gout, as it is inoffensive to the stomach, and certain in its effects on the bowels. Dose 3ss. to 3iss. (Mr. Donovan, p. 135.)

LAND SCURVY.—Dr. McNab employs mineral and vegetable acids; preparations of iron; bitters, as cinchona, chrysaetta, wine, beer, &c. He says the only curative is change of air, and that death is nearly certain without it. It is the "ultima et unica remedia." (p. 126.)

#### Affections of the Nervous System.

TETANUS. *Traumatic.*—In the early stage give calomel and opium; which failing to relieve, calomel three grs., tartarised antimony half a gr., opium two gr., every three hours, and

a double dose every night. An enema in the morning. (Mr. Greenhow, p. 54.)

Owing to an attempt to extract a tooth. It was broken when the patient had hardly recovered from the menstrual state; it recurred, however, before the tetanus subsided, but there was not complete freedom from it until the menstruation ceased. On the 3d day blistered from the temple to the chin, and the blister dressed with an ointment of ung. hydrarg. and morph. mur. Bags of ice were applied to the whole track of the spine, and one gr. of morph. mur. was given every hour until stertorous breathing was induced. (Dr. M'Girr, p. 52.)

TRISMUS NASCENTIUM.—As much one of the opprobria medicorum as ever, both as to its pathology and its treatment. Post mortem examination, with the consideration of the peculiar relationships of the excito-motor system of nerves, can alone lead to a just estimate of its true cause, and point to its proper treatment. Curling found "increased vascularity in the substance of, and in the membranes enveloping the upper part of the spinal cord." So also Dr. Thompson of Philadelphia. Billard found "an effusion of a quantity of coagulated blood in the spine, from a rupture of the minute vessels of the medulla—a spinal apoplexy." Dr. Sims points out a remarkable irregularity in the feeling of the bones:—"The child had lain, during the whole of its illness, exactly in one position, the weight of the head resting wholly on the os occipitis; the latter pushed in upon the brain, being overlapped for a quarter of an inch or more along the whole course of the lambdoidal suture, by the edges of the ossa parietalia; the superficial posterior vessel full of black blood, and a coagulum occupying the whole length of the cord, enveloping perfectly the medulla: spinal veins full of black blood. Treatment to consist in the removal of immediate or remote causes of the congestion, by care as to the position of the child's head, by placing it on its side, so as to take off the weight of the body from the occipitis. (Dr. Sims, p. 31.)

HYDROCEPHALUS.—The external application of mercury may be ordered to be rubbed in or smeared on the leg (inside) every twelve hours, and covered with a stocking made to tie lightly above the knee. Small doses of iodide of potassium (one gr. every three or four hours) may also be given. (Braithwaite, p. 133.)

DELIRIUM TREMENS.—Whilst the tongue and mouth are moist, and urine abundant, don't be afraid of giving opium for the purpose of procuring sleep when needed; but be careful if these symptoms are not present. (Dr. Corrigan, p. 27.)

PARALYSIS.—Besides other modes of treatment, make use of electro-magnetism, which may be useful in

1st.—Partial paralysis from congestion. Time, friction, change of air, strychnia, and restoration of the general health, may succeed; or electro-magnetism, applying one of the conductors, covered with wet linen, over the trunk of the largest nerve of the affected part, and the other, similarly prepared, over the region of

the palsied muscle, for some minutes. The remedy may be continued for some time.

2d.—Paralysis of muscles supplied by the portio dura.

3d.—Local paralysis, involving the whole or part of a limb from exposure to cold. One conductor to be placed over the lower cervical spinal region, the other passed down the arm.

4th.—Paralysis affecting one side of the body or a single limb, the result of exhaustion. This case was a lady of weak and strumous diathesis, and was exhausted by nursing, the left arm becoming palsied. Under generous diet, weaning and electro-magnetism, the paralysis was cured.

5th.—Paralysis from hæmorrhage or enervation.

6th.—Rheumatic paraplegia. One conductor being pressed against the sacrum, the other placed in a basin of salt and water, in which the feet are immersed.

7th.—Paraplegia from sitting too long in the bent position, as at the desk, or any cause which keeps the body bent forwards. Due nourishment, rest in the recumbent position, iron or zinc, and electro-magnetism, subsequently, will generally succeed.

**Cautions.**—Electro-magnetism acts most effectually in cases of recent attack. In old standing cases, the remedy must be perseveringly applied, or no benefit will accrue. Do not use this remedy because paralysis exists. In truly organic lesion it may often be mischievous, especially where there is subacute inflammation, or a highly irritable state of the spinal marrow. (Dr. G. Bird, p. 55.)

In obstinate paralysis after apoplexy give brucine, a centigramme (1-154 gr. Fr. = 1-6th gr. avoird.) in infusion of arnica; increase the dose one centigramme daily, until its effects are evident, and then proceed discretionally. (M. Bricheteau, p. 59.)

**ANÆSTHESIA.**—Treated by electro-magnetism, and cured by the application twenty-two times, from an hour and a half to two hours sitting each time. The current passed down the whole spine half an hour; then from each side of the sacrum to each foot for half an hour; then from the spine to the abdomen for half an hour. (Mr. Christophers, p. 58.)

**EPILEPSY.**—Iodide of potassium three grains three times a day, and the month to be affected by blue pill. (Dr. White, p. 65.)

**SCIATICA.**—Treated with moxas. Tincture of guaiacum and aconite was prescribed, and the dose increased. Aconite plaster over the seat of pain. Cupping over the part, and afterwards two grs. calomel and one gr. opium; then a mixture of vin. colchici and tinct. aconite: lastly, six moxas; since which the case has done well. (Dr. A. T. Thomson, p. 59.)

**NEURALGIA.**—Apply a blister as soon as possible to the trunk of the nerve, and sprinkle upon the surface from half a grain to a grain of morphia every morning. Attend to the general health at the same time, giving internally every night pil. hyd., pil. aloes, ext. acet. colchici, aa. gr. iij., and five grains of iodide of potassium thrice a day in any convenient vehicle. This endermic method has succeeded

when leeches, blisters, moxas, belladonna, arsenic, iron, iodine, turpentine, and guaiacum have entirely failed. (Dr. White, p. 61.)

When other treatment (as valerianate of zinc and quinine, &c.) fails, try a very strong decoction of coffee at the commencement of each paroxysm of pain. (M. Piorry, p. 62.)

**CHOREA.**—As the causes are various, so the treatment must be according to the circumstances of each; for the weak and delicate, ill-fed, and ill-clothed, half a dr. rhubarb macerated twelve hours in port wine; and in quantity, given according to the age of the patient, three times a day. If a loaded condition of the bowels, or worms, or improper aliment, purgatives and a strict attention to dietary. If connected with absence or deficiency of catamenia, cupping on the loins, hip-bath, aloetic purgatives, and a combination of steel, ammonia, and aloes. If an inflammatory affection of the pericardium, antiphlogistics, cupping, leeches, blisters, calomel, antimony, opium. If from inflammatory thickening of the spinal theca, or disease of the brain, local and general treatment on common principles. The mineral tonics appear to possess nearly equal advantages, but the cases for their application must be peculiarly chosen, and then the benefit will be enhanced by combination with the vegetable tonics and purgatives. Electricity is of very doubtful efficacy. (Dr. Hughes, p. 290.)

Cleanse the bowels, and give the following:—R. Ferri subcarb. sacch., sodæ bicarb., aa. gr. ij. pulv. aromat. gr. j. ft. pulv. ter in die sumendus. Use the tepid shower bath, and if the above powder does not what is expected, try oxidi zinci, sacchari albi, aa. gr. iij.; M. ter in die sumendus, and increase the dose if necessary. (Dr. Bellingham, p. 62.)

**HYSTERIA.**—Often accompanied with retention of urine from spasm about the neck of the bladder. Evacuate the large intestines, by an injection of turpentine and assafoetida. Use the cold hip-bath, and cold douche. Regulate the catamenial function, and then give stimulating tonics, good diet, warm clothing, and exercise. (Dr. Todd, p. 63.)

Give the pil. galb. co. when the large intestines are disordered, as shown by pain in the left side. (Dr. Munn, p. 63.)

Give valerianate of zinc. (Dr. Lever, p. 64.)

**SPINA BIFIDA, Operation for.**—The base of the tumor may be compressed between two rods of wood directed in the line of the vertebral column, and at first brought into single apposition; then punctured with the trocar, and as the cyst empties, the pieces of wood may be more approximated, so as to bring the two surfaces of the serous membrane into contact. The rods may be removed on the tenth day, and on the fifteenth the second ligature may probably fall off. (M. Latil de Timecour, p. 159.)

As some constitutional symptoms frequently supervene upon operations for spina bifida, too much precaution cannot be taken to secure the evacuation of the sac as gradually and in as constant a manner as possible; and the opera-

tion which appears the most suitable for attaining the end should be adopted, and, above all, timely put in practice. (Mr. Dumville, p. 160.)

**TOOTHACHE; New Remedy for.**—Cold saturated solution of camphor in ether, to which a few drops of liquor ammonia are added. (M. Cottereau, p. 324.)

**Caries of the Teeth.**—Scrape out the entire of the softened carious part, and rub its anterior with a saturated solution of nitrate of silver, or with pulverized nitrate made wet. (p. 197.)

#### Affections of the Circulatory System.

**ARTERIES, Wounds of.**—On treatment of wounds of arteries, observe as follows:

1st.—No operation to be done upon a wounded artery unless it bleeds.

2d.—That no operation is to be done for a wounded artery in the first instance, but at the spot injured, unless such operation be impracticable.

**Brachial.**—If compression do not suffice, bare the vessel, and place a ligature above and below the wound. If above the edge bicipital aponeurosis, cut down, place one ligature just above the seat of injury; do not open the aneurismal sac, nor look for the vessel below it; use moderate pressure along the sac; observe the horizontal position, and, if necessary, deplete.

**Ulnar, trunk of, upper third.**—Cut boldly down upon it through the muscular structure, and apply a ligature above and below. In wounds of the ulnar in the hand, secure always by ligature.

**Radial.**—Tie where practicable; where not, try compression; but if swelling of the hand prevent this, tie the radial above, and compress the ulnar or the brachial itself from time to time, or, as a last resource, the ulnar may also be tied. If bleeding still recur, do not amputate, but cut carefully down to the metacarpal bone and finger to give more room, and let amputation be your last resource.

Treat wounds of the foot on the same principles.

**Hand or Foot.**—Dilatation of the external wound, and ligature above and below. If not practicable, then use compression on the principal trunk, and a graduated compress and bandage on the wound.

**Aneurismal Varix, or Varicose Aneurism.**—When obliged to perform the operation, either from great increase of swelling or anxiety of the patient, cut freely down to the artery, and place upon it a ligature above and one below.

**Tying of Arteries.**—1. When the axillary artery is injured below the giving off the subscapular and p. circumflex branches, place a ligature below, but not immediately below, the latter branch. Where it occurs from a sloughing state of stump, tie the artery in the first instance, and if that prove unsuccessful, amputate. 2. If from femoral, judge well the part from which the bleeding comes; mark the

shortest distance from the face of the stump at which compression arrests the hemorrhage, and there apply the ligature, but if it be just above the a. profunda, amputate, if the strength of the patient will admit. 3. If after amputation at the shoulder joint, cut down through the great pectoral muscle, and place the ligature anywhere below the clavicle. The same principles are alike applicable where danger arises by oozing from the surface of the stump, not capable of being suppressed by pressure. 4. Where a small vessel (the branch of a much larger) bleeds, take up the branch, and not the trunk, if possible. 5. Where the bleeding artery can be seen at the bottom of the wound, cut down upon it, and place a ligature around it, both above and below the artery. 6. Hesitate before tying the external iliac for wounds of the femoral; and keep in view the general principle of tying arteries as near as possible to the bleeding points. If bleeding recur, the operation must then be boldly executed, even if the iliac artery had been previously tied. 7. The operation of applying a ligature upon the axillary artery itself, at the part injured (in all cases of wounds, and in all cases of recent circumscribed or diffused aneurismal swellings, the consequence of wounds), is the substitute which ought in all cases to supersede that of ligature upon the subclavian. 8. If the femoral artery be divided by a fracture of the femur, operation will generally be required, and always so if the fracture be a comminuted one. If puncture made by such fracture give rise to aneurism, treat first the fracture and then the aneurism.

If consequent mortification proceeds unchecked, and there be much constitutional disturbance, arrest it first, and let the line of separation be well observed. Where there is much weakness, or irritability of constitution, defer the operation, particularly if there be hope of the patient becoming stronger and more tranquil. If mortification has once stopped, and again begins to spread, amputation will give a chance of life. 9. Never apply the tourniquet for aneurism, or wounded artery, but compress it with the hand. 10. To promote collateral circulation after a large artery has been tied, rub the part below gently with the hands for several hours, or for three or four days, relaxing during sleep. 11. If the external wound, which has reached the artery, has healed for weeks or months, give rise to a diffused or circumscribed aneurism, treat it as an aneurism occurring from an internal cause, but with this difference, that as the artery is sound, the operation may be performed close to the tumor. (Mr. Guthrie, p. 159—162.)

**ANEURISM.**—On this subject we notice the accidental discovery, by a patient of Dr. Harrison, of the application of a number of clamps (such as used by joiners and cabinet-makers, to secure their glued wood-work), along the course of the artery, proving it not to be necessary completely to arrest the pulsation in the tumor: but by causing a lessened current of blood through it, produce coagulation and a contraction of the sac. (Mr. Wilde, p. 172.)

Dr. Bellingham applies two compressing instruments upon separate parts of the limb, one tightened, the other not; and by thus alternating the pressure, producing the same effect as if constant compression were maintained at one-point, the patient being enabled to bear it for a much longer period than other instruments. (p. 172.)

*Ligature of Arteries, without dividing the Middle and Internal Coats.*—Chelius considers it unnecessary to draw the ligature so tight as is commonly recommended, but only so much so, that the whole of the internal coat be brought in close contact, and that the ligature should indent the external coat of the vessel. (Chelius, p. 167.)

*Torsion of Arteries, Effects of.*—Torsion, by producing obliteration of the vessel, either by coagulation, and simultaneous assimilation of all the three coats at the spot, or by the slow and insensible contraction, as by ligature, converts the arterial tube into an impervious cord. It is adapted to small arteries of the fourth or fifth order, radial, ulnar, tibial, intercostal, cervical, thoracic, external pudic, spermatic, digitals. Setze them with forceps, close the instrument and twist in the fingers, three, four, or six times in the same direction, and then abandon them, or return to the operation if not sufficiently twisted. Care must be taken to seize the whole calibre of the vessel; to take sufficient hold; not to include the surrounding textures; and so to twist them that the proper coats are ruptured, but not so much that the cellular coat is also broken. Its advantages are simplicity and celerity, no assistance being necessary, and its not leaving foreign bodies in the wound. (Dr. Porta, p. 177.)

*Galvano-puncture in Aneurism.*—The galvanic current should be directly transmitted through the blood itself by two opposing points. Employ fine steel needles, three inches long, and as they burn or cauterize the skin, or lose their electricity, coat them, before application, with gum lac, or cutler's varnish. The extremities of the needles should cross each other in the tumor, and when the latter is of large size, multiply the points, so that the nuclei of coagulation may pass into one common clot. They should pass into the tumor obliquely or perpendicularly, opposed to the current of blood. The application of the galvanic current may be made each time ten or twelve minutes; by this time the tumor will feel hard, and the pulsation cease: after this, supply compression, or a bladder of ice, to complete the cure. It is suggested for the cure also of varix, erectile and con-sanguineous tumors, &c. (M. Petrequin, p. 182.)

Mr. Hamilton has tried it in a case of carotid aneurism. He passed fine gold needles coated with shell lac, an inch long, through the inner and outer sides of the tumor, and made them to touch in the centre; then used Smee's battery, with twelve pairs of plates, gradually applied. After fifteen minutes, pulsation became less, the tumor firmer, and, at the end of twenty minutes, complete coagulation was evident, as the tumor was solid and the pulsation was imperceptible. (Hamilton, p. 184.)

*Simple Puncture without Electricity.*—By simply passing needles through the tumor (transfixing) and leaving them in twenty-four hours. With one needle a fibrinous coagulum was formed, attached to the side of the artery, which Dr. Naimais thinks would have changed into a solid cord, and filled the interior of the vessel, if the animal (a horse) had lived long enough. He thinks the needle caused a slower motion of the blood at the part where the needle passed through the tumor, and collected around it the deposit of fibrine. Its facility and simplicity are its recommendations over galvanopuncture, &c. (Dr. Giacinto Namais, p. 186.)

*Ligature of Left Subclavian within the Scalenus Muscle.*—Lay the patient on a low bed, with the head and shoulders raised, and the face turned to the right side. Make an incision three and a half inches long, on the inner edge of the mastoid muscle, terminating at the sternum, and dividing the integuments and platysma myoides.

Make a second incision from the last, horizontally, towards the sternal extremity of the clavicle, two and a half inches long. Dissect the flap of integuments and platysma upwards and inwards, so as to lay bare the sterno-mastoid. Pass a director under this muscle, and divide the sternal and half the clavicular attachments with a bistoury. Turn these portions up, so as to show the sterno-hyoid and sterno-thyroid muscles, and the jugular vein beneath the fascia: also a portion (in this case) of the aneurismal sac, strongly pulsating. Divide the fascia with the handle of the scalpel and fingers, and pass down the inner side of scalenus anticus, carefully avoiding the internal jugular vein, thoracic duct, and phrenic nerve, until the finger reaches the artery and recognises well its pulsation. Detach the artery very deliberately, so as to avoid wounding the thoracic duct and pleura, and pass the aneurismal needle, in this case Sir Philip Crampton's, under it, with the point and ligature upwards. Catch and secure the ligature, tying it securely with the point of the fore-finger, in the bottom of the wound, and, to be satisfied that the artery is secured, take care to examine the distal part of it for the cessation of all pulsation. (Dr. Rogers, p. 188.)

*Aneurism by Anastomosis on the Forehead.—Treatment by numerous Operations.*—1. Ligatures placed upon the temporo-frontal and two temporo-parietal arteries of the right side, and upon the temporal artery in the frontal region and the temporo-parietal of the left; these made by needles passed under the arteries and compressed by a thread wound like 8. 2. Destruction of morbid structure by caustics. 3. Excision; and 4. Compression. (Dr. Warren, p. 167.)

*NEVUS MATERNUS.*—Extending over one side of the face, as far as the eye, to the lower lip and chin, and downwards upon the neck to a little below the clavicle. Application of a ligature, 1st. To the left external carotid: 2d. A ligature on the right carotid, a month after the first: 3d. Breaking up the structure of the lip affected, with a cataract needle: 4th. The

removal of a V shaped solid portion of the lip, two inches long. (Dr. Warren, p. 167.)

**Treatment by Caustic.**—Introduce a narrow knife, one-eighth of an inch wide, into the middle of the nevus, and move it in different directions, so as to disintegrate its vascular structure. Then apply a small caustic, or a probe armed with it (by being dipped into the nitrate, melted in a platina or silver spoon), into the puncture made with the narrow knife, and move it about so that wherever the knife has divided the blood-vessels, the caustic may freely penetrate. Extend the operation, if not effectually done by the first application. (Sir E. Brodie, p. 189.)

**Internal Jugular, Wounds of.**—May be tied by passing a tenaculum through the cut edges, and drawing them together without destroying the continuity of the vessel.

**Partial Division of the Coats of an Artery.**—Place a ligature both above and below the division, and do not trust to the vis medicatrix.

**Wounds of the Throat with Hemorrhage.**—First, if necessary, tie the external, and if it should not cease, and the wound be not in the internal carotid, then tie the common carotid.

**MOLES.**—Wash with soap and water, and rub until the blood fills the delicate branches of the erectile tissue. Make the skin tight, and then cover with a paint made of stiff white lead and carmine, and, having transpierced a cork with three needles, so that their points project sufficiently, puncture the surface and texture of the mole. (Chelius, p. 190.)

**VARICOSE VEINS.**—Having marked the veins to be cured with ink, apply a small caustic, of five parts quick lime, and four parts potassa mixed up with spits. wine (Vienna paste), over each projecting vein. When in the horizontal position, insulate each place of application of the caustic with a circle of plaster three or four thicknesses, the internal space being not more than one-quarter or one-third of an inch in diameter. Remove the caustic in half an hour, and dress in the usual way, applying a bandage. From six to twelve applied at one time will be sufficient. (Mr. Skey, p. 190.)

**HÆMORRHAGE from the Nose.**—Introduce the little finger into the nostril, and press upon its floor until the bleeding stops; then take a dossil of lint, and roll it upon powdered alum, and press it upon the floor of the nostril with the little finger. Introduce pieces of lint, in this way, until the roof of the nostril supplies the pressure of the finger. (Dr. Oke, p. 192.)

**Hæmorrhage from Leech Bites.**—Wipe the orifice with a bit of lint or fine linen, and when nearly dry, seize a small portion of integument around the bite with the thumb and finger, and make moderate pressure, until the hæmorrhage is completely suppressed, which will be from five to fifteen minutes. (Dr. Marshall, p. 193.)

Or take a small pinch of down from a beaver hat and pile it upon the orifice; and then put over the down a piece of thin muslin, and draw it tightly. If blood oozes through both, dry it, until the hæmorrhage ceases, and in a short time the down and muslin will have become matted with coagulum. All superfluous down

have healed, and the matted matter will fall off. (Dr. Houston, p. 194.)

Or, apply a piece of lint dipped in a strong solution of alum, or apply to the place tobacco, such as is used for smoking. (Mr. Gervie, p. 194.)

**VENESECTION FROM THE FOOT.**—Immerse the foot in hot water to swell the veins. Put on a bandage an inch above the ankle. In puncturing either of the veins before the malleoli, be careful not to touch the bone before with the point of the lancet. If the vein bleed in a stream, catch the blood in a vessel; but if it only dribble, the foot should be put into the hot water, and judge of quantity by the color. (M. Malgaigne, p. 193.)

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#### Affections of the Respiratory System.

**CROUP.**—In croup, scarlatina maligna, &c., where great prostration exists, the stomach seems insensible to ordinary emetics, which only purge, and increase the prostration. In such cases, try the turpeth mineral (subsulphate of mercury). To a child, twelve years old, give five grains every fifteen minutes, accompanied with mustard whey, till vomiting is produced. The second dose will generally be sufficient. It vomits for an hour or two without causing purging, or subsequent prostration. It may be repeated twice or thrice in twenty-four hours. (Dr. Hubbard, p. 134.)

Antiphlogistic treatment is sometimes useful, if not hurtful. Emetics useful by acting mechanically? Mercury may be given early. Local applications may comprise dilute muriatic acid, alum, and nitrate of silver, the two latter used in a solid or liquid state. In using caustics be careful to hold the child's head steady, and have the caustic firmly fixed, and not far from the port-caustique. Or, it may be used by means of a piece of sponge fastened to the end of a piece of whalebone, like the sponge probang, bent to an obtuse angle, or curved; care being taken to cleanse the surface well. This may be done three or four times a day. Tracheotomy is the last resource. This treatment, however, is more applicable to diphtheritis than to croup. In diphtheritis the false membrane often forms first on the fauces and back of the mouth, and may be arrested by the above applications. (M. Guersent, p. 75.)

**Bronchitis, &c.**—Use the turpeth mineral (subsulphate of mercury), in five-grain doses, every quarter or half hour, till it causes vomiting, instead of tartar emetic, in those cases where we fear the prostrating effects of the antimony (See Croup). (Dr. Hubbard, p. 134.)

**PNEUMONIA.**—The treatment consists of, 1st. Subduing inflammatory action by moderate bleeding (sixteen to twenty ounces), at the beginning of the attack, followed by three or four grs. of calomel and one gr. opium, and if crepitant rûle persist, repeat the bleeding, and give tartar emetic in full doses, viz., one or one and a half grains every three or four hours, making the interval afterwards, six or eight hours. Give the bitter almond emulsion as a sedative,

or hydrocyanic acid. 2d. Preventing deposition by exciting the capillaries, by giving hyd. c. creta, gr. iv. vel v. or calomel, gr. j. in each interval of the antimonial, so as to produce a fair constitutional impression short of pyalism. Blister with caution. 3d. Guard against relapse on well-known principles. (Dr. A. T. Thomson, p. 71.)

**HOOPING-COUGH.**—Purgation with calomel; if febrile symptoms, calomel and antimony; an occasional emetic, and small and repeated doses of carbonate of potassa, or the following formula: Potassæ carb. 3j.; coccus cacti, gr. x.; aq. fervent q. s. The dose according to age; for an infant, a teaspoonful thrice daily. (Dr. Allnatt, p. 74.)

Dr. Wachtl, of Vienna, recommends the ammoniated tincture of cochineal. (p. 74.)

In the first stage mild antiphlogistics, daily emetics, and strict confinement to the house, except in summer months. In the latter stages give the following:—Tincture of cantharides, tinct. of opium comp. aa. ʒss.; tinct. cinch. co. ʒvss. A teaspoonful to be taken three times a day in a little boiling water; the dose to be increased if no strangury is produced. Be careful, however, at all times, not to give opium if it can be avoided. (Drs. Graves and Mc'Gregor, p. 74.)

**PHTHISIS.**—Subjects of phthisis expire a much less quantity of air than when healthy, and it may be possible by the spirometer to distinguish phthisis at a much earlier period than by any other means. (Mr. Hutchinson, p. 69.)

**ASTHMA, Spasmodic.**—Take a piece of blotting paper; dip it in a saturated solution of the nitrate of potash, and dry; place the dried paper on a common plate, and ignite, allowing the fumes to be diffused in the room of the patient. (p. 73.)

**APHONIA, Chronic.**—Emetics, aperients, mercurials, iodine and potassium, cinchona, and acidulated astringent gargles were given for five months unsuccessfully, and it was afterwards cured in three weeks by the inhalation of iodine from a Woulff's bottle for fifteen minutes twice a day, and a sulphate of quinine mixture. (Mr. Monks, p. 132.)

**ASPHYXIA, by Strangulation.**—Immediate Treatment.—The ligature having been removed, watch, and, if natural respiration continue, do not interfere. If respiration has ceased, use artificial assistance immediately. When normal respiration is established, desist.

If coma remain, or respiration again cease, commence again; secure a pair of bellows (if scientific means are not at hand), or a tube of any kind (a roll of paper or elastic catheter), which insert into the nostrils, and with your own lungs a fair substitute will be made;—but, 1st. Avoid undue force in inflation; 2d. Inflate at regular intervals, imitating natural respiration; 3d. Warming or oxygenating the air are unnecessary; 4th. Expose the chest to the full play of the lungs; 5th. Do not open the trachea, unless the larynx be obstructed; 6th. Close the useless nostril and mouth; 7th. Press the larynx against the vertebrae to prevent inflating the stomach; Electricity and galvanism are unnecessary.

**After Treatment.**—If congestion supervene from reaction, abstract blood cautiously, and keep the patient in a moderately warm temperature. (Sir B. Brodie, p. 77.)

**THROAT, Wounds of.**—In those where the skin, superficial muscles, and vessels, are divided, use sutures cautiously, and observe a relaxed position of the parts.

When an opening is made either into the fauces, pharynx, larynx, trachea, or œsophagus, inquire as to the extent of hæmorrhage; secure every dangerously bleeding artery; remove all loose fragments; keep the wound free, the head raised; avoid all irritation, eating, speaking, and especially sutures, or mental excitement; use an elastic tube introduced into the nostril, or through the glottis (when there is œdematous state of the mucous membrane) when necessary; keep the apartment well ventilated; use the simplest dressings, as water or poultice, and if there be much discharge a piece of soft sponge to absorb it.

If inflammation or constitutional fever supervene, use local or general bleeding, antimony, mercurial purgatives, &c.

Violent dyspnoea in consequence of excrescences or granulations in the glottis or air-passages, may be overcome by tracheotomy. (Mr. McWhinnie, p. 194.)

#### Affections of the Alimentary Canal.

**GLOSSITIS.**—Use purgatives of calomel and jalap; leeches, and a blister to the throat, and nitrate of silver, gr. 20, aq. dist. ʒj., to be applied with a camel-hair brush three or four times a-day. (Dr. England, p. 196.)

**APHTHÆ.**—Take honey, fifteen parts, diluted sulphuric acid, one part, by weight; brush the ulcerated surface with a camel-hair pencil dipped in this liniment; repeat it occasionally. (Prof. Lippich, p. 90.)

**PERITONITIS.**—Do not force the peristaltic action of the intestines by violent purgatives, and chiefly subdue the inflammatory action which is the cause of constipation, by leeches, blisters, and mercury. Where you have reason to think accumulations of fecal matter are present, introduce Dr. O'Beirne's intestinal tube once or twice, but it is worse than useless to force the discharge of the contents of the intestines. (Dr. Corrigan, p. 90.)

**STOMACH, Affections of.**—In irritability of the stomach, with the deposit of earthy phosphates, arising from derangement of the functions of the spinal cord, and evinced by emaciated countenance, burning, gnawing, pain in scrob. cordis, and heavy pain across the loins, tongue clean and red, pulse quick and sharp, skin dry and imperspirable, with vomiting after meals; try strychnia, as in the following formula:—Strychnia gr. j., acidi nitrici dil. ʒi., aquæ ʒiij. solve, ut sumat æger, fiat ʒj. ter in die, and rub the scrob. with a liniment of Croton oil; milk dietary, consisting of eighteen ounces of bread, one ounce of butter, and two pints of milk daily. The medicine to be taken fifteen minutes after each meal. The strychnia acts particularly on the spinal marrow; and it is

supposed that when alkaline urine is secreted, independently of the character of the ingesta, there is always some lesion of this part. (Dr. Bird, p. 98.)

Unfermented bread is said to be useful where there is habitual headache, acidity of stomach, flatulence, eructations, sinking at the pit of the stomach, and pain after meals; in fact, in confirmed indigestion, and to all who are subject to gout and gravel. (p. 138.)

**CHOLERA (Asiatic).**—Three objects are to be observed in its treatment, viz., 1. To moderate the morbid action established for expelling the poison, by replenishing the fluids. Give the patient a fluid for drink, consisting, as nearly as possible, of similar elements to the serum, as albumen, muriate of soda, and carbonate of soda in a very dilute state; give also effervescing salines. 2. To prevent local engorgements, particularly of the liver and vena portæ, remove a quantity of blood proportionable to the exigency of the case, and the organ congested. 3. To promote healthy secretion, and allay pain, irritation, and spasm. Give calomel and Dover's powder freely, until the vomiting and purging are restrained. (Mr. Clark, p. 83.)

Take thirty grains of sesqui-carbonate of soda or bicarbonate of potash, put it into a tumbler glass, and add a wine glass of water and a little syrup. Then dissolve twenty grains of tartaric or citric acid in half a wine glass of water, and let the patient drink it off immediately. Lemon juice may be substituted for the citric acid. The carbonic acid is said to act as an antidote to the poison in the system. (Dr. Parkin, p. 84.)

Loss of power in the heart is said to be one important lesion in cholera, and nature therefore endeavors to remedy the disease in four ways, which we ought to study, viz., 1. Vigorous muscular pressure—by cramps—which propel the tarry blood towards the heart. 2. The absorption of the water restores the blood to its natural or liquid condition. 3. Nausea, by causing general relaxation of the system, diminishes the obstruction to the passage of blood in the vessels. 4. Retching, or vomiting, assists mechanically in driving forward the blood in the distant congested vessels. (Mr. French, p. 86.)

First give calomel, rhubarb, aloes, aa. gr. x. fl. bolus; then liq. ammon. m'x., and repeat in half hour doses if rejected. Effervescing draughts, soda water, liq. ammoniæ externally over the chest, abdomen, and upper and lower extremities as a rubefacient, vinegar and water to the head. *Convalescent Treatment.*—A laxative after the second or third day, and tonics for a week afterwards. Use opium cautiously. For the spasms or cramps, stretch the lower extremities, taking hold of heel and toes, and bend the toes and foot towards the patient as he lies, gently and repeatedly. Use also shampooing. (Ollapod, of Madras, p. 86.)

**DIARRHŒA.**—Try acetate of lead for obstinate and peculiar diarrhœa, accompanying uterine phlebitis and peritonitis. This medicine seems to act by checking the peristaltic action of the intestines, and allaying pain by

blunting the sensibility of the mucous membrane. (Dr. Smyth, p. 86.)

**DYSENTERY.**—Baitley's solution of sesquioxide of iron, one drachm; tinct. of muriate of iron, one drachm; water, six ounces. Mix, and give a quarter part every four hours. (Mr. Gerris, p. 87.)

**HERNIA.**—New mode of applying the taxis, viz., drawing back the protrusion into the cavity, instead of pushing it back. Flex the thighs on the pelvis, also the loins, &c., so that the body may be coiled up. Seize with one hand the hernial tumor at its base, and compress slightly, and with the other hand bring the abdominal parietes as much towards the inguinal aperture as practicable, and by a simultaneous movement of both hands, produce traction on the hernial contents.

This plan is to imitate the practice in olden time, which was to place the patient's head downwards, and by the position of the intestines, shaking him up and down, to induce the viscera to gravitate back into the abdomen; and it often succeeded after the failure of all other means. (M. Grynfeldt, p. 197.)

**STRANGULATED (Early operation is).**—Try the following plan of treatment:—1. Pressure for a short time is indispensable. 2. Bleeding under cautious restrictions is advisable. 3. The warm bath may be used in mild cases, but in bad strangulations they are worse than useless. 4. Cold may be tolerated in the early stage, but if too long used, or used too cold, may produce gangrene. 5. Tobacco is uncertain and dangerous; useless if weak, and dangerous if strong. 6. Opium in full doses is useful, causing muscular relaxation. 7. Purgatives are pernicious. 8. Belladonna, trifling with the life of the patient.

**SUMMARY.**—In bad strangulation, where pain, tenderness, and firmness of the tumor are great, and where there is much constitutional disturbance, after cautious use of the taxis—1st, Bleed to faintness, and when the necessary relaxation is produced, 2d, further attempts, very cautiously used, may be employed to effect reduction, but by no means exhaust too long the time and strength of the patient by the other accessory means mentioned above, but at once, 3d, proceed to the operation. Of the utility and practicability of dividing the stricture without opening the hernial sac, there can be no doubt when the cases are cautiously chosen; and, it may be generally attempted, except where gangrene is fairly suspected, when the sac must be opened to allow the gangrenous parts to separate; or when the stricture is in the neck of the sac itself, whether at the upper or lower rings, which is not very frequent. (Dr. Warren, 201.)

**HEMORRHOIDS (Operation by cautery).**—The tumors may be brought down as usual, opened throughout their whole length, and the filices caustic, i. e., potassa c. calce, well rubbed in, so as to destroy the structure. Afterwards give injections to remove loose particles of caustic, and use a hip-bath afterwards. (M. Amussat, p. 204.)

**ANUS, Fissures of, with Condyloma.**—This was a most satisfactory and efficient cure of a most troublesome affection by nitrate of silver.



A daily application was made of the solid nitrate, from the 29th of May to the 19th of June, when the case was cured of both the fissures and the condyloma. (Dr. Hargrave, p. 206.)

**FISSURE OF THE ANUS IN CHILDREN.**—Give an enema daily for six or eight days, composed of extract of rhathany, one scruple; and water three ounces. (Trousseau, p. 206.)

E

Affections of the Urinary Organs.

**KIDNEYS.** *Treatment of Diabetes.*—*Glucosuria.*—*Diet.*—Strictly forbid all farinaceous substances, as those into which starch in any way enters. Gluten bread is of great value; it satisfies the cravings of the appetite. Animal food, with eggs, milk, butter, and cheese, are proper. Also the following vegetables: Spinage, endive, lettuce, sorrel, asparagus, haricots verts, cabbage of all kinds, along with fat pork or salt bacon; cresses with oil, and hard-boiled eggs. Fresh gluten, with butter, and cheese grated upon it, is an excellent dish. For dessert, allow olives, almonds, filberts, and walnuts; occasionally, and in small quantities, allow apples, pears, cherries, currants, gooseberries, raisins, and pine-apples. *Drinks:* The French wines, Bourgogne and Bourdeaux, about a pint in the twenty-four hours; they are astringent; sometimes the quantity is to be increased, but the least approach to inebriety is injurious. N. B. Some patients are made worse with wine. Beer is injurious. Coffee is good, and should be taken without sugar, or the quantity of sugar should be very small. Lemonade and drinks of this class are very injurious. *Clothing:* Protect the body from sudden chills, by clothing it in flannel. *Exercise* should be carefully regulated; the patient should engage in those exercises in which he takes pleasure; but fatigue is to be avoided. Baths are not of much use; occasionally a tepid bath may do good; swimming in the sea has been found very useful.

*Medical Treatment.*—Carbonate of ammonia, 77 grains; rum, 310; water, 1550 grains. One third to be taken half an hour before each meal; or give it as a bolus (eight grains), with treacle, from two to ten to be given every night.

Give Vichy water. The alkaline bicarbonates, particularly soda, are very useful.

*Dover's Powder and Opium.*—The former is very useful; ten grains at bed-time. Crude opium and morphia often disorder the stomach.

*Thiara divina*, 3ss. to ʒi., every night: a drachm contains one grain of opium.

*Chalybeates and Tonics.*—When there is decided pallor of skin, resembling chlorosis, give tonic bitters with iron. The pulverized iron, or iron reduced by hydrogen, is the best form of chalybeate.

*Evacuants.*—Commence the treatment by giving an emetic and afterwards a purgative,

to clear away anything injurious in the primæ viæ. Evacuants are of no use afterwards, except to combat certain symptoms.

Lime water, calcined magnesia, alkalies, nitric, phosphoric, and sulphuric acids, alum, tannin, and other astringents, are of little if any use.

*Bleeding.*—General bleeding is always injurious. Leeches or cupping to different parts, as the stomach or anus (as symptoms indicate), will be found useful, viz., where there is epigastric tenderness or suppressed hæmorrhoids.

The chief reliance must be placed on dietetic and hygienic means. (M. Bouchardat, p. 103.)

**HÆMATURIA.**—If the patient be young, vigorous and plethoric (not otherwise), general blood-letting. If the kidneys are affected, cup over the loins; if the bladder is painful, apply leeches to the groins or perineum. In renal cases, dependent on subacute inflammation, use counter irritation, by means of antimonial ointment. Do not apply blisters. If the pain seems to arise from the presence of calculi in the kidney, apply morphia ointment, or apply a belladonna plaster to the loins. When the circulation is increased, and there is no sickness, give tartar emetic. If there is sickness give digitalis. In order to restrain the hæmorrhage, give acetate of lead and opium, or sulphate of alum with hyoscyamus. If the pain is decidedly connected with the bladder, use anodyne suppositories. Ergot of rye is very efficacious in stopping the hæmorrhage, and it produces no unpleasant effects; give it in doses of from ten to fifteen grains, with a little carbonate of soda or potash, and at intervals of from four to six hours. Should it disorder the stomach, add a few grains of ginger or comp. cinnamon powder. Any of the mineral acids may be given according to the individual case. In chronic cases, give copaiba and turpentine; also pareira brava, and uva ursi; and improve the general health with iron and iodide of potassium. Cold should be applied, and cold water injections used as auxiliaries to restrain the hæmorrhage. (Dr. Fife, p. 88.)

*Alkaline Urine.*—Use strychnia when the affection follows injury or lesion of the spine, as recommended by Dr. Golding Bird. (p. 99.)

*Nephritis.*—Give copaiba in ten drop doses, three times a day, in case of nephritis with suppression of urine, after bleeding and the ordinary treatment have failed. (Mr. Roberts, p. 73.)

**BLADDER.**—*Lithotripsy.*—This operation is applicable, 1st, to patients above puberty, if the stone is not large, say ʒi. to ʒi. in diameter, or as large as a chestnut; 2d, when the bladder and urethra are tolerably healthy, as shown by retaining the urine for hours, and being able to pass it in a good stream, and when the bladder will admit of injection and careful exploration. (Liston, p. 207.)

Dr. Arthault's new instrument is capable of crushing and pulverizing in three minutes, a calculus of the size of a pigeon's egg. (Gaz. Med. Chir., p. 209.)

*Lithotomy.*—1. Use the simplest instruments. 2. Interfere as little as possible with

the ileo-vesical fascia. 3. Know well the exact position of the stone, for the use of the forceps is the most annoying part of the operation. 4. Dilate internally, if necessary, for a large stone; or make a bilateral incision, but it is very seldom necessary. 5. Inroducing a gum-elastic tube through the track of the wound into the bladder, to secure the flow of urine from it, and keep it there, in children 20 hours, in adults 40 or 50.—(Mr. Liston, p. 207.)

In performing the operation of lithotomy in the female introduce a deeply grooved straight director into the bladder; and then pass a probe-pointed bistoury along it, and make an incision, about half an inch in extent, towards the tuberosity of the ischium, the wound being limited to the anterior half of the urethra. Next make a slight pick in the (?) side of the orifice of the urethra, and withdraw the director; then gradually introduce the point of the left forefinger into the wound, and carefully dilate the posterior half of the urethra; finally, seize the stone with a small lithotomy forceps. Mr. Fergusson thinks that the incision in the anterior part of the urethra produces less injury than dilation. (Mr. Fergusson, p. 209.)

Dr. Baker of New York, on the other hand, divides the urethra half an inch posterior to the meatus urinarius, leaving this orifice and the anterior portion of the urethra undivided. (Dr. Baker, p. 210.)

**URETHRA.—Stricture.**—M. Civiale uses the flexible sound, carrying a port-caustique within, but projecting an inch beyond the latter. The length of the opposite end is about eight inches. The smallest port-caustiques are three-quarters of a line in diameter, and are flexible. The conductors are elastic gum, straight or curved, according to the situation of the stricture: they are seven inches long, and from two to three lines diameter, having a graduated scale attached. The anterior opening is proportioned to the size of the port-caustique, which fits without being tight. Care is necessary that the extremity of the port-caustique is completely introduced into the constricted part at the moment when it protrudes from the conductor: this will be obtained by gentle traction on the penis.

When the stricture is much contracted, so as to admit only a very delicate bougie, renounce or apply it from before backwards. Its application should be confined to linear contractions, capable of admitting the port-caustique, and an exact impression of the contraction. When the melioration is not progressive, discontinue the use of the caustic, and resort to other means. (Dr. Civiale, p. 217.)

**Urethral Fistula.**—When from healthy abscess, to be treated by encouraging granulations, assisted by permanent catheters.

When from specific abscess and stricture, to be treated by simple incision into the urethra through the perineum, to divert the urine for a few days before performing the operation, and when this is healed, by using permanent catheters. (Segalas and Ricord, p. 220.)

**Perineal Fistula.**—If the application of caustic or the actual cautery fail to keep the orifice

raw, so that the granulations cannot close it, a taliacotian operation should be tried, as modified by Dieffenbach, which consists in not turning the flap round or bringing the edges together, but of separating two little lateral flaps from the penis; at the sides of the fistulous opening.

If calculi are passing through the urethra, and lodge in front of the scrotum, endeavor to draw them forwards to the orifice, which, by a little enlargement, will allow them to come out. If not able to be brought forwards, try to pass them back, so as to cut on them in the perineum behind the scrotum. (Mr. Hawkins, p. 219.)

**Urine, Extravasation of.**—Cut down upon the part, lay open the urethra, and allow the pus and urine to escape; then apply warm poultices to favor the separation of the sloughs. Support the scrotum, should it be implicated, and afterwards use astringent lotions. During the attendant fever, relieve the bowels with an enema, and give Dover's powder; and, when low symptoms come on, give stimulants (brandy) and opium. (Mr. Quain, p. 221.)

**Hæmorrhage from Urethra.**—Hæmorrhage from the urethra, as well as other cases of hæmorrhage, may be treated by solution of secale. Battley's solution of secale, 3j; tinct. of sesquichlor. of iron, 3j; water, 3vj. Mix, and give a quarter part every four hours. (Mr. Gervis, p. 87)

#### Affections of the Organs of Generation.

**SYPHILIS, Chancre.**—If seen within three days, apply nitrate of silver freely, and secondary symptoms need not be feared, and even after this time, in nine cases out of ten, the same results will take place. There are some indications, however, against the use of caustic, and these are inflammation, or great irritation of the part; but, perhaps, the most important indication against its use is induration of the sore; the constitution is sure to be affected when this occurs, and mercury must be given. (Mr. Acton, p. 222.)

**Secondary Syphilis.—Pains in the Long Bones, &c.**—Give hydriodate of potash, five to eight, or to fifteen grains three times a day, and, if not successful in a few days, then mercury may be had recourse to. Where the secondary symptoms are scaly eruption, excavated ulcer of the tonsil, swelling of the testicle, excavated ulcer of the tongue, acute ulcers of the edges of the eyelids, iritis, purulent discharge of the meatus auditorius externus, papular eruption without fever, desquamating tubercular and pustular eruption, secondary ulcers, fissured tongue, ulceration round the nail, phagedenic ulcers of the skin, and foul sloughy ulcerations of the pharynx, they will be benefited by mercurial fumigations. (Mr. Ormerod, p. 227.)

M. Ricord often substitutes the bromide for the iodide of potassium. The dose is the same, and it has produced the same therapeutic effects, but more slowly. It is much cheaper. (p. 228.)

**Syphilitic Testicle.**—Combine the mercurial

treatment with iodide of potassium. Give three quarters of a grain of iodide of mercury in a pill every night, and one or two grains of iodide of potassium twice or thrice during the day. Continue this treatment for some time after a cure is effected. When effusion into the tunica vaginalis occurs, the fluid is generally absorbed; occasionally, however, it remains, and it is necessary to tap and inject the sac; before doing this we should endeavor to procure its absorption, by mercurial frictions on the scrotum, or the application of bego plaster with mercury. We should also try compression. (M. Helot, p. 229.)

**GONORRHOEA.**—Gonorrhœa has six regions as its seat in the urethra. 1. Balanic, or the portion within and just behind the glans penis. 2. Spongie, or the portion extending from the glans penis to the bulb. 3. Bulbic, or the portion situated about the bulb, and to the membranous portion. 4. Membranic, the whole membranous or muscular portion. 5. Prostatic, or the part involved by the prostate gland. 6. Cystic, when the specific poison affects the bladder.

Destroy its existence as quickly as possible, as there is no fear of stricture, if no phlegmonous inflammation. Take six to twelve copaiba capsules daily, or one to two oz. of cubebs. Use an injection of ten to fifteen grs. arg. nit. aq. distillat. ʒj. Do not mix copaiba and cubebs in one preparation, or give them together.

1. Where there is active inflammation, use active antiphlogistic measures, baths, and laxatives, and when subdued, as above.

2. Where dysuria, apply leeches in perineo, cool lavements, general baths. If it continue very distressing, use an elastic catheter of moderate size.

3. Open abscesses as early as the matter is well formed.

4. Vesical tenesmus; inject per rectum aq. ʒiv., tinct. opii ʒv. 30 drops.

5. In commencing gleet, inject ter die aq. dist. ʒviij. zinc. sulph. plumb. s. acet. aa. ʒj.

6. In chronic gleet, if no particular thickening or stricture, use wine, tannin, alum, or iodide of iron (aq. dist. ʒviii., iod. ferri. gr. ij ad iv.) injections.

Injections with copaiba or cubebs are generally useless.

7. Epididymitis, or inflammation of epididymis, use a suspensory bandage. N. B. Be careful not to confound orchitis with epididymitis. (M. Ricord, p. 213.)

Enjoin rest and temperate habits. Use astringent injections, as nitrate of silver, quarter of a grain to the ounce, used only once in twenty-four hours; or sulphate of zinc or alum, from ten to fifteen grains to the ounce. At the same time give the capsules of copaiba in large doses an hour after each meal; give a large dose (five or six) at bed-time. Direct the patient to void his urine every half hour or so, previous to which he should inject a small quantity of injection. (Mr. Brett, p. 215.)

Mr. M'Donald condemns solutions of nitrate of silver because of producing cystitis, and recommends it in ointment, a drachm to an

ounce of lard, smeared on a bougie, and introduced three inches in the male, and retained three minutes. The penis afterwards to be bathed in warm water. (Mr. M'Donald, p. 215.)

Whenever gonorrhœa is followed by secondary symptoms, it is more than probable that there originally existed some syphilitic sore just within the orifice of the urethra, unobserved by the surgeon. (p. 228.)

**Ectrotic or Abortive Treatment.**—In the very early stage, before the suppurative crisis, inject a solution of nitrate of silver (grs. xii. to ʒi.) about two inches and a half down the urethra, by means of a glass syringe. Only use it once or twice, and if it fail in arresting the disease, then have recourse to ordinary treatment. (Dr. Arnott, p. 213.)

**SCROTUM. Hydrocele.**—Treated successfully by alcohol, after the puncture had been made twice unsuccessfully. The scrotum was enveloped with a large compress, four times doubled, and steeped in alcohol of thirty degrees, and kept on by a suspensory bandage. This lotion was continued forty days. (M. Pleindoux, p. 234.)

Discharge the fluid with a trocar or pocket lancet. Apply a warm vinegar poultice. When sufficient inflammation is superinduced by the poultice, apply poultices of bread and milk, and give a few smart doses of purgative medicine. (Dr. Harvey, p. 234.)

#### Parturition and Diseases of Women.

**VULVA, Follicular Disease of.**—Arg. nit. and nitric acid are of no use. Hydrocyanic acid lotion is serviceable, or an ointment made of two drachms of prussic acid and a scruple of diacetate of lead, with two ounces of cocoanut oil. The parts are to be first washed with infusion of roses, and the ointment applied two or three times a day on lint.

Or try a lotion of lime water with opium; or make a poultice of bread, saturated with a decoction of conium leaves, to a pint of which add two drachms of the liq. plumbi diacet.

When irritation is excessive, prescribe vapor-baths, either simple, or medicated with sulphur. Attend to general health, order a nutritious but unstimulating diet; avoid wine and porter; give milk with lime water; keep the patient at rest; forbid sexual intercourse. There should be change of air. Give the vegetable tonics, as cascarrilla, columba, cinchona, sarsaparilla, &c.; keep the bowels open with small doses of magnes. sulph. in infusion of cascarrilla or camomile. When the symptoms are decidedly abating, give a mild mercurial course with sarsaparilla. (Mr. Oldham, p. 307.)

**VAGINA AND URETHRA, Disease of.**—The value of the speculum is incalculable in all cases where there is reason to suspect disease of the neck of the uterus.

**Local Treatment.**—In vulvular inflammation, the hip-bath and poppy fomentations. For the itching, nitrate of silver ʒj., aq. dist. ʒj., applied three or four times a-day; or tincture of matco,

Both may be applied either with a camel's hair pencil or with a stick, to which a piece of sponge is tied. Lotions of the soluble salts of lead, zinc, mercury, narcotic preparations, borax, hydrocyanic acid, bread crumb soaked with liquor plumbi diacet., gelatine and bran baths.

**General Treatment.**—Mild saline purgatives, rest, sea-bathing, alternative doses of mercury, as Plummer's pill, gr. v., nocte manequ. Brandishe's alkaline solution, twenty drops in an ounce of any bitter infusion; balsam copai-ba. For pain in the back apply cautery to the sacrum. (Dr. Mitchell, p. 306.)

**Uterine Polypi and Ulceration.**—If small, remove them by twisting, with a forceps, consisting of a straight stem, eight inches long, having two short spring blades, with serrated tips, upon which slide a brace movable from the handle, by which they are easily pressed firmly together, and made to grasp very securely any object caught between them. Apply nitrate of silver to restrain bleeding. Where it is necessary, in a larger pedunculated polypus, apply a ligature; Niessen's double canula is recommended, and with it, silk salmon fishing line soaked in linseed oil, which combines strength, perfect pliability, and softness, and is unaffected by moisture. N. B. In persons of a high habit, and who are subject to indulgences in dietary, be careful not suddenly to suppress menorrhagic discharges, because of the dangers of determination to cerebral congestion. (Dr. Montgomery, p. 307.)

**Uterus, Ulcerative Inflammation of.**—Make very careful specular examination. Local treatment:—astringent vaginal injections, sulph. zinc, alum, tannin, acetate of lead, &c., repeated cauterization of the ulcerated surface with nitrate of silver, or acid nitrate of mercury. The use of the caustic is followed frequently by an increase in the local pains and leucorrhœa, which may become sanguinolent. The exacerbation may last a few days, but afterwards the patient becomes easier and better than before its application. General treatment:—contenance, horizontal posture, and such other means as constitutional symptoms indicate. When there is debility, give tonics, &c. Leeches, scarifications, or cold hip-bath are unnecessary. External applications for pains in the loins are useless, but may be employed as a placebo. (Dr. Bennett, p. 287.)

**Irritability of Stomach in Pregnancy.**—Give strychnia in doses of from one-sixth to one-twelfth of a grain in a little diluted nitric acid three times a day. (Dr. G. Bird, p. 98.)

**Vomiting of Pregnancy.**—M. Stackler gives three quarters of a grain daily, of the black oxide of mercury. No unpleasant effects follow. It is beneficial in hysterical convulsions and uterine irritation. [We suspect some mistake in the statement of the quantity given.—Ed.] (p. 279.)

**Hæmorrhage before Delivery.**—1. Accidental.—If the os uteri be dilated and the presentation natural, rupture the membranes, and leave the case to nature; but if the hæmorrhage do not cease, use ergot. If the os be not dilated, plug and wait.

2. In unavoidable, as placenta prævia.—If

the os be dilated or dilatable, introduce the hand and turn the child, but if the placental covering of the os be only partial, treat as the first variety. (Dr. Mitchell, p. 280.)

**Uterine Hæmorrhage after Delivery.**—Mr. Higginbottom recommends giving an emetic dose of ipecacuanha, or ergot, in the exhaustion attending uterine hæmorrhage, after the delivery of the child or separation of the placenta. Of the ergot, Mr. H. gives 3ss. before the birth of the child, and a like dose after birth, and before the separation of the placenta. (p. 286.)

**Uterine Phlebitis and Peritonitis.**—Give acetate of lead in the obstinate diarrhoea of uterine phlebitis and peritonitis. (Dr. Smith, p. 86.)

**PUERPERAL FEVER.**—Endeavor to throw off the morbid specific matter, and sustain the powers of life; give diaphoretics and stimulants according to the stage of the disease. Adopt every precaution against propagation; cease to attend midwifery at the same time with cases of malignant or severe erysipelas; observe rigid abluion of the hands, either with simple water, or chlorinated; change garments, or expose them to a free atmosphere or high temperature, or absent yourself so as to obtain an entire purification, at the same time using warm baths and other alternative and purifying means. (Dr. Peddie, p. 43.)

**OVARIAN DROPSY.**—Puncture with a trocar through the vaginal parietes (the tumor being situate between the rectum and vagina), the canula being left thirty hours in the puncture to permit the fluid to drain off. In ten days it was dilated with a bistoury, and water injected into the sac; and to keep the opening pervious, a thick tube of tin was introduced and secured in front. In four weeks the puncture and cyst were contracted, and the patient cured. Conditions necessary to success.—1. No complication, and the tumor unilocular. 2. That the cyst contain no more than fifteen lbs. of fluid. 3. That the opening be large enough to permit the easy introduction of the finger. 4. That the temperature of injected water be agreeable to the patient, and thrown deep into the sac. 5. That the tube be occasionally withdrawn, and not entirely disused, until the opening has contracted and the discharge become solely purulent. (Prof. Kiwisch, p. 319.)

**MENSTRUATION, Irregular.**—Make use of cold water, as follows; Commence first with the tepid and then with the cold bath, twice daily, for half an hour at a time. This process exerts a double influence on the female genital organs; the one a strengthening, and the other an attracting force. (Dr. Chmelik, p. 316.)

**CHLOROSIS.**—There are cases of chlorosis marked by an increase rather than a diminution of the total amount of blood; it is not a necessary condition, but it is more certainly and frequently a change in its quality. It is identical with anæmia.

When there is increase of blood, blood-letting, leeches, or cupping, are recommended.

When pain on pressure in some region of the spinal cord, cup or apply leeches, or repeat-

ed blisters on either side of the spine. Moderate pustulation; use anodynes sparingly and cautiously, and this may apply also to the use of aconite or cannabis Indica. The local application of these anodynes may be tried with much advantage, by means of soaked lint, either with or without the removal of the cuticle. Sulphate of veratrine  $\text{℥j.}$  to  $\text{ʒj.}$  of arxunge is very efficacious. Where the pains are very obstinate and severe, *firing* lightly applied may be tried.

Where there is great disturbance of the digestive functions, give warm cordial cathartics; one or two drops of creosote in pill thrice daily, alone, or with compound galbanum pill; finely powdered charcoal (of which that from box-wood is the best); or the following:—Fine charcoal, calcined magnesia, aa. gr. x., powdered nutmeg, five grs. Mix. This, mixed cautiously with, and taken in, milk and water, two or three times a day.

The *essential* treatment, as it has special regard to the normal character of the red particles of the blood, must consist in the administration of iron (if no contrary indicating conditions). If idiosyncrasy prove a constitution intolerant of iron, then make trial of bismuth, either alone, or in combination with carbonate of ammonia, and the salts of Peruvian bark. If iron can be tolerated, then the muriated tincture; the acetated tincture of Dr. Percival, of Dublin; vinum ferri; or Bewley's solution of the super-carbonate; *maist. ferri comp.*; bark, iron, and ammonia; citrate of iron and quinine; compound ferri pil. with sulph. of quinine; and the saccharine proto-carbonate.

When a mild aperient is necessary during the use of iron, the following is recommended:—Sodæ bicarb. gr. xv.; acid tartaric. gr. x.; sulph. ferri (siccat.) gr. j. ad gr. v.; sacchari albi ʒss. M. to be kept dry, dissolved in a wine-glassful of water, and swallowed while effervescing.

Dr. Freke recommends the hydro-sulphuret of ammonia to diminish the number of red corpuscles in the blood, on the supposition that it appropriates a portion of that iron which would otherwise contribute to the formation of the red globules. (Sir H. Marsh, p. 310.)

Administer from eight to thirty grains daily, of tannate of iron, especially to persons of sanguine temperament. (M. Benedetti, p. 315.)

**AMENORRŒA, Electricity and Galvanism in.**—To insure success, improve the general health by exercise and tonics, and remove accumulations from the bowels. Pass the shocks of the Leyden jar from the pubes to the sacrum, beginning about a week before the expected period of return, and repeat as often as will be thought necessary. (Dr. G. Bird, p. 315.)

Dr. T. L. Ogier gives a teaspoonful of a strong tincture of water pepper, made from the leaves, stems, and flowers, three times a day. (p. 316.)

#### Affections of Joints and Bones.

**DISLOCATIONS, Hip Joint, Reduction of.**—1. Obtain two planks of oak, beech, or elm, eight

feet long, three feet wide, and three inches thick, and joint these by joists. 2. Let these rest on chairs or tressels. 3. Drill holes in opposite directions, so that when the patient is placed upon the board, the ilia and unaffected thigh may be secured by two strong leather straps, thus rendering the pelvis fixed, and enabling the effective means, viz., extension and uplifting the head of the affected bone, to be used with the greatest advantage. In dislocation of the dorsum ilii, instead of the single pad above the knee, substitute two iron plates just above the condyles, one side being fast by a hinge-joint, and the other by two thumb-screws. 4. At the distal end of the board, fix an upright post, twenty inches high and three or four inches thick, and drill in it a hole for the pulley rope to pass; make another hole laterally in the post for a stick or windlass, which may be worked with cogs or a ratchet wheel. 5. Attach one of the pulleys to a hook in the front plate (of which no description is given), and the other to a strong screw staple in the upright post. 6. All being now adjusted, extension may be made in the most gradual manner. Wherever it shall be required, the apparatus should be well wadded with any suitable soft material, to prevent abrasion of the skin and bruising of soft parts. [A simple diagram, with the apparatus applied upon a figure, would very much have forwarded the objects for which this paper is published.—Ed.] (Mr. Davis, p. 144.)

**Iodine Injections in the Joints.**—Consider well the situation of the opening, especially let it be at or near where fluctuation is most evident. Pinch up a fold of the skin and pass in the hydrocele trocar at the base of the fold, so that when the operation is complete, the internal and external opening may not correspond, which prevents the ingress of air. An ordinary trocar may be used. [M. Velpeau uses a hydrocele trocar.] Draw off six or eight drachms of the fluid [M. Velpeau draws the whole off], or a quantity equal to the injection thrown in. Use undiluted tincture of iodine; the fluid left in the cavity dilutes it. [M. Velpeau dilutes the injection.] Allow the greater part of the fluid to remain in the joint. [M. Velpeau allows it all to escape.] N. B. M. Velpeau's practice appears to have been the most successful; it does not excite so much inflammation. (M. Bonnet, p. 147.)

**BURSA, Diseased.**—Make a free longitudinal incision from above downwards, throughout the whole extent of the bursa; inspect the cyst and detach any small adherent bodies; where the cyst is thick and capacious, and bulges from the incision, remove an elliptical portion. Introduce an oiled dossil of lint as a dressing, and apply light compresses and a bandage. When suppuration is fairly established, apply poultices if necessary. The advantages of this method over puncture, subcutaneous incision, injection, seton, extirpation, &c., are—1. it is easily and quickly done. 2. It is less painful. 3. It produces little or no constitutional disturbance. 4. It is more satisfactory in its results, producing a radical cure, and removes all foreign bodies at once. (Dr. Adams, p. 152.)

In acutely inflamed bursæ, enjoin rest, apply leeches, and cold lotions, and when the inflammation is sufficiently subdued, pass a bit of sewing silk through the centre of the cyst. [Mr. Richard, p. 154.]

**KNEE-JOINT, Bursal Disease of.**—When not communicating with a joint, they may be opened without danger in all situations and in every stage. The effect of seton is like that through a hydrocele or ranula, viz., the secretion is absorbed without being discharged by a wound, and the sac is obliterated. In a hard and consolidated form of the disease, it breaks down into a common abscess, which, when punctured, discharges its contents and heals. Pass the thread (common silk) through the centre of the tumor, and keep it in until the end is accomplished. If inflammation supervene, remove the thread; foment, or poultice; when sufficient inflammation has been set up, which is indicated by the oozing of pus from the punctures, and may be continued four or five weeks. If the morbid bursa be too deep for the application of the above treatment, injection and pressure may be used.

For ganglions or adventitious cutaneous cysts, puncture with the lancet is a less painful and more certain remedy than a blow. Let the puncture be no larger than to evacuate the contents of the cyst. Bind down the part afterwards with a pad of lint and adhesive plaster, to promote the obliteration of the cyst. [Mr. Skey, p. 151.]

**Diseased Joints, Position and Support.**—In joints of the lower extremities, first calculate well the position the most applicable [the straight being the most slightly and useful]. Use strong pasteboard or undressed leather as a splint, adapt it whilst wet, and pad with lint or jeweller's wool, and fit in such a way to the limb as to be perfectly easy to the patient, at the same time giving steadiness to the limb, and let it extend sufficiently above and below the joint.

**Convalescent Treatment.**—Envelope the joint in splints of leather undressed with oil, first soften in water, and allow them to remain on so as to form an exact case for the joint, which, when hard, may be lined with soft wash leather. Jeweller's wool may now be laid in various places to prevent pressure of the edges of the splint, and a firm roller applied to secure all parts equally. The joint is now ready for passive or active motion, as may be judged most advisable. [Mr. Brownless, p. 149.]

**Fractures of the Thigh.**—Mr. Bulley, of the Berkshire Hospital, uses an apparatus for the more efficient treatment of fracture of the thigh, which makes the extensile power by means of a foot-piece moving on an endless screw, and divides the traction equally between the foot and the lower end of the fractured bone. Its advantages are—1st, Easily-regulated extension. 2d, Constant exposure to the eye of the surgeon. There is a lateral splint also connected with the upper part of the apparatus, so acted upon, as to prevent the bowed or excavated appearance so frequently produced. (p. 142.)

**Fracture of Clavicle.**—The maintenance of the fragments immovable, and the obtaining a regular callus, are procurable by Desault's bandage rendered stiff with dextrine. Care is to be taken to guard the armpits and other parts against this stiffness by means of compresses or wadding. A tight flannel waistcoat next to the skin is a good precaution. (M. Blandin, p. 158.)

**Fracture, Treatment of.**—To prevent pain and suffering, to place the parts in the most favorable condition for repair, and to prompt the normal shape and length of the limb, are the principles which must guide the surgeon in the treatment of fracture; and these indications are fulfilled by instant co-aptation, and observing the utmost possible apposition. These observed, there is no necessity for local loss of blood or cold lotions. Firm support, guided by the above principles, will do all that is necessary to secure a sound limb. (M. Liston, p. 141.)

#### Affections of the Senses,

**SKIN DISEASES, Porriago Scutulata (Ring-worm).**—Shave the head, and apply one of the stronger acids to the part. The strong acetic answers the best. It may be applied by means of a piece of sponge tied to a stick, and should only be used for a few minutes. Nothing more should be done for a week or ten days, when the crust produced by the acid should be separated with a pair of scissors, and if there be any appearance of the disease remaining, the acetic acid should be applied again; but if it presents a healthy appearance, let it be well washed with soap and water, and a little olive oil applied every night. When all the vegetable organisms constituting the disease have been destroyed, then use a stimulating ointment, as the ung. creosote 3ss. to 3j. to the ounce of lard; or apply tincture of iodine by means of a camel's-hair brush; or the ung. hyd. biniodid, diluted with six parts of the ung. picis liquid.; or a mixture of equal parts of sulphur and pitch ointment; or the carb. of potass ointment, 3ss. to 3i. to the ounce of lard. It is often useful to alternate some of these remedies; the head should also be washed three or four times a day with a lotion of the sulphuret of potass. dissolved in lime water, or with carbonate of potass. dissolved in water. Attend to the general health; if the child be of a delicate habit or scrofulous, give iron and tonics, quinine with infus. quassia, and a nutritious diet. All heating articles of diet are improper, also salted food; the diet should be plain, but nutritious. (Erichsen and Wigan, p. 245.)

**Porriago.**—Avoid all unnecessary irritation, as soap, cold lotions, poultices, or narcotics. Do not shave the head, but cut the hair down as close as possible with scissors, first softening the crusts with hot water, and afterwards washing with half the yolk of a fresh egg and water, and drying with a very soft cloth. Use a sulphurous ointment combined with camphor

or creosote ʒj. to ʒj. of lard. Wear a light linen or silk cap of a washing kind, and change the linings of hats, bonnets, &c., frequently. Internal treatment must be guided by common principles. (Mr. Startin, p. 236.)

*Porriga Pudendi*.—Take a small bleeding from the arm (8 oz.). Give calomel, gr. iv; ext. coloc. comp. gr. vi; statim; and every four hours two table spoonfuls of the following mixture:—Potassæ nitrat., ʒj.; magn. sulph., ʒj.; mist. camph., ʒvj. M. Lotio plumbi to be kept constantly applied to the vulva. After some time the lead lotion may be replaced by one of two grs. to five of bichloride of mercury, and two to five minims of hydrochloric acid to aqua ʒj. Observe well the regulation of the bowels and dietary. (Mr. Evans, p. 247.)

*Acne*.—When the follicles are only loaded, use the flesh brush, but, if very large and unsightly, use mechanical means, as a needle, to empty them. If the suppurating points are numerous, order the vapor douche; mercury, and camphor ointment, white precipitate with camphor, or lime, ʒj., zinc ointment, ʒj., camphor, ʒj., or ioduret of sulphur, gr. xv. ad gr. xxx., lard, ʒj.; or, hyd. bichlor. in almond emulsion, or quince seed mucilage; or, sodæ hyposulphatis, ʒj. ad ʒij., alum sulphat. ʒj. ad ʒij., aq. ros. ʒviss., aq. colognæ ʒss. for a lotion.

For the redness that remains on the nose after the eruption, apply nitric acid, pharmacopœia strength, but take it off immediately with blotting paper; or, you may use acetum cantharidis; both these at fortnightly intervals; or, puncture every vascular trunk with a fine lancet.

Chalybeates, mineral acids, vegetable bitters, or iodine, arsenic, or mercury, if special organs require them. Alcoholic stimulants, if the stomach require, good air and exercise. (Mr. Startin, p. 240.)

*Sycosis*.—Extract the hairs with a pair of forceps; wash with yolk of egg and warm water, or fomentations of decoction of popples, linseed, &c., with a little sulphur or bran; or a sulphur vapor douche, applied by means of a steam pipe to the face, excluding the nose; or, apply the following mild stimulating ointments, viz., hyd. precip. alb. gr. xv. ung. hydrag. fort. ʒj.; liq. plumbi acet. ʒss.; ol. palmi, recent. ʒvj.; M. Give brisk acidulated saline purgatives, and subsequently chalybeates. (M. Startin, p. 240.)

*Lepra, Psoriasis, Lupus, Acne, Eczema Chronica, Impetigo, Prurigo, Lichen*.—In the treatment of these and all chronic affections of the skin which are not venereal, nor dependent on local causes, first, reduce inflammatory action by depletion and antiphlogistic regimen; then administer arsenic, beginning with five minims of the liquor potassæ arsenitis thrice a day, with the meals, until the conjunctiva is inflamed; afterwards reduce the dose to four minims, keeping the eyelids slightly sore and weeping. The whole success of this treatment (which seldom or never fails in any of the above diseases) depends upon the continued and persevering use of the medicine, which is perfectly harmless, when administered with

vigilance under these restrictions. (Mr. Hunt, p. 247.)\*

*Pityriasis, Herpes, Eczema*.—Use a lotion composed of one part of alum, and sixty-two parts of water.

In the slighter forms of acne, lichen, pityriasis, herpes, and even in eczema, use a simple acidulated lotion. In impetigo, after the crusts have fallen off, use the following application of alumina:—Alum, eight grammes; infusion of Provence roses, five hundred grammes. Gowlan's solution, or Bateman's mercurial emulsion, however, answer very well. M. Cazenave uses the following:—Bichloride of mercury, ten centigrammes; hydrochlorate of ammonia, ten centigrammes; almond emulsion 250 grammes; make a solution. In really chronic eczema he uses the following lotion:—Acid nitric, twenty-five drops; acid muriatic, twenty-five drops; distilled water, three hundred grammes. Mix by shaking. (Cazenave, p. 263.)

*Ichthyosis Fortuita*.—1st. Augment the action of the capillaries of the skin, by giving small doses of the blue pill and emetic tartar; liquor arsenicalis; cantharides in decoction of rumex obtusifolius, made by boiling an ounce of the sliced root of the common dock in a pint of soft water; dose ʒij. 2dly. Improve the secretions generally, by generous diet, as milk, vigorous exercise in the open air, &c. 3dly. Aid the action of the two former by topical means which stimulate the skin, and assist the separation of the diseased papillæ by warm baths, friction, &c. (Dr. A. T. Thompson, p. 264.)

*Urticaria*.—Where arising from irritating ingesta, give emetics and purgatives. If from visceral disorders of other forms, pay especial attention to them. Where idiopathic, and without assignable cause, pay close attention to the skin, &c.: bleed when the pulse will admit, and give magnesian aperients, or iodide of potassium. Where the case is chronic, use liquor potassæ in large, or liquor potassæ arsenitis, in small doses. (Mr. Startin, p. 248.)

*Erysipelas*.—In some cases the following ointment may be used instead of the solid arg. nit. or the solution: nitrate of silver ointment in three strengths, viz.:—Nitrate, 12 parts, lard 32 parts; nitrate, 8 parts, lard 32 parts; nitrate, 4 parts, lard 32 parts. (M. Jobert, p. 264.)

*Stains from Nitrate of Silver, to remove*.—Moisten the spots several times with a solution of hydriodate of potash, and expose the part to the direct rays of the sun. The hydriodate converts the black stain of the nitrate into the white ioduret of silver. A trial of its use internally is also recommended in those cases where the skin has been tinted by the internal use of the nitrate. (Journal de Médecine, p. 264.)

*EYE DISEASES, Syphilitic Iritis*.—Give turpentine ʒj. three times a day in almond emulsion, using double the quantity of the confectio. Thus (Mr. Carmichael's formula): R. Olei terebinth. rectificat. ʒj., vitelli unius ovi

\* See Mr. Hunt's papers on chronic diseases of the skin, Lancet, 1844, p. 38, 77, 128, 274, 286, 343, 697.

simul, et adde gradatim, emulsionis amygd. 3iv.; syr. cort. aurant. 3ij.; spt. lav. c. 3ij. ol. cinnam. gt. three vel four. Misce, sumat cochlearia larga duo ter in die. If the inflammation run high, cup or leech the temple. This remedy alone is frequently successful, but in obstinate cases, mercury is the sheet anchor. (Dr. Jacob, p. 261.)

**Conjunctivitis, Iritis, &c.**—Dr. Laugier recommends a collyrium—made in a warm marble mortar—of two parts Venice turpentine, and one part oil of turpentine, added by degrees in conjunctivitis, accompanied with slight tarsal affections, scrofulous corneitis, and conjunctivitis with corneitis. He instils three or four drops between the eyelids night and morning. The oil of turpentine may also be made into an ointment, but he prefers using the mixture. (p. 268.)

**Ophthalmia, Gonorrhoeal.**—Apply the nitrate of silver in substance to the conjunctiva by exposing the conjunctival surface of the inferior eyelid, and drawing the caustic, pointed like a pencil, lightly across it. (Mr. Walker, p. 264.)

**Plasias.**—Reserve in the use of direct depletion is commonly most in accordance with the principles of sound practice. But cupping, mercury, purgatives, dietary, blistering, and subsequently tonics, are productive of most decided advantage. (Mr. France, p. 265.)

#### Toxicology.

**Poisons, Arsenic.**—Magnesia, not strongly calcined, is an excellent antidote to arsenious acid; it removes it entirely from a state of solution in water, and forms an insoluble compound. Magnesia in a gelatinous state answers best. Magnesia decomposes emetic tartar, the salts of copper, and corrosive sublimate, also the organic alkalies, morphia, strychnia, &c. (M. Bussy, p. 117.)

Dr. Christison recommends the light pure magnesia, which may be obtained in a gelatinous pulpy state, by adding a solution of caustic potash to a cold saturated solution of sulphate of magnesia, and washed afterwards with cold water. The dense magnesia has very little action on arsenic in solution. When the gelatinous cannot be obtained, then use the light calcined, in proportion of between thirty and fifty parts to one of arsenic taken.

[As in the hurry of these cases it is frequently difficult to know what quantity of arsenic has been taken, it must be left to the discretion of each practitioner to judge what quantity of the magnesia he shall administer as the antidote.—Ed.] (Dr. Christison, p. 117.)

**Mineral Poisons.**—Universal antidote:—First give a purgative, then a soap bath, and a mixture of persulphuret of iron and syrup, night and morning, in such quantities as to be always in excess in the intestines to prevent re-absorption. (MM. Sandras and Bouchard, p. 324.)

**King's Yellow.**—The hydrated peroxide of

iron acts as the best chemical antidote, combining with the arsenic in the stomach to form an arsenite of iron which has little solubility, and therefore of little energy as a poison. As the arsenic may be again set free by the secretions of the stomach, take care to give the pectorals in excess, and repeatedly, until all effects subside. (Dr. Patterson, p. 119.)

**Laudanum.**—Make use of electro-magnetism. The wires to be applied in turn to every part of the body, and the patient to be roused and kept awake. It may be continued for four hours, and may gradually become more susceptible and energetic in the limit until the end of the period stated, when there may be satisfactory revival. (Dr. Barry, p. 113.)

#### Materia Medica and General Therapeutics.

**ATROPHIA AND BELLADONNA.**—Make a solution of one, two, or three grains of atropia to 3j. of distilled water; add a drop of nitric acid to render it soluble, and a drop of spt. vini, to make it keep. Introduce a drop of one of these solutions between the eyelids, which will keep the pupil dilated from four to ten days, according to the strength of the solution used.

It may be useful in iritis; aquo capsulitis; also when it is wished to break up recent adhesions between the iris and lens; to withdraw a protruding iris from its position; in central cataract; or in central opacity of the cornea, where the pupillary margin is attached to the back of the cornea, &c. Its use is less marked when conjunctivitis is present, than in a healthy eye, and its effects are more transient.

In ulcers of the cornea, belladonna is of special service; by it synechia anterior, &c. may be prevented. In cases of rupture from ulceration, with hernia of the iris, apply the solution of atropia close to the eyelids, and keep them closed with plaster; smear the eye and brow with the extract of belladonna, and, if necessary, use leeches to the temples, just over the malar bone; apply blistering, and use such constitutional treatment, as is calculated to subdue inflammation, and the further spread of the sloughy or ulcerating process.

In neuralgic affections of the eye, intermitting and unattended with inflammation, or obvious alteration in the structure or motion of the organ—try belladonna internally, from one-sixteenth to one-sixth of a gr. in solution three times a day. In old and inveterate photophobia or ophthalmia, attended with vascular cornea, in discharged soldiers, the internal use of belladonna is marked. (Mr. Wilde, p. 258.)

**AMPUTATION of the Thigh.**—Mr. Syme says he is now satisfied that there are circumstances in which the circular incision ought to be preferred. The perfect condition of the stump, where there is nothing but integuments to protect the bone, as at the ankle, led him to conclude, that if the circular operation could be performed with the certainty of providing such a covering, it might be employed with advantage in the lower third of the thigh. There is



plenty of skin and plenty of room to employ the tourniquet, without impeding the incisions or retraction of the muscles, and the size of the wound is much smaller than at the middle of the thigh. Apply the tourniquet close to the groin; use a middle-sized knife, such as is employed for the flap operation. Make the incision of the skin as near the knee as possible; not in a circular direction, but so as to form two semilunar edges, which may meet together in a line, from side to side, without projecting at the corners, and divide the fascia with the integuments. Draw these up by firmly claspings the limb, and not by dissecting and turning back. Divide the muscles by a circular sweep of the knife down to the bone, and retract with the utmost care. This should be at least two inches; and, before using the saw, protect the muscles, and freely expose the bone by means of a split cloth.

Mr. Syme adds, as the soft parts required to form the stump in amputation at the knee, are apt to be so deranged in their texture, as to delay, though not prevent recovery, and thus in some measure counterbalance the advantage of exposing the cancellated instead of dense bone, together with the contents of the medullary cavity, "I do not persist in advocating amputation at the knee now, when satisfied that the operation by circular incision, if performed with due care on proper principles, may be employed at the lower third of the thigh safely and advantageously." (Professor Syme, p. 155.)

In amputation, Mr. Quain makes the flaps short in the first instance, and adds to their length, subsequently, by circular incisions through the deeper muscles. Modifications are, however, required, according as the parts to be amputated are not clothed with muscle, e. g., the leg and fore-arm. (Mr. Quain, p. 158.)

**FLAP AMPUTATION.**—The disadvantages of flap amputation are—1. It is more painful from the extent of integument divided, and oblique division of nerves. 2. More protracted in its performance, in consequence of the difficulty of obliquely cut arteries collapsing. (Mr. Bulley, p. 158.)

**REFLECTING PRISM, and Tube for Exploring the Open Passages.**—Used for, 1st. The vagina, &c., for polypi; for, ulcerative, and other diseases, both of the vagina and uterus, and preternatural labor. 2d. The rectum; for stricture, hæmorrhoids, &c. 3d. Urethra and bladder; in lithotrity, lithotomy, and stricture. 4th. The pharynx, larynx, and eustachian tube; for diseases of these passages. 5th. The nose; for ulcer, ozæna, polypus. 6th. The stomach itself! 7th. Gunshot wounds, &c.; where bodies lodge and require extraction. (Warden and Avery, p. 324.)

**ULCERS.**—Give turpentine those in ulcers

which are prevented healing by deficient action, where the ulcer is sluggish, surface smooth, without granulation, or of a greenish foul appearance; discharge serous, edges rounded, smooth, and callous, and the surrounding skin is pink or blue. It should not be exhibited where the patient is plethoric, the ulcer inflammatory, and the pulse full and frequent, or where it produces nausea, or other unpleasant symptoms; in the last case substitute cajuput oil, three drops three times a day, or give the capsules of Messrs. Evans and Leecher, each containing twenty to twenty-five drops of the turpentine. Continue the use of the turpentine until good healthy granulations appear, with the secretion of good pus. (Mr. Hancock, p. 321.)

**MOIST HEAT, Application of.**—Mr. Markwick, of the Western German Dispensary, has invented a fabric of sponge and wool, which he calls "Spongio-piline," which, by being impregnated with the required epithem, proves a substitute for poultices and fermentation cloths.

The "Impermeable piline" is another fabric of wool, &c., backed with India-rubber, and recommended where protection to the skin and joints, or increased diaphoresis, is necessary.

**PLASTERS.**—New mode of preparing adhesive and strengthening plasters.—India-rubber in fine shreds, 5 lbs.; spt. turpentine, sufficient to cover, and add as the substance absorbs it. When dissolved, press through a fine sieve. Heat four ounces of Cayenne pepper in a quart of spt. turpentine, and with a portion of it, grind 1 lb. of litharge, mix in the remainder afterwards, and add 6 oz. bals. Peru. Then melt 1 lb. of India-rubber, and add spt. turpentine until it is thin enough to strain. Finally, mix all the preceding together. (Chemist, p. 324.)

**BED SORES.**—Thicken the cuticle, by using a stimulating wash, as follows:—Hyd. bichlorid. gr. ij.; sp. vini tenui. 3j. ft. lotio. This may also be applied to the skin, against which a very powerful truss is to press. (Sir B. Brodie, p. 325.)

**VAPOR BATH.**—Cheap substitute for one more complicated.—Take a piece of quick lime, the size of the fist; wrap it round with a well wetted cloth or flannel; then, to prevent its wetting the bed, with a dry one doubled in folds. One may be placed on each side, and one at the feet, and when sweating is fully established, they may be withdrawn. Hot fluids or increased covering is unnecessary. (Dr. Serre, p. 140.)

**MERCURY, Mode of Administering to Children.**—Smear a drachm or more of strong mercurial ointment on a flannel roller, and apply it not very tight, round the knee. Repeat it daily. The motions of the child produce the necessary friction. (Sir B. Brodie, p. 133.)

PRACTICAL OBSERVATIONS ON THE  
HOMŒOPATHIC PRACTICE.

BY DR. GUINNESS, DUBLIN.

*Pleurœpneumonia.*

On Friday, the 2d of October, 1846, Miss A. D. of Beaumont, aged thirteen, was attacked with shivering, headache, and other febrile symptoms, for which I gave her

R Tinct. Aconiti, 3. gtt. iii.

Aque, § iv. M.

A tablespoonful every second hour.

And at bedtime one dose of Belladonna, 3.

She was so much better the next day, that I found her up and dressed, and she begged to be allowed to go down to the drawing-room being exposed to a draught of cold air that evening, all her former symptoms returned, and her mother continued the medicine as above; and on Monday, the 5th, eight o'clock at night, her cough and fever became so much worse that I again was sent for. I found her lying on her right side, her face and eyes very red, her skin in general burning, but particularly over chest and abdomen; raving at times; headache; incessant, dry, hacking cough; the least stir increased it; shooting pains through the chest occasionally, when coughing, and pains in right side; pulse 130 full; her breathing oppressed and short, particularly when sleeping, which is much disturbed by the cough; bowels confined; urine very turbid. Physical signs: dullness on percussion well marked over the posterior and inferior part of right lung, as far as spine of scapula; bronchial respiration, and absence of vesicular murmur. Ordered

R Tinct. Bryoniæ, 3. gtt. iii.

Aque, § iii. M.

A teaspoonful at once, followed in an hour after with

Tinct. Aconiti, 3 gtt. iii.

Aque, § iii. M.

These medicines to be repeated alternately during the night.

*Tuesday morning, 6th October.*—Her medicine had been given regularly every hour, as she was so much disturbed by the cough; skin much cooler; pulse reduced 30 beats; countenance more natural; eyes and face not nearly so red; cough looser, but she gets up very little expectoration, and swallows it immediately: urine and bowels as last night. Physical signs not altered. The Tinct. Bryoniæ, 3., and Tinctura Aconiti, 3, to be continued, but at intervals of two hours.

*Wednesday morning, 7th*—Passed a much better night; slept for two or three hours at a time; pulse 90; cough looser, and not so

troublesome; pain in side nearly gone; feels stronger. She has taken of late only cold water, whey, or barley water; urine still turbid; bowels not moved, but she has no uneasiness; directed an enema of warm water if she felt uneasy. Omit Tinct. Aconiti. Continue Bryonia, 3, every third hour.

*Thursday, 8th.*—Passed a much better night; slept for three or four hours at a time; no febrile symptom: physical symptoms much as before, but there are occasional mucous râles, and at times I thought I observed some moist crepitus. To continue Bryonia 3, as before.

*Friday morning, 9th.*—The fourth morning of treatment for pneumonia, but a week since the rigor. Finding that though she was improved, still the physical signs remained pretty much the same, I gave her

Tinct. Phosph., 3. gtt. iii.

Aque, § iii. M.

A tablespoonful every third hour. The Bryonia to be discontinued, and to get a little weak chicken broth.

*Saturday morning, 10th.*—Fifth day of treatment for pneumonia; slept nearly seven hours without awaking; feels quite well; on examining the posterior part of the right lung, I was much gratified to find that the sound was much clearer on percussion, and there was a distinct moist crepitating râle, with some mucous râles; no pain in the chest; bowels had been well moved without enema; urine nearly natural; pulse 84. To continue Phosphorus every four hours, and to sit up for a little time, and to have bed tea.

*Sunday, 11th.*—Is up and able to walk about the room; feels strong; pulse 70; to move into the drawing-room. Chicken for dinner. Continue Phosphorus three or four times in the day.

*Tuesday, 13th.*—My little patient was well; there was a slight itchy eruption in one of her hands and feet. Sulphur, third trituration in water. A spoonful three times daily.

This case is interesting, as, although the febrile symptoms and cough were quite subdued by the Bryon. and Aconite, still the physical signs never gave way, until I gave her Phosph.; and it is an additional proof of the truth of Dr. Fleischmann's remark, viz: "I have been quite convinced, by the experience of many years, that pneumonia is cured by no medicine so rapidly and certainly without any other aid, as with Phosphorus; and I am inclined to believe that a pneumonia which Phosphorus does not cure is, as yet, incurable by the Homœopathic method."

SCROFULOUS OPHTHALMIA.

June 30th, 1846.—John Quays, county

Meath, three years old, had been ill with this disease twelve months; various remedies had been tried by different physicians without success. He was led into my study with his head much bent forward, as he could not bear the least ray of light. I found it quite impossible to raise the eyelids, which were puffed, and a quantity of hot tears were running from his eyes, also much purulent matter, his face was swollen, pale and unhealthy-looking, his abdomen very large, he was weak in his limbs, and his appetite bad; he was also very low in spirits, and wished to sit in the dark by himself; he had an eruption on his legs. Ordered.

R Tinct. Sulph., 30. gl. xx.

Aquæ, ʒ xii. M.

A tablespoonful three times daily.

The following week the child was brought again, his eyes were open, he was much more lively, the eruption was going off, and altogether he was much improved.

R Tinct. Sulph., 30. gl. xx.

Aquæ, ʒ xii. M.

A tablespoonful three times daily.

July 9th.—Still continues improving.

R Tinct. Calcar., 30. gl. xx.

Aquæ, ʒ xii.

A tablespoonful three times daily.

21st.—Getting quite well.

R Tinct. Sulph., 30 gl. xx.

Aquæ, ʒ xii. M.

A tablespoonful three times daily.

August 4th.

R Tinct. Calcar., 30. gl. xx.

Aquæ, ʒ xii.

A tablespoonful three times daily.

12th.—His father came up from the county of Meath for him, and was surprised at the great improvement, as he stated that he had been at much expense paying for medicine and advice, without deriving any benefit. I ordered him to take him home to the country.

#### HERNIA HUMORALIS.

On the 8th of September, John Bell, from the county of Monaghan, applied to me for relief. Two months before he contracted gonorrhœa in England; this was quite checked by medicine he had been taking (I believe Copaiba). He now complains of much pain in the left testicle, and a distressing dragging sensation in his side; the testicle is a good deal swollen and tense, and painful to the touch. He cannot sleep at night.

Tinct. Pulsatillæ, 6.

A few globules dissolved in eight ounces of water.—A tablespoonful three times daily.

September 10th.—Pain much less, testicle not so much swollen, pain in side relieved, slept better, and there is now some discharge from urethra.

Tinct. Clematis, 3. gl. xii.

Aquæ, ʒ vi.

A spoonful three times daily.

12th.—Continues to improve.

Tinct. Clematis, 3. gl. xii.

Aquæ, ʒ vi.

A spoonful three times daily.

15th.—Improving still. More discharge from urethra.

Tinct. Merc. Sol., 5. gl. xii.

Aquæ, ʒ vi.

A spoonful three times daily.

18th.—Swelling of testicle nearly gone.

Tinct. Merc. Sol., 5. gl. xii.

Aquæ, ʒ vi.

A spoonful three times daily.

18th.—Swelling of testicle nearly gone.

Continue Mercury:

21st.—He is almost well.

Sulph., 30.

Three times daily.

29th.—Slight running from urethra; swelling all gone long since.

Nitric Ac., 30.

He went home quite well.

#### HEMORRHOIDS.

September 30th.—John Byrne, of Raheny, aged forty-two, has suffered from piles constantly for fourteen years, frequently passing blood; has severe burning sensation, with tenesmus; habitual constipation; has taken much medicine, and consulted a great many physicians, without deriving much benefit; for the last two years has been in constant suffering.

Tinct. Arsen., 3. gl. xii.

Aquæ, ʒ vi.

A tablespoonful night and morning.

October 5th.—Bowels had been much more free; he has passed no blood for three days, and feels much better.

Tinct. Arsen., 3. gl. xii.

Aquæ, ʒ vi.

A tablespoonful night and morning.

9th.—Bowels quite regular; no appearance of blood since; tenesmus gone; "has not been so well for nearly two years;" his appetite and strength improved.

Tinct. Arsen., 3.

Only to be taken at bedtime.

14th.—Continues quite well.

Tinct. Sulph., 30.

A tablespoonful night and morning.

19th.—Is quite well; expresses himself most thankful.

Tinct. Sulph., 30.

A tablespoonful night and morning.

This case attracted the notice of the physicians under whose care it had been previously.

September 23d.—Mary Welch, of Doney-

carney, aged 18. This young woman had been ill about three months; had been ordered aperients by the physician of her parish without relief, further than acting on the bowels; her bowels were not moved often for a fortnight, unless by purgatives; she has a constant sensation of "beating" in her head and vertigo, and these symptoms are sometimes so bad that she is forced to go to bed; menstruation irregular; great pain in her back. Is suffering much from piles.

Tinct. Nucis vomicæ, 3. gl. xii.

Aquæ, § vi.

A dessert spoonful three times daily.

30th.—Bowels have been regular since; piles much better; her tongue is foul, and he complains of sickness of the stomach.

Tinct. Pulsatillæ, 6.

To be taken three times daily.

October 7th.—Piles quite gone; stomach and bowels well; still has much pain in head, and dimness of sight occasionally.

Tinct. Belladonnæ, 3.

When she feels the pain coming on.

14th.—After taking the last medicine two or three times, she felt no further uneasiness of head and sight; expects a change soon; in other respects she is quite well.

Tinct. Pulsatillæ, 6.

To be taken three times daily.

Shortly after this I was told she was in perfect health.

August 10th.—Mrs. Masterman, Raheny, has been suffering from piles, with much bleeding and pain occasionally, for twenty-seven years. Complains of much weakness and constipation.

R Tinct. Arsen., 3.

To be taken three times daily.

12th.—Some improvement, but still has tenesmus and blood.

R Tinct. Merc. Sol., 5.

To be taken three times daily.

16th.—Tenesmus and blood gone; bowels moved once daily; feels much better; piles nearly gone.

R Sulph. 30.

To be taken night and morning. Cured.

November, 27th.—She has remained in perfect health.

August 3d.—Ann Cooney, aged thirty-five, has had piles for thirteen years. Constant sensation of sickness and load in stomach, much worse after eating; epigastric region tender on pressure; bowels generally confined; pulse, sixty.

R Tinct. Nucis vom. 3. gl. xx.

Aquæ § viii. M.

A tablespoonful to be taken three times daily.

18th.—The report is, that the piles are quite relieved, and her stomach much better.

R Tinct. Sulph. 18. gl. xx.

Aquæ § viii. M.

A spoonful to be taken night and morning, Cured her.

August 13th.—F. Martin, a laborer, was unable to leave his bed, the piles protruded so much; they were very dark and tense; they bled a great deal, and the pain was very severe; bowels costive.

The same treatment as in Cooney's case was adopted; on the 18th he was much better, and I gave Sulph. 18; on the 20th he was at his work, quite well.

#### GLOSSITIS.

P. Fitzsimmons, a carman, aged forty, on 10th June, 1846, had a severe rigor, followed by painful swelling of the tongue and throat. I did not see him until the 11th, about twenty-four hours after the rigor: the whole tongue was then enormously swollen; it nearly filled the cavity of the mouth, so that it was quite impossible to see the throat; but the tonsils externally felt enlarged, and were painful to the touch; his face very red and swollen, headache, pulse 100, full. On asking him could he swallow, he shook his head, and endeavored to mutter that he could not. His wife stated that when he attempted it, it seemed to give him great pain. Pressure on the tongue with a spoon gave much pain, and the surface of it, as far as I could see, was coated white; but the point and edges, and inferior surface, were deep red, glossy, tense, and shining. His skin was burning hot, and he had passed a very restless night. I explained to him that he must endeavor to swallow a teaspoonful of the bottle I was going to give, regularly every hour; and it was not without much difficulty and pain that he succeeded in doing so.

R Tinct. Bellad. 3. gtts. iv.

Aquæ § ii. M.

A teaspoonful to be taken at once, to be followed in an hour after with a teaspoonful of the following, and so on alternately:—

R Tinct. Merc. Sol. 5. gtts. v.

Aquæ § ii. M.

Ten o'clock, P. M.—Twelve hours since I saw him: pulse 84, face less red, swallows better, and speaks rather better. To continue the medicines alternately every second hour during the night, should he be awake. Next morning I found the swelling greatly reduced, the tongue was less red and painful, and he could swallow and speak much better, the medicines to be continued alternately every third hour. On the next morning, forty-eight hours since I first saw him, the swelling was almost completely gone, and he could speak and swallow nearly as well as before his illness: pulse 76, natural; appetite good; slept well. He was able to go to his work in a day or two, and expressed himself truly grate-

ful for the very rapid cure of his most distressing complaint.

I had a similar case some months before, treated exactly in the same way, which recovered as rapidly. I also had two cases of the same disease before I knew Homœopathy: in one case, after adopting the usual antiphlogistic treatment, I was obliged to make a deep incision into the tongue, and the patient recovered. This practice is strongly recommended by some French surgeons, particularly De La Malle, in the fifth volume, quarto, of the *Mém. de l'Acad. de Chirurgie*. It also appears that many patients have been saved from suffocation by making deep incisions, notwithstanding the antiphlogistic treatment adopted; and yet, in the two last cases I treated, I was enabled, in a very few hours, by the use of *Beladonna* and *Mercury*, to reduce the severe inflammation of the tongue, thus saving my patients the painful operation of cutting into the tongue. The other case, treated Allopathically by me (that is, before I studied Homœopathy,) I sent into a Hospital; finding that the disease spread so rapidly, and the man was becoming insensible, I wished for further advice.

#### PLACENTA PRÆVIA.

TO THE EDITOR OF THE LANCET :

Sir,—I beg to submit to your disposal the following case, which I consider both interesting and important, as it tends in some degree to elucidate the correct treatment of placenta prævia, which has lately been the subject of much controversy among obstetricians. On Monday, Dec. 7th, I was requested to see Mrs. T—, aged twenty-nine, the mother of three children, and who stated that she was at full period of utero-gestation. I found that she complained of slight pains in the back, accom-

panied by rather profuse discharges of blood, which she attributed to some unusual bodily exertion, to which she had been subjected on the previous day. I therefore enjoined rest in the recumbent position, and prescribed small doses of the tincture of opium with diluted sulphuric acid. On the following day, I ascertained that there had been but slight returns of the hæmorrhage and very little pain. She continued in this state for four days subsequently to my first visit, when I was hastily summoned on the accession of the more active pains of parturition. I found her in rather an exhausted state; there was profuse hæmorrhage, the blood trickling from the bedstead, and the bleeding increased considerably during each succeeding pain. A vaginal examination demonstrated a complete presentation of the placenta, with the os uteri dilated to about the size of a crown piece, and thin and yielding. As the powers of life were evidently on the decline from the hæmorrhage which had occurred, it was evident that no further time was to be lost. I accordingly administered half a drachm of finely powdered ergot in some brandy and water, and proceeded to the extraction of the placenta before the child.

After removing the placenta from the vagina, the hæmorrhage almost entirely ceased, and parturient pains became energetic, the child was expelled, under head presentation, entirely by the natural efforts. The infant was apparently still-born, but was, after a time, resuscitated by the usual expedients. The patient (six days after delivery) is recovering without any unfavorable symptom, with the exception of debility, the natural consequence of the unusual loss of blood. I have sent you the above case as another example in favor of the "new mode" of treating placenta prævia, for which I hope no apology is necessary from—Sir, your obedient servant.

WILLIAM G. CORY.

Cannon-street-road, Dec., 1846.

## HOMŒOPATHIC HOSPITAL REPORTS.

## REPORT OF THE HOSPITALS OF THE SISTERS OF CHARITY AT LINZ AND KREMSIER.

## LINZ HOSPITAL.

From the 1st January till the end of December, 1846.

| NAMES OF DISEASES.                                        | Rm'g fr'm 1844. | Admitted. | Cured. | Improved. | Uncured. | Died. | Remaining. | NAMES OF DISEASES.                           | Rm'g fr'm 1844. | Admitted. | Cured. | Improved. | Uncured. | Died. | Remaining. |
|-----------------------------------------------------------|-----------------|-----------|--------|-----------|----------|-------|------------|----------------------------------------------|-----------------|-----------|--------|-----------|----------|-------|------------|
| Abcess.....                                               | 1               | 4         | 5      |           |          |       |            | Brought forward.....                         | 17              | 310       | 296    | 7         | 2        | 8     | 14         |
| Anasarca.....                                             | 1               | 2         | 1      |           |          | 1     |            | Furuncul.....                                | 1               | 1         | 1      |           |          |       |            |
| Amenorrhœa.....                                           | 1               | 5         | 5      |           |          |       |            | Gangrene of throat.....                      | 1               | 1         |        |           |          |       |            |
| Apoplexy.....                                             | 1               | 1         | 1      |           |          |       |            | Gout.....                                    | 2               | 4         | 1      | 1         | 2        |       | 2          |
| Ascites.....                                              | 1               | 1         |        |           |          |       |            | Headache, nervous.....                       | 1               | 1         | 1      |           |          |       |            |
| Arthritis rheumatic.....                                  | 2               | 3         | 10     |           |          |       |            | rheumatic.....                               | 12              | 11        |        |           |          |       | 1          |
| Aortitis.....                                             | 2               | 1         | 1      |           |          |       |            | Hysteria.....                                | 1               | 3         | 4      |           |          |       |            |
| chronic.....                                              | 1               | 1         | 1      |           |          |       |            | Hernia, incarcerated.....                    | 1               | 1         |        |           |          | 1     |            |
| Bronchitis.....                                           | 1               | 1         | 1      |           |          |       |            | Hepatitis.....                               | 1               | 1         | 1      |           |          |       |            |
| chronic.....                                              | 1               | 1         | 1      |           |          |       |            | chronic.....                                 | 1               | 1         | 1      |           |          |       |            |
| Burns.....                                                | 3               | 3         | 3      |           |          |       |            | Hemiplegia.....                              | 1               | 1         | 1      |           |          |       |            |
| Caries of bones.....                                      | 1               | 1         | 1      |           |          |       |            | Hæmoptysis.....                              | 4               | 4         |        |           |          |       |            |
| Catarrh of the bowels.....                                | 2               | 2         | 2      |           |          |       |            | Heart disease, organic.....                  | 16              | 11        | 11     | 2         | 1        |       | 2          |
| of the lungs, acute.....                                  | 11              | 11        |        |           |          |       |            | Hemeralopia.....                             | 1               | 1         |        |           |          |       |            |
| chronic.....                                              | 4               | 4         |        |           |          |       |            | Inflammation of the nasal mem-<br>brane..... | 2               | 1         | 1      |           |          |       |            |
| emphyse-<br>matic.....                                    | 1               | 3         | 4      |           |          |       |            | of gums.....                                 | 1               | 1         |        |           |          |       |            |
| of the stomach.....                                       | 3               | 3         |        |           |          |       |            | of knee joint.....                           | 1               | 1         |        |           |          |       |            |
| Cancer of the uterus.....                                 | 2               | 1         | 1      |           |          |       |            | of vertebra.....                             | 1               | 1         |        |           |          |       |            |
| of the stomach.....                                       | 1               | 1         | 1      |           |          |       |            | Jaundice.....                                | 7               | 5         |        |           | 1        | 1     |            |
| Cerebral irritation.....                                  | 1               | 1         |        |           |          |       |            | Influenza.....                               | 1               | 1         |        |           |          |       |            |
| Chlorosis.....                                            | 8               | 7         |        |           |          |       |            | Lentitis.....                                | 1               | 1         | 1      |           |          |       |            |
| Colic.....                                                | 1               | 1         |        |           |          |       |            | Leucorrhœa.....                              | 1               | 1         |        |           |          |       | 1          |
| gastric.....                                              | 5               | 4         |        |           |          |       |            | Mammitis.....                                | 1               | 1         |        |           |          |       |            |
| menstrual.....                                            | 3               | 3         |        |           |          |       |            | Melancholia.....                             | 1               | 1         | 1      |           |          |       |            |
| nervous.....                                              | 1               | 1         |        |           |          |       |            | Medullary sarcoma of the liver.....          | 1               | 1         |        |           |          |       | 1          |
| rheumatic.....                                            | 9               | 9         |        |           |          |       |            | Menorrhagia.....                             | 1               | 1         |        |           |          |       |            |
| painters'.....                                            | 1               | 1         |        |           |          |       |            | Myelitis.....                                | 1               | 1         |        |           |          |       |            |
| Concussion of the brain.....                              | 2               | 2         |        |           |          |       |            | Old age.....                                 | 1               | 2         |        |           |          | 3     |            |
| spinal cord.....                                          | 1               | 1         |        |           |          |       |            | Ophthalmia rheumatic.....                    | 4               | 4         |        |           |          |       |            |
| Contusions.....                                           | 12              | 11        |        |           |          |       |            | scrofulous.....                              | 1               | 2         | 3      |           |          |       |            |
| Convulsions.....                                          | 2               | 2         |        |           |          |       |            | Otitis.....                                  | 2               | 1         |        |           |          |       | 1          |
| Coxalgia.....                                             | 1               | 1         |        |           |          |       |            | Edema, general.....                          | 1               | 1         |        |           |          |       | 1          |
| Congestion of lungs.....                                  | 1               | 1         |        |           |          |       |            | Pemphigus.....                               | 1               | 1         |        |           |          |       |            |
| Cramp of stomach.....                                     | 8               | 8         |        |           |          |       |            | Peritonitis.....                             | 5               | 5         |        |           |          |       |            |
| Cynanche tonsillaris.....                                 | 15              | 15        |        |           |          |       |            | traumatic.....                               | 1               | 1         | 1      |           |          |       |            |
| Desquamation of skin.....                                 | 1               | 1         |        |           |          |       |            | Parotitis.....                               | 3               | 3         |        |           |          |       |            |
| Dissolution of the fluids (Auflö-<br>sung der Säfte)..... | 1               | 1         |        |           |          |       |            | Phlebitis.....                               | 1               | 1         |        |           |          |       |            |
| Dislocation of the shoulder joint.....                    | 1               | 1         |        |           |          |       |            | Pleuritis.....                               | 1               | 7         | 7      |           |          |       | 1          |
| Diarrhœa.....                                             | 14              | 13        |        |           |          |       |            | chronic.....                                 | 1               | 1         |        |           |          |       |            |
| catarrhal.....                                            | 1               | 1         |        |           |          |       |            | and pneumonia.....                           | 1               | 1         |        |           |          |       |            |
| chronic.....                                              | 2               | 2         |        |           |          |       |            | Pneumonia.....                               | 14              | 14        |        |           |          |       |            |
| Dropsy, general.....                                      | 1               | 2         | 1      |           |          | 2     |            | and cystitis.....                            | 1               | 1         |        |           |          |       |            |
| Dysentery.....                                            | 2               | 3         | 5      |           |          |       |            | Purpura.....                                 | 2               | 2         |        |           |          |       |            |
| Diabetes.....                                             | 1               | 1         |        |           |          |       |            | Panaritium.....                              | 1               | 1         |        |           |          |       |            |
| Encephalitis.....                                         | 1               | 1         |        |           |          |       |            | Photophobia, scrofulous.....                 | 2               | 2         |        |           |          |       |            |
| Endocarditis.....                                         | 2               | 15        | 15     |           |          |       |            | Paralysis of spine.....                      | 2               | 1         | 1      | 2         | 1        |       |            |
| Entropium.....                                            | 1               | 1         |        |           |          |       |            | Pleuritic effusion.....                      | 4               | 1         |        |           |          |       | 1          |
| Empyema, and purulent effu-<br>sion into pericardium..... | 1               | 1         |        |           |          |       |            | Prolapsus iridis.....                        | 1               | 1         |        |           |          |       | 1          |
| Erysipelas of foot.....                                   | 8               | 6         |        |           |          |       |            | uteri.....                                   | 1               | 1         |        |           |          |       |            |
| of face.....                                              | 6               | 6         |        |           |          |       |            | Rheumatism, acute.....                       | 1               | 42        | 42     |           |          |       | 1          |
| Fever, catarrhal.....                                     | 5               | 5         |        |           |          |       |            | chronic.....                                 | 5               | 4         | 1      |           |          |       |            |
| inflammatory.....                                         | 2               | 2         |        |           |          |       |            | of the nerves.....                           | 1               | 1         |        |           |          |       |            |
| gastric.....                                              | 2               | 29        | 31     |           |          |       |            | Rheumatic palsy.....                         | 1               | 1         |        |           |          |       |            |
| intermittent.....                                         | 41              | 40        |        |           |          |       |            | Scorbutus.....                               | 1               | 1         | 1      |           |          |       | 1          |
| rheumatic.....                                            | 1               | 45        | 44     |           |          |       |            | Scrofula.....                                | 1               | 1         |        |           |          |       |            |
| Frozen limbs.....                                         | 6               | 5         |        |           |          |       |            | Splenitis.....                               | 2               | 2         |        |           |          |       |            |
|                                                           |                 |           |        |           |          |       |            | Spasms, hysteric.....                        | 1               | 1         |        |           |          |       |            |
|                                                           |                 |           |        |           |          |       |            | Spasmodic cough.....                         | 1               | 1         |        |           |          |       |            |
| Carried forward.....                                      | 17              | 310       | 296    | 7         | 2        | 8     | 14         | Carried forward.....                         | 27              | 489       | 436    | 27        | 10       | 15    | 24         |



## LINZ HOSPITAL—(Continued).

| NAMES OF DISEASES.                             | Rm'g fr'm 1844. | Admitted. | Cured. | Improved. | Uncured. | Died. | Remaining. | NAMES OF DISEASES.                     | Rm'g fr'm 1844. | Admitted. | Cured. | Improved. | Uncured. | Died. | Remaining. |
|------------------------------------------------|-----------------|-----------|--------|-----------|----------|-------|------------|----------------------------------------|-----------------|-----------|--------|-----------|----------|-------|------------|
| Brought forward.....                           | 27              | 489       | 436    | 27        | 10       | 19    | 24         | Brought forward.....                   | 27              | 515       | 455    | 29        | 12       | 19    | 27         |
| Strangury.....                                 | 2               | 2         | 2      | 2         | 2        | 2     | 2          | Tuberculosis of lungs.....             | 1               | 1         | 1      | 1         | 1        | 1     | 1          |
| Swelling of the cheek.....                     | 6               | 6         | 6      | 6         | 6        | 6     | 6          | Tuberculous disease of intestines..... | 1               | 1         | 1      | 1         | 1        | 1     | 1          |
| of the axillary gland }<br>inflammatory..... } | 1               | 1         | 1      | 1         | 1        | 1     | 1          | disease of lungs }<br>(Phthisis..... } | 3               | 20        | 11     | 1         | 7        | 4     |            |
| of the gums.....                               | 2               | 2         | 2      | 2         | 2        | 2     | 2          | Typhus.....                            | 4               | 57        | 48     | 1         | 7        | 5     | 2          |
| of the knee joint, gouty                       | 2               | 2         | 2      | 2         | 2        | 2     | 2          | Ulcers, indolent.....                  | 2               | 15        | 14     | 1         | 1        | 2     | 2          |
| of the inguinal glands, syphilitic             | 1               | 1         | 1      | 1         | 1        | 1     | 1          | of stomach, perforating.....           | 1               | 1         | 1      | 1         | 1        | 1     | 1          |
| of the lower jaw, inflammatory..... }          | 2               | 2         | 2      | 2         | 2        | 2     | 2          | scrofulous.....                        | 1               | 1         | 1      | 1         | 1        | 1     | 1          |
| Scabies.....                                   | 1               | 1         | 1      | 1         | 1        | 1     | 1          | Ulcers, syphilitic.....                | 1               | 1         | 1      | 1         | 1        | 1     | 1          |
| Scarlatina.....                                | 3               | 3         | 3      | 3         | 3        | 3     | 3          | Vomiting, chronic.....                 | 1               | 1         | 1      | 1         | 1        | 1     | 1          |
| Sprain.....                                    | 1               | 1         | 1      | 1         | 1        | 1     | 1          | with purging.....                      | 2               | 2         | 2      | 2         | 2        | 2     | 2          |
| Tinea capitis.....                             | 4               | 4         | 4      | 4         | 4        | 4     | 4          | Wounds.....                            | 1               | 2         | 3      | 3         | 3        | 3     | 3          |
| Carried forward.....                           | 27              | 515       | 455    | 29        | 12       | 19    | 27         | Zona.....                              | 1               | 1         | 1      | 1         | 1        | 1     | 1          |
|                                                |                 |           |        |           |          |       |            | Total.....                             | 38              | 616       | 524    | 40        | 17       | 35    | 39         |

The number of patients who attended the Dispensary in 1845 was 3868.

DR. REISS, Ordinary Physician.

K. PLENINGER, District Surgeon, &c., &c.

## THE KREMSIER HOSPITAL.

From the 12th of October, 1845, till the end of April, 1846.

| NAMES OF DISEASES.                | Admitted. | Cured. | Improved. | Uncured. | Died. | Remaining. | NAMES OF DISEASES.         | Admitted. | Cured. | Improved. | Uncured. | Died. | Remaining. |
|-----------------------------------|-----------|--------|-----------|----------|-------|------------|----------------------------|-----------|--------|-----------|----------|-------|------------|
| Abcess, lymphatic, of breast..... | 1         | 1      | 1         | 1        | 1     | 1          | Brought forward.....       | 132       | 108    | 7         | 3        | 5     | 11         |
| Ascites.....                      | 1         | 1      | 1         | 1        | 1     | 1          | Gastric irritation.....    | 10        | 10     | 1         | 1        | 1     | 1          |
| Aneurism of aorta.....            | 1         | 1      | 1         | 1        | 1     | 1          | Herpetic eruption.....     | 2         | 1      | 1         | 1        | 1     | 1          |
| Arthritis.....                    | 2         | 2      | 2         | 2        | 2     | 2          | Hæmaturia.....             | 2         | 1      | 1         | 1        | 1     | 1          |
| Anasarca.....                     | 1         | 1      | 1         | 1        | 1     | 1          | Hæmoptysis.....            | 4         | 2      | 1         | 1        | 1     | 1          |
| Anomalous menstruation.....       | 1         | 1      | 1         | 1        | 1     | 1          | Hæmorrhage.....            | 1         | 1      | 1         | 1        | 1     | 1          |
| Bronchitis.....                   | 1         | 1      | 1         | 1        | 1     | 1          | Hepatitis.....             | 1         | 1      | 1         | 1        | 1     | 1          |
| Cataract, incipient.....          | 2         | 2      | 2         | 2        | 2     | 2          | Hemiplegia.....            | 1         | 1      | 1         | 1        | 1     | 1          |
| Cough, acute.....                 | 3         | 3      | 3         | 3        | 3     | 3          | Incontinence of urine..... | 1         | 1      | 1         | 1        | 1     | 1          |
| chronic.....                      | 10        | 7      | 3         | 3        | 3     | 3          | Leucorrhœa.....            | 1         | 1      | 1         | 1        | 1     | 1          |
| hooping.....                      | 1         | 1      | 1         | 1        | 1     | 1          | Laryngitis.....            | 1         | 1      | 1         | 1        | 1     | 1          |
| Colic, gastric.....               | 1         | 1      | 1         | 1        | 1     | 1          | Ophthalmia.....            | 8         | 6      | 1         | 1        | 1     | 1          |
| Cramp of stomach.....             | 6         | 6      | 6         | 6        | 6     | 6          | scrofulous.....            | 5         | 4      | 1         | 1        | 1     | 1          |
| Concussion of chest.....          | 1         | 1      | 1         | 1        | 1     | 1          | Ovaritis.....              | 1         | 1      | 1         | 1        | 1     | 1          |
| of brain.....                     | 1         | 1      | 1         | 1        | 1     | 1          | Parotitis.....             | 2         | 2      | 2         | 2        | 2     | 2          |
| Cynanche tonsillaris.....         | 12        | 12     | 12        | 12       | 12    | 12         | Pneumonia.....             | 7         | 6      | 1         | 1        | 1     | 1          |
| Disease of heart, organic.....    | 1         | 1      | 1         | 1        | 1     | 1          | Pleuritis.....             | 2         | 2      | 2         | 2        | 2     | 2          |
| Dropsy, general.....              | 3         | 3      | 3         | 3        | 3     | 3          | Phthisis.....              | 1         | 1      | 1         | 1        | 1     | 1          |
| Diarrhœa.....                     | 5         | 5      | 5         | 5        | 5     | 5          | Ptyalism.....              | 2         | 1      | 1         | 1        | 1     | 1          |
| Dropsy of the ovarium.....        | 1         | 1      | 1         | 1        | 1     | 1          | Rheumatism.....            | 3         | 3      | 3         | 3        | 3     | 3          |
| Erysipelas of face.....           | 3         | 3      | 3         | 3        | 3     | 3          | Swelling of the knee.....  | 5         | 1      | 1         | 1        | 1     | 2          |
| of foot.....                      | 3         | 3      | 3         | 3        | 3     | 3          | Speck upon Cornea.....     | 1         | 1      | 1         | 1        | 1     | 1          |
| Epilepsy.....                     | 1         | 1      | 1         | 1        | 1     | 1          | Scrofula, general.....     | 1         | 1      | 1         | 1        | 1     | 1          |
| Fever, typhus.....                | 10        | 9      | 1         | 1        | 1     | 1          | Tetanus, traumatic.....    | 1         | 1      | 1         | 1        | 1     | 1          |
| , mild.....                       | 13        | 12     | 1         | 1        | 1     | 1          | Ulcer of foot.....         | 13        | 11     | 1         | 1        | 1     | 1          |
| , cerebral.....                   | 1         | 1      | 1         | 1        | 1     | 1          | hand.....                  | 2         | 2      | 2         | 2        | 2     | 2          |
| , rheumatic.....                  | 3         | 2      | 2         | 2        | 2     | 2          | lips.....                  | 1         | 1      | 1         | 1        | 1     | 1          |
| , intermittent.....               | 21        | 18     | 1         | 1        | 1     | 1          | back.....                  | 1         | 1      | 1         | 1        | 1     | 1          |
| , gastric.....                    | 17        | 15     | 2         | 2        | 2     | 2          | scrofulous.....            | 2         | 2      | 2         | 2        | 2     | 2          |
| , catarrhal.....                  | 4         | 4      | 4         | 4        | 4     | 4          | Vomiting, gastric.....     | 3         | 3      | 3         | 3        | 3     | 3          |
| Gout, chronic.....                | 1         | 1      | 1         | 1        | 1     | 1          | Wounds.....                | 2         | 2      | 2         | 2        | 2     | 2          |
| Carried forward.....              | 132       | 108    | 7         | 3        | 5     | 11         | Total.....                 | 219       | 175    | 14        | 6        | 8     | 18         |

DR. SCHWEITZER, Ordinary Physician.

## THREE CURES OF EPILEPSY.

BY DR. STORER, OF BATH.

"People are as free to believe in repeal as in mesmerism. It is treated as a dream, which concerns none but the dreamer."—MR. ALBANY FONBLANQUE, *Examiner*, Nov. 29, 1846. p. 754.\*

To the Editor of the *Zoist*:

SIR,—In forwarding the enclosed cases, I must remark that next in importance to surgical operations without pain, of which your journal affords abundant examples, stands perhaps the cure of epilepsy, so truly distressing to patients and their friends. The long continuance of the attacks, the thorough incapability of pursuing regular employment, and the extreme uncertainty of any known medical means in the shape of medicines, are too well known to need comment. I will not pretend that mesmerism is a specific in epileptic cases, but I do say that what it has already accomplished should at least open the eyes of the medical public and procure it a still greater trial. Yours obediently,

HENRY STORER, M. D.

27 Brock street, Bath, }  
December, 1846. }

Case I.—Charlotte Pearson, 23 years of age, residing at 33 Milk street, Bath, was sent to me in March, 1845, by General White, a gentleman who takes great interest in mesmerism. The account I received from her mother was, that she had suffered from fits for the last three or four years,—that they occurred as frequently as five or six times a week, sometimes as often as to this amount in one day, and so violently that she required two or three persons to hold her; and that she had frequently injured herself during the attacks by falling suddenly against the wall, down the stairs, or into the fireplace.

Up to the very time of my seeing her, she had continued to have these fits. The last was a most severe one, and her fall greatly bruised her face and temple. She had been under the care of a great many medical men; amongst others, the late Dr. Barlow, who pronounced her case incurable: and so extreme did I regard it, that I told her friends I could only hope to relieve.

From this period I mesmerized her daily for three weeks, and afterwards three times a week for the same time, together about six

weeks. The results have been as follow. During the first fortnight the fits were as frequent as previously, but not so severe. After the first fortnight they gradually diminished in number, and became much less violent. This state of improvement continued until the end of the month. Since that period she has had NO RETURN, NOW ABOVE A YEAR AND A HALF. Her general health is much improved, bodily and intellectually; for she was becoming fatigued. The contrast in her daily pursuits is striking and gratifying. Her mother is a charwoman, and was frequently obliged to give up two or three days a week to attend on her. The mother has since become infirm, and the daughter is now able to go out and earn her own living, and to assist towards the support of her mother.

In the treatment of this case, simple sleep only was produced or sought for. She would remain for a long time quite passive, but could easily be aroused. The only marked sensible effect in her case, was the state of sleep or quiescence which followed during the day. She has been seen here by several parties, who have kindly interested themselves in her behalf, and the results in all respects have afforded the most satisfactory evidence of the good accomplished.

II.—Master Chapman, aged 13, was brought to me by his mother, resident at Primrose Hill, Bath, February 5, 1846. She stated that he had suffered from fits (apparently epileptic), more or less, for the last three years; that the attacks had sometimes continued for many months together, and sometimes returned with little intermission during a whole day, though not so frequently at present, but still he generally had three or four attacks daily; and that he had been under the care of several medical men of Bath, amongst others the late Dr. Barlow, by whom, as well as by the rest, his case had been pronounced hopeless.

Previously to his being brought to me, he had been seen by Dr. Carter of Bath, who adopted mesmerism in his case for about three weeks; but as that gentleman soon afterwards left the place, the treatment was given up.

Just before my being consulted, I was informed that he had several fits, though not quite so severe. I mesmerized him daily for the first fortnight, then three times a week for about two months, and then only twice a week for a month. He continued to improve rapidly; and has had NO RETURN whatever of his fits. During the excessive heat of this summer, he complained of faintness, but this feeling was soon removed by mesmerizing him; and I occasionally mesmerized him during the warm weather.

There were some peculiarities in this

\* Mr. Albany W. Fonblanque surely knows that believers in mesmerism are so "free" that they are vilified in all the English medical journals, and by a host of physicians and surgeons, and newspaper and magazine writers, who, like himself, are totally ignorant of the subject. Surely, too, when cases previously rebellious to art are cured, and torturing operations are rendered painless, some others are concerned as well as the dreaming mesmerists, who effect these blessings.—*Zoist*.



youth's case. At first, when mesmerized, he was quite taciturn; after a short period he became so loquacious that it was with difficulty he could be restrained. He was at times perfectly insensible to pain, so much so, that he had a tooth extracted without sensation, as reported in your last number but one, p. 214; at other times he was so highly sensitive as to be impressible by every external circumstance. He was also at times perfectly clairvoyant. His case was witnessed by a great number of individuals here, and, after the most rigid testing, they have been perfectly satisfied with the reality of the phenomena.

The states of catalepsy and rigidity also varied in this case, sometimes the one, sometimes the other, being extremely well developed.

The most important point in the case, however, is the COMPLETE CESSATION of the fits, and the general improvement, *bodily and intellectually*, which has taken place. So great is this improvement, that he has resumed his school studies, which for three years had been completely interrupted.

III.—As a sequel to these cases, I will now add the outlines of one, which, for the good accomplished, ought to rivet the attention of every conscientious practitioner.

A respectable mechanic, a printer, was seized with epileptic fits about three years since. They continued so long and violently as to compel him to leave his occupation; and himself, his wife, and three children, were obliged to live on three shillings a week received from the Bristol Union. About this period, Mr. Lundie, a lecturer on mesmerism, sought out some extreme cases, and amongst others found that of this poor man, and mesmerized him for about a month. The patient was afterwards occasionally mesmerized by a volunteer, and by myself; and the effects were most striking.

*For the last eighteen months he has had no RETURN whatever of his fits; and, instead of being the recipient of three shillings a week from the Union, he has been enabled to earn for the last eighteen months eighteen shillings a week in an iron factory.*

I should not report this case, as the patient was not my own, but that I can vouch for every particular.

•• How can Mr. Wakley and his coadjutor Dr. Marshall Hall, Sir Benjamin Brodie, Dr. George Burrows, Dr. Chambers, &c., find it in their hearts to read such facts as these and continue to do all in their power to make the world despise mesmerism!—*Zoist*.

## SPEEDY CURES OF VARIOUS LOCAL AFFECTIONS.

BY MISS ELLIOTSON, OF LAUREL LODGE, CHELTENHAM.

[Communicated by Dr. Elliotson.]

"How much more amiable and becoming it would have been, if this lady had unceasingly 'minded her knitting,' instead of bothering her brain about such a subtlety as mesmerism. Enough of her. She (Miss Martineau) has gone to mesmerize Mehemet Ali; but I can easily fancy the old file saying, 'Won't do, Miss Martineau! Egyptian darkness has become enlightenment.' Truly, this is a quacking and miracle-loving age!" Mr. F. S. GARLICK, Medical Practitioner, 5, Chesapeake, Halifax; Nov. 10. 1846.—*Halifax Guardian*.

I have received the following cases from Miss Wallace, whose undaunted practice and defence of mesmerism before all the medical and satanical scoffers of her neighborhood, are beyond all praise.

Such cases appear to me of the highest importance. In the first place, they prove that not merely diseases of the nervous system, as is a common case, but inflammatory and other kinds of affections, yield to mesmerism. In the next place, they prove that mankind have a ready help in their own families in numerous accidents and ailments; more ready than lotions and liniments and plasters and leeches usually are, however excellent these may be. Let not medical men say that their well-established methods would have surpassed the easy mesmeric means employed by Miss Wallace.

### CASES.

I will now detail the cases, in Miss Wallace's own words.

#### I. Inflammation of the Eye.

July 5th, 1846.

Victoria Harmer, aged 8, suffering from an inflamed eye, blood-shot, and having a sty on the eyelid, was cured by mesmerism in a quarter of an hour. The sty, the redness, and the pain, which the child compared to running a needle into her eye, had all *entirely disappeared, and the eye in every respect looked and felt as well as the other*. The child was stated by her mother seldom to be free from this malady for a fortnight together, and sometimes it continued several weeks without intermission. So many weeks have elapsed without any return of the complaint, her mother hopes the cure is radical.

We, the undersigned, were present and witnessed the above cure.

Elizabeth Harmer,  
Sarah Tomlins.

2, Pitville Parade, Aug. 27th.

## II. Inflammation of the Eye.

August 1, 1846.

Harriet Gregory was attacked last January with inflammation of the left eye, attended with great pain both in the eye and over the brow. When I first saw her, the eyelids were swollen, the eyeball blood-shot, and the usual routine of leeching, lotions, fomentations, &c., prescribed by Dr. Alderice and Mr. Hartley, had failed entirely in giving her any relief. Dr. Alderice recommended salivation, to which the patient refused to submit. Harriet Gregory has been unable to remain in service from this severe affliction. When she came to me on the 1st of August, she was suffering under all the symptoms already described. *Half an hour's mesmerizing relieved the pain*, but effected no change in the appearance of the eye. On going into the air, she suddenly felt as if a great weight was removed from the forehead, and found she could bear the light, and look steadily at any object without pain. She returned to tell me of this decided improvement. The next day, the eye was still red, but the pain had only returned over the eyebrow, and this I removed in a few minutes. I did not see her again for three days, when her eye was quite well, and she told me the redness and inflammation had entirely disappeared in the evening of the day I last mesmerized her.

We, the undersigned, witnessed this cure.  
(Signed) Harriet Gregory,  
Sarah Tomlins,  
Esther Harrington.

August 5th.

The second time I mesmerized Harriet Gregory, I observed a speck on the eye, which I privately pointed out to a gentleman present, but did not name to her, as she had not mentioned it. Mrs. Harmer informs me she had shown this speck to her, and they both saw that it was entirely gone after the third mesmerizing.\*

Elizabeth Harmer.

## III. Tooth-ache.

August 11th, 1846.

Harriet Haynes, cook to Mrs. Brooke, of the Aviary, came to me suffering from excruciating tooth-ache, which had deprived her of all rest. I entirely removed the pain in a few minutes by mesmerism.

A day or two after, the pain returned, from

\* Compare the cures of inflammation of the eye in Vol. II., p. 239; Vol. III., pp. 26, 32, 324. For the power of mesmerism over inflammation in general, see Vol. III., p. 612, and the remarks in it.

exposure to cold, accompanied by swelling in the cheek, which drew the mouth and eyelids on one side. In a few minutes, the pain and swelling were entirely gone, and the mouth and eyelids restored to their usual position.\*

(Signed)

Harriet Haynes,  
A. E. Andrews,  
A. M. Brooke.

August 28th.

## IV. Severe Head-aches.

August 17th, 1846.

Elizabeth Wakeley,† aged 28, suffered from most violent head-aches, for ten years, and was in great pain in her head when she came to me, and had a feasted breast. I mesmerized her, and she went away in twenty minutes perfectly relieved from all suffering, and remains quite well up to the present time.

Catherine Wakeley, her mark, x  
As witness, Mary Ann Williams.

August 28th.

## V. Severe Rheumatic Pains.

John House, butler to Mrs. Brooke, suffered violent pain in his shoulder, from rheumatism; was unable to use his arm or work for two days. I mesmerized him: all pain was removed, and the free use of his arm restored, in about twenty minutes. The next evening much rain fell, and the pain returned in his knee; but I again succeeded in removing it, and he is now able to do his work.

John House,  
A. M. Brooke.

The Aviary, Cheltenham, August 27th.

## VI. Tooth-ache.

August 18th, 1846.

Mary Ann Phillips, suffering from distracting tooth-ache, was quite cured by half an hour's mesmeric sleep.

Mary Ann Phillips.

August 27th.

## VII. Severe Pain from a Fall.

August 26th, 1846.

Richard Phillips, living at No. 8, St. James's street, aged 60, fell from a ladder and hurt the whole left side, particularly the shoulder,

\* Compare Vol. III., p. 514, for a similar rapid cure, by a personage as high in the church as in literature and philosophy.—J. E.

† Mr. Wakley formerly spelt his name thus. Like the rest of his Gloucestershire and Somersetshire relations; but we always adopt his present spelling. We have old lists in which his name is so spelt. Why he dashed out the first s several years ago, we know not.—Zeist.

so severely, that he could not be moved without suffering agony.

I found him lying on his back, groaning with pain, attended by Mr. Heally, of the hospital, without any good results.

The slightest touch on shoulder, head, or foot, caused such acute suffering, that I was obliged to give up the idea of having him moved off his back as I wished, in order to apply local mesmerism over the injured parts. I therefore proceeded to make long passes from head to foot, and in about twenty minutes he was able to raise, and freely use, his arms, and shortly after he turned on his side, merely taking hold of his wife's hand. I left him free from pain, and the catching that affected his breathing was also removed.

On returning the next day, he met me at the door, expressed his warmest gratitude for his cure, and told me that shortly after I left him, he was able to rise from his bed, and sit up two hours; and came down stairs next morning, feeling no pain beyond tenderness in the shoulder. Two days after, he resumed his work as a gardener.

I remarked in this case, as in almost all others, that though the patient could not suffer the slightest touch from any other person, the pressure from my hand gave relief in place of pain. I first noticed this fact three years ago, in a very bad case of sciatica, which I cured; and almost invariably I find it repeated in cases of tic, tooth-ache, rheumatism, &c. &c.

We, the undersigned, testify to the truth of the above cure.

Richard Phillips,  
Mary Phillips,  
M. Phillips,  
C. Haynes.

#### VIII. Inflammation of the Eye.

August 27th, 1846.

James Smith had experienced considerable pain for several days from an inflamed eye, accompanied by a sty on the upper lid. All pain and inflammation was subdued by my vice mesmerizing him. A hard substance still remains, arising, I conclude, from want of perseverance in the use of mesmerism and mesmerized water.

James Smith,  
Avandale House.

#### IX. Inflammation of the Eye.

August.

Sara Phillipps had bad eyes, greatly inflamed, for three months: was quite cured by seven times mesmerizing.

Sara Phillipps, her mark, +  
Anne Phillipps, her mark, +

#### X. Liver Complaint.

Anne Phillipps had, as the doctors said, liver complaint from the age of 7, and is now 12. Suffered great and almost constant pain in her side, which had been much swelled. Had been a dispensary patient for years, and derived no benefit from the remedies prescribed. Never had any pain from the first time she was mesmerized, three weeks ago, and thinks she is now quite cured.

(Signed) Sara and Anne Phillipps.

Both these cases continued well when I left Cheltenham, at the end of October.

#### XI. Scalded Arm.

We, the undersigned, certify that Harriet Haynes scalded herself so severely, that she compared the pain she endured to having her arm "from the shoulder to the end of the fingers thrust into the fire." In the presence of Mrs. Thomas, Miss Wallace entirely removed the pain, leaving little remains of the redness and inflammation that followed the accident; and a complete cure was effected in about three minutes. In the course of a few days, the skin came entirely off the hand and arm, leaving a new skin in its place.

Under ordinary medical treatment, the patient herself, and all who witnessed the accident, feel convinced her sufferings would have been severe and protracted.

Jane Thomas, Pittville Villas;  
Sarah English, 9, Northfield Terrace,  
Mary Ann Williams, } Laurel Lodge,  
Ellen Wallace, }  
John House, }  
Harriet Haynes, } The Aviary.  
Ann Taylor, }

Laurel Lodge, Oct. 8th, 1846.

#### XII. Inflammation of the Eye.

SEPTEMBER 14th, 1846.

Caroline Reeves suffered from violent inflammation of the eye for four years, which terminated in the total loss of the sight of one eye about four months ago. She had consulted Dr. Selwyn, Mr. Cook, Mr. Wright, and Mr. Evans, without deriving any benefit; and when she came to me, she feared she was losing the sight of the other eye. Some of the medical gentlemen said the sight could never be restored, as the nerve of the eye was destroyed: the pupil was nearly covered with a speck, that appeared deeply indented.

After the first mesmerizing, the pain was much subdued; and after the third, all redness and inflammation had disappeared, and

both eyes felt stronger. The fourth mesmerizing enabled her to see a little with the blind eye, and in three days more she read a newspaper by candle-light; and her eyes have now remained well for nearly a month, and every day they appear to be gaining strength. Three weeks before Caroline came to me, she applied to Miss Kirkland for an in-door ticket for the hospital, as she was told that the only chance of saving her remaining eye was getting absolute rest for some time; and, she being a friendless orphan, this could only be obtained by admission into an hospital. Miss Kirkland kindly tried, but without success, to obtain the desired admission for her.

Caroline is servant to Mrs. Olive, fishmonger, High Street, who has been very kind in getting medical advice for her, and sending her regularly to me at much inconvenience to herself.

We, the undersigned, certify the above cure to have been effected as reported.

(Signed)

Caroline Reeves, her mark +  
Mary Ann Williams, Laurel Lodge,  
Annie Andrews, 9, Norwood Terrace,  
E. Turty, Manchester Walk,  
Sarah English, 9, Northfield Terrace,  
S. Baker, Haynes Cottage, Wynchomb st.  
Ellen Wallace, Laurel Lodge.

Mrs. Olive and her daughter expressed their willingness to attest Caroline's restoration to sight, and I left the case for their signatures, but through some neglect it has been sent to me without, and there is not time now to apply for them.

### XIII. Deafness.

Peter Baker, 4 years old, became deaf from cold. At the request of his father I mesmerized him, and he went into so deep a sleep that he was carried home and put to bed without waking; and the next day his hearing was much better.

At the second mesmerizing he walked about the room without awaking, and was quite insensible to the prick of a pin, pinching, &c., and his hearing was entirely restored.

Signed by the father and mother of the child,

Samuel Baker,  
Ann Baker.

Laurel Lodge, Oct., 1846.

### XIV. Pain from a fall, and Scalded Hand.

Mary Bowyer fell down a flight of stairs in the dark, striking her side and back with great force against a projecting window-frame on the landing. When telling me of

the accident next day, she said the shock she received was tremendous, and the bruises were very black, but she hoped they would not signify.

Two days after she told me she greatly feared she had sustained some internal injury, and that the spine was hurt, for every time she came up stairs or drew a deep breath, she felt pain in her back: adding that her fellow-servant assured her he was certain I could cure her, which I did *completely*, by a few minutes' local mesmerism.

About a fortnight afterwards, Mary scalded her hand very severely, and came to me in great agony, having applied flour and ink to her hand, which formed a paste: over this I put some cotton wadding, and after the application of local mesmerism for about ten minutes, to my great surprise she sank into a profound sleep which lasted about two hours, when she awoke perfectly free from pain. Two hours after the pain returned, a consequence of her washing off the ink and flour. I again put her to sleep in a few minutes, and on rousing her in about half an hour, she declared the pain entirely cured; and a very slight redness was all that remained of this serious accident. The next day I sent her in to Dr. Elliotson, who expressed much satisfaction with both the cures. The skin came off her hand very gradually in the course of the following week.

The undersigned witnessed the said and its cure.

Ellen Wallace,  
Samuel Baker,  
Mary Bowyer, her mark +

Kensington, Dec. 7, 1846.

At the termination of these narratives by Miss Wallace, I must tell the medical world, that, however they may sneer, no means which they would have employed could have effected speedier, or so speedy, cures. No disagreeable drugs had to be swallowed: no painful or irksome local measures had to be borne.

When in Switzerland lately, I met that excellent man, the Rev. Mr. Pyne. He told me that his driver, a few days before, fell off the box, and hurt his shoulder and arm so severely that he could not hold his whip or move the limb. Mr. Pyne mesmerized the part, and presently the man was astonished to find he could move the arm freely and hold his whip. Subsequently to this, he met a gentleman with an agonizing tooth-ache. Mr. Pyne said he thought he could benefit him, and in a very short time the gentleman found his pain gone by local mesmerism. Was not this as much as the established medical means would have effected? If the

devil lent his hand invisibly to Mr. Pyne and Miss Wallace, I can only say it was very good of him: and I shall begin to like him.

JOHN ELLIOTSON.

## CURE OF FATUITY, INSANITY, &c. &c.

BY DR. ELLIOTSON.

"John Elliotson, M.D., has labored with all his might to ruin his own prospects, and bring his profession into disrepute. *Sorely has he suffered for the part he has played. His position is irretrievably lost. No man now cares what Dr. Elliotson says or does.*" Mr. F. S. GARLICK, Medical Practitioner, 5 Cheapside, Halifax. Nov. 10, 1846.—*Halifax Guardian*.\*

In November, 1842, Mr. Morgan, Surgeon, of Bedford Row, called upon me to request I would see a poor child whom he had been treating for four months without the least benefit, and in whose case no measures of the ordinary routine of medicine now suggested themselves to him as calculated to be of any use. The mother had heard of the wonderful case and cure of Miss Emma Melhuish, of Bedford Street, opposite the Three Cups Yard, in which she lived, the remarkable and most instructive details of whom are given in the fourth number of *The Zoist*† and had told him that, as her daughter still lay in the most wretched state, not at all improved, and he held out no hopes to her of being able to do any good, she should be thankful if he would go to me and ask me to try to cure the poor child with mesmerism. Mr. Morgan did not fall in a passion at her "ignorance" and "impudence;" he neither "swore" nor "bounced;" neither did he "laugh at her as a fool;" he did not tell her that mesmerism was a "complete humbug," and "wonder she could believe in such nonsense;" he did not tell her that I was a "quack," "a very clever man once, but now a lost man," "mad," and that "nobody now cared what I said;" that "Mr. Wakley had exposed all mesmerists and mesmeric patients, and destroyed mesmerism years ago, for ever;" that I "had been turned out of University College and its Hospital on account of prescribing mesmerism;" that Dr. Forbes had killed mesmerism after Mr. Wakley had killed it, and both would kill it several times yet; that my "prospects"‡ were ruined; that I "was ruined and going to leave England for ever;" that "mesmerism was a most dangerous thing, and persons sometimes could not be awaked again, and that it might cause apoplexy, or,

perhaps, insanity for life;" that "the Okeys are both in lunatic asylums through it;" that "the coma might so overpower the system and produce such a shock, that the system might never rally;" that "if the child was mesmerized, he," though he confessed he could do nothing for it, and was no longer attempting to do anything for it, "would never attend it again;" nor, "should the mother have any more family, that he would not attend her in her confinement, if mesmerism was allowed to enter the house;" all which deliberate falsehoods and threats have come to my knowledge as uttered by modern practitioners of what is absurdly called high standing and of middle standing, royal practitioners, titled practitioners, graduates of English universities, fellows of colleges, hospital physicians, and surgeons, and professors, and teachers, the middle orders taking courage at seeing their superiors act thus; and also by the most miserable distributors of phyaic. He did not say, as the most fashionable physician of the hour did to a baronet, a patient of mine, who consulted him in my absence, on finding that I attended him, "Oh, that gentleman who has always got some crotchet or other: and has now got hold of mesmerism:" and on being then asked if he had ever witnessed a mesmeric case, replied, "No; and nothing shall ever induce me." No; Mr. Morgan immediately called upon me, and made the request, honestly saying, "certain it is that neither myself nor others" (I use the words of a letter subsequently written to me by him) "have produced the least benefit upon a set of symptoms as strange as I ever witnessed, and as difficult, to me at least, to understand or describe."

"In the summer of 1842 (continues his letter) I first saw her, laboring under the following symptoms; constant pain in her head; with difficulty roused to the slightest exertion; bowels obstinately costive; lying for weeks in a semi-comatose state, sometimes crying, again laughing; painfully susceptible to the least noise, at one time almost refusing food, at another ravenous, refusing, however, to eat before any one, but screaming if a basket kept in her bed was not constantly supplied, not with proper food, but cakes of all sorts, jellies, and new bread. Her appearance, pallid in the extreme, and daily wasting away. I tried in vain, in their turns, stimulants, cordials, tonics, local bleeding, purging, blistering, constant cold applications to the head. Some other medical men saw her; I don't know their treatment, but when I was again called in, I was at a loss what to do, and sent for you."

On the 4th of November, 1842, at four o'clock in the afternoon, I accordingly went to see the child. Her name was Sarah Wiltshire: and her age eleven years. The ac-

\* I am not aware of having done anything to offend Mr. Garlick, or even heard of his existence before.

† Vol. I., p. 429.

‡ "God bless the mark!" after being in practice thirty years.

count given by her mother was the following. She herself had been attacked in the mews by a drunken man, who abused her in the grossest manner. The child was terrified, seized with a violent tremor, screamed excessively, and continued to do so. At length her hands became clenched, her jaws locked, and she fell into insensibility which lasted three days; her head working about all the time; and not a particle of food or drink being swallowed. Her sensibility then returned, and she ate voraciously, *lying constantly on her back, moaning, rolling her head, and working her hands: and a fit of screaming and rage took place every hour or two, in which she attempted to bite everybody*; the bowels were never relieved without medicine: and she had also a violent cough, like the barking of a dog.

In this state I now beheld the child. *She could not speak, and had not spoken from the first, and the bowels had not acted for nine days, nor had she SLEPT AN HOUR AT A TIME. She was pale and looked thin, sickly, and fatuous.* She could not even sit up in bed: thus there was extreme general debility, and the greater part of the nervous system was in disorder. She was fatuitous and maniacal; had great excitement of some of the portions of the brain concerned with emotion, and of parts concerned with muscular action.

Finding that aperients, like all other medical means, had failed, and, what was worse, had always aggravated the symptoms, I entreated that no aperients, nor indeed any other drugs, should be given, whatever the length of time the bowels might remain torpid. I have repeatedly seen the cure of St. Vitus's dance thrown back by the use of active purgatives, or by diarrhoea excited by eating improper things while the disease was yielding to iron, with which I have never failed to cure the dysease when I superintended its use myself. Feeble, nervous, and dyspeptic persons suffer exceedingly from similar injudicious treatment, as well as by the prevalent use of mercury; many such patients are the better for habitual action but once every second or third day.

I made long and slow passes at a very short distance from her, from opposite the forehead to opposite her stomach, as she lay. At first she continued moving her head about and away from me, moaning, and very cross, and she never fixed her eyes upon me or anything. But in *twenty minutes she was fast asleep*; her head ceased to roll, and the moaning was no longer heard. On my speaking to her she was roused up, but a repetition of the passes for five minutes, sent her back into sleep as sound as ever, and I left her asleep, silent and motionless. It was now twenty minutes to five, and I desired she might be undisturbed

and allowed to wake spontaneously, and she *slept from that time till two o'clock in the morning*—ABOVE NINE HOURS: she who had not slept one hour together for the previous ten weeks!

Was all this sheer imposture? was her disease imposture? and was the deep trance, the stillness of head and hands, and the silence above nine hours, the result of imagination in this poor violent and fatuitous object? was it Manchester fatigue of her eyes? which were never fixed upon me.

As she lived too far off for my convenience, and out of my usual course of visits, Mr. Wood visited her daily, and continued what I had begun.

Nov. 5th. Sent again to sleep, and left sleepy.

She has not screamed from the time she was mesmerized yesterday; and, though she was left *sleepy* only, *slept* well all night. She is altogether better.

6th. The head was rolling about as usual, but became quiet almost as soon as mesmerization was begun, and she was soon asleep.

7th. *Slept* from the time she was mesmerized yesterday, at 6 o'clock P. M., till 4 in the morning—ten hours: when she awoke for a few minutes, and slept again till 6, making twelve hours. She also slept on her side for the first time since her seizure, four months before—the cough, which had been very troublesome, was also greatly reduced. She had recovered her speech, but it was only to use bad and violent language to all about her, in the fits of frenzy which often seized her. She was mesmerized in the afternoon and left asleep.

8th. She slept from the afternoon of yesterday, till 8 o'clock to-day. During the mesmerization to-day, the cough ceased, she turned on her left side, went to sleep, and was left sleeping. Her bowels acted to-day spontaneously.

9th. She slept from 6 o'clock last evening, till 7 this morning—thirteen hours. She has no cough to-day; is stronger, and decidedly better.

Soon mesmerized to sleep, and left sleeping. The daily report was much the same, till

15th. She had slept all night as usual, except that she woke about 4 o'clock in the morning for a few minutes. She was much improved: but, having had no action of the bowels for seven days, a purgative was given, contrary to my express orders, because I felt convinced its action would be injurious, and that the bowels, if left to nature, would at length act spontaneously. The purgative acted violently, exhausted her, brought back the cough, and intensely aggravated every symptom.

The mesmerization influenced her less ; so that she slept from 4 o'clock in the afternoon till 9 in the evening only ; and not so soundly as before. The fits of screaming returned frequently.

16th. She was sent to sleep, but slept only for an hour after she was left, and has not slept at all since. Her symptoms are much aggravated, and she is much weaker.

I often observe that the effects of causes injurious to health are felt, as in this instance, more afterwards than immediately, or even not at all at first.

17th. Slept for a short time only after she was left asleep : and had no sleep at night.

She is *nearly as bad as before she was mesmerized*.

Mesmerism thus had far less power over her now she was refused. I have often been unable to produce any appreciable effect upon extremely weak persons, even when their complaints were seated in the nervous system, and they were exceedingly nervous. So far is the fancy of uninformed persons incorrect, that mesmerism is the influence of merely a strong person over one less strong. The irritable condition which often attends extreme weakness probably tends to prevent the mesmeric influence. At any rate, weakness does not favor mesmeric susceptibility.

18th. She slept longer last night, and is much stronger.

19 to Dec. 3d. Slept well at night : still improving.

Dec. 10th. Much better : but still rolls her head.

16th. Stronger : spasmodic cough gone.

Jan. 3d. Pretty well. Is able to walk across the room. Will now be mesmerized every other day only.

20th. No symptom but a degree of debility. Will be mesmerized but twice a week.

Feb. 1. Perfectly well : and walks about as usual. To be mesmerized but once a week. *Her bowels always act regularly.*

20th. Mesmerism to be discontinued.

In the autumn, seven months after her cure, she was terrified again by the same man and suffered a relapse ; which, however, was soon removed by mesmerism.

Mr. Morgan wrote to me about Christmas, last year. " You will be pleased to hear she continues quite well ; has all her faculties ; has assisted in teaching in a Sunday school," much to the satisfaction of the lady patronesses. Her mother thinks her quite well, and attributes her return to health to your advice and attention."

Her mother was right : and nothing but the most perverse prejudice or dulness could suggest a doubt upon the point.

Unhappily, after being well nearly three years, she was terrified a third time on the 14th of last June, and suffered another relapse : and the mother herself came to me for assistance. There was some mistake in taking the address of their new abode, and I did not see her for a week. She remained without any improvement all this time, and nothing had been done for her. She was feeble, almost sleepless, fiercely outrageous, after having been sullen for the first three days. The bowels did not act for the first fifteen days, and during that time she lived upon jelly ; they had acted spontaneously, however, before my arrival. She could not sit up in bed ; had fits of insensibility several times a day ; and suffered pain in her head.

I easily sent her, who had been so long nearly sleepless, into a sleep which lasted from four that afternoon till ten the next morning.

I desired the mother to make the passes twice a day just as she saw me do. She followed my directions and regularly produced sleep, which lasted very many hours : and she thus soon cured the child. *Nothing else was done.* The bowels soon became regular ; and I saw the girl on Friday last, December 11, stout and in perfect health, in Three Cups Yard.

It will be observed that when she was asleep, we left her. In a former number I stated that if I had my own way—had no special reason for deviating from a general rule—I *would never wake a patient*.<sup>\*</sup> The longer the sleep, the greater generally the benefit. Still patients in their sleep-waking sometimes tell us that they should sleep only a certain time ; and then we ought always, where there is no delirium, to follow their directions. Without such instructions, we may discover that sleep beyond a certain time does not leave them so well. This is, however, very seldom the case. Sometimes they grow uneasy in their sleep, and it is well to wake them, and generally to send them to sleep again. But if none of these things take place, I should never wish to wake a patient ; nor do I, except for mere convenience, as when they come to my house and I am obliged to go out at a certain hour, or when their avocations will not allow them to sleep beyond a certain time.

*They are sure to wake spontaneously sooner or later*,—as sure as we are from common sleep when we go to bed. An unfounded fear prevails that persons may never wake again from the mesmeric sleep, because it has appeared in the papers that particular patients could not be awakened. We sometimes cannot wake them just when we wish. But if

\* Satan little thought when he was curing her, that this ungrateful return would be made to him.—J. E.

we wait, we are able after a time; and, if we wait still longer, they are sure to wake of their own accord. There was an account of a lad at Deptford who could not be awakened. In his sleep he said he could not be awakened till the next or following day at a certain hour. Nor could he. But at the hour mentioned, he awoke spontaneously; and is well and thriving at this moment.\*

The longer the sleep, the greater usually is the benefit. *Yet patients are every day cured without sleep or any other sensible effect*; so that mesmerism should have an ample trial of many months in every case, although no sleep take place. I have never yet failed of curing St. Vitus's dance: but never yet sent a patient in that disease to sleep. On the other hand, sleep-waking may be readily induced, and endless exquisite phenomena present themselves, and yet no improvement take place. I mesmerized three cases of epilepsy for three years daily, and produced nearly all phenomena short of clairvoyance and sympathy of sensation, and did not cure one of the three.

Generally the more experiments are made with traction, rigidity, &c.; though not always with mesmerized water or metals, and the more cheerful a conversation is carried on, the better.

Generally the deeper the sleep can be made, by breathing, continued passes, laying the fingers over the eyeballs, or the hand upon the head, &c., &c., the greater the good. Not, however, always. I have seen a few patients, who, after they have been mesmerized some weeks or months, suffered if the sleep was made so deep that they could not converse. Some suffer at last if they are mesmerized often: so that those who were at first improved by mesmerism twice a day are the better for having it only once a day; then for having it every other day, and so on. † When no sleep was even induced, but passes made for half an hour with no great sensible effect, I have known them at length produce discomfort if continued as long as at first, and I have been obliged to reduce the time, till at length I made them for only a minute or two, and less and less frequently in the week. A very deep sleep produced by metals or water, or in any other manner, may at length completely overpower the system and greatly exhaust its strength.

It will be observed that this little girl was left asleep. When this can be done, it is a happy circumstance, and we ought always to attempt it the first time. But when it is found that the patient cannot be left by the mesmerizer without distress, we must remain. In some instances this will wear off, especially if others in the mesmeric state are present;

for persons generally become agreeable to each other in the mesmeric state. We ought carefully to ascertain, not only that the patient may be left by us, but that he can allow the presence or proximity of another. If he cannot, and we leave him in charge of some one, great mischief may be occasioned.

JOHN ELLIOTSON.

## FEVER A DISEASE OF THE SPLEEN. (?)

TO THE EDITOR OF THE LANCET.

MORE busied in the "sport of musing" than in the "labor of thought," a sentence in a past number of a contemporary suggests to me the following reflections.

Dr. Williams, of University College Hospital, lecturing on the subject of intermittent fever, in noticing the "poor, impoverished state of the blood," which attends the disease, adds: "It has been a matter of doubt (question?) among physiologists, as well as pathologists, how it is that disease of the spleen so peculiarly produces this anemia" (*Gaz.*, Oct. 24, 1845). In elucidation of this point, I may observe, that it has been long a matter of conviction with me that the spleen is the laboratory of the hæmatosine of the blood. Harvey, indeed, disclosed how the blood is distributed; but philosophers appear very generally to have forgotten to ask themselves whence it is got?—where it is made? The heart pumps, the vessels convey, the lungs aerate, the liver and kidneys deplete, and chyle-milk renovates, the blood; but, *de novo*, where is it generated?—whence is it originally derived?—where is it that the chylous supplies are converted into red globules? Most certainly, to my apprehension, in the passage through the spleen.

There are those with whom it has been a favorite theory that fevers are disease of the blood. I believe that fevers are diseases of the spleen. Of this I think there exists adequate evidence. Of course I do not allude to symptomatic or nervous "fevers." A lesion of the function of the spleen vitiates its products—i. e., vitiates the manufacture of hæmatosine. I have even an idea that the rigors of ague have some relation to a crisis of puruloid secretion in the splenic apparatus—a vitiation of the splenic process of the formation of the red principle. It would not appear difficult to account in this way for the translation of purulous deposits. I have an idea that the production of animal heat takes place whenever and wherever arterial blood becomes venous—viz. in the capillary transit; and that the splenic product, the hæmatosine of the blood, plays as

\* *Zeist*, Vol. 1., p. 472.

† *Zeist*, Vol. 1., p. 436.



important part in the process. If the functions of the spleen, then, be those not only of the generation of new globules, but also of the renovation or regeneration of the old, exhausted, or deteriorated red particles—alike the renovation of the old, and the production of the new material of the elementary constituent of the blood, the hæmatosine, hæmatin, or cruorin,—it is easy to perceive in what way “disease of the spleen so peculiarly produces anæmia.” By the objectionable term “anæmia,” an absence of the red particles, the radical constituent of blood, is properly indicated. In the history of fevers, after a review of the facts which connect fevers with the spleen and the blood, it will not be difficult to come to the conclusion that fevers are diseases of the spleen, in reference to the functions of that organ as the laboratory of the elementary constituent of the blood, the hæmatosine.

I have the honor to be, Sir,  
Your obedient servant,  
B. HAYGARTH.

Hamilton, Nov., 1846.

## ELECTRICITY

Considered as to its distribution throughout our globe, with a theory respecting temperament, and the peculiar influence of climate upon our mental faculties.

BY J. W. LAKE, ESQ., HOLBEACH.

IN a recent communication, I offered some fair ground for the assumption that electricity was identical with the vital or nervous agent. Assuming this identity, then, it will be expected that the human body should exhibit the customary electrical phenomena. I have, however, observed, that man is not an isolated being, but that he is intimately, though mysteriously, connected with surrounding objects, and therefore, before we consider electricity in its relation to him, it should first be considered in its relation to the globe on which he treads. And here the question arises—What is electricity? Who can define the subtle agent? We are acquainted with its effects, but we are ignorant of the manner in which those effects are produced. We can reduce it to certain laws, but we cannot penetrate into the manner in which those laws are controlled. We view it as the great cause productive of every movement and operation of Nature, but we are wholly unable to trace the mysterious tie which connects it with the fiat of the Great Ruler of all. As a power, its existence has been known from the earliest ages; it is the fifth element of the Hindoos, by whose sacred Vedas it is thus described:—“There is a strong propensity which dances through every atom, and attracts the minutest par-

ticle to some particular object. Search this universe, from its base to its summit, from fire to air, from water to earth, from all below the moon, to all above the celestial spheres, and thou wilt not find a corpuscle destitute of that natural attractability.” As the vital or generative principle of Nature, this power was worshipped as a God in the earliest ages of mankind, the Greeks deriving their *Θεός* from the word *θεαομαι*—I contemplate an unknown cause.† In the mythology of the Romans it was deified under the title of Jupiter Tonans. The two hands of Nature, whereby she chiefly worketh, heat and cold, of Lord Verulam; the plastic Nature of Cudworth; the spirit of Nature of Dr. Henry Moore; and the ether of Sir Isaac Newton, are all conceptions of that principle which modern science recognises by the term Electricity.

One of the most prevalent errors regarding this principle is that which would argue from a difference of effect a distinctness of agent, and call upon us to acknowledge the existence of two electricities, positive and negative. But if the different effects of positive and negative electricity be adduced as an argument of their being distinct agents, I answer, that this carries with it no proof of the fact; for be it recollected, that a certain degree of heat (32° Fahr.) turns fluid water into solid ice, while another degree of heat (212° Fahr.) converts this same water into ethereal steam, and yet, who would venture to assert that ice-heat and steam-heat were distinct agents, or that heat and cold were not comparative states of the same principle?

Now, I conceive that electricity, like heat, has an infinite range of intensity, and as heat and cold are but comparative terms, so positive and negative electricity are but comparative states: for instance, a body positively electrified as regards the earth, is negatively electrified as regards another substance, on which a greater quantity of this agent has been induced; so water at 80° will be warm compared with ice, and cold in comparison with boiling water. Again, I conceive that the range of electrical intensity within the limits of our experiments is very trifling in this respect, being again analogous to heat, and that, therefore, a negatively electrified body is merely a body containing a less amount of electricity than the surrounding medium, or the substance with which it is compared; and I consider that it would be as impossible to deprive a body of the whole amount of its electricity, as it would be to deprive a substance of the whole amount of its caloric. Frozen mercury still contains a large amount of the

\* Quoted and translated from the Hindoo poem of Shirin and Ferhad, by Sir William Jones.—See *Asthetic Researches*.

† Mirabaud.

agent called heat; so a body in the greatest negatively electrical state which it was in our power to induce, would still contain a large amount of electricity.

One of the principal characteristics of this agent is the tendency which it has to assume a polarized position; it is in this condition we find it in the magnetic needle, the atmosphere, the terrestrial globe; and when we come to consider it as a pathological agent, we shall find that this is the condition it assumes in man.

If we place a bar of iron in the northern hemisphere, it is found that positive electricity takes the upper surface, and negative electricity the lower, and *vice versa* in the southern hemisphere, where negative electricity takes the upper portion, and positive electricity the lower.\* Kite-experiments, too, in the northern hemisphere, have all tended to prove that every elevation in the atmosphere is positive to all strata beneath it, and negative to all strata above it: and I have no doubt but that these experiments would, in the southern hemisphere, give the reverse results, and it is to be regretted that they are as yet wanting. However, this deficiency is in some measure remedied by the results obtained from observations on the dipping-needle. This instrument is merely the magnetic needle suspended so as to have free motion in a vertical instead of a horizontal plane; in the northern hemisphere, the attraction of the earth draws the positive electric, or north pole of the needle, in a downward direction, with an intensity varying with the latitude: for instance, at a certain point in the tropical regions, the needle assumes a horizontal position; and could it be carried around the globe in a line where this horizontal position would be maintained, the line thus drawn would be the magnetic equator.† As we approach the pole in the northern hemisphere, the positive extremity of the needle is attracted downwards, and at the pole itself assumes a perpendicular position (‡);‡ in intermediate places, this dip or declination varies with the latitude. In the southern hemisphere, the same phenomenon is observed, with this exception, that here it is the opposite extremity, or negative pole of the needle, that is attracted.

These observations afford us an insight into the manner in which electricity is distributed throughout our globe—namely, that it is found

collected within the tropics, from which it is polarized in a horizontal direction; there is also a vertical polarization of the terrestrial electricity, the vertical direction being from the surface of the earth upwards, while the horizontal direction extends from the equator to the poles. With these preliminaries, then, we will proceed to consider this agent, more especially in reference to the physiology and diseases of man. Regarding electricity as the vital agent, I propose to call that state of body characterized by energy of the vital power, as fever; the electric, in contradistinction to that state in which this power is torpid, as collapse, to which I apply the term magnetic. The temperament, then, may be divided into four classes—viz., the electric, the electro-magnetic, the magneto-electric, and the magnetic. The electric temperament is that in which electric action is in excess, and is characterized by a dark complexion; hair dark, and in large growth; warmth and energy of the various passions; and muscular and constitutional strength. The electro-magnetic temperament is that in which electricity slightly preponderates, and is known by the same characteristics less evidently marked. The magneto-electric temperament is an approximation to the magnetic, which latter is characterized by a fair and delicate complexion, timidity, and reserve, want of energy, and a degree of distance or coldness. The magnetic state is strikingly marked in the latter stages of phthisis, a disease to which this temperament is especially subject.

The temperament of climate, too, is especially deserving of attention. Contrast the warmth and energy of the inhabitants of the southerly portion of our hemisphere, where electricity is more abundantly diffused, with the coldness and reserve which characterize the inhabitants of more northerly latitudes. Certainly it is evident that a deficiency of electricity seems, in cold climates, attended with a deficiency of the fire and vigor which characterize the human passions. All the sciences of the passions, such as music, painting, &c., claim a southerly zone as their birth-place, whilst the calm and calculating coolness of philosophy finds a more genial home in the less exciting latitudes of our own country. The civilization of the southern portions of Europe brought sculpture, painting, and poetry, to perfection, yet produced few mechanicians. In more modern times, these latitudes have been the cradle and nursery of music, while the genius of the mechanician and the logic of the metaphysician shine more conspicuously in the temperate regions of the north. These facts, I conceive, admit of the following explanation:—Electricity, or magnetism, in excess, acts alike as a sedative (as frozen mercury produces

\* Cunningham's Essays on Electricity and Magnetism.

† For the form of the magnetic equator, as determined by Morle and Hausteln, see Noad's Lectures on Electricity.

‡ We must here suggest that positive experiment is wholly wanting. The nearest approach of man to the north pole was made in 1837, by Parry, who did not attain further than lat. 82° 45'; and to the south pole, we believe by Weddell, in 1833, who reached only to lat. 74° 15' S.—Ed. L.

the same effects on the living tissues as red-hot iron);—witness apoplexy, or the stupor of drunkenness, as an example of the one, and the soporific influence of extreme cold, as an instance of the other; but in moderate quantities, both these agents (or, rather, both these states of the same agent) act as a stimulus. Witness the exhilarating influence of alcoholic liquors, and the bracing effects of a frost. Now I conceive that the functions of our bodies, both mental and corporeal, are dependent on the electricity contained in the brain and spinal marrow, and this electricity is affected by climate in two ways—viz. as to its quantity and as to its polarity—the first occasioned by the horizontal polarization of the terrestrial electricity; the second by its vertical polarization. The horizontal polarization is by far the most important, and it is owing to this that electricity is in excess in the torrid, and so deficient in the frigid zones; and, as a consequence of this excess and deficiency, the inhabitants of these zones stand very low in the scale of civilization; a literary negro or Esquimaux would, indeed, be looked upon as a phenomenon. Approaching from the torrid zone towards the pole, we arrive at a latitude\* in which a vertical polarity becomes evident, and here we find a degree of activity in the intellectual and physical faculties. The vertical polarity, however, being slight, the intellectual is almost on a par with the physical, and this tends to develop the passions rather than the judgment. Approaching further north, we find this activity increased, and the greater vertical polarity of these latitudes occasions a determination of electricity to the upper or intellectual portions of the brain; hence the rapid progress of civilization in these zones when once the intellect was cultivated, and mankind taught to rely rather on their mental than their physical powers. It is in these regions (and our own country is happily situated in this zone) that the intellectual man makes his nearest approach towards perfection; for the quantity of electricity, as regulated by the “horizontal polarization” is that best adapted for the exercise of the animal functions, whilst the “vertical polarization,” by causing the cerebrum to be more active than the cerebellum and spinal marrow, renders the passions less energetic, and the intellect more acute. A striking proof in corroboration of these remarks may be found in the fact, that all our finest works of art are executed by southern artists, whilst the inhabitants of southern climes are compelled to have recourse to the superior skill and talent of the northern engineer. In the frigid zone, the

great deficiency of electricity renders the corporeal frame short and stunted, and the passions dull and obtuse, and merges the intellect into a show of reason little better than instinct.

These peculiarities of climate are evinced in the variability of our own country. We well know that when suffering from intense cold or oppressive heat, our intellect seems to have deserted us: in the one case we express our ideas as having frozen, in the other as being melted. I question whether an advocate could do justice to a cause if compelled to plead it in an atmosphere of either 20° below zero, or 100° above it. These effects would be temporary, but they serve to illustrate the effects of climate upon the mental faculties.

A question now arises as to whether climate will produce its characteristic effect upon strangers—that is, whether on removal to another latitude the electricity present in the brain and spinal marrow will assume the same polarity as exists at that latitude. This I think may be answered in the affirmative, though an extent of time may be required for the purpose. The removal of a Newton to the warmer regions of the south would in all probability have deprived the world of his incomparable “Principia,” while the depth of passion exhibited in the poetry of Byron may be traced to the very cause which would have ruined a Newton. Mr. Dalton, in his recent remarks on elephantiasis (a disease decidedly peculiar to climate) corroborates this opinion: he says—“Individuals coming to live in a country where this disease is prevalent, do not become attacked with it at an early period of their residence; it seems to require a certain amount of *seasoning* to render the constitution liable to its influence.” Causes which affect the body affect the mind also, the one being intimately connected with the other. The fact, then, of climate exerting its influence upon our physical condition is a convincing proof of its affecting the mental faculties also. The peculiar influence of climate upon the physical condition of man must form the subject of a future communication.

In the present instance I have labored, and I hope not in vain, to prove my previous assertion of the connexion existing between man and the globe on which he treads, my object being to induce medical men, by investigating disease in its relation to the vital or nervous agent,

“Not merely to discern  
Things in their causes, but to trace the ways  
Of highest agents.”

The path before us may be unfrequented, but it is not altogether untrodden. The suggestions here offered are but an extension of ideas that fitted in the speculative imagina-

\* Italy, Greece, the South of France, and Turkey, may be included in this zone.

tions of our forefathers; and though each succeeding adventurer may progress a few steps in advance of his predecessors, still this is too trifling to be considered in comparison with the vast field which yet lies unexplored before us. As yet we are but groping at the foundation; let those, then, who seek honor and distinction in natural science, gain it by erecting the superstructure; let them unfold to us the mysteries of that

"Electric chain wherewith we are darkly bound,"  
and by practical demonstration realize Pope's sublime idea, that

"All are but parts of one stupendous whole,  
Whose body Nature is, and God the soul,"  
*Holbeach, Nov., 1846.*

### ON THE ELECTRICITY EVOLVED IN RESPIRATION.

BY — BOW, M. D., PORTOBELLO, NEAR EDINBURGH.

IN attempts to explain the changes effected during respiration, physiologists take no account of the electricity of the air, notwithstanding it is as much a principle of the atmosphere as either nitrogen or oxygen; indeed, it has been surmised, and that on no slight grounds, that to electricity does oxygen owe its gaseous state. This notion was promulgated in an inaugural dissertation, entitled "*De Effectibus Electricitatis Quibusdam*, 1820. By Dr. Moran, formerly of the Staff Corps." I remember perusing this thesis at the time with great interest; but had lost sight of it, until it recurred to me whilst reading the article on electricity, in *THE LANCET*, by Mr. Lake.

Dr. Moran quotes the experiments of others to prove that the oxygen of the air is combined with electricity, and that it affords electricity when its capacity for it is diminished, as in condensation or combination; and therefore, when the combination which is effected in the lungs takes place, electricity must be liberated. The result of experiments instituted by himself proves that recent venous blood, subjected to negative electricity, becomes red, whilst arterial blood, so treated by positive electricity, becomes black; that venous blood, subjected to galvanism, becomes, at the positive pole, blacker and thicker, but at the negative pole, redder, thinner, and spumous.

Seeing, then, that electricity must be liberated in the lungs, and that it does redden venous blood, and that as nearly all the oxygen which disappears is expired in combination with carbon, Dr. Moran concludes that the change of color is owing to the entrance of

electricity into the blood, and the removal from it of carbon. The electricity is carried along with the blood to all parts of the body, and is attracted by the nervous matter within the cranium, and by the ganglionic system, and there becomes nervous power. By entering the muscular fibre, it endows it with irritability; and from the union of the nervous power of the nerves of the capillaries with the electricity of the blood passing through these vessels, animal heat is produced.

The above is a short exposition of Dr. Moran's views; and I think it very difficult to disprove that oxygen owes its gaseous form to its junction with electricity, and that, until it can be disproved, electricity should be considered a principle of the atmosphere, and the part it plays during respiration inquired into.

Volta and Read observed, that in expired air the quantity of electricity was constantly diminished compared with that inspired. But listen to Sir Humphrey Davy:—Oxygen, in its elastic state, has properties which are very characteristic; it gives out light by compression, which is not certainly known to be the case with any other elastic fluid, except those with which oxygen has entered without undergoing combustion; and from the fire it produces in certain processes, and from the manner in which it is separated by positive electricity, in the gaseous state, from its combinations, it is not easy to avoid the supposition that it contains, besides its ponderable elements, some very subtle matter, which is capable of assuming the form of heat and light. My idea is, that the common air inspired enters into the venous blood entire, in a state of dissolution, carrying with it its subtle or ethereal part, which, in ordinary cases of chemical change, is given off; that it expels from the blood carbonic acid gas and azote; and that, in the course of the circulation, its ethereal part and its ponderable part undergo changes which belong to laws that cannot be considered as chemical,—the ethereal part, probably, producing animal heat and other effects, and the ponderable part contributing to form carbonic acid and other products. The arterial blood is necessary to all the functions of life, and it is no less connected with the irritability of the muscles, and the sensibility of the nerves, than with the performance of all the secretions. I have not marked the above passages as a quotation from "*Consolations in Travel*"; or, the *Last Days of a Philosopher*," because I find it on a slip of paper written some years ago, and not so marked. I have not now the volume at command; but I believe it is a quotation, and underneath I have written—Sir Humphrey is particularly cautious; he would not have us to believe that he thought this subtle matter to be electricity, and nothing, he says, can

be more remote from his opinion than to conjecture the cause of vitality.

The modern doctrine imputes the change of color to the absorption of oxygen gas by, and the removal of carbonic acid from, the blood. "The blood, whilst circulating through the capillaries of the lungs, is divided into an innumerable multitude of minute streamlets, each so small as to admit but a single layer of its corpuscles; and in these, therefore, the surface which is placed in contact with the air is so enormously extended as to be almost beyond calculation. Hence, then, we can at once understand how a change may be instantaneously effected in it, which would occupy several hours, when the blood is less advantageously exposed to the influence of oxygen." (Carpenter.) This view would appear much clearer, could we believe that the fresh air at each inspiration reached the cells. The quantity of vitiated air remaining in the lungs after expiration is not less than a hundred cubic inches, and this must occupy the cells; the change of color after each inspiration is instantaneous, which must baffle all attempts at explanation by the laws of diffusion of gases. No such objection can be raised to the electric doctrine; for the separation of the electricity from the oxygen may take place in the bronchial tubes, the electricity passing readily through the moist air of the cells into the blood, which, from the iron it contains, is admirably fitted to attract it. The particles of blood, having become similarly electrified, repel each other, giving rise to a stream which necessarily flows towards the left auricle. Nor does this doctrine interfere with that of the absorption of oxygen. It is now known that the oxygen consumed exceeds that necessary for the production of carbonic acid, so that a part may be absorbed by the lungs.

I agree with Dr. Moran that the electricity which enters the blood in the lungs becomes nervous power, but I would confine the operation of that power to effecting the functions of animal life. I agree, also, with Mr. Lake, that electricity is elicited in the body by chemical decompositions and combinations; but not that that so elicited is carried to the brain, and thence dispensed. I take it, that the electricity from decomposition is of the nature of galvanism or magnetism, and passes to the ganglionic system of nerves, there to effect the functions of organized life.

Some years ago, in a communication to *THE LANCET*, I supposed that the sympathetic system of nerves was composed of two divisions, the one furnishing contractility to all the muscles of the body, the other effecting the chemical changes in growth and repair. Thus the muscle derives its contractility from organic nerves, but the nerve conveying the

stimulus to contraction comes from a different source. Now, let us see how this nerve enters and traverses the muscle:—"The trunk of a nerve and its first branches penetrate between the muscular fasciculi in a tortuous course, the exact direction of which appears indifferent. But the minute filaments on which each branch ends are found invariably to traverse the muscular fibres at a right angle, and at short distances from each other, and then either to return to the same nerve, or to join a neighboring branch. Thus, a nerve terminates in muscles by innumerable delicate loops; or the nervous filaments distributed transversely through muscular substance communicate equally at either end with the brain or spinal cord. The branches of the *portio dura* are found to unite by slender twigs with those of the three divisions of the fifth nerve upon the face; and in the tongue the union is equally distinct of twigs of the ninth nerve with twigs of the gustatory. It is remarkable that in many of these familiar instances the junction that takes place is between sentient nerves and nerves of motion."

In this nerve, which enters and traverses the muscle in a direction perpendicular to that of the fibre, and which communicates equally at either end with the brain or spinal cord, I see nothing more nor less than a conducting wire inducing contraction of the muscle, which, in its turn, may be compared to the magnet of an electro-magnetic machine. By the innumerable filaments by which the nerve traverses the muscle, the inducing force is multiplied in the same manner as we multiply the electrical intensity by making our conductors into the form of helices.

In the above quotation from Mayo, it is said to be remarkable, that in many of these familiar instances, the junction that takes place is between sentient nerves and nerves of motion; but I think it would be remarkable were such not the case, for by such junction we become conscious of the state of the muscle.

*Portobello, N. B., Dec., 1846.*

#### PAINLESS REMOVAL OF A TUMOR WEIGHING 112 POUNDS.

By the kindness of Dr. Ashburner I am enabled to give the following extract from the *Bombay Bi-Monthly Times*, of Oct. 15—Nov. 1.

"The Committee appointed by Government to report on the value of mesmerism in surgical operations, have handed up their opinion to the authorities. The committee had met *fourteen* times, each sitting being of *two hours*

duration. Appended to their report were minutes of all proceedings, and details of the different cases which had been kept. It is to be hoped their inquiries have tended to prove the value of the science, and that they will induce Government to introduce its practice into general use. Of the value of mesmerism in surgical operations, Dr. Esdaile has supplied abundant evidence. The *Calcutta Star*, of the 15th of Oct., published an account of the removal of a tumor the day previous from a man's body which weighed *seven stone*, which occupied six and a half minutes in the performance; the patient *moved neither muscle nor limb during the time it was being removed, and did not awake till roused with a view of being given some wine and water!* There could be no mistake in the matter: the operation was performed in the presence of Mr. Halliday, Mr. Beadon, Mr. Young, Mr. Hume, Dr. McPherson, Dr. Jackson, Dr. Stewart, Dr. Burt, Dr. R. Stuart, Dr. Taylor, and Dr. Hufnagle.

"We subjoin the report of the operation entire from the *Eastern Star* of the 17th ult. It puts the question of the advantages of mesmerism beyond a doubt:

"*Report of Dr. Esdaile's last Mesmeric Operation at the Native Hospital.*—*Calcutta, 16th of October, 1846.* Hurromundoo Laha, aged 27, hearing that I was in Calcutta, came to the Native Hospital to-day with an enormous scrotal tumor. It measures *seven feet* in circumference, and two feet round its neck. The disease began seven years ago with hydrocele, and its progress has been very rapid during the last three years. He has monthly attacks of fever, when the tumor swells, and discharges water. Although the tumor is actually *as large as his whole body* (he appears to be about eight stone weight), his person is in tolerable condition, and his constitution does not seem much broken. 10th. He was mesmerized to-day for the first time for two hours. He slept profoundly, and was partially cataleptic. 11th. No mesmeric effects to-day, on account of his system being deranged by fever. 12th. The mesmeric phenomena are less striking than on the first day. He is still feverish. 13th. This day being excessively rainy, I did not go to hospital, thinking the gentlemen interested in the progress of the case would not venture to the hospital in such bad weather. At 2 o'clock, p. m., I received a note from an amateur who had gone to watch the progress, informing me that the patient

had that day exhibited the most perfect *cataplexy*, and might have been made into "*minced meat*" without knowing it. 14th. The same appearances being present as yesterday, proceeded to operate on him. The tumor had daily been tied up in a sheet, to which was attached a rope through a pulley in a rafter. The first part of the operation was performed without disturbing him, as he lay; the mattress was then hauled down till his pelvis rested on the end of the bed; his legs were held asunder, and the pulley put in motion to develope the neck of the mass. It was transfixed with a long two-edged knife, and removed by circular incisions, right and left. The flow of venous blood was appalling, but soon moderated under general pressure of the operator's hand. The arterial bleeding was not formidable, and was not a source of danger. The mass, half an hour after its removal, weighed 103 lbs., and with the blood and fluid contained in it, must have been *upwards of eight stone weight*. During the whole operation, *I was not sensible of a quiver of the flesh or the slightest movement of his limbs or body*. Dr. Duncan Stewart held his pulse all the time, and had the best opportunities of observation; he has kindly furnished me with the following notes.—JAS. ESDAILE, M.D.

"The time occupied in the operation was *six minutes*, including the application of ligatures to the spermatic arteries, and three or four other vessels that spouted. The arterial hemorrhage was very small indeed, but the welling of blood at the movement of each transverse incision was appalling. The loss could not have been less than 10 or 12 lbs. The patient remained *throughout most perfectly still and motionless*. I held his pulse the whole time, and counted it carefully. Immediately on the removal of the tumor it sank to zero; his face became pale and cold, sweat bedewed his forehead, and it was not till his head was lowered by the withdrawal of one or two pillows that he recovered from the collapse caused by so sudden and great a withdrawal of vital stimulus from the heart and brain. The pulse gradually returned, and was found, when first counted, to be 120, very small, compressible, and intermitting, but there was *not the slightest evidence of consciousness or pain*. It was now deemed necessary by Dr. Taylor and myself to pour some wine and hartshorn down his throat; but as he could not swallow in this

state, it was allowed us to dash cold water in his face, blow in his eyes, and fan him, by which means he awoke from his trance, recovered sufficient sensibility to drink some brandy and water, and *presently subsided into perfect repose*; the pulse however remaining very weak, and settling at 100. No active hemorrhage ensued with this reaction, but two or three more small arteries were tied, cold cloths were applied to the raw surface, and the patient was then carefully removed to a clean bed. In the course of the afternoon, as I was informed, some symptoms of collapse occurred, such as vomiting and restlessness, and some seven or eight more vessels were successively secured by the assistants, who remained in watchful charge of him. He passed a good night; the wound was stitched and strapped the following day, and on visiting him this morning I found him looking composed and sleeping soundly: the parts looking well, and with every promise of a most successful cure.—D. STEWART, M.D., *Presidency Surgeon, Calcutta, Oct. 16th, 1846.*”

On reading this, I wrote to Dr. Esdaile's excellent brother, the Rev. David Esdaile, in Scotland, requesting the latest professional news he had received from the doctor. The following is the reply:—

“Manse of Rescobie, Forfar,  
“18th Dec., 1846.

“Dear Sir,—In compliance with your request, I have much pleasure in communicating the latest intelligence regarding my brother and his mesmeric doings. I have a letter from him, dated Calcutta, 18th October, in which he tells me that *he has come successfully through the ordeal of the Mesmeric Committee*, appointed by the Government of Bengal. *Two members* of the seven composing this Committee were selected on account of their *notorious opposition to mesmerism*; ‘yet,’ observes my brother, ‘they have signed a report to Government, *confessing to have witnessed seven painless operations in a fortnight*. I have not seen the report, but it is favorable, with some attempts at damaging with faint praise, and doubts of its general applicability; mere grimaces and helpless kickings against the pricks of the doctor-craft, which will be duly disposed of when the report is printed. I am now waiting for orders from Government. The Governor of Bengal tells me that he wishes me to prosecute the matter into all its practical details, and I have asked for an experi-

mental hospital for this purpose, but have no idea how it will end.

“‘Having finished with the Committee, I gave a public entertainment, three days ago, to some of the leading officials here, when I abstracted a scrotal tumor, EIGHT STONE WEIGHT (THE WEIGHT OF THE MAN'S WHOLE BODY), *without its owner knowing anything about it*, and he is doing very well. Pray tell Dr. Elliotson that the tumor has been voted to him by acclamation, and is in rum, waiting his acceptance. It was proposed to send it to Dr. Forbes, but, on the principle of “*detur digniori*,” Dr. Elliotson was preferred. I am glad that *he has lived to defile the graves of his enemies*.’

“In the conclusion of the letter my brother complains bitterly of a sentence of ‘cruel nonsense,’ published in his book. As the only remedy, I beg you will be so kind as publish what he says in *The Zoist*. ‘What I wrote was—  
“And may it not be the nervous energy passing off by the organs of sense, the lungs, and periphery of the body, retaining its vital properties, and remaining under the direction of the will for a time, even beyond the surface of the body?” There is meaning, if not truth, in this: as it stands, it is mere verbiage. Could it not be corrected? I become every day better satisfied with my theory, and am vexed to see it so mauled.’

“Trusting to hear of your gracious acceptance of the rare gift presented as a homage to your talents and noble exertions in the cause of science and humanity,

“I am, dear Sir,

“Yours sincerely,

“DAVID ESDAILE.

“John Elliotson, Esq., M.D.”

As soon as the mass arrives, I shall have great pleasure in showing it to any gentleman who may call at my house in Conduit Street.

#### REMOVAL OF A TUMOR FROM THE NECK.

M. DURAND, Professor of Philosophy in the College of France, has sent me the following account of another painless operation in France:—

“We, the undersigned, inhabitants of Cherbourg, having witnessed on this 19th of September, 1846, at half-past three o'clock in the afternoon, an operation just terminated with the greatest success, by Dr. Loysell, assisted by Dr.

Gibon, upon Miss Anne Le Marchand, of Portbail, thirty years of age, placed in a state of mesmeric sleep and *perfect insensibility*, in our presence, we attest and certify to the following facts:

"At forty minutes past two o'clock the patient was mesmerized to sleep by Professor Durand, at the distance of two metres (about 60 inches) and in less than three seconds. The surgeon, then, in order to satisfy himself of the insensibility of his subject, plunged a long stilette, such as used by dissectors, several times abruptly into her neck; a bottle of concentrated ammonia was also placed under her nose. She continued in a state of immobility; no sensation was perceived; *no alteration was visible in her features: not a single external impression was manifested.*

"At the end of five or six minutes of sleep, the patient was awakened by her mesmerizer in a second. After a few moments she was re-mesmerized, as at first, but at a still greater distance. The physicians were immediately informed by Professor Durand that the operation might be commenced with perfect safety, and that they might freely converse aloud as to the state of the patient without fear of being heard, so deep and perfect was her insensibility.

"At ten minutes before three o'clock, the operator made straight downwards, behind and above the mastoid process, an incision eight centimetres in length (above 3 inches). A layer of muscles presented itself first. Then a large gland came into view, which was carefully dissected away in *four minutes and a half.*

"The wound was washed. It was now discovered, what it was difficult to foresee, that there were two other glands; the superior extending its roots deep into the tissues, and in immediate contact with the carotid, the principal artery of the neck: the other, less difficult to isolate, in consequence of its connexion, and lying among the muscles situated in the side of the neck. These two latter glands were extracted in *three minutes.*

"In dissecting the glands, a vein of large capacity was wounded. The surgeon tried to stop the flow by causing the patient to respire, so as to strongly dilate the chest. She instantly did this at the request of her mesmerizer; but the effort being insufficient, it became necessary to apply a ligature.

"The greater part of the spectators now approached the patient; several

medical men introduced their fingers into the gaping wound, which was more than eight centimetres in depth, and distinctly felt the pulsation of the carotid artery.

"During the whole of the operation, Miss Le Marchand remained calm and *impassible; no emotion agitated her; no muscular contraction* took place, not even while the knife was penetrating deeply into the flesh; she in fact appeared like a statue; for insensibility had become perfect. No change appeared in her frame; there was no sign of uneasiness, no syncope, no lethargy; indeed the young lady spoke several times. As often as she was interrogated, she replied that she felt exceedingly well, and had no pain whatever. At the invitation of M. Durand, once we even saw her raise herself, and resume her former position.

"The wound was cleansed again. Some minutes afterwards, the edges were united with several pins, between which were placed strips of adhesive plaster, and above these were perforated linen lint compresses, an external supporting bandage, and the other dressings necessary in such cases.

"At this period several other persons approached the patient. For a moment, isolation was destroyed by her mesmerizer, and she was enabled to hear the various questions addressed to her. Her replies were given with perfect ease and remarkable calmness.

"When everything was complete, the patient was restored to consciousness in two or three seconds. She smiled, by degrees recognised her position, and perceived that the operation had been performed. To the questions put to her, she replied with lively interest, *that she had not suffered at all; that she had not experienced the least pain, and had no recollection of what had taken place.* Afterwards she retired, and every one present could clearly see in her physiognomy tranquillity and unaffected cheerfulness.

"An extremely remarkable phenomenon occurred in this case. She had only been mesmerized nine times; yet the rapidity with which her mesmerizer was able to pass her, several times in our presence and immediately before the operation, from ordinary life into the most absolute and insensible mesmeric sleep, was almost incredible. At several metres distance from her, even a glance of the eye, a single look accompanied by a firm will, was sufficient to plunge her into this extraordinary state,



which is at present so interesting to science, extinguishing as it does all possibility of sensibility to pain. Her isolation from the external world became so complete that she heard no one, not even her mesmerizer, when he did not touch her. This isolation was promoted to the utmost, so that the operator and the medical men and other numerous spectators were at liberty to talk at their ease as much and as loudly as they chose about what was going on, without any fear of being heard by her, even at the height of the operation.

"In conclusion, the undersigned declare that they are *fully convinced*, after witnessing such a result, that the mesmeric sleep is sufficient, even in a few sittings, to produce the most perfect insensibility in the organs; and that it is of high value in surgical operations of every kind, by *sparing to the unfortunate patient cruel suffering*,\* and what is, perhaps, still more formidable, the distressing sight of preparations, and anticipated terrors of operation.

"Dr. Obet remained constantly *close to the patient*, in order repeatedly and attentively to examine this interesting phenomenon, and observe the state of the *pulse and respiration*, which underwent *scarcely any alteration*.

"The present report has been compared with notes, taken with scrupulous exactness, by M. Chevreil, Member of the Council of the Arrondissement and of the Municipal Council of Cherbourg, who noted down with the greatest minuteness all the circumstances of the operation as they occurred.

"[Here follow the names of *upwards of fifty* of the most respectable citizens of Cherbourg, out of which we select the following:—]

"Messrs. Lemaistre, Receiver of the Public Taxes, and formerly Under-Prefect of Cherbourg; Obet, M.D. of Paris, Corresponding Member of the Royal Academy of Medicine; Gibon, M.D. of Paris; Fossey, King's Attorney-General, at Cherbourg; Le Seigneurial, Judge of Instruction to the Civil Tribunal, Member of the Arrondissement Council; Des Rives, Military Superintendent at Cherbourg; Henry, Merchant, Commander of the National Guard, and Member of the Municipal Council; L'Abbé Fafin, Chaplain to the Civil Hospital; Professor Darrington.—&c., &c., &c."

\* What will Sir B. Brodie, Dr. Copland, and their Exeter and Halifax friends think of these French block-heads?—*Zoisé*.

"On the 23d of Sept. the wound resulting from the operation was completely cicatrized. Yesterday morning, the pins and the bandages which surrounded it were removed, and the young lady was able to walk about part of the afternoon."

The following accounts were furnished me by Mr. Chandler.

#### Removal of a Tonsil by Mr. Aston Key.

##### "A CONTRAST."

"My next case may, I think, with great propriety, be headed as above. In *The Zoisé* for October is inserted a letter written by me to Dr. Elliotson describing the removal of a tonsil from the throat of a little girl three years and a half old, by Mr. Key, he having promised to permit me to mesmerize her prior to the operation, but proceeding with it without fulfilling that promise, although I was present for the purpose and could have got her asleep in four or five minutes.

"I need not again describe the sufferings and fright of the little patient. Suffice it to say that she has not ceased to talk of them to the present time, and, the other tonsil increasing in size, till its removal was quite necessary, all her friends considered that she would not permit Mr. Key even to approach her. He however appointed Wednesday, Oct. 21st, to make the attempt.

"Now mark the contrast!—I had but three days to renew the influence of mesmerism over her as she had been at Margate since the last operation. Nevertheless I resolved to try, and accordingly commenced on Monday. She slept in ten minutes and remained asleep an hour and a half; Tuesday she was asleep in eight minutes and remained above an hour, when she was awaked. On the Wednesday, as Mr. Key's appointment was for twenty minutes past three, I mesmerized her at three o'clock: she slept in four minutes, and on his arrival she was very profound, and everything appeared quite favorable.

"With a bone spatula I made several attempts to open the mouth and depress the tongue, the little patient partially awaking each time, but quickly falling into profound sleep again. At length by using a little more force and asking her at the same time in a whisper to open her mouth (to which request she partially acceded), the tonsil was exposed fairly to view, and Mr. Key seized it with the double hooks, and with a bistoury very expertly removed the greater portion of it. The little girl of course partially awoke, but did not struggle; nor was she aware that any-

thing beyond a mere examination of the throat had taken place. She displayed no fear or surprise. She was allowed to swallow all the blood, as she has a great horror at its appearance, and she permitted me to examine the mouth immediately after the operation, evidently showing that she was quite unconscious of what had taken place. After Mr. Key was gone, she observed that 'she did not dislike him this time, as he had not hurt her.' Finding her throat rather sore some hours after, and having seen the piece of tonsil on the table, she became suspicious, and said, 'she was sure Mr. Key had been cutting her again,'—but was quite satisfied when told that he had only applied something to it.

"Mr. Key very candidly acknowledged that mesmerism had been the means of soothing the little patient and quieting her fears; and I think he will admit that he could not have removed the tonsil without its aid, for he told me on our way to the house, that he did not expect to succeed in removing it.

"The contrast between the two operations was most striking; the first was all noise, fright, and blood, with a deep cut on the tongue, which was very sore for a week; whilst the second was all sleep, sleep, sleep, and not a spot of blood outside the mouth.

"What a triumph for mesmerism!

"I have yet another case to relate of great interest on account of its novelty. It is a case of mesmeric tooth extraction in which the patient appeared to feel at the time, but, when awaked a few seconds after the operation, was evidently not aware of having done so.

"Mrs. Moss, æt. 25, applied to me on the 19th of November, to have three teeth extracted, asking at the same time if it could not be done in the mesmeric sleep. I immediately commenced making passes, and, finding her very susceptible (the eyes following the hand at the very first pass), I continued, and in 25 minutes she slept, though not soundly, as she did not lose her recollection.

"The next day she slept in 12 minutes, and after a few minutes more became quite profound.

"21st. Asleep in 8 minutes. Loss of sensation in the hands and feet, gradually extending to the shoulders, which it did not pass; the line of demarcation being accurately defined (not visibly of course). After awaking her, the loss of sensation remained to the same point, and was removed by blowing or transverse passes, and was instantly renewed by longitudinal ones. I tested the genuineness of the case very beautifully to-day. After blowing to restore the sensation in the hands without making any remark, I restored it to the foot by a transverse pass. This was the first time I used the pass for that purpose, and

I may observe that my patient had never seen mesmerism.

"28th. She now goes to sleep in two or three minutes, and the sensation (though still lost gradually from the hands and feet upwards) disappears entirely in about a quarter of an hour, the last portion being the top of the head. She has for the last two or three days shown perfect catalepsy, which also remains after she is awake.

"She is also re-mesmerized by one pass, a nod, or even a wink; and when awakened again, is quite puzzled to know why she again fell asleep."

#### CONVERSION OF THE MEDICAL PROFESSION TO THE SOLEMN DUTY OF PREVENTING THE AGONY OF SURGICAL OPERATIONS.

DR. ASHBURNER has favored us with the following extract from a letter written in America to Miss Edgeworth, who communicated it to him:

"With us here in Boston a new adaptation of gas from ether removes all sensibility to pain from the most fearful surgical operations. It is a blessing to the human race unequalled since the first application of vaccination. I speak decidedly, for it has within the last month been so repeatedly tested without failure in our admirable hospital by skilful surgeons, that it is an accredited fact. It is gas from ether, inhaled through the mouth, which produces a tranquil dreamy state, an entire inaction of the muscular system, a total insensibility to pain, but a slight perception of sound, which enters into this sort of dream that is passing through the mind. It being necessary to take out two of Lizzie's large double teeth three weeks since, I asked to have this gas applied first, having heard of its power only a few days before. They were taken out with an interval of only five minutes, and she was conscious of nothing but the placing of the instrument and the sound of her father's steps as he walked up and down the room. She suffered no pain at the time or afterwards. It leaves no effect except a sort of drowsiness, which passes off in a few moments. At the hospital large tumors have been removed, limbs have been amputated, the patient perfectly unconscious, the flesh and muscles perfectly still, no twitching, no contracting. In one case of amputation, the woman began to rouse at the tying of the last artery, and said she felt something pinch her. Another waking when all was done, asked impatiently why they did not begin—what they were waiting for.

"It was first applied in this manner by a

practical and very skilful chemist in this town of the name of Jackson, and explained by him to a young dentist, who applied for some means to manage a refractory patient. He tried it on himself first, and was so delighted with its effects, that he sent out to hire some one to have a tooth drawn after taking it, for five dollars; since then his room has been crowded."

I understand that sulphuric ether is employed: a piece of sponge soaked in it is placed in an opening of a bottle with two openings, and the patient inhales through the other opening, so that the air drawn into the bottle and thence into the lungs is necessarily charged with ether. Insensibility is said to occur generally in about three minutes. If this plan produces insensibility to pain in more instances than mesmerism, and quite as innocently and easily as when mesmerism succeeds, it will indeed be a blessing, and none will hail it more joyously than we mesmerists, who have no other object than the good of mankind. It is this consciousness indeed, and the noble self-respect which this produces, that enables us with all humility and thankfulness to disregard the fiendish malice of our opponents.

In my Pamphlet *On Painless Surgical Operations in the Mesmeric State*, I, in 1843, recorded 1 amputation, 1 removal of a cancerous breast, 1 division of the ham-strings, one introduction of a seton, 1 removal of an excrescence, 1 opening of an abscess, 2 severe operations on the jaw, &c., and 32 tooth extractions—*forty painless operations*.

In *The Zoist* are recorded 16 amputations; the removal of 28 tumors—some enormous; 19 various operations by incisions of greater or less length, 3 applications of fire or caustic substances, 3 cuttings away of cancer of the breast, 67 tooth extractions, 3 cuttings out of nails, 1 operation for cataract, 3 for hydrocele, 1 for polypus, one for squinting, 3 venesections, 4 introductions of setons and issues—*a hundred and fifty-two painless operations*.

This overwhelming amount of facts in all quarters of the globe has made no impression upon the medical world. Not one of these operations has been copied into the medical journals from *The Zoist*, nor even the name of *The Zoist* allowed to sully their pages.\* This circumstance will never cease to be the most astounding in the history of our profession when studied by posterity, not only by the

medical, but by the whole reading public. It will be referred to as an illustration of the character of human nature in this century.

Yet, though this mighty mass of prevention of agony has been as disregarded by the profession as the treasures of the British Museum are by the horses of the cab-stands in all the surrounding streets, I felt certain that, as soon as it was announced that the same thing could be effected by inhaling ether, all the medical world would be alive to the importance of preventing the agony of operation: that the various poor patients who showed no pain in the ethereal stupor, and declared afterwards that they had felt none, would not be cruelly reviled as impostors, but that their undisturbed state would be considered *full proof* of the absence of suffering, not of concealment of suffering: that their word would be implicitly respected as truth, not scorned as falsehood: that, if they did not shake their left leg while their right was cutting off, this would not be urged against them as unphysiological by Mr. Wakley, Dr. Marshall Hall, Sir B. Brodie, and a host of uninformed disciples:† that the operators who published their painless operations would not be styled dupes, mountebanks, quacks, impostors, deserving to be scouted by medical colleges, and met in consultation by no respectable medical man: nay, that the most stupid and dogged opposers of mesmerism would be the first to desire to alleviate pain by the new method, each hospital straining hard to be the earliest in the race. Such is beginning to be the case. *The London Medical Gazette*, which not only has not noticed one painless mesmeric operation from *The Zoist*, but declares that no one reads—not *The Zoist*, hated word!—the mesmeric magazine, except the impostors who send their cases to it,† announced on Dec. 18th, p. 1085, the new fact, merrily heading the article, "*Animal magnetism superseded*." Its authority was not, like us, unworthy of respect, but "respectable;" the stupor was not a sham, but was the "most profound sleep;" and the patient *really* went through all "without being sensible to pain, or having any knowledge of the proceedings of the operator." It considers that the process "must be regarded as producing a state of temporary poisoning," by which "sensibility may be so destroyed that that which in the healthy state would occasion severe pain, may be performed without any consciousness on the part of the patient. The *respectability* of the source from which we derive our information, prevents us from doubting that the writer has accurately stated what he saw." Truly, the house of Longman & Co., and their reputed editor,

\* The French case of painless operation in *The Zoist* for July, p. 199, was copied by the *Medical Gazette* from the *Times*, and in the very same number, June 19, the editor consistently expresses his surprise and regret that I was appointed to deliver the Harveian Oration. "Considering the notoriety which the orator elect has acquired, as a patron of mesmerism, we should have supposed that a more appropriate selection might have been made." P. 1068.

\* See my Pamphlet *On Operations Without Pain*, pp. 19, 20.

† *Medical Gazette*, April 12, 1845. See *Zoist*, Vol. III., p. 201.

Dr. Alfred Taylor, are very complimentary to us mesmerists.

Then the *Lancet* has no hesitation (in the number for Dec. 26, p. 704) to announce the matter: is now struck with the propriety of preventing agony, and protests that such a discovery, if it stand the test of experience, will be an *invaluable boon*; in the same number inveighing against and abusing the mesmeric method with all the distinguishing characteristics of the Wakleyan tongue. Mr. Wakley will not hear of a patent being taken out to limit the benefits of the plan, as the Americans propose on account of the possible abuse of it. He sees no danger, makes no indecent objections.\*

The *Medical Times*, which has not presented to its readers one of the operations recorded in *The Zoist*, though the editor reads it, is fully convinced of the truth of mesmerism, and extracts so largely from other journals that a fruitless attempt was lately made by Messrs. Longman to arrest its extractions, announces that Mr. Liston! yes, Mr. Liston! has taken off a thigh and torn away a diseased toe-nail in the ethereal insensibility, and the editor "hopes to have further particulars on this very interesting subject." We hear from a gentleman present that after the amputation Mr. Liston said to the students, "You see just what it's worth. At any rate it's better than mesmerism." Certainly it is, and greatly better in some respects,—that is if more generally successful, as innocent, and as capable of repetition, after the operation, to procure ease. When mesmerism takes, it has this advantage, that it may be easily repeated whenever the pain comes on or the wound has to be meddled with; that the insensibility may be continued for a length of time; and that nights of good repose may be procured. The poor creature whose leg Mr. Liston removed painlessly, shrieked fearfully with agony afterwards when something was done to him. Besides, mesmerism greatly restores the health and is productive of the highest benefit before the operation and after it, and will sometimes prevent the necessity of an operation.†

Mr. Liston did not scold at the poor man; he did not wonder, as he did in the Medical Society in regard to the Nottinghamshire man, whether "the interesting patient was advanced enough in his education to read with his belly."‡—no, he felt, in common with other medical men, that the world is now beginning to see it no longer doubtful that operations may often be, and ought to be if possible, performed painlessly in the mesmeric state: and he and they jump at any other

method of effecting the same thing. To mesmerism and mesmerizers all this is really owing. The idea of procuring insensibility for operations had, through mesmerism, laid such hold on men that the trial of inhaling ether was made; and the success of mesmerism will drive the profession headlong to try the new method, and too generally, as evidently in the case of Mr. Liston, out of a desire to "*supersede*" mesmerism. We will contribute all in our power to the success of the new method; for we prove all things and cleave to that which is good. But, in cases of operation, mesmerism, when it succeeds, will have the advantages which we have just mentioned; and might properly be added before and after the operation for their sake. The mighty, the inestimable blessings of mesmerism in the cure and alleviation of disease are of greater extent than its application in operations, and we see no reason to imagine that the stupefaction by ether will be found to possess its remedial powers.

After all this was written, their appears in *The Times*, to-day, Dec. 28, an extract from Dr. Forbes's forthcoming number, containing accounts just received from America of the new discovery.

One patient, it is declared,

"Knew what the operator was doing; perceived him, for example, take hold of the tooth and draw it out, felt the grating of the instruments, but still felt no pain."

In another,

"The features assumed an expression of pain, and the hand was raised."

Another,

"Flinched and frowned, and raised his hand to his mouth."

But all, on coming out of the stupor, declared they had felt no pain. Dr. Forbes was present at the amputation of the thigh by Mr. Liston, and says that the man seemed partially conscious, and declared that in his sleep he had heard some words, and felt something was being done to his limb: but that he had felt no pain. Some have known all that was going on, some have talked, and some have recollected much or all afterwards.

What was the conduct of the Medical and Chirurgical Society and of writers in medical journals and newspapers, because the poor man, whose leg was amputated without pain by Mr. Ward in Nottinghamshire, moaned, as in a disturbed dream, after the leg was off, and on waking said he thought he had once heard a kind of crunching, but had felt no pain and knew nothing that had passed? Why he was violently and coarsely pronounced by acclamation a *trained impostor*, and his case not allowed to remain on the minutes. I beg the world to read pages 10, 11, 33, 34, 55, of my Pamphlet.

\* See Dr. Engledee further on, p. 600. —*Zoist*.

† See Pamphlet, p. 6, 13.

‡ Pamphlet, p. 66.

The truth, unsuspected by Messrs. Liston, Wakley, Boott, and the rest of the eager anti-mesmerists, is, that the state induced by ether is somnambulism—the very same state as the mesmeric—which varies from deep coma to more or less partial activity of brain.\* In both instances it is induced artificially; but in mesmerism it is induced by a living frame, in inhalation it is induced by an inanimate compound.†

My triumph has now arrived. The first operation in the sleep-waking state thus artificially induced, has been performed in the hospital from which mesmerism was banished, and by the surgeon who was the most violent against it and leagued with Mr. Wakley.

In the *Morning Chronicle* of to-day, Dec. 28, is a letter from Dr. Boott, announcing the American fact to the public, and saying that a young lady had gone through the extraction of a tooth in his house in Gower street without being conscious of it: that six persons had gone through the same at St. Bartholomew's Hospital in the presence of Mr. Lawrence,—who behaved so unjustifiably at the time of the Okeys, and has sneered at mesmerism from that period on all occasions. Dr. Boott says,

"I hope the fact will induce surgeons to make trial of inhalation," and that the insertion of his letter in the *Morning Chronicle* may "encourage dentists and surgeons to attempt the alleviation of human suffering."

He assures us that he immediately sent the whole American report to Mr. Wakley and to several distinguished surgeons, and is quite grieved to find it will not appear in the *Lancet* for a week, on account of this delay "leading to the infliction of unnecessary pain." This is very proper feeling: most commendable. But reflect a moment, Dr. Boott, on the vast amount of surgical pain and of unrelieved human suffering to which you have been accessory. You are a physician: and you were on the Council of University College at the time of the genuine cases of the innocent Okeys: when diseases were cured beautifully by mesmerism, and when a painless operation was performed on one of my patients in the mesmeric insensibility, in your hospital, by my clerk under my directions. You were one of the council who forbade the use of mesmerism in the hospital, and have been on the Council, I believe, ever since. You obstinately refused to witness even one of the wonderful facts, though it was your duty to investigate them. The clear and indisputable operations recorded in *The Zoist*, have taken place since then, and yet the pre-

vention of mesmerism in the hospital, in which prevention you took an active part with Mr. Quain and Dr. Sharpey, has continued under your auspices: you have allowed agony to be inflicted on the patients who came under the surgeon's knife, and have felt not for them during eight long years: and now, suddenly, you think a week is too long (and I also say it is too long) for surgeons to continue to inflict pain!!! When your old anxiety to oppose and injure mesmerism, and the part you played against it and me as a member of the Council, are remembered, your present lively humanity and your alacrity respecting ether, with your instant communication of the new facts to Mr. Wakley above all other journalists, would be laughable, were it not melancholy.\*

What will Dr. Copeland say to this terrible innovation of preventing so useful a thing, "so wise a provision," as pain in operations? "patients being all the better for it."† What will Sir B. Brodie say, who told the Society and recently told the students of St. George's Hospital, in his anxiety to crush all attempts at preventing surgical agony by mesmerism, that patients who appear not to feel in what is called the mesmeric state, do feel; that a large portion in ordinary circumstances scarcely complain of pain! that it is not very uncommon for them to appear like indifferent spectators! and that it is in the power of almost every one to sustain pain without any outward manifestation!‡

I see clearly that the profession will now admit the truth of mesmerism. The performance of operations without pain, through mesmerism, caused men's thoughts to be occupied with the point, and this new mode was devised. The possibility of artificial insensibility by the new method being believed practicable, men will be led to think more calmly of the mesmeric method, and of its many advantages in soothing and strengthening, as well as in causing insensibility in surgical cases. Mesmerism at large will then be calmly consider-

\* Pamphlet, p. 65. The feeling which animates all these worthies to such sudden and active benevolence, was absolutely confessed by some of the officers of St. Thomas's hospital. They called on a friend of mine, and actually said they liked the new invention, because it would knock up mesmerism.

At Bartholomew's, one of the surgeons said last week to a man who wished to have a tooth out, "Well, do you wish to have it with pain or without?" "Without," was the answer. "Well then, breathe this." After all was over, the man was not mocked and insulted, but directed to go and tell everybody that they perform operations there without pain. This is all right: but why not have attempted it by mesmerism long ago?

† My Pamphlet, p. 59. *Zoist*, Vol. IV., p. 3.

‡ I must refer to pp. 36 and 37 of my Pamphlet, for Sir B. B.'s inability to distinguish between endurance of pain and insensibility, and his strange argument that the Nottinghamshire man, who when awake was most sensible of pain, was perhaps by nature unsceptible of pain, &c.

\* I refer to my Pamphlet, p. 41, sq.

† Palpable matter and a drug. †

‡ *Zoist*, Vol. IV., p. 2.

ed, and all the good which it can give in states of disease, will be sought after. The rapid progress of mesmerism is now secured.

The great want of knowledge of the character of sleep-waking in all its modifications, and even of common sleep and dreaming, will pass away;\* for the patients' stupified by ether, are evidently in a state of sleep-waking or somnambulism, and this state will become familiar: and such nonsense as was spoken in the Medical Society and has been written in medical journals and newspapers, will cease.

Sir Benjamin Brodie will not commit himself much longer, by mistaking for a piece of deception the exquisite and genuine case of sleep-waking near Bath, that is recorded in the *Philosophical Transactions*.†

## THE DISSECTOR.

NEW YORK, APRIL 1, 1847.

### Swedenborg a Clairvoyant.

SINCE by the *spirit* of man is meant his mind, therefore by being in the *SPiRiT*, which is sometimes said in the word, is meant a state of the mind separate from the body; and because, in that state, the prophets saw such things as exist in the spiritual world, therefore that is called the *vision of God*. Their state, then, was such as that of spirits themselves is, and angels in that world. In that state, the *spirit* of man, like his mind as to sight, may be transported from place to place, *the body remaining in its own*. This is the state in which I have now been for twenty-six years, with this difference, that I have been in the spirit and at the same time in the body, and only several times out of the body.—T. C. R., p. 157.

The state here described by Swedenborg, in which he had been for twenty-six years, is plainly and clearly the mesmeric or magnetic state. It is however said that Swedenborg denied this in the following words: "I foresee that many, who read the revelations of the chapters, will believe that they are the inventions of the imagination; but I assert in truth that they are not inventions, but were truly seen and heard, not seen and heard in any state of the mind buried in sleep or in a dreamy state, but in a state of full wakefulness."—T. C. R., p. 851.

The first lines we have quoted are from the first part of Swedenborg's work, entitled "True Christian Religion," and the last will be seen from the point where it was closed, and expresses a commendable parental solicitude for the work in a latitudinarian manner common to priests and prophets, and nothing more. We should, however, observe that persons in the magnetic state often say of their own accord that they are not asleep, but are in a state of full wakefulness, and such is the fact; for the magnetic state is not one of sleep, but of *wakefulness* greater than that of the natural state, because they know more in the former than they do in the latter state.

Swedenborg was a natural clairvoyant more than a hundred years ago, and had the faculty of magnetizing and demagnetizing himself at will, as many persons have at this day. He had also the faculty of opening his eyes and walking the streets in the magnetic state, like many clairvoyants of the present period.

He also wrote a great portion of some, and perhaps of all of his religious works in the magnetic state, and these portions are easily distinguished from those that were written in the natural state.

In his work entitled "Heaven and Hell," p. 192, Swedenborg says, "All progressions in the spiritual world are made by changes of the state of the interiors, so that progressions are nothing else than changes of state: thus also I have been conducted by the Lord into the heavens, and likewise to the earth in the universe, and this as to the spirit, while the body remained in the same place."

Now when the spirits of clairvoyants or impressionists are progressing to the planes or to patients at great distances, their bodies remain in the same place as did Swedenborg's, and these acknowledgments in regard to his state show in the most direct manner that it was the magnetic state, and are conclusive and final.

We may now copy the following from Swedenborg, as it is mostly matter of science, as seen and known to clairvoyants, and will be very interesting to many of our readers.

"Man at this day, to whom the interiors are closed, knows nothing of those things which exist in the spiritual world or heaven: he says indeed from the Word and from doc-

\* *Zoist*, Vol. IV., p. 17. † Pamphlet, p. 28.

trine, that there is a heaven, and that the angels, who are there, are in joy and in glory, and he knows nothing besides.

"Nevertheless most persons do not apprehend that spirits and angels have sensations much more exquisite than men in the world; namely, sight, hearing, smelling, something analogous to taste and touch, and especially the delights of the affections. If they had only believed that their interior essence was a spirit, and that the body, together with its sensations and members, is only adequate to uses in the world, and that the spirit and its sensations and organs are adequate to uses in the other life, then they would come of themselves and almost spontaneously into ideas concerning the state of their spirits after death. For then they would think with themselves, that his spirit is the very man himself who thinks and who lusts, who desires and is affected, and further that all the sensitive, which appears in the body, is properly of its spirit, and of the body only by influx: and these things they would afterwards confirm with themselves by many things, and thus at length would be delighted with those things which are of their spirit more than with those which are of their body. In reality also this is the case, that it is not the body which sees, hears, smells, feels, but its spirit; wherefore when the spirit is freed from the body, it is then in its own sensations, in which it had been when in the body, and indeed in those much more exquisite; for corporeal things, because respectively gross, rendered the sensations obtuse, and still more obtuse, because it immersed them in earthly and worldly things.

"This I can assert, that a spirit has much more exquisite sight than a man in the body, and also hearing, and what will seem surprising, more exquisite sense of smell, and especially sense of touch, for they see each other, hear each other, and touch each other. This also he who believes a life after death, might conclude from this, that no life can be given without sense, and that the quality of the life is according to the quality of the sense; yea, that the intellectual is nothing but an exquisite sense of interior things, and the superior intellectual of spiritual things; hence also the things which are of the intellectual and of its perceptions are called the internal senses. With the sensitive of man immediately after death, the case is this. As soon as man dies, and the corporeal things with him grow cold, he is raised up into life, and then into the state of all sensations, inasmuch that at first he scarcely knows otherwise than that he is still in the body; for the sensations in which he is, lead him so to believe. But when he perceives that he has more exquisite sensations, and this especially

when he begins to speak with other spirits, he then takes notice that he is in another life, and that the death of his body was the continuation of the life of his spirit. I have spoken with two with whom I had been acquainted, on the same day that they were buried and with one who saw through my eyes his own coffin and bier, and inasmuch as he was in every sensation in which he had been in the world, he talked with me about the obsequies, when I was following his funeral, and also about his body, saying, that they reject it because he himself lives.

"But it is to be known, that they who are in the other life, cannot see anything which is in the world through the eyes of any man; the reason why they could see through my eyes was, because *I am in the spirit with them, and at the same time in the body with those who are in the world.* And it is further to be known, that I did not see those with whom I discoursed in the other life, with the eyes of my body, but with *the eyes of my spirit*, and still as clearly, and sometimes more clearly than with the eyes of my body, for, by the divine mercy of the Lord, the things which are of my spirit have been opened.

"But I am aware that the things which have been heretofore said, will not be believed by those who are immersed in corporeal, terrestrial, and worldly things, that is, by such of them as hold those things for an end, for these have no apprehension of other things than those which are dissipated by death. I am aware also, that neither will they believe, who have thought and inquired much about the soul, and have not at the same time comprehended that the soul is man's spirit, and that his spirit is his very man which lives in the body. For these cannot conceive any other notion about the soul, than that it is something cogitative, or flamy, or ethereal, which only acts into the organic forms of the body, and not into the purer forms which are of its spirit in the body, and thus such that it is dissipated with the body; and this is especially the case with those, who have confirmed themselves in such notions by views puffed up by the persuasion of their own superior wisdom."—*Arcana Celestia*, 4622.

We should now copy in this connexion the following, as it is matter of science, as seen and known to clairvoyants.

"That nothing exists in nature but from a spiritual principle is, because there cannot anything be given, unless it has a soul; all that is called soul which is essence, for what is not in itself an essence, this does not exist, for it is a nonentity, because there is no *esse* from which it is; thus it is with nature; its essence from which it exists is the spiritual principle, because this has in itself the divine

esse, and also the divine power of acting, creating, and forming, as will be seen from what follows: this essence may also be called soul: because all that is spiritual lives, and what is alive, when it acts into what is not alive, as into what is natural, causes it either to have as it were life, or to derive somewhat of the appearance thereof from the living principle: the latter [is the case] in vegetables, the former in animals. That nothing in nature exists but from what is spiritual, is because no effect is given without a cause; whatever exists in effect is from a cause; what is not from a cause, is separated; thus it is with nature; the singular and most singular things thereof are an effect from a cause which is prior to it, and which is interior to it, and which is superior to it, and also is immediately from God; for a spiritual world is given, that world is prior, interior, and superior to the natural world, wherefore everything of the spiritual world is a cause and everything of the natural world is an effect. Indeed one thing exists from another progressively even in the natural world, but this by causes from the spiritual world, for where the cause of the effect is, there also is the cause of the effect sufficient; for every effect becomes an efficient cause in order even to the ultimate, where the effective power subsists; but this is effected continually from a spiritual principle, in which alone that force is; and so it is, that nothing in nature exists except from something spiritual and by it."—*Athanasian Creed*, 94.

#### Facts and Fictions.

WE are told by Professor Bush in his relation of the developments of Mesmerism to the doctrines and disclosures of Swedenborg, that "the mesmeric state is as much distinguished by mental as by physical phenomena. Yet this state is induced by *physical means*, that is to say, by manual movements, or passes made in a downward direction, and it is removed by passes made in a reverse direction."—P. 85. Now it is a *fact* that physical means, as passes, are generally made in inducing the mesmeric state; but it is a *fiction* to suppose that this state is thus induced or removed by the passes alone, without the exercise of the forces of the brain at the same time.

Again the Professor says, "And what will be (the objector) make of the fact, that in *transmitting* this agent, which is palpably removed by upward passes purely mechanical,

he has transferred his own thoughts and volitions to the physical element of the other party? All this is matter of indubitable *fact*, coming within the range of every day experience, and we submit whether the simple charge of *materialism* is a sufficient reply to the evidence of *facts* which appeal as directly to the objector's reason as to ours."—P. 86.

There is not, we are sorry to say, a solitary *fact* to be found in the above paragraph. The thoughts of the magnetizer are never transferred to the other party in the process of mesmerizing, nor until the other party is mesmerized. It is then only that the thoughts of the magnetizer or other persons can be read and thus transferred.

The work is full of such errors, the consequence of the Professor's limited knowledge of magnetism.

#### Magnetic Machines and Consumption.

WE should again direct the attention of physicians to the great importance of the use of the *magnetic machine* in the treatment of consumption, as the use of this instrument with the compound chloride of gold cures every case in the first stage of the disease, and more than nine-tenths of those in the last stage.

We should also again direct their attention to the fact that we first commenced the new, scientific, and successful manner of magnetizing, and were soon after compelled to engage in the manufacture of magnetic machines to obtain good instruments for magnetizing, by which the great benefits of the practice might be extended and perpetuated; and that we have sold and continue to sell at a very small profit a great number every year. The great demand for these instruments has, however, excited the cupidity of speculators, who have engaged in the manufacture of inferior imitations of our machines, and without any knowledge of magnetism or magnetizing, are foisting them upon the profession and the public with all the arts that are peculiar to such geniuses; and if the practice of magnetizing is not entirely ruined and abandoned in a very few years, it will not be from



any fault of theirs, for a little practice soon shows that no dependence whatever can be placed upon the action of such machines, in the cure of consumption or any disease.

The actions of the two magnetic forces are opposite, or as different as black is from white, and in magnetizing it is a matter of great importance to know which is the positive and which the negative force, and where to apply the positive and where the negative force; yet neither the speculator who sells, nor the person who purchases, knows anything on these subjects. Besides the forces from our machines are really magnetic, and appear, and are really, different from those of other machines as seen by the natural eye and by clairvoyants.

#### Mesmerism—Lectures on.

DURING the last winter this city has been surfeited with the crude expositions of some eight or ten lecturers on Mesmerism. Professor Rodgers opened the discussion on the philosophy of Mesmerism. Professor Sunderland followed on its phantasies; and Professor Dodd closed on its constant tendency to produce an equilibrium.

The accompaniments of these lectures were first, Professor Sunderland's Red Pepper case; second, Davis's Hall case, and third, Mrs. Johnson and Dr. Oatman's case.

Professor Rodgers claimed priority of discovery in mesmerizing an audience; Professor Sunderland claimed to have discovered that Mesmerism is nothing but sympathy; while Professor Dodd claimed to have made the grand discovery that the sun, earth, and planets, were maintained in their positions by the forces of Mesmerism.

THE following communication is from the Rev. Samuel Griswold, of Lyme, Ct., a very accurate observer, and a very powerful mesmerizer.

[For the New York Dissector.]

#### POLARITY OF THE HUMAN HAND.

Mr. Editor:

Some facts were presented in an early number of the Dissector, in proof of the po-

larity of the human hand. During the last two years I have frequently tried experiments illustrating the same truth.

1. The following is a pretty experiment, and may be tried by those who do not understand the process of inducing the somniscient state by Animal Magnetism.

Place together the ends of the thumb and of all the fingers of your right hand, so that they will all touch at once any flat surface, as a table. The magnetic current from the poles in the ends of the thumb and of the fingers, will thus be made to concentrate their influence on a comparatively small surface. Let a second person hold the palm of his left hand upward and horizontally, bringing the elbow opposite the side, at a little distance from it; being careful not to rest this hand or arm on any part of himself or other object. Then bring your concentrated thumb and fingers over the centre of the palm of his hand (the location of the large pole), holding it for some time an inch or half an inch distant from it. A sensation of warmth will be felt if both the experimenters are right-handed, or both left-handed, and both in their normal magnetic state. This warmth is occasioned by the union of the negative force in your right hand, with the positive force in his left hand, on the principle that magnetic forces of opposite denominations, on being united, attract and contract, consequently expel heat.

Next bring the thumb and fingers of your right hand over the right hand of the other person in the same manner, as in the first experiment; and a sensation of cold, like a very slight breeze, will be produced by the two forces,—on the principle that magnetic forces of the same denomination, on being united, repel and expand—consequently absorb heat, and cause the sensation of colic.

If you next hold your left hand over the right hand of the other person and then over his left, both being placed as in the former experiments, you will obtain the former result.

I have frequently discovered, by this experiment, that persons were left-handed, [as the warm sensation was produced by bringing nearly together both of our right hands, or both of our left hands; and the cold sensation

by the near approximation of the right hand of one to the left hand of the other.

The negative force being stronger than the positive, will be found on the right side of persons who are right-handed; and on the left side of those who are left-handed.

In both these cases the normal state may be reversed by local injuries, or partial paralysis of the stronger side.

Many persons have not sufficient susceptibility to magnetic impressions, to perceive these sensations. In some cases also it will require considerable time for the magnetic communications to be established between the two experimenters.

Many, who have stoutly professed their disbelief in Animal Magnetism, or even ridiculed it as a humbug, have honestly declared to me that they very distinctly perceived both the warm and cold sensations in the foregoing experiment. But their disavowal cut them off from any possible source of explanation of the phenomena produced.

2. Another proof of the opposite polarity of the two hands, I have often deduced from the somniscient subject.

Care was taken not to disturb the polarity of either side by cross manipulations. When the subject was declared by himself to be in the magnetic sleep, I have crossed my arms, so that my right hand came in contact with his right hand, and my left with his left, and have often been surprised by the marked effect. I have often tried this experiment with C. M. R., a young lady of delicate constitution and magnetic sensibility, whom I have magnetized for her health. When in the somniscient state I have often touched her right hand with my right hand, which gave her a powerful shock, attended with an unpleasant sensation. Even one finger produced this shock. If I took hold of her right hand with my right, and her left hand with my left, she would manifest great uneasiness, and immediately change her hands, taking my right hand with her left, and my left with her right. Other somniscients, less sensitive, have perceived a different influence from my two hands when applied to either of their hands; and have often directed how the two

hands should be placed in reference to their polarity.

#### INFLUENCE IN REMEDIAL APPLICATIONS.

A knowledge of the distinct polarity of each hand, yea of the whole side, is of great practical importance in the application of the remedial influences of Animal Magnetism.

1. In producing clairvoyance, great care should be used not to disturb the polarity of the two sides of the subject, otherwise much confusion may be produced.

2. Local inflammations may be removed by applying the repulsive and cooling influence to the diseased or injured part.

While in your office more than a year ago, with Dr. ———, of strong, healthy constitution, he had a painful sensation and some inflammation in his *right* eye, produced, if I rightly remember, by a small particle of sulphate of copper. I applied the fingers of my *right* hand, held at a little distance from his eye; and he immediately felt the cooling sensation, mentioned in the foregoing experiments, and very speedily both the pain and inflammation were removed.

3. Your directions for magnetizing with your magnetic machine, are equally applicable to the appliance of Animal Magnetism. The right hand corresponds to the negative button, and the left hand to the positive button. In magnetizing for diseases of the organs the right hand should generally be placed on the spine opposite the organ diseased, and the left hand over the place where the pain is felt.

4. Your diagrams and explanations of the poles in the brain and in the internal organs are of very great importance to those who magnetize for disease.

Your much obliged friend,

SAMUEL GRISWOLD.

Lyme, Ct., Feb. 10, 1847.

*Case of Epileptic and other fits, Delirium, Neuralgia, Vomiting, and the discharge of Arsenic taken long previously, successfully treated with Mesmerism, which produced intuitive knowledge of the internal state, the future course of the Disease, and the proper treatment.* By J. C. LUXMOORE, Esq., of Alplington, Devon.

I SHALL premise an account of the case before I saw it, by Mr. Parker, surgeon, at Exeter.

"In 1833 I was requested by Dr. ——— to attend Mrs. Bird with him. She was then suffering daily from *epileptic fits*, varying from six to eight hours in duration, and they have continued as long as 48 hours: *frequent delirium: paralysis* of the left arm and left leg: the left hand inverted so that the fingers could not be separated without great exertion: *vomiting* of nearly all her food, and very frequently blood, even as much as half a pint at a time. She had a large painful tumor in the left iliac fossa, connected with the uterus, from which tumor the aura epileptica always proceeded. She had also a cough resembling hooping cough of the most violent character.

"The above sufferings had been treated by *one bleeding, one cupping, leeches, and repeated salivations*. She was once under *salivation* for 12 consecutive months. The *materia medica* had been ransacked. *Electricity and galvanism* had been also resorted to. But no *beneficial effects attended any of the treatment*.

"I removed the tumor by the application of leeches to the os uteri. It frequently returned, and was as often removed by the same means. The paralysis of nearly *three years' duration* was quite cured by the application of moxa, and has remained well to this day, now nearly 14 years. The cough was much relieved by the same means. Tic douloureux was also added to her other ailments.

"All other means having failed to relieve her sufferings, I suggested bleeding her from the arm, which was attended with such relief, that I have now *bled her nearly six HUNDRED times*, never taking less than *half a pint*, and more frequently *more than a pint*, each time. The treatment after a while lessened the violence of the fits, shortened the duration of the delirium, stopped the vomiting of blood, but had no effect on the *tic douloureux* or the *vomiting of food*.

"I ceased to attend Mrs. Bird for some time. In 1834 I was selected as her sole medical attendant, when I found her with her *face, eyelids, lips and tongue much swollen*; scarcely able to speak or swallow; the *inside of her mouth was covered with black pustules*. She had been taking for *some months* moderate doses of the solution of arsenic, which Dr. ——— had prescribed for her tic doulou-

reux, and which is a very ordinary treatment for that complaint. She was at the same time taking *frequent doses of lime water*.

"I have never given her a single dose of arsenic or mercury. She has frequently called my attention to a watery eruption on her legs and feet, arms and hands, and on eating salt or salt meat has complained of *garlic eructations*. Mrs. Bird kept her bed for *seven years*, and then gradually gained strength, until she was able to walk short distances; but the tic, fits, and vomiting of food were never subdued.

"The attendance on and subsequent death of her husband, in 1845, again increased all her ailments. The fits became more violent, and the weakness gradually increased; the tic douloureux attacked every part of the system, particularly in the form of angina pectoris, which I have frequently witnessed; and expected her death every moment.

"In 1845 I recommended *mesmerism*, but she would not consent to it until October of that year. She was now in a deplorable state; violent fits occurring daily, or rather nightly; tic douloureux without intermission. She could take very little solid nourishment and even that little was nearly all rejected within a few minutes of its having been taken. From all these symptoms I did not consider she would live a month. Mesmerism was now had recourse to, a detailed account of which is furnished by Mr. Luxmoore in the following pages.

"I. B. PARKER."

On the 24th of October, 1845, I, in company with Mr. Parker, visited Mrs. Bird, whom I had never before seen. In seven minutes I succeeded in getting her into mesmeric sleep, although she had, on my arrival, assured me she did not think mesmerism would ever affect her. I aroused her at the end of half an hour. During sleep the left hand contracted in the manner described by Mr. Parker: blowing upon it caused relaxation.

Oct. 27th. Asleep in three minutes, and was aroused at the expiration of one hour.

Oct. 29th. Mesmerized late in the evening, with the intention of leaving her asleep (she gets no natural sleep). She soon fell into sleep-waking, mistaking me for a particular friend of her late husband's. Mesmeric attachment now manifested itself, so as to oblige me to give up the idea of leaving her asleep. Community of taste and feeling were also very marked. Slept two hours.

Nov. 1st. Has suffered much from spasms, rigidity, and palpitation of the heart; all which were much better during sleep-waking, and this continued two hours.

Nov. 3d. Found Mrs. Bird in high delirium,

declaring neither Mr. Parker nor I should come near her; and on my approach she attempted to bite and strike me. In ten minutes she was in quiet sleep-waking.

At the expiration of two hours I aroused her, but, not finding her collected, I again put her to sleep; shortly after which she awoke quite comfortable.

Previously to being mesmerized, these fits of delirium never lasted less than six or eight hours, and have continued six weeks.

Nov. 5th. Feels much better. In mesmeric sleep-waking two hours and a quarter.

Nov. 6th. All day threatened with a fit, conscious of its coming on just as I arrived. Mesmerized, and immediately had the fit, with slight delirium and considerable rigidity: aroused her in a little more than two hours, unconscious of what had taken place. She hears no voice but her mesmerizer's, nor can she distinguish the loudest mechanical sounds.

Nov. 8th. General health improved, has suffered scarcely any pain from tic since first mesmerized, although up to that very day she had never been free from it for eleven years, and has been in the habit of rubbing half an ounce of creosote into her face and head every fortnight. Slept two hours and a half.

Nov. 10th. Mesmerized two hours and a quarter. Rather poorly.

Nov. 11th. Mesmerized two hours, during which she suffered from a slight fit of rigidity. While Mrs. Bird was in sleep-waking, I silently placed the kernel of a nut in my mouth; she then complained of a "naughty" taste, and in one moment began retching violently. I ascertained she had lately taken a dislike to nuts, from having eaten a very bad one.

Nov. 14th. Mesmerized two hours and a quarter: has had no tic nor fit.

Unavoidable circumstances prevented Mrs. Bird's being again mesmerized until the 22d; in the interval she had three fits, and was obliged once to use creosote to ease a slight attack of tic.

Nov. 22d. Slept two hours, during which she had a slight fit. I to-day observed that in sleep-waking she was much influenced by my will. She pointed a finger, opened or closed her hand, placed it on my knee or took it off, by my silently willing her to do so.

Nov. 24th. The old distressing cough, resembling hooping-cough, has returned, but no fit. Slept three hours.

Nov. 25th. Much more cheerful, and seems better, but had a violent fit during mesmerism, extreme rigidity; the head and heels only touching the sofa, the spine being arched backwards. It took me nearly a quarter of an hour to relax the body.

Nov. 29th. Has suffered slightly from tic,

cough very bad, voice weak, slept three hours and forty minutes.

Dec. 1st. No tic. During sleep-waking, Mr. Parker burnt moxa on the spine in hope of relieving the cough; she felt the pain for a moment, but it did not produce a fit, as was the case before mesmerism was resorted to. On arousing she was unconscious of having been burnt. While asleep she said bleeding would do her good.

Dec. 2d. Bled before she was mesmerized; then had a very tranquil sleep. No rigidity even of the left hand. Circumstances prevented Mrs. Bird's being again mesmerized until the 16th; and, although a very exciting circumstance took place, she had but two fits and no tic.

Dec. 16th. Spirits low; slept three hours; no fit nor tic. Mrs. Bird's cerebral organs are easily excited by local mesmerism: I however scrupulously avoid touching them, unless actually necessary, as I well know the excitability of her brain.

Dec. 19th. Slept two hours; but did not get into perfect sleep-waking until after a fit and considerable rigidity. When this was over, she said, "I shall be ill on Christmas day, and have a very severe fit on the last day of the year; it will be the worst I ever had; but, if I survive it, I shall be better afterwards."

Dec. 20th. Slept two hours and a half; during which she had a severe fit.

Dec. 22d. Found Mrs. Bird in high delirium, beating herself on the floor. Soon mesmerized her into sleep-waking, and, at the end of one hour and three quarters, I aroused her, quite tranquil; she had been much irritated during the day, which may account for her uncomfortable feelings.

Dec. 24th. Slept two hours and a half, during which Mrs. B., had two fits, but very little delirium; she again alluded to the attack on Christmas day, and said, the second would be on New Year's day (not on the 31st of December, as she had before stated); and added, "I shall be very ill all day. The worst will commence at 6 P.M., and, if I am alive, at twelve o'clock at night I shall recover."

Dec. 25th. Very delirious, and has been so all the morning. I mesmerized her, but it took two hours to overcome the delirium; at the end of three hours, I aroused her, perfectly tranquil.

Dec. 26th. Much better; slept three hours.

Dec. 27th. In a very confused state of mind: mesmerism soon reduced the delirium, and on arousing her, she was tranquil and collected.

Dec. 28th. Feels better, slept three hours, and had a severe fit. During sleep-waking she said, "I must, on the 1st of January, be

bled copiously after 6 P. M., and my feet kept warm; give me a little coffee, if possible, after I am bled: it will be no use trying to mesmerize me until after 5 P. M."

Dec. 29th. Very tranquil: mesmerized three hours: no fit, nor tic.

Dec. 30th. Has suffered from spasms; mesmerized; no fit, nor tic.

Dec. 31st. Mesmerized four hours; suffered from tic, owing to having been exposed to a current of cold air.

Jan. 1st, 1846. Mr. Parker and I visited Mrs. Bird in the forenoon, and found her very restless and ill. At a little after 5 P.M. we found her quite delirious. I commenced mesmerizing her, but she did not get into sleep-waking. Soon after 6 o'clock a very severe epileptic fit came on; her struggles and convulsions were frightful; she would, in a moment, jump from the reclining position, and stand on her toes in that posture, become rigid, then fall away relaxed, and remain almost inanimate. Shortly after the commencement of the fit, Mr. Parker opened a vein in her left arm, and, although the orifice was large, scarcely any blood flowed, and what did come was more like treacle than ordinary blood: another vein in the same arm was opened, and the hand placed in hot water, &c., but not more than half a pint of blood could be obtained; the other arm was then tried, with, for some time, no greater success; at last, the blood changed color, and flowed more freely. Still the fits returned, at very short intervals, for nearly six hours. At three different times, Mr. Parker, the nurse, and myself, all thought her dying; and at one time we feared she had ceased to exist. The disturbance about the head and lungs was frightful. Passes over both afforded relief. I had during the whole time continued to mesmerize, and kept one hand well wetted with cold water on her forehead when her struggles would admit. At 12 o'clock I saw her lips move; she said, "I am better now; I am only a little faint; I shall be better directly." She then took a cup of coffee, remained partially faint for some time, but quite collected. At a little after 1 o'clock I aroused her, and she seemed better than could possibly be expected.

Jan. 2d. Very sore from the effects of the fit; mesmerized into sleep-waking in two minutes, when she said, "I told you I should be very ill yesterday; you see I was right; I shall not have another fit until the 9th of June in the evening. I must, if they wish me to get better, be bled every Thursday for five weeks; it will weaken me, but I shall regain my appetite, and be able to take solids:" this she had not done for a long time.

Jan. 3d. Suffering from slight head-ache; mesmerized two hours and a half, during

which she took coffee and plain cake; on arousing the head-ache had vanished.

Jan. A little confused, but not delirious; mesmerized three hours. During her sleep-waking she took coffee, and a small quantity of animal food for the first time for many weeks. She said, "I should have been better if they had taken more blood on the first of the month; it would have drawn off more of the black blood from the vessels about the brain. I shall, after my next bleeding, if Mr. (Luxmoore) (it must be remembered that she does not know me in her sleep-waking) puts me to sleep, be able to eat a mutton chop for supper."

Jan. 5th. Better; had two hours natural sleep during the night, and retained her breakfast. During sleep-waking, which continued two hours and a half, she said, "The first thing that injured me was being salivated. I ought not to have had any mercury. My then medical attendant also gave me a solution of arsenic, which I took until my mouth was all over black spots; it created inflammation in the stomach, which has never subsided."

Jan. 6th. Mesmerized one hour and three quarters; says, "A cup of coffee should be given me after bleeding; I will tell you more on Friday (Jan. 9)."

Jan. 7th. Still better; mesmerized two hours.

Jan. 8th. Not quite so well; was bled as directed; then mesmerized more than two hours, and on arousing felt better.

Jan. 9th. Soon after she got into sleep-waking, she said, "How beautiful! I see all my inside." She described the structure of her foot, and then went through many other portions of her body with (in the opinion of Mr. Parker, who was present) great accuracy.

Jan. 10th. Mesmerized one hour and a

\* The effects on the mouth and skin, were such as slow poisoning by arsenic sometimes produces. It also causes inflammation of the eyes and stomach. In a Clinical Lecture by Dr. Elliotson, reported in the *Lancet* for May 6, 1832, he detailed the very slow poisoning of a family near Chelsea by arsenic, one having died before he was called in, and nobody could guess why. He immediately suspected arsenic was the cause of the watery eyes, vomiting, and quickness of pulse. On a diligent search, colors containing arsenic and copper were found in large quantities buried in the damp kitchen and garden surrounding the house, left by the previous occupier. As water had free access to the arsenite of copper, an eminent chemist had no doubt that arseniuretted hydrogen had been formed and had vitiated the air of the house. They all recovered by bleeding. After arsenic swallowed has been apparently all removed from the stomach, inflammation may remain in the organ. A case of the kind is recorded by Dr. Roget in the *Transactions of the Med. and Chir. Society* vol. ii., where bleeding and other anti-inflammatory means were requisite to cure, though stimulants also were required. Conformable to all that we observe of the symptoms and to all we know of appropriate ultimate treatment in poisoning by arsenic is the present wonderful narrative. Dr. Elliotson mentions a lady who had spasm, &c., of her stomach and pain of her limbs for years after swallowing arsenic.—*Zoist*.

half, and aroused spontaneously; says, "Mesmerism may be omitted on Sunday without injury."

Jan 12th. Side (uterus) very painful; has a headache of the description which in her case is usually followed by a fit; soothing mesmeric passes relieved her much. Aroused at the end of three hours by my silently willing her to be so. In her sleep to-day she described a sort of coating over the inside of her stomach.

Jan. 13th. Side easy for some hours after I left yesterday, but the pain has since returned. Mesmeric passes again gave relief. After she had been in sleep-waking some time, she, quite contrary to her usual custom, became violent, attempting to strike me: I placed my finger on Benevolence and subdued her, but, on my ceasing to act on that organ, her angry feelings returned; I at last discovered that a kerchief she wears over her ears had slipped, and was pressing on destructiveness; on removing it, all anger ceased. Her left hand was, as usual during the first part of her sleep, contracted, and I proceeded to release it by blowing, passes, &c., when she said, "If you place your fingers just by the side of Veneration, and draw them down the arm and beyond the fingers two or three times, you will get rid of the contraction much better." This proved to be true, but in most cases the contrary would have been the effect.

Jan. 14th. Mesmerized three hours; side again relieved by passes.

Jan. 15th. Bled as directed; mesmerized about two hours; aroused, refreshed.

Jan. 16th. Better. In sleep-waking, which lasted two hours and a half, she said, "The black blood on the top of the head is much reduced by last night's bleeding." Appetite tolerable, and she retains most of her food. No tic.

Jan. 17th. Mesmerized three hours and forty minutes; breathing difficult; passes with the flat hand gave ease to the lungs. Breathing over the chest made her start, and gave the sensation of electric sparks. Had two hours' natural sleep during the previous night.

Jan. 19th. Has had two hours' natural sleep, and seems better than I have ever seen her; breathing much easier. I breathed over her lungs, then on my own fingers, and passed them (touching the dress) from the top of the shoulder, over the lung, and off by the waist. This produced in her the sensation of electricity, following my fingers, and passing off like sparks as they left her body. Her hand also on the same side became as it were electrified, so that the tips of her fingers touching any part of her body or mine caused the feeling of sparks having been drawn through them.

Jan. 22d. Has thrown no food from her stomach for ten days. Is suffering from a slight cold, with difficulty of breathing. Bled as directed. Mesmerized, and was better on arousing. Electric phenomena as on Monday (19th).

Jan. 23d. General health better, but side painful. Soon after sleep-waking was produced, she made signs that her jaw was locked; upon which I inquired how I could relieve it; she took my hand and made passes from the ear to the mouth, which soon had the desired effect.

Jan. 24th. Side still painful, otherwise better; appetite good, and retains most of her food; mesmerized, and said the next two bleedings would much lessen the black blood on the brain.

Jan. 26th. Annoying circumstances caused a headache. Mesmerized, and was better on arousing.

Jan. 27th. Mesmerized two hours, side and head still painful; says the tumor in the former will be relieved by a discharge within twenty-four hours.

Jan. 29th. Side has discharged. Bled as directed. Mesmerized two hours, and was very comfortable.

Jan. 31st. Better. Mesmerized two hours and a half.

Feb. 2d. Slight headache. Mesmerized, and said she would give further directions as to her treatment after bleeding on Thursday (Feb. 5).

Feb. 5th. Has suffered from rheumatism since Monday. Bled, and then put to sleep. I rendered her limbs rigid, and on relaxing them the rheumatic pains had left. She, as promised, now gave further directions as to her treatment, saying, "I must not be bled again for a month or three weeks at the earliest, unless I have a fit. The coming in my stomach, which I mentioned in January, is rather loosened; my food should be nourishing. If this treatment is followed, I shall be sometimes better and sometimes worse until the 9th of June, when I shall have a bad fit; but, if proper precautions be taken, I shall from time to time give directions as to my treatment. I do not mean to say I shall be until the 9th of June, but, if I do, what have named will take place: life and death are in the hands of the Almighty."

Feb. 7th. Rheumatism has not returned but she again rejects most of her food. Mesmerized three hours.

Feb. 9th. Mesmerized two hours and a quarter. Appetite indifferent.

Feb. 12th. Better, but appetite bad, and she retains but little food, though apparently gaining strength.

Feb. 14th. Was much frightened last night by two drunken men entering her garden at

knocking at her door; this produced violent palpitation, and shortly her legs and feet began to swell, assuming a dropsical appearance. Mesmerized.

Feb. 27th. Absence from home has prevented my mesmerizing her since the 14th instant. She has suffered slightly from tic, but nothing like she did before being mesmerized; legs still swollen. During her sleep-waking to-day she suffered from rigidity and locked-jaw, which required some perseverance to overcome. She said, "I have lost some ground from being so long without mesmerism." She still vomits her food, and says she shall continue to do so until the coating is removed from the stomach.

Feb. 28th. Mesmerized three hours; at first she suffered from lock-jaw and rigidity, which were soon overcome. She directed that small quantities of laudanum should be applied to the stomach externally, and added, "I shall be much weaker yet, and on the 7th of March delirious, and should be mesmerized from 6 to 8 o'clock." I to-day rendered the ankles and legs rigid several times, and this reduced the swelling.

March 2d. Excessive debility. Mesmerized into sleep-waking; soon after which she had a most violent spasm about the heart, which seemed to threaten life. After it had ceased, she said, "I shall have another attack in about ten minutes, and another between 7 and 8 in the evening. The former took place, and at the end of four hours I aroused her, when she was perfectly unconscious of all that she had suffered. At half past 6 P. M., I found her rather delirious, but soon got her into sleep-waking, when she told me the attack would last on and off for an hour. This proved correct. The spasms were terrific; her screams might have been heard a long way off. The violence of the attack on the 7th will, she says, commence about 6 o'clock, P. M.; it will be useless for me to persevere in mesmerizing her for more than three hours that night. The swelling of the legs has subsided, but the water is gone into her chest. This, I fear, was caused by my driving it from the feet and legs. The dropsical manifestations were, she thinks, produced by the fright on the 14th of February, causing interruption of the circulation of the blood.

March 3d. Rather more comfortable, having had some natural sleep during the night. Mesmerized four hours, and suffered from slight spasms.

March 4th. Much better, but has felt a little tic. Mesmerized three hours, and said, "I shall throw a quart or three pints of water from my stomach within forty-eight hours, which will relieve the chest. I am in a very weak state, but on the 7th they must

not be afraid to follow my directions, which will prove beneficial. I shall be in a high state of delirium from inflammation on the brain, resulting partly from over anxiety and partly from want of free circulation. They should take a small quantity of blood from the temporal artery, but, if this cannot be done, more must be taken from the arm: then rub the chest with laudanum, and apply mustard plasters to it and the feet. If they follow these directions, whatever I take on Saturday night and Sunday will remain on the stomach. On Saturday after bleeding, I may have a wine-glass of Sherry, given in small quantities at a time; arrow-root will be good for me. I should be mesmerized at 6 P. M., and bled as soon as I am asleep;" (she often talks of being put to sleep, but never admits that she is so when mesmerized.) "Let me be kept as much under mesmerism as possible for three hours; I should also have a dose of morphine equal to twelve drops of laudanum. I shall then have a better night than for some time. I may have a wine-glass of Sherry on Sunday. Pay no attention to any directions I give respecting myself on Saturday (March 7). After Sunday I shall again reject my food."

March 6th. Yesterday she vomited nearly two quarts of water, which much relieved the chest. Mesmerized; says, "The tumor in my side (uterus) will discharge on Thursday or Friday. I shall be very weak, but better on the 14th. The day before, on the same morning I vomit the coating from my stomach, I shall eject a little blood."

March 7th. Mr. Parker and I visited her rather before 6 o'clock, P. M.; she was in a high state of delirium, declaring she would destroy herself. I placed her on the sofa and commenced mesmerizing her, but was obliged to put my finger on Benevolence before she would allow me to proceed. Until I resorted to this expedient, she attempted to strike and bite me. I could not get her into sleep: still mesmerism had a very soothing effect, and she was sufficiently under its influence to object to the touch of any one but her mesmerizer. Mr. Parker attempted to open the temporal artery, but, owing to its being in her case very deeply seated, he did not succeed; she was therefore bled from the arm. All her other directions, with one exception, that of washing the chest with laudanum, which was quite unintentionally omitted, were strictly attended to.

March 8th. Found Mrs. Bird in a sort of quiet delirium, and was informed that, during the night and since she arose, she had been constantly falling asleep and starting up again. She was soon mesmerized into sleep-waking, and the delirium passed off. She said, "It is a pity they forgot the laudanum, but it is no

wonder, they had so many difficulties\* to contend with. I should have had a better night, but as it is I shall be weaker for it all the week. The morphine would have quieted the internal nerves, and the laudanum the external ones; but, the latter being omitted, I felt sleepy, but was continually disturbed. On the 12th, in the morning, I shall be very faint; I shall throw from my stomach more than a quart of water. There will be no delirium after to-morrow, 3 o'clock, until the 20th, and then it will not be much. On Saturday I will give you further directions.

March 9th. Just as yesterday. Mesmerized into sleep-waking, and the delirium ceased. At five minutes after 3 P. M., I aroused her, quite free from delirium; but she thought it was still Saturday, having lost the time during which, in her waking state, she had been delirious.

March 10th. Quite collected; side painful, breathing oppressed. Mesmerized.

March 11th. Mesmerized two hours and a half; chest more uneasy.

March 12th. Mesmerized four hours; feels faint, and has thrown from her stomach two quarts and half a pint of water. During sleep-waking, she said, "I shall have three very severe spasms about the heart in a quarter of an hour." They took place. Mrs. Bird also added, "I shall, on the 3d of April, have a very severe fit of tic, but I will tell you more about it on Saturday. If, when I throw the coating from my stomach, Mr. Parker will analyse it, he will find it contains arsenic."

March 13th. Tumor has discharged, and Mrs. Bird has thrown nearly a pint and a half more water from her stomach. Mesmerized, and said, "I shall, in ten or fifteen minutes, have three severe spasms about the heart." They took place; her screams and convulsions were frightful. Mr. Parker, who was present, said he never saw any more severe. After they were over, she said, "There's an end of the ill effects of my friend's forgetting to put laudanum on my chest."

March 14th. Mesmerized, and seems better. During the sitting, she gave the following directions: "Let me have as much mesmerism as possible next week, any time any day, except on the 20th, when it should be in the evening. I shall wander slightly on that day; Saturday be exhausted; Sunday poorly, but better; Monday still better; Tuesday a severe head-ache. The tic, on the 3d of April, will commence at 10 o'clock, A. M., and end at 3 P. M.; from 2 to 3, it will be at the worst. After the tic, six violent spasms; when they are over, let two teaspoonfuls of laudanum be rubbed on the chest and stomach."

March 16th and 17th. More comfortable; mesmerized both days.

March 20th. Breathing bad. Mesmerized, and said, "The water is again collected on my chest. I must as much as possible avoid the recumbent position, even at night, and have some medicine to promote the swelling of my feet. I was to have been better to-morrow, Sunday and Monday, and so I shall, except the breathing, which will be worse on these days."

March 21st. Breathing still bad. Mesmerized, and said, "The water in my chest is increased; the medicine and liniment have been of use; without them, the increase would have been greater. Passes down the back and chest will be beneficial." I followed her directions.

March 23d. Breathing very bad. Soon after she was under the influence of mesmerism, very distressing attacks of difficult breathing commenced, threatening suffocation. In the first and second she suffered very much, starting on her feet; in that state became quite rigid; and in a minute or two relaxed, and was left perfectly powerless. She then said, "You must keep me leaning forward, or I shall die; you must use any force to do it. I shall have six more attacks; do not fear, and I shall be safe." The six paroxysms took place, and I had to use great pressure to prevent her rising. After this, she said, "I shall throw water from my stomach about 5 o'clock to-morrow morning, and more before noon. Mesmerism will not take full effect on me on the 3d of April, until 3 o'clock."

March 23d. Threw about two quarts of water from her stomach about 5 o'clock in the morning, and rather more than a pint at 10. Mesmerized into sleep-waking, and said, "I shall throw more water from my stomach before 5 o'clock this evening."

March 24th. A pint more of water was ejected after I left yesterday. Feels weak, but two hours and a half mesmerizing refreshed her.

March 25th. Rather better, but suffers from not being able to lie down; feet swollen. Mesmerized four hours.

March 26th and 27th. Looks better, but is still weak. Mesmerized both days.

March 28th. Mesmerized two hours and a half; has a watery rash, which in her sleep-waking she says is on the inside of her stomach, as well as on the external parts of the body.

March 29th. Mesmerized one hour and three quarters. No water in the chest; feet less swollen.

March 30th. Rash still bad. Mesmerized, and said, "My stomach is very much irritated."  
[To be concluded in the next number.]



# THE DISSECTOR.

VOL. IV.

JULY, 1847.

NO. 3.

*Case of Epileptic and other fits, Delirium, Neuralgia, Vomiting, and the discharge of Arsenic taken long previously, successfully treated with Mesmerism, which produced intuitive knowledge of the internal state, the future course of the Disease, and the proper treatment.* By J. C. LUXMOORE, Esq., of Alhington, Devon.

(Concluded from the April No.)

ed, and the arsenic acting on, the system is poisoning the blood, and also the water that is floating about me; this makes the rash so troublesome."

March 31st. Rash still troublesome; chest and stomach painful. Mesmerized two hours.

April 1st. Mesmerized. Rash has partially disappeared, owing to a slight chill: says, "it will appear again before the 3d; it is now looking very angry in the stomach."

April 2d. Rash a little more out; slight tic. Mesmerized.

April 3d. Tic came on this morning, in exact accordance with Mrs. Bird's prediction. No tongue can describe what she appeared to suffer. At 3 o'clock, P. M., the tic ceased, and I got her into sleep-waking. Previously to this, although I had been with her a long time, all my endeavors to produce sleep were unavailing. At a quarter after 3, the spasms commenced; the six occupied twenty-five minutes, and were very violent. After they were over, she said, "I shall get on tolerably until the 16th of this month, when I shall have either seven or eight spasms about the head and heart; they will last nearly an hour. On the 16th I should be under mesmerism from 12 to 2 o'clock. After this I shall have a severe head-ache for three days; if it lasts to the fourth, I must have aperient medicine; and if to the fifth, should be bled." On arousing she was quite free from tic, but her head and face were sore from the effects of it.

April 4th. Free from tic, which much surprised her, and quite unconscious of having suffered from spasms. Mesmerized two hours.

April 5th. Mesmerized one hour and three quarters, and said, "There is little water in my chest, the weather is much against me" (rain has fallen and there is great dampness in the air). "On the 16th, the spasm will be the worst. I fear Mr. Luxmoore will require assistance to hold me, but no one but himself must touch my forehead or over my heart; it would be dangerous." Chest mesmerically electrified.

April 6th. Mesmerized. Says, "The water in my chest is not much increased." I made, by her direction, passes with the flat hand from chest to feet: this produced slight swelling of the feet. Her chest was again mesmerically electrified, and she observed yellow fire follow the tips of my fingers. The electricity of yesterday, she says, prevented the breathing being as bad as it otherwise would have been.

April 7th. Breathing bad. Mesmerized, and said the water in the chest will be thrown off on Saturday (April), at 5 o'clock. Chest again electrified, and she saw ribbons of fire pass through the water, which they seemed to warm.

April 8th. Breathing still bad; was frightened again last night by two men entering her garden. Passes with the flat hand made her feet swell.

April 9th. Breathing bad. Mesmerized three hours and a half; says, "Whenever the coating is removed from the stomach, I must have a strong dose of aperient medicine, to prevent any portion remaining in the bowels."

April 10th. Mesmerized one hour and three quarters; feels better, except the breathing.

April 11th. Threw off five pints of water this morning. Mesmerized, and said, "I shall throw off a little more water at 5 o'clock to-morrow."

April 12th. More water having been ejected, the breathing is much better. Mesmerized one hour and forty minutes.

April 13th. Breathing still better. Mesmerized, and said, "I fear I must be bled on

the 21st, as the head-ache will not pass off without it."

April 14th and 15th. Slight spasms while asleep, otherwise comfortable. Mesmerized both days.

April 16th. Mr. Parker and I visited Mrs. Bird at ten minutes before 12 o'clock; we found her on the floor quite delirious. In less than two minutes I mesmerized her into sleep-waking, and she became sane and tractable. The spasms shortly commenced, and increased in violence to the fifth, which was truly frightful; and during which, she, notwithstanding all my efforts, assisted by Mr. Parker, threw herself on the floor, carrying me with her, and pulling out her hair by handfuls; the next two spasms were not so bad, and the last was very slight. Soon after the spasms had ceased, she said, "Between this and the 21st, mesmerism must, on no account, be omitted for twenty-four hours together, and, on that day, I should be twice under its influence. I shall have bad spasms on the 1st of June." Soon after arousing, a severe head-ache came on, as she had said would be the case.

April 17th. Head-ache continues. Mesmerized four hours; says she shall have spasms, daily, more or less until the 9th of June.

April 18th. Head still aches. Mesmerized two hours; says there is water in the chest.

April 19th. Head-ache and slight spasms. Mesmerized, and then said, "I shall have rather a severe spasm while under mesmerism this evening (she was correct). They must not attend to any directions I may give on the 21st, however plausible they may appear to be. I should be bled on that day at 12 o'clock, and not aroused from mesmerism until half-past 2. Persons subject to insanity should always be mesmerized by the same operator. If I were mesmerized by any one but Mr. Luxmoore, I should be insane until the 9th of June. I shall be ill on the 2d of May, and should be mesmerized in the evening."

April 20th. Took a strong dose of medicine as directed. Mesmerized, and said the medicine has had the desired effect, in removing an obstruction.

April 21st. At 11 A.M., I found Mrs. Bird delirious; she had been rather violent. At half-past 11, I commenced mesmerizing her; in two minutes she was in sleep-waking, and the delirium had almost ceased; she might wander for a sentence or two, but soon detected herself. At twenty-five minutes after 12 she was bled, and at the end of four hours she aroused perfectly collected, and free from head-ache. In the evening I again sent her to sleep for two hours, when she said, "I shall throw water from my stomach on Saturday."

April 22d. Mesmerized, and said, "On

the 1st of May I shall throw off a little blood from my stomach; on the 2d, I shall be very ill, particularly towards evening; on the 3d, I shall throw up something gritty, it will contain part of the coating of the stomach I have before spoken of. Immediately after I have thrown up the gritty substance, I must have a dose of the same sort of medicine I had on the 20th of the month. I shall throw off three pints of water on Saturday next (25th), at five minutes before 6 in the morning. After the 3d of May, I hope I shall be able to recline." She has not been able to lie down night nor day since the 20th of March.

April 23d. Mesmerized two hours and a half; had one bad spasm.

April 24th. Suffering from great nausea, and is very weak. Mesmerized, had a bad spasm, and the nausea produced retching. She said, "The coating is almost all fallen from the stomach, but still it will not be got rid of until the 3d of May. If I am under mesmerism to-morrow between 3 and 4 in the afternoon, I shall be able to give better directions about the 9th of June than at any other time."

April 25th. Water vomited this morning, and she feels very languid. Mesmerized in the morning, and again in the afternoon, when she gave the following directions for the 1st and 9th of June. "On the 1st of June, the spasms will commence at 3 P.M., and be over by 4; mustard should be applied to the extremities for twenty or thirty minutes. To be mesmerized at 2, and aroused at 5 o'clock. On the 9th, at 10 in the morning, I shall be delirious; but there will be no danger of my injuring myself until 10 P.M. No cold water must be applied to the head on account of tic. After 10 at night, violent spasms of the head and heart, which will continue until 12 o'clock. Head and heart to be held by Mr. Luxmoore. From 12 to 2 violent tic; during which let me have hot cloths to my face. From 2 to 4, a fit in great violence; I should be bled as soon after 3 as the struggles will allow. If possible, open both temporal arteries; if not, bleed from both arms. If one temporal artery is opened, and not the other, bleed from the opposite arm. I must be bled until I yawn, and have coffee soon after; then two teaspoonfuls of laudanum to be applied round the temples, face, and chest. From 4 to 6, spasms, and the effects of previous suffering; during which, mustard plasters must be had recourse to, and kept up for twenty-five minutes. I shall then get into a sort of half-stupor until 9 o'clock. After this, mesmerism will be deeper than it ever has been in my case. I shall know Mr. Luxmoore, and shall also be asleep (she does not now consider herself asleep when mesmerized). I must not be al-

lowed to put my foot to the ground this day, nor the next. I may be aroused at 10 o'clock, but should be under mesmerism again in two hours."

April 26th. Has unfortunately given her head a blow, which caused a head-ache. Mesmerized three hours and a quarter.

April 27th. Tolerable in the morning, but during the day circumstances occurred causing a misunderstanding betwixt Mrs. Bird and the person for whom she, in her sleep-waking, mistakes me: this caused her very great distress of mind; and as soon as I mesmerized her into sleep-waking, she became very uncomfortable at having the person she mistook me for with her. I took a great deal of trouble to quiet her, but all to no purpose; so I thought it best to arouse her, and in her waking state assured her that if she thought any one was near, or would approach her, except Mr. Parker and myself, it must be a delusion, and I begged her to keep this idea strongly impressed on her mind while passing into mesmerism. I had, however, to arouse her several times before I could succeed in making her know me in her sleep-waking; when, however, this was accomplished, she became reconciled, and said she must be bled immediately, or she should be insane for life, which would not, in that case, last more than a fortnight. She was bled, and then felt better.

April 28th. Very ill and depressed; but during sleep-waking, she said, "With due care you will yet save me." Mesmerized twice, and knows me in her sleep-waking.

April 29th. Mesmerized in the morning, when she said, "If you wish to save me, you must be with me from half-past 8 to half-past 9 this evening; it will be a struggle between life and death." I sent her to sleep at 7 P.M.; soon after which a spasm came on, and she was very ill. I kept her asleep until 10 o'clock.

April 30th. Mesmerized in the evening, and was very comfortable during the first part of the sitting, but ultimately became faint, owing (as she said) to the contents of the stomach beginning to ferment. She also directed hot jars to be placed at her feet, and sal volatile, two parts water and one part spirit, to be taken at 12 o'clock to-night, 5 to-morrow morning, 12 at noon, and 5 in the afternoon; and a hot jar to be placed at her side.

May 1st. Mesmerized three hours; said, "I shall be ill this evening; keep me asleep as late as you conveniently can to-morrow evening." Mesmerized again in the evening; she was delirious, and remained so for an hour; then became collected, and directed sal volatile, of the same strength as before, between 5 and 6 o'clock to-morrow morning. She now suffered horribly in the calves of her legs and

stomach; the pain could scarcely be endured. She has vomited a little blood. On eating salt or salt meat, she experiences garlic eructations. All this, and the rash she has suffered from, are, I understand, indications of the presence of arsenic.

May 2d. Rather wandering. Mesmerized, soon became collected, and said, "My blood is fermenting, as if I were in a state of salivation. The reason I have been obliged to be so often bled, is owing to the medicine I formerly took." Mesmerized again in the evening, and Mrs. Bird's sufferings in the legs, head, stomach, back, chest, and arms, were perfectly dreadful; three times did she fall into such a paroxysm, as Mr. Parker, who was present, said he never saw a person recover from; her gasping for breath cannot be described. After a time she became easy, and on arousing was unconscious of anything extraordinary having taken place.

May 3d. Mr. Parker and I called on Mrs. Bird between 1 and 2 o'clock, P.M., and found she had thrown from her stomach a quantity of a gritty substance, in a little bloody water, at 5 A.M.; on applying the established tests, the presence of arsenic was indicated. She had taken the aperient medicine as directed. Mesmerized in the evening for two hours, and, with the exception of great weakness, was much more comfortable. She said, "I must not be allowed to fall into what I call sleep, during mesmerism for some time (this is a drowsy stupor, quite distinct from mesmeric sleep; both body and mind are in a state of listless inactivity), or I shall awake an idiot."

May 4th. Much easier; continues to take sal volatile of the same strength; says the system is so paralysed, that if it were weaker it would have no effect. Mesmerized two hours. In the evening I found Mrs. Bird delirious, but soon got her into sane sleep-waking; when she said, "It is lucky you came to-night, or I should have been raving mad by the morning. I did not tell you of it, as I could not endure the notion of encroaching so much on your time; but I see I was wrong, and will never again withhold any directions I consider beneficial. To-morrow you should be with me from 8 to 9 in the evening. I shall have three severe spasms between 12 to 1 o'clock to-morrow; if I were mesmerized, it would be better."

May 5th. Mesmerized two hours; had the three spasms. In the evening found Mrs. Bird delirious; mesmerized from half-past 6 to 10 o'clock, P.M.; soon got her into sleep-waking. She said, "I could not have lived, if Mr. Parker had not bled me so often."

May 6th. Quite collected; mesmerized twice.

May 7th. Great tendency to the stupor;

mesmerized two hours and twenty minutes in the morning, and again in the evening.

May 8th. Very weak. Mesmerized two hours and a quarter, and said, "Very shortly after I am mesmerized this evening, I shall cough, and shall wipe some more of the gritty substance from my mouth. I shall have a spasm between 7 and 8 o'clock, this evening, and should have one ounce of Epsom salts, with a little peppermint between 4 and 5 to-morrow morning. I shall have spasms all Monday." In the evening I again visited Mrs. Bird, and, after having talked to her a little time, sent her into sleep-waking, when she soon coughed, and I wiped from her mouth a gritty substance, precisely similar to that she had vomited on the 3d; this did not go out of my sight until I delivered it to Mr. Parker, who, on testing, found it contained arsenic. Had a very bad spasm between 7 and 8 o'clock.

May 9th. Tolerably comfortable, but weak, and had a little impediment in speaking. Mesmerized twice; said, "I shall be very ill Monday and Tuesday (11th and 12th), and have spasms between 7 and 8 P.M., on the latter day. I shall be very faint."

May 10th. Mesmerized, and said, "I should be mesmerized to-morrow from 10 to 12, 3 to 4, and 7 to 8 o'clock. On Tuesday, from 10 to 12, and 6 to half-past 8. When I faint, rub camphorated spirits into the upper part of each side of my windpipe,—it will recover me sooner than anything else: this will be found beneficial in all cases of fainting. I shall be very ill on the 3d of July, but it will not be a fit. If not mesmerized, I shall not recover."

May 11th. In the morning was tolerable, except the tendency to faint, which, however, was overcome by strictly following her directions. Mesmerized two hours. In the afternoon I found Mrs. Bird much depressed; a distressing message had been delivered to her. Mesmerized, and for a time she was just as she had predicted; but afterwards became raving mad. I sent for Mr. Parker, who applied mustard to the ankles; but with this assistance, and all the mesmeric means I could think of, it took two or three hours to get her tolerably calm; when she exclaimed, "You have overcome me again; if you wish to save my life, bleed me; do not be afraid." This was done, and before 11 o'clock we left her perfectly sane. She also said during sleep-waking, "I may lie down to-night." This she has not been able to do, night nor day, since the 20th of March.

May 12th. Better than could be expected. Mesmerized in the morning three hours and a half; said, "The spasm will, owing to my being bled last evening, come on between 3

and 4, instead of between 7 and 8 o'clock, as I before stated, but it will not be so severe. I shall wander on the 15th, between 3 and 5 o'clock." Mesmerized again in the afternoon for two hours; at a quarter after 3 o'clock the spasm came on; after which she said, "I must be bled again on the 18th. I shall, from 4 to 9 in the evening, be as raving as I was yesterday: I should be bled at a quarter after 8. I shall then be tolerable until the 22d; after which, I shall be able to give no directions about anything until the 9th of June. On the 21st, I will give you all the necessary directions until the 9th. Between the 1st and the 9th of June, my speech will be very bad."

May 13th. Feels better. Mesmerized twice, two hours each time.

May 14th. Tolerably comfortable. Mesmerized two hours in the morning, and the same time in the evening; said, "To-morrow I shall wander slightly, and should be under mesmerism from half-past 11 to half-past 12 o'clock, and again in the evening."

May 15th. Mesmerized, and said, "I threw off two mouthfuls of blood from the lungs this morning; the right lung is very bad, not only shrivelled, but in spots much inflamed. I shall have a struggle to-night, soon after I am mesmerized. (This proved correct.) If I were not mesmerized it would take place at 1 in the morning, and then I should be violent. To-morrow I must be mesmerized from 10 to 1, and again in the evening. I shall have a spasm about 7 P.M." Slept three hours in the morning, and two in the evening. Wandered slightly during the day.

May 16th. Has a slight cold. Mesmerized, and said, "I am rather out of order from the cold; my right lung is still inflamed, and will be more so. Mesmerized persons are electrified in a high degree; they should never sleep on iron bedsteads, or spring mattresses." Mesmerized again in the evening, and the spasm was violent about 7 o'clock.

May 18th. Found Mrs. Bird tolerably free from delirium, but was told she had wandered a little before I arrived. Mesmerized two hours and a half. At ten minutes before 4 P.M., Mr. Parker and I found Mrs. Bird delirious. Mesmerized, and retched violently, but soon became collected, and said a mustard emetic would relieve her stomach. It was administered, but a second was resorted to before the desired effect was sufficiently produced. She now discovered that there was a small portion of the gritty substance still remaining in her stomach, which would be thrown off within three days. She, after some time (as she had predicted), became raving mad; screaming, singing, and

laughing most violently. I still had great influence over her, although I cannot say she was asleep. She was bled, as she had directed, and soon after became collected, and remained so on arousing. If during the extreme raving I took off my attention for a single moment, she was sure to commit some act of violence, either towards me or herself; but while I kept my will strongly upon her, she was quite tractable, that is, I could prevent violence.

May 19th. Has enjoyed some natural sleep during the night, and is quite free from delirium. Mesmerized twice, and said, "I have a great deal of water in the chest; I shall throw it off before the 25th, but to-morrow I will tell you the exact day. I shall be better to-morrow than on any day until after the 9th of June, but my intellect will be clearest on the 21st."

May 20th. Mesmerized twice, and after she had been asleep some little time, she coughed, and threw from her stomach a small quantity of the gritty substance, similar to what had been before ejected; this also contained arsenic. During sleep she said, "The sal volatile must not be, for a few hours, more than half as strong as I have been taking it (up to this time it has been two parts water and one part spirit), as the stomach is lacerated at the parts from which the gritty substance has last been removed. I shall have rather a severe spasm about noon to-morrow; when it is over, give me a cup of coffee. I shall throw about three pints of water from my stomach between 2 and 3 o'clock to-morrow morning; after which I may lie down, but before that I must keep my head and chest up."

May 21st. Water has been vomited. Spirits not so good. Mesmerized, and repeated her directions for the 9th of June, in no particular varying from what she had before said. She now desired that a poultice (made according to a prescription she gave) should be applied to the side to-night and to-morrow night, and the tumor would then discharge at 1 o'clock on the morning of the 23d. "I shall (she said) feel ill to-morrow, and have a spasm at 7 o'clock, P.M.; it will be over by 8. I should be mesmerized twice. On the 23d, I should have a dose of salts; on the 24th, I should be mesmerized in the evening, and not awake until 10 o'clock, P.M. On the 25th, I shall have spasms and cramp through the limbs and whole system, both in and out of mesmerism: 26th and 27th, ditto: 28th, severe spasms; between 11 and 12 o'clock in the day I shall be delirious, but if it comes to madness, bleed me sparingly. I should be mesmerized at 10 A.M. 29th, 30th and 31st, spasms, but not very severe; times of mesmerism immaterial. To

this date let me go out as often as the weather will permit, except on the 28th; but after the 31st, I should not go out until after the 9th of June. For directions for the 1st of June, see April 25th; 2d, 3d, 4th, and 5th, spasms; 6th, 7th, 8th, very ill."

May 22d. Last night the poultice was applied to the side, which caused great pain. Mesmerized twice. Spasm as predicted.

May 23d. Application to side repeated last night, and tumor has discharged. Mesmerized two hours in the morning, after which she was taken into the open air. When I visited Mrs. Bird in the afternoon, she was much fatigued; this caused delirium, which it took some time to overcome, but after arousing she was perfectly collected.

May 24th. Took the salts yesterday, as directed. Mesmerized twice. I aroused her at a quarter after 10, tolerably comfortable.

May 25th. Suffering from cramp and spasms. Mesmerized four hours and a half in the morning, and had a long sleep in the evening.

May 26th and 27th. Just as yesterday. Mesmerized twice on each of these days. Internal vision, prevision, and clairvoyance have all left her; she does not now during mesmerism recollect a word she has said during lucid sleep-waking, nor has she since the 21st instant.

May 28th. Found Mrs. Bird in her garden, quite delirious. I induced her to go into the house, and soon mesmerized her into sleep-waking, in which for a time she was collected; but from half-past 10 to 11 o'clock she gradually got worse, spasms began, and then she became perfectly mad. Mr. Parker bled her, I having placed her as erect as possible in order that faintness might be felt with the loss of little blood, and consequently half a pint was sufficient to produce the effect. On recovering she was quite collected. I kept her asleep nearly six hours at the first sitting, and two hours more in the evening.

May 29th, 30th and 31st. Weak, but quite collected. Mesmerized twice each day, and I had great difficulty in preventing the stupor: slight spasms.

June 1st. Mesmerized a little before 2 o'clock; at a quarter before 3 she became restless; this feeling increased to 3 o'clock, when the spasm commenced with great violence; nothing but her prevision, and what we had before witnessed in her case, gave Mr. Parker or myself any hope of her recovery. At a quarter after 3 o'clock the mustard was applied, and before 4 she was quite tranquil. At 5 I aroused her, and again mesmerized her for two hours in the evening.

June 2d. Very languid. Mesmerized, and soon after became delirious for three

quarters of an hour, but it appeared to proceed more from weakness than anything else, and might have been increased by the excessive heat of the weather; kept her asleep four hours, and mesmerized her again for two hours in the evening; suffered slightly from tic and spasms.

June 3d and 4th. Slight spasms and a very little tic. Mesmerized twice each day.

June 5th. Spasms rather more severe. Mesmerized twice; great tendency to stupor.

June 6th. Feels ill. Mesmerized at a quarter before 10 o'clock, when a severe spasm came on, causing delirium, rigidity, and an involuntary action of the muscles. Slept three hours and a half; was again mesmerized two hours in the evening, and said, "I think a dose of salts would do me good, but I do not know."

June 7th. Took the salts, and feels they have been beneficial. Mesmerized five hours, before and during which she had several spasms, producing rigidity and violent involuntary action of the muscles. Was much refreshed on awaking.

June 8th. Very ill, and slightly delirious. Soon after I had mesmerized her into sleep-waking, a spasm came on; she was quite insensible and unmanageable. Having read Dr. Gregory's translation of Reichenbach's *Researches on Magnetism*, it occurred to me that placing Mrs. Bird's head to the north could do her no harm, and might be of benefit. I therefore, without assigning any reason, requested the sofa might be so turned as to bring her, as near as I could judge, into the desired position; and in less than two minutes a surprising change took place. She exclaimed, "My head is towards the north. I feel much more comfortable. I am suffering great pain, but my spirits are better. How bright things appear to me! How dull I have been! but now I see clearly. How stupid not to know that I was to be so very ill to-day, and have so much to go through to-morrow. You have done very well for me. I shall remain lucid until after a spasm, which will take place about 7 this evening, when all will again be dark until the 10th." She also said, "If you were now to turn my head to the west, I should be mad. I think (she added) if all persons subject to insanity were (provided they do not lie on iron) to sleep with their heads to the north, it would be better. East to west, or south to north, is not so bad as west to east." I am convinced Mrs. Bird had never seen Reichenbach's book, but these assertions are, I consider, borne out by experiments. "I am (she also said) influenced as the compass, being full of a mesmeric electricity; it is similar to electricity and magnetism, but not identical with them. Some persons under mesmerism are

not so much influenced by this electricity as others."

June 9th. Although Mrs. Bird was not to be mesmerized until 10 o'clock, P.M., Mr. Parker and I visited her in the morning; she was delirious, and continued so through the day. At about half-past 9, P.M., we again saw Mrs. Bird, and at a little before 10 I commenced mesmerizing her: a very bad spasm came on, acting on her head and heart; then violent delirium with continual spasms, lasting until 12 o'clock.

June 10th. At 12 o'clock the tic commenced; her agonies were most distressing to witness; she threw herself about, sometimes on the floor, and was quite insane; singing, laughing, screaming, and groaning alternately. At 2 o'clock, the tic had passed off, and the fit commenced with great violence: her spine was arched forwards, and she injured it, as she had some time previously predicted. At 3 o'clock, A.M., on Mr. Parker's attempting to open her temporal arteries, she became very violent, and for twenty minutes resisted all our efforts. We at last succeeded in opening the right artery, but it caused for an instant great agony, as it implicated the nerves, which were suffering from the effects of tic. After a very little blood had flowed, she became sane, and requested to be bled in the opposite arm, instead of the other arm, as the nerves were in such an irritable condition; this was done: the artery and vein were kept open until yawning was produced. At 4, A.M., the laudanum was applied, slight spasms came on at intervals, and she suffered much from the effects of what she had gone through. At half-past 5, mustard cataplasms were applied, and as soon as they were taken off, she fell into a sort of half stupor; this continued until 9 o'clock, when she got into a high state of mesmerism, knowing she was asleep, &c.; and said, "I have injured the spine in two places: my side will never gather again, unless there is some active cause; but this would not have been the case, if leeches had been applied, instead of the poultice." Mrs. Bird's predictions in all cases have been fully verified, and we considered ourselves called upon to carry out all her directions. At a little after 10 I aroused her. Mesmerized again at noon, and slept three hours. Internal vision and prevision have returned in full splendor (see April 25, and June 10). At half past 7, P.M., I again sent her to sleep for two hours and a half, when she said, "I must be bled every Wednesday for six weeks; the first five times in the arm, and the last in the left temporal artery. To-morrow I should be mesmerized from 11 to 2, and 7 to 9 o'clock." The cough has come on, and will, she says, last six weeks. Mrs. Bird, between the 14th

of February and 9th of June, had two fits; but it must be recollected, she was twice frightened, and often much excited. I have neglected to note the dates.

June 11th. Better. Mesmerized three hours and a half in the morning, and two hours and a half in the evening, during which she said, "I shall be very unwell on the 3d of July; I should to-morrow be mesmerized twice, but the time is not important."

June 12th. Mesmerized three hours, and prescribed medicine for Saturday.

June 13th. Very tolerable. Mesmerized twice. In the afternoon, and after she had got into sleep-waking, a gentleman of Exeter came to see Mrs. Bird. I then called her attention to his knee, which had been seriously injured some months before from the kick of a horse. After a time, she said, "Your knee is bandaged too tight (this no one in the room knew but the gentleman himself, who instantly admitted the truth of what she stated. He was sitting from three to six feet from Mrs. Bird, and wore loose trousers). She was now silent for a little time, appeared puzzled, and requested me to take the gentleman's hand; on my doing which, she started, exclaiming, "He has steel about him." She for a few moments felt uncomfortable. When Mrs. Bird recovered, she said, "Steel is not good for the knee, whalebone or ivory should be used instead, and no metal except silver or gold be introduced." She recommended bathing, local mesmerism, and a liniment, adding, "If the gentleman follows my advice, he will be much better than he is at present."

June 14th. Feels sick from the medicine. Mesmerized water settled her stomach, and threw her into a very deep sleep, in which she did not hear even my voice, nor could I get her to pay the least attention to me in any way. On again arousing (if I may use such a term) into sleep-waking, she was much refreshed, and directed that she should be mesmerized on the 16th before 12 o'clock in the day, and between 7 and 9 in the evening. Slept three hours and a half.

June 15th. Better. Mesmerized and slept comfortably.

June 16th. Still improving in general health, but the cough, which exactly resembles hooping-cough, is very troublesome. Mesmerized water again produced what she calls the double sleep. In the afternoon she had a slight attack of diarrhoea, for which she gave a prescription in case it continued. Mesmerized twice.

June 17th. Head and face swollen; mesmerized twice. In the evening all the symptoms had increased. Bled as she had directed. She also said, "My face should be bathed with an infusion of parsley, marsh mallow, and feverfew."

June 18th. Diarrhoea rather violent. Mesmerized twice, and said, "It will be necessary to use the prescription I gave the other day, and to have my face bathed." All this was attended to.

June 19th. Mesmerized at Mr. Parker's, when a few gentlemen and ladies were admitted to see Mrs. Bird; she aroused at the end of five hours. Mesmerized for two hours in the afternoon, and aroused, feeling better. Face to be again bathed.

June 20th. Mesmerized twice; cough very bad, producing a tendency to lock-jaw, which she said would be avoided either in or out of mesmerism by pressure of the fingers just at the hinge of the jaw. Passes down the spine relieve the cough.

June 21st. Health improving. Mesmerized from a quarter before 3 to 6 o'clock. For twenty minutes she was in the deep sleep, and, on again getting into sleep-waking, she said, "I have been examining my brain to see in what state it will be after the last bleeding, on the 22d of July (Wednesday). I shall be very ill on the Monday and Tuesday, from cramp and violent cough. Before 8 o'clock on Wednesday evening I shall be quite mad; then bleed me in the temporal artery; this will get rid of the madness, and I shall get into mesmeric sleep: I shall be partially under its influence before, but not asleep. From this time I shall get better, but should not exert myself too much, nor get overheated."

June 22d. Somewhat depressed, particularly after 12 o'clock (there was much thunder in the air). Mesmerized twice, and says her liver is out of order, and she should eat water-cress, and very young onions. Cough still bad.

June 23d. A severe thunder took place last evening, during which Mrs. Bird felt a very curious sensation in the head, spine, and limbs, such as she had never before experienced; there seemed to be slight electric shocks passing through the system. Mesmerized twice, and slept five hours.

June 24th. Mesmerized morning and evening; during the latter sitting, Mr. Parker attempted to bleed; the first trial was unsuccessful. There is now some difficulty in getting at the vein, as she has been bled more than four hundred times in the arm that was now tried. On the second attempt, Mr. Parker's finger unfortunately touched her arm, which immediately became rigid, and although the vein was opened, scarcely any blood would flow.\* I soon relaxed the arm, and placed her hand in hot water, but all to no effect. She then said it would be safer after a short time to arouse her and open a

\* When Mr. Parker has bled Mrs. Bird in the mesmeric state, he has always avoided touching her, having used my hand as a rest.

vein in the waking state, as, if a similar accident occurred to the other arm, we should not be able to bleed her for the night. This was done, and sixteen ounces of blood taken; after which she was again mesmerized for two hours.

June 25th and 26th. Mesmerized twice each day, and is better.

June 27th. The thunder weather still causes uneasiness. Mesmerized twice, and said, "On Monday, the 29th instant, I will give directions for the following day, and decide whether it will be better to postpone the bleeding from Wednesday, the 1st of July, to Friday, the 3d, as it would be of great benefit to me on that day, when I shall be so ill."

June 28th. Felt better for a drive she took last evening. Mesmerized three hours and fifty minutes; said, "I have not quite got over the effects of the stagnation of the blood on Wednesday. There is great inflammation all up the spine, but particularly at the lower bone."

June 29th. Feels as yesterday. Mesmerized two hours and three quarters in the morning, and said, "The bleeding can be put off until Friday (July 3), if you will mesmerize me every evening after to-morrow from 7 to a quarter before 10 o'clock. On Friday I shall have spasms through the day; indeed they will commence the night before, but the worst will be between 7 and 8 P.M.; after 8, bleed. In the forepart of the day let me have as much mesmerism as you can. I shall be rather delirious. During the following week I shall be weak and poorly until the last bleeding; a few days after which, I shall be able to do without mesmerism for a short time."

June 30th. Had enjoyed many hours natural sleep during the night and feels better. Mesmerized twice.

July 1st. Slight spasms. Mesmerized as yesterday.

July 2d. Spasms increased, but it must be remembered she was to have been bled last night: the operation by her directions was postponed to to-morrow. Mesmerized twice.

July 3d. Spasms rather worse. Mesmerized 3 hours in the morning. At 5 o'clock in the evening I again mesmerized Mrs. Bird, spasms still continued, and between 7 and 8 three very severe ones came on. As soon as she became collected after the third spasm I aroused her, and Mr. Parker opened a vein in her arm: it was not done during sleep for fear of a repetition of what took place when she was last bled. When the arm was secured I again sent her to sleep until 10 o'clock, when she was aroused free from delirium.

July 4th. Suffering from reaction after the blood letting. Mesmerized 3 hours both morning and evening. Spine also locally mesmerized with the flat hand during both sittings; this has been done daily for some

time, and it generally throws her into deep sleep.

July 5th. Mesmerized more than three hours. To-day she could bear the spine and chest to be mesmerically electrified by the tips of my fingers and then soothed down with the flat hand.

July 6th. Mesmerized three hours and three quarters.

July 7th. Spine and cough better. Mesmerized twice; back and chest electrified.

July 8th. Suffering from head-ache. Mesmerized 3 hours in the forenoon. In the evening Mr. Parker and I visited Mrs. Bird, and found her much excited, a report having reached her (promulgated of course by an opposer of mesmerism), reflecting on her character, insinuating that Mr. Parker and I visited her for immoral purposes: a more wicked or false report could not have been invented. But what will not our opponents do! They must be beaten and they begin to know it, though still trying to ward off the blow for a time. They scruple not to have recourse to the most base expedients, setting truth utterly at defiance. While they only rant about satanic influence, witchcraft, humbug, &c., &c., their conduct produces some amusement: but when they are base enough to attack the character of a female, on whom a word of reproach on that point has never before been breathed, it must, I think, be reprobated by all respectable persons, be their opinion of mesmerism what it may. But to return to our patient, who was bled and sent to sleep for three hours.

July 9th. Head much relieved, although she frets and vexes herself much, owing to the report alluded to yesterday. Mesmerized three hours in the morning and not again for the day, owing to my being suddenly called to see a sick relation some miles from Exeter.

July 10th. At half past 3 P.M. I found Mrs. Bird suffering from head-ache. Mesmerized her, when she said, "If mesmerized gold were placed on my forehead where the pain is, I think it would produce a soothing effect. It may throw me into a deep sleep; if it does, you had better remove it soon after that takes place." I tried the experiment, which succeeded admirably. After two hours and a half, it was convenient that she should be aroused; I therefore awoke her, and she took tea; after which I again put her into sleep-waking and repeated the experiment with the mesmerized gold, with a precisely similar result. Slept three hours.

July 11th. The excitement respecting the report is much increased. Mesmerized three hours, during which she was tolerably composed. In the evening, when Mr. Parker and I arrived, we found Mrs. Bird suffering much in her head, and very soon after I got her asleep a convulsive motion of the eyes com-



menced. Then came several violent spasms, flying from the head to the heart, accompanied with great rigidity of the whole body, and excessive difficulty of breathing; indeed such were the symptoms, that had I not known the power mesmerism had over her, I should have despaired of her life. She was very delirious, but after a time became more calm, although the breathing continued painfully difficult. I now placed a highly mesmerized sovereign in her hand; she grasped it tightly, and then placed it on the pit of her stomach, and fell into a deep sleep. In five minutes the breathing and whole frame became as tranquil as can well be imagined. On arousing she felt exhausted, but was quite collected.

July 12th. Spirits still much depressed. Mesmerized twice, and said, she had irritated the spine during last evening, which made the cough worse.

July 13th. Spirits low and feels pressure on the brain, particularly on the centre of the forehead. Mesmerized three hours in the morning, during part of which time she was in the deep sleep; on coming out of which she said, "After the bleeding on the 22d of this month, I shall feel weak and ill for a few days, then, if nothing unexpected occurs, I shall gradually get better until the 16th of August, on which day I shall have very severe spasmodic affections: both hands will be contracted, particularly the left. You must relieve this by burning moxa on the nape of the neck; let the arms be rubbed with camphorated spirits and oil, twice a day, until they gain strength." Mesmerized again in the evening for three hours, when she directed that she should inhale from an infusion of certain herbs twice a day.

July 14th. Headache rather worse. Mesmerized twice; says, "The spasms which will take place on the 16th of next month, are entirely caused by her fretting about the report affecting her character."

July 15th. Head still bad. Mesmerized three hours in the morning, when she said, "The lungs are already benefited by the inhaling." They are mesmerically electrified daily. In the evening she was bled, then mesmerized, and when the first feeling of faintness had passed off, she desired me to throw her into the deep sleep, with mesmerized gold on her forehead. This was done, and, on again getting into sleep-waking, she alluded to the 16th of August, saying, "I cannot see [my way clear; that day looks very dark to me." Slept four hours.

July 16th. Very weak, but head better. Mesmerized twice, and said, "The temporal artery must not be opened on Wednesday until about 8 o'clock P.M. I shall begin to be very delirious between 5 and 6 P.M."

July 17th. Much mental suffering conti-

nues. Mesmerized three hours in the morning. In the evening I found Mrs. Bird considerably excited, having heard more of the slanders that have been so falsely reported respecting her. Mesmerized; soon after which a severe spasm came on, was followed by others, and she became insane. I now succeeded in getting her into the very deep state. Slept three hours and twenty minutes. On arousing she was calm.

July 18th. Spirits a little better, but the spasms continue. Mesmerized twice.

July 19th. Still poorly; spasms continue, and she has a slight attack of St. Vitus's dance. Mesmerized twice; says the action of the limbs will only last for a day or two.

July 20th. Less spasms, but great debility. Mesmerized 3 hours in the morning, and 2½ hours in the afternoon. Cramp and cough.

July 21st. Better, with the exception of a pain in her head, which cannot be expected to be removed until blood has been taken from the temporal artery to-morrow evening. Mesmerized twice. Still unable to say how the 16th will terminate. Cramp and cough as yesterday.

July 22d. Head very bad. Mesmerized three hours in the forenoon, and at times was slightly delirious. A little before 6 P.M., Mr. Parker and I found Mrs. Bird delirious, and she soon became quite mad, attempting to strike me and do all sorts of mischief. I could not get her to sleep, but still by determination and a strong exercise of the will, I kept her tolerably quiet, provided I did not take my eye off her. At 8 o'clock the temporal artery was opened, and before much more than a table-spoonful of blood had flowed, she was quite collected and asked what we had done. As soon as the bandage was adjusted, I mesmerized her into sleep-waking and then into the deep sleep: on recovering from the latter she said, "I shall only have one more fit of coughing, which will be on Saturday evening. On Friday week the 31st I must take an ounce of tincture of rhubarb, and on Tuesday week I should be bled. I shall be cheerful while away" (Mrs. Bird is going to the sea side for a fortnight), "but my spirits will flag on my return." She again, after speaking of the spasm which will take place on the 16th of August, said, "After the application of moxa a stupor will come on, during which, bleed until I show some signs of faintness; then put my feet into warm water with a little mustard in it for ten minutes, wipe them dry and put them on the sofa. If I rally from the stupor I shall do well; if not, one hour will only be left for me. The sufferings of that day are entirely produced by the unkind reports."

July 23d. Better in every respect, but

weak from the bleeding. Mesmerized. St. Vitus's dance has quite left her.

July 24th. Appetite improved, and is altogether better. Mesmerized three hours and a half in the morning and two hours in the evening.

July 25th. Still better. Mesmerized twice. During the morning sitting a thunder storm came on and she felt slight shocks through her system. She heard the thunder, although no mechanical noise nor the voice of any one but that of her mesmerizer is audible to her. May not this be owing to electricity? She again assured me, that being without mesmerism until the 15th of August would not, in any way, affect the crisis on the 16th. Cough as predicted.

July 26th. Still better. Mesmerized two hours and a half.

Aug. 4th. Bled to sixteen ounces while at the sea-side.

Aug. 14th. Has not been mesmerized since the 26th ultimo. Mrs. Bird took the tincture of rhubarb on the 31st ultimo. The changeable weather has given her very slight tic. Mesmerized three hours and a half, and said, "My chest is nearly full of water" (her breathing is very difficult), "I have a slight cold, which has produced a little inflammation through the system, and the stomach is disordered by it. I can give you no further directions as to the 16th. The spasms will commence at 5 o'clock."

Aug. 15th. Still feeling ill. Mesmerized three hours in the morning, and said, "I shall throw the water from my stomach before to-morrow morning; that is something in favor of my recovery. Your taking sal volatile or wine after I am bled, on the 16th, will be beneficial." On visiting Mrs. Bird in the evening, I found she had ejected three pints of water, and consequently the chest was much relieved. Mesmerized again for three hours.

Aug. 16th. Found Mrs. Bird at 10 A.M. very ill. Mesmerized her for two hours and a half, but she could not even now see her way through the afternoon attack; indeed there appeared to be in sleep-waking a very strong impression that she should not recover; not that she saw that would be the case, but all after the stupor appeared as a blank. At twenty minutes after 3 P.M., Mr. Parker and I found Mrs. Bird looking and feeling as ill as it is possible to imagine; Mr. Parker's impression was that she would not recover. I mesmerized her into sleep-waking, and it was very beautiful to observe her perfect resignation, and touching to a degree to hear her express her entire forgiveness of all who had injured her. The gratitude she expressed towards Mr. Parker and myself for the attention we had paid her, was unbounded. At 5 o'clock the spasms came on, her screams were

dreadful; before 6, both hands contracted, and Mr. Parker gave me a moxa to burn on her neck, as she had directed. Soon after it began to affect the skin, the hands flew open and were relaxed. Her other directions as to hot water, bleeding, &c., were attended to. She fell into the stupor, and was to all appearance dying. I persevered in keeping her as much under the influence of mesmerism as possible, wetting her lips with wine, and taking some myself, as well as several doses of sal volatile; this recovered her for a moment, but her tongue was convulsively drawn to the roof of her mouth; lower jaw dropping, limbs extended, and she was to all appearance sinking. This continued for nearly an hour, when her breathing became more easy; and she told me, in an almost inaudible voice, that she was better, but that as the reaction of blood-letting took place, she should suffer greatly. I proposed keeping her under mesmerism the whole night. This at first she was unwilling we should do, as it would fatigue us. However, Mr. Parker and I remained with her until 7 o'clock the next morning. She awoke spontaneously twice during the time, but I soon mesmerized her into sleep-waking. At 7 A.M. I aroused her. At 1 P.M. I again gave her three hours mesmerism, and kept her asleep the same time in the evening.

Aug. 18th. Thunder in the air, which causes a little oppression about the brain. Mrs. Bird last night ejected her supper; with one exception, this is the only time she has vomited any food since the early part of July, and on each occasion she had exerted herself sooner after a meal than is desirable. Before being mesmerized, she ejected her food daily for nearly thirteen years. Mesmerized twice.

Aug. 19th. Notwithstanding the weather, which is very damp, Mrs. Bird gains strength, and her general health improves. Mesmerized twice, and said, "My stomach is a little out of order; liver is inflamed; right lung dormant, but not much inflamed; nerves of the brain rather excited, but that will subside. The time of the day at which you mesmerize me is of no importance, until Tuesday, the 25th. At 4 P.M. on that day I shall suffer from cramp in the bowels. Soothing passes would be of benefit. If you were not with me there would be no danger, only I should suffer more. I must have one ounce of tincture of rhubarb that night."

Aug. 20th. Mrs. Bird's cold has occasioned slight tooth-ache, but nothing worth the name of tic. Mesmerized twice. During the second sitting she said, "Wild sage tea would do me good, and a poultice of toast and yeast, such as I have before used. The general inflammation through the system is much less."

Aug. 21st. Mesmerized twice, together six hours.

Aug. 22d. Face much better. Mesmerized three hours.

Aug. 23d. Still better; appetite good, does not eject her food. Mesmerized each day for some hours.

Aug. 25th. Mesmerized in the morning, and a little before 4 in the afternoon, with the cramp present.

Aug. 26th and 27th. Took rhubarb on the night of the 25th. Rather weak; mesmerized both days for some hours.

Aug. 29th, 30th, and 31st. Mesmerized each day twice. Health improving.

Sept. 1st, 2d, and 3d. Mesmerized each day. On the last, she said, "I shall, soon after I am mesmerized to-morrow, have a sharp spasm, which will leave a head-ache; with this exception I shall get on tolerably until Tuesday, which day I do not see clearly."

Sept. 4th. Mesmerized six hours. Spasm came on as predicted, and left a head-ache.

Sept. 5th. Head-ache continues. Mesmerized twice, two hours each time; says Tuesday will be an uncomfortable day.

Sept. 6th. Head worse (there is thunder in the air, and this always affects her). Mesmerized once four hours; says she should be bled on Tuesday the 8th, or a severe spasm and delirium will be the consequence.

Sept. 7th. Mesmerized: head bad.

Sept. 8th. Bled, and then mesmerized three hours in the afternoon.

Sept. 9th. Head-ache gone; feels better, but weak. Mesmerized some hours.

Sept. 10th. Still better: sleeps at night. Mesmerized twice, together five hours; says the heart is now worse than any other part.

Sept. 11th. Mesmerized twice, together five hours.

Sept. 12th. Mrs. Bird has a little tendency to faint; the heat of the weather is intense. Mesmerized twice, two hours each time.

Sept. 13th. Just as yesterday. Mesmerized three hours.

Sept. 14th. Stronger, and able to sit up a longer time; but exertion causes palpitation. Mesmerized four hours, and said, "To-morrow, Wednesday and Thursday, will be very fair days; Friday and Saturday oppression about the head; Sunday I shall be very ill, but better on Monday."

Sept. 15th. Mesmerized five hours; says, "There is pain at the bottom of the right lung: I must rub into the side, just over that part, one-third of a grain of opium in an ointment, twice a day; and the inhalation must be altered" (for this she gave a prescription); in other respects comfortable.

Sept. 16th. Not mesmerized.

Sept. 17th. Comfortable. Mesmerized twice, together five hours.

Sept. 18th. Severe head-ache, and feels ill. Mesmerized twice; spasm in the head; says she shall require bleeding on Sunday afternoon.

Sept. 19th. As yesterday. Mesmerized twice.

Sept. 20th. Mesmerized two hours and a quarter in the morning, and appeared as usual. At six o'clock in the evening, Mr. Parker and I found Mrs. Bird very ill, eyes sunk, and appears in a most deplorable state; she was bled, and then put to sleep. She first got into sleep-waking, and then into the deep sleep; remained in the latter one hour and a half, and, on again coming into sleep-waking, said, "The disease that is prevalent is not diarrhoea, but Asiatic cholera; it is in a milder form than it was some years since. I shall have an attack of it this day fortnight; but if you attend to my directions, I shall recover. It will come on in the night. I should drink as much water as possible, have some of the medicine which I have told you is good for that complaint, and bled at 12 o'clock at noon." I kept her asleep upwards of three hours, when she awoke much more comfortable.

Sept. 21st and 22d. Better. Mesmerized twice each day.

Sept. 23d. Has had a slight fall in rising from the sofa, and sprained her arm and ankle, both of which were eased by local passes after she was put into sleep-waking. The spine is also a little injured, and causes a slight impediment in her speech; local mesmerism soon relieved it.

Sept. 24th. Feels the shake, but is otherwise improving. Mesmerized twice.

Sept. 25th. Mesmerized three hours. Feels tightness on the chest; said during sleeping-waking, "I shall on Sunday and Monday be tolerable; Tuesday and Wednesday, a sick head-ache; Thursday and Friday, better; Saturday not so well."

Sept. 26th and 27th. Mesmerized some hours each day, and during sleep-waking coughed up a considerable portion of phlegm, which relieved her chest.

Sept. 28th, 27th, 28th, 29th, and 30th. Mesmerized twice on each day. Sick head-ache on the two latter.

Oct. 2d. Rather uncomfortable. Mesmerized twice, together five hours, and said, "On Sunday (4th), as I have told you, I shall be very ill: I must be bled at 12 o'clock, but not mesmerized until 5 p.m., as the bowels will not cease to act until that time; I must take a dose of the medicine I have prescribed every two hours until the action on the bowels begins to subside. I may have a little wine Monday and Tuesday. I shall be some days better and some worse until the following Sunday, when I must be again bled. I shall then get on as usual until the 21st; bled:

in the evening of that day. On the 28th, I shall be very ill from spasms, faintness, and delirium; bleed me in the evening. On the 29th and 30th I shall feel ill. On the 31st, a change will take place, and I shall improve daily to the end of the year, that is, if no external circumstance occurs to throw me back. Let me take every third day, commencing from the last day of October to the 31st of December, half a teacup-full of infusion of furze-blossom and sting-nettles, with a quarter of a glass of sherry, and ten drops of essence of coriander or caraway seeds; it must be taken warm on going to bed. After the last day of November I shall not require so much of your attention."

Oct. 3d. Feels poorly. Mesmerized twice, together four hours and three quarters.

Oct. 4th. Mr. Parker bled Mrs. Bird at 12 o'clock; she was suffering from Asiatic cholera; her nails were blue round the quick, and blood glutinous. The attack commenced at 4 in the morning (the medicine had been left the evening before, with directions to be taken if the bowels were acted on; Mrs. Bird was of course not told what would take place), with vomiting; soon after a violent action of the bowels came on, accompanied with severe cramp. Evacuations like rice water. At 5 o'clock p.m., I mesmerized her, and kept her asleep five hours. It will be recollected she had predicted this attack fourteen days before it came on.

Oct. 5th, 6th, and 7th. Mesmerized twice each day, and is better, but weak.

Oct. 8th and 9th. Better. Mesmerized several hours each day.

Oct. 10. Not so well. Mesmerized some hours.

Oct. 11. Poorly. Mesmerized twice, and bled.

Oct. 12th, 13th, 14th, 15th, and 16th. Some days a little better than others. Mesmerized twice each day, except the 15th.

Oct. 17th. Took an aperient draught, as she had directed on the 14th.

Oct. 18th and 19th. Mesmerized some hours each day, and on the latter said, "I should not eat much animal food for the present. Rice and tapioca are good for me."

Oct. 20th. Suffering from an attack on the bowels, produced by a slight cold. Mesmerized twice.

Oct. 21st. Bowels still out of order. Mesmerized twice, prescribed for myself, and took the medicine; bled in the evening.

Oct. 22d. Bowels much quieter. Mesmerized twice.

Oct. 23d and 24th. Mesmerized twice each day, and feels better.

Oct. 25th. Just as yesterday. Mesmerized once.

Oct. 26th. Mesmerized twice, together four hours and a half: said, "My spirits

will be bad up to Wednesday night. Bleed me as soon as convenient after 6 o'clock on that evening." Has a little head-ache.

Oct. 27th. Head-ache increased. Mesmerized twice.

Oct. 28th. Found Mrs. B. in the evening suffering much from head-ache and depression. Mesmerized two hours and a half. In the afternoon, about half-past 4, Mr. Parker and I visited Mrs. B.; she was looking very ill, eyes particularly dull, and she was a little incoherent in her conversation; this increased until she became quite delirious. Spasm as predicted. At 6 o'clock she was bled, but faintness was not produced until twenty ounces of blood had been taken. Up to this time mesmerism had not been attempted. Mrs. Bird having told me it would not produce sleep. As soon as the arm was secured I sent her into sleep-waking, and she said, "I am very weak, but my complaints are cured: I shall after a day or two gain fast. The mechanical injury I received on the top of my head, when young, may produce occasional delirium."

Oct. 29th. Mesmerized twice, and is suffering from reaction after blood-letting.

Oct. 30th, 31st, and Nov. 1st. Mesmerized each day, and is better: but her spirits are depressed, owing to the base attacks on her published in the Exeter papers, where she is week after week branded as an impostor, because some of the opposers of mesmerism cannot understand the arsenic affair; and they have not the fairness to wait until the case is published, but take hold of all the scraps of conversation, whether true or false, that are reported to have fallen from any one connected with the case. They harp a great deal about arsenic, enough to kill twenty men, and say there is a written statement that I have asserted this to be the case. I can only say, whoever has written a statement to this effect, must have mistaken what I said, as I never even thought that such a quantity of poison had been vomited: indeed, how much arsenic the gritty substance contained I could form no judgment of, until I received Dr. W. Gregory's analysis in the middle of November. It may seem strange for me to speak of November here, but this part of the case had not been transcribed from my notes when Dr. Gregory's letter arrived.

Nov. 2d, 3d, and 4th. Spirits very low. Mesmerized many hours each day.

Nov. 5th. Mesmerized twice, and had a dreadfully severe spasm through the head through fretting.

Nov. 6th. Frightfully ill, owing to the effects produced by the continued published attacks on her character. Mesmerized three times, two hours each; says there will be a change one way or another before half-past 5 o'clock to-morrow evening.

Nov. 7th. Ill all day. Mesmerized twice. At a little after 5 p.m., a most severe spasm came on; her convulsions were dreadful to witness.

Nov. 8th, 9th, and 10th. Rather better, but the spasm of the 7th has greatly reduced her strength.

Nov. 11th. Vomited her breakfast this morning, owing to again exerting herself too soon after eating. Mesmerized twice.

Nov. 12th, 13th, and 14th. Mesmerized some hours each day, and is gaining strength, although slowly.

Nov. 15th, 16th, 17th, and 18th. Mesmerized twice each day. Not much change.

Nov. 19th. Mesmerized twice, and said, "The circulation of blood is more free; I should take warm liquida, but no wine. The tea must be omitted for the present. I should have three frankincense pills for three nights, a moderate dose of squills the following mornings, and some magnesia the fourth night." Her directions were followed, as on every other occasion.

Nov. 20th. Mesmerized twice, gains strength slowly.

Nov. 21st. Still better in the morning; but, after seeing a letter in the Western Times, declaring her to be an impostor, and stating some direct falsehoods respecting her, the brain became irritated. In the afternoon she was delirious, and very ill. I mesmerized her three times to-day, and on the last occasion, after having been some time in the deep sleep, she, on again getting into sleep-waking, said, "You must soon decide. I have been looking at myself; if you do not bleed, I shall be insane for life; and if you bleed, I do not know that you will be able to recover me from the faintness." Mr. Parker, who was present, immediately opened a vein in Mrs. Bird's arm (I having first aroused her), and bled to indications of faintness. I then again commenced mesmerizing her, but had very great difficulty in recovering Mrs. Bird from the faintness; indeed she appeared, both to Mr. Parker and myself, to be dying; her tongue was convulsed, breathing scarcely discernible, and in the midst of all this her jaw became locked; but I soon relieved it by the means I had before used. After about half an hour she recovered a little, and was able to swallow small quantities of wine. My taking strong doses of dilute sal volatile, seemed to have a beneficial effect on Mrs. Bird.

Nov. 22d, 23d, 24th, 25th, and 26th. Mesmerized twice each day, except the 25th. Very ill on the first three days, but has gained strength since, and her spirits are improving.

Nov. 27th and 28th. Mesmerized twice each day; is suffering from tic, but not nearly so the extent she did before mesmerized. Mrs. Bird has a severe attack of influenza.

On the latter day she said, "I shall suffer from tic during the night, but it will be better by the morning. I shall have a spasm in the kidneys on Tuesday between 7 and 8 P.M."

Nov. 29th, 30th, and Dec. 1st. Has suffered from tic. The spasm took place as she predicted. The influenza has caused great weakness. Spirits better.

Mrs. Bird has, during sleep-waking, the power not only of looking through her own system, but also that of any persons who may be brought before her, and can give directions for the treatment of their diseases. In no one instance in which her recommendations have been fully carried out, have they, as far as I am aware, failed to procure relief: and I am authorized by Mr. Parker to state, that she has most successfully prescribed for many patients by his merely giving their symptoms, and that frequently after the ordinary medical remedies have failed, especially in violent cases of typhus fever, diarrhoea, external inflammation, consumption, rheumatism, and tic douloureux. Mrs. Bird can also give the phrenological development of any person's brain who may be present, when she is in sleep-waking. One case I will mention. A lady, with whom Mrs. Bird was not previously acquainted, entered the room after Mrs. B. was mesmerized, and the lady herself declared that Mrs. B. had given as correct a description of her character as if she had known her twenty years. The lady wore a thick dark bonnet the whole time she was present. There have been several other equally striking instances, but space forbids my entering into their details.

It may now be asked, what benefit has Mrs. Bird herself derived from mesmerism, as she is still reported to be a great invalid? My reply is, that external circumstances weighing on her mind are the cause of her present bodily sufferings, as I venture to assert (and in this I am borne out by Mr. Parker's opinion) that a great majority of the spasmodic affections she has lately suffered from, have been produced by mental depression. Even conscious innocence cannot bear up against continued public detraction. It will be seen by reference to Mr. Parker's statement, that Mrs. B. was (previously to being mesmerized) suffering daily from violent epileptic fits. She vomited nearly all her food, and her agonies from tic were scarcely to be endured. She has not had a fit since the 9th of June, and only three since the 1st of January. The tic has been in comparison (except when mentioned in the previous part of the case) next to nothing since the first day she was mesmerized; and she has vomited food but three or four times since the early part of July, and in every instance has this been occasioned by her moving too soon after eating.

Mrs. B.'s side (uterus) now causes her no inconvenience.

I, in conclusion, hope that the interest of the case will be sufficient apology for my giving it in the form of a diary; and should the perusal of these pages induce but one person to persevere in a mesmeric case, notwithstanding apparently insurmountable difficulties, it will greatly add to the pleasure I have received during the progress of my labors. Many cases I am confident fail for want of sufficient time being devoted to them.

Much has been said respecting the substance which Mrs. Bird ejected from her stomach, and of course the antimesmerists in the neighborhood cannot be induced to believe one word about her having vomited any substance containing arsenic. Some report that we assert she vomited pure arsenic; others insinuate that the substance which I say she vomited did not come from her stomach, but was placed in her mouth and from thence ejected merely for the purpose of deception; and this they considered proved, when it was discovered that Mrs. B. had caused arsenic to be purchased some little time before she vomited the gritty substance. I was aware of this months before they said a word about it; Mr. Parker knew it at the time it was procured; and who will it be supposed was our informant? Why Mrs. Bird herself! The fact is, the arsenic was never in her possession, but was brought by the chemist of whom she purchased it for the purpose of his using it in her garden, mixed with salt, to destroy slugs. The evening proving wet, he came over the next morning and buried it in the earth. During the night it was in Mrs. B.'s house; a person at the time staying with her had it locked away and kept the key, so that Mrs. Bird did not know where it was placed; and had she, there was no means of her getting at it.

As I am one of those foolish people who condescend to believe what they see, my opinion on the subject would not have been altered if Mrs. Bird had kept any quantity of arsenic in her possession. I assert (and I flatter myself that at least those who know me, and whose opinion I value, will not doubt my word) that on two occasions a gritty substance, subsequently found to obtain arsenic, was in my presence ejected from Mrs. Bird's stomach. As to her having concealed it in her mouth, that is quite out of the question, for she could not, during the time I was with her before it was ejected, have spoken plainly had there been anything in her mouth. Besides which, how was she to get it into the state in which it is, for anything to all appearance less like arsenic can scarcely be conceived. In one point of view it is perhaps unfortunate that Mrs. B. should have purchas-

ed arsenic at this particular time, as it enables uncandid people to insinuate that the said arsenic has been used for the purposes of deception. But leaving out of view the circumstance of both Mr. Parker and myself knowing all about her having procured the article, Mrs. B.'s openly sending for arsenic is I think a clear proof that no trick was intended, and strongly confirms my statement that she, on arousing, recollects nothing that has taken place during her sleep-waking. An impostor would not, I should say, do what would lead to certain detection. Added to this, the watery rash, garlic eructations, and pain in the calves of the legs, are indications of the presence of arsenic in the system. All these she experienced and complained of to Mr. Parker, long before mesmerism was even named in this neighborhood.

Once more; must not the system from some cause have been much paralysed, to allow of very good sal volatile being taken with only two parts out of three water? and I have, at the time she prescribed it for herself, often seen her take it of that strength. I hope I shall be excused this digression, as I feel, on Mrs. Bird's account, strongly on the subject, she having been branded as an impostor by those who can know nothing of her case.

My friend, Mrs. Janson, has examined the ejected substance under a powerful microscope, and is satisfied it is not a mechanical mixture.

Mr. Herapath, the eminent chemist, has published the following letter in the *Western Times*:—

*"To the Editor of the Western Times."*

BRISTOL, Dec. 2d. 1846.

"Sir,—My attention has been called to a controversy which has for some time been carried on in your city, upon the reality of certain exhibitions and statements in relation to mesmerism, and I have been solicited by the exhibitor on one side, and opponents on the other, to express an opinion upon the possibility of a large quantity of arsenic ('enough to kill 20 men') remaining in a living stomach for many years, and then of having been thrown up during mesmeric clairvoyance. Of course in the absence of more definite information I could, in reply, merely state that no such case had ever occurred in my experience, or within the course of my reading. Since then, Mr. Parker, surgeon, of Exeter, the exhibitor and advocate of mesmerism, has called upon me with the matter said to be ejected, and having expressed a wish to have all the facts inquired into, I obtained from him a small portion of each of the two packets, one of which he said had been caught and identified by a gentleman who was present at the time of ejection, and the other which had not been so identified. I have submitted those to chemical inquiry, and I find them to be nearly alike in appearance and chemical composition. They are pulverulent, and slightly af-

glomerated, the color whitish—or rather white, with a shade of brown. The microscope shows the structure to be crystalline, and capable of depolarizing light; they contain one-twentieth part of their weight of arsenious acid, combined with lime as arsenite of lime; the remainder is crystalline carbonate of lime, with a little organic matter of animal origin. I did not weigh what I saw in Mr. Parker's possession, nor have I any means of knowing the entire weight of what was said to be ejected—what I received was half a grain of the identified, and four-tenths of a grain of the other, and I should judge them to be a tenth part of what I saw. If I am right in this, the total quantity of arsenious acid in it would be under half a grain—a quantity certainly not enough to kill an adult human being, and especially as it is partly neutralized by lime, which, to a certain extent, destroys its poisonous qualities. The smallest quantity of uncombined arsenious acid which is recorded as destroying life from its action on the stomach is six grains, and that was in the case of a child.

"Such a compound as that I refer to might be formed if 'arsenical solution,' arsenite of potassa and lime water, were mixed together in a neutral solution containing animal matter;\* but I cannot understand how it could remain in a human stomach for years, knowing as I do that the contents of almost every stomach is *acid*, from the presence of free hydrochloric acid and biphosphate of lime, both of which would constantly tend to dissolve and decompose it.

"I have neither the time nor the inclination to be drawn into a controversy of such a length as this appears to be, and I would respectfully recommend the belligerents to abandon the mere expression of opinion, and to resort to the application of *practical tests* to prove or disprove the possession of the powers claimed—thus *strangers* with diseases *not apparent* might surely be subjected to the clairvoyant by disinterested persons. If she judges rightly in a majority of cases, a favorable opinion would follow, and in the Exeter Infirmary patients about to submit to surgical operations could be mesmerized—if only two or three of them underwent the operations without feeling pain more would be done to establish mesmerism than by writing hundreds of columns in newspapers.

"I am, Sir, your obedient servant,  
"WILLIAM HERAPATH."

It will be observed that Mr. Herapath considers both the specimens given to him by Mr. Parker "nearly alike in appearance and chemical composition." Dr. William Gregory, to whose report I shall hereafter refer, coincides in this opinion. I therefore consider it proved that the substance ejected in my presence, and what was before vomited, are essentially identical in their contents. With

regard to Mr. Herapath's assertion that he cannot understand how it could remain in the human stomach so many years, &c., it must be taken with the due consideration that, although a *most eminent chemist*, he is *not*, I believe, a medical man; and also that the question was put to him, as to arsenic enough to kill twenty men. I should before have stated that the entire quantity of gritty substance ejected by Mrs. Bird is about one drachm. It has been stated that Mrs. B. took but a single half ounce of liquor arsenicalis, which would contain rather more than two grains of arsenic. This is *not the case*, as Mr. Parker well knows from statements received when he in 1834 became her sole medical attendant. The liquor arsenicalis was sometimes procured by her late husband, and sometimes by a servant. Mr. Bird, being in a public office, was in the habit of purchasing things at different chemists who frequented the office in which he was engaged. I mention this, as a druggist in Exeter has stated that only once did he make up a prescription for Mrs. Bird containing arsenic. Her then medical attendant, from whom Mrs. B. received the greatest kindness and attention while under his care, frequently himself brought medicines in his pocket for her; but whether that containing liquor arsenicalis formed any part of them, we have no means of ascertaining.

I now with great pleasure come to the analysis and opinion of Dr. William Gregory, Professor in the University of Edinburgh; but before doing so, I confess my utter want of language *adequately* to express my sense of the obligation we are under to him for the unremitted attention he has paid, and trouble he has taken, to determine the contents of the substance submitted to him, and also for allowing us to publish so full a report of his labors and opinions. Dr. Gregory, it will be recollected, is not only a chemist, but also an eminent physician, and the translator of all Liebig's works on chemistry known in this country.

*Dr. Gregory's Analysis, extracted from a letter addressed to Mr. Parker.*

"297 milligrammes of the powder, about 4.5 grains, were boiled ten times in succession, each time with about 30 grammes of distilled water, and the solutions filtered, united, and evaporated to dryness in the vapor bath. The liquid when very concentrated became covered with a film, which is the case with a solution of arsenite of lime. A little organic matter, of a brown color, separated towards the end of the evaporation, but when dry, the residue was nearly white, the organic matter being masked by the arsenite of lime. It weighed, after being heated for a long time at 212°, 45.5 milligrammes. This dried mass had all the characters of a similar one obtained by boiling

\* "The patient is said to have formerly taken these as medicines at the same time."

arsenite of lime with water, and drying up the solution. In both cases the film appeared, and if any crystallization existed in the dry mass, it was very confused in both.

"The mass was dissolved in boiling water and filtered from a little organic matter which had become insoluble, or at least was not dissolved by this smaller quantity of boiling water. The solution in both cases was slightly alkaline to very delicate test-paper, indicating the presence of basic arsenite of lime. It gave a yellow precipitate, with nitrate of silver. In short, the solution was a nearly pure solution of arsenite of lime. In order to have a control for the quantity of arsenic present, I acidulated the liquid with hydrochloric acid, and precipitated the arsenic by a current of sulphuretted hydrogen gas. The sulphuret of arsenic was formed very abundantly, and of a perfectly pure yellow color. After standing in a warm place till all the smell of sulphuretted hydrogen was gone, the liquid was thrown on a filter, and the sulphuret of arsenic well washed. It was then dissolved in ammonia, the solution dried up, and the residue, sulphuret of arsenic, with a trace of organic matter, after being heated to 212° for half an hour, that is, till it ceased to lose weight, weighed 30.0 milligrammes, equivalent to 24.1 milligrammes of arsenious acid, or to 44.9 milligrammes of basic arsenite of lime.

"The matter dissolved from the powder by boiling water therefore, consisted of,

|                          |            |
|--------------------------|------------|
| Basic arsenite of lime,  | 44.9 mill. |
| Organic matter and loss, | 0.6 "      |
|                          | <hr/> 45.5 |

And it contained 24.1 milligrammes, or about 0.372 of a grain (1.3 grain) of arsenious acid.

"That portion of the powder which had not been dissolved by the boiling water contained the carbonate of lime, colored by organic matter. It was dissolved, as well as what remained on the filter through which the boiling solutions had been filtered, in dilute hydrochloric acid; the solution neutralized by ammonia (which was added in slight excess, but caused no precipitate, indicating the entire absence of phosphate of lime), and precipitated by oxalate of ammonia. The precipitate was collected on a filter, well washed and dried. After being heated to 212°, till its weight became quite constant, it weighed 340 milligrammes, equivalent to 233 milligrammes of carbonate of lime. I should have said that the greater part of the organic matter remained undissolved when the original carbonate was acted on by hydrochloric acid, but its quantity was so small, and it adhered so tenaciously to the filter, that it was absolutely impossible to make a determination directly of its weight. It gave out when heated on platinum a smell of burnt animal matter, and no doubt contained a little albuminous or gelatinous matter.

"The result of the whole analysis, therefore, is as follows:

|                          |               |               |
|--------------------------|---------------|---------------|
| Carbonate of lime,       | 233 mill.,    | or 3.989 grs. |
| Basic arsenite of lime,  | 44.9 "        | 0.372 "       |
| Organic matter and loss, | 19.1 "        | 0.138 "       |
|                          | <hr/> 297.0 " | <hr/> 4.500   |

Or in 100 parts.

|                          |       |
|--------------------------|-------|
| Carbonate of lime,       | 78.45 |
| Basic arsenite of lime,  | 15.11 |
| Organic matter and loss, | 6.44  |

100.00

The proportion of arsenious acid in 100 parts is therefore 8.11

"Before analysing the powder, I again examined various portions of it under the microscope, and in many instances I perceived some irregular fragments having a decided appearance of crystallization; but the mass of powder is amorphous, under the weak power which I employed. The crystallized portions have not in any degree the aspect of the powder of arsenious acid; they much more resemble grains of carbonate of lime; and the observations of Mr. Herapath, made with a higher power, show, I have no doubt correctly, that the mass of the powder is crystalline carbonate of lime.

"From all these observations, joined to those in my former letters, I am decidedly of opinion that the arsenious acid present in the powder is entirely in the state of arsenite of lime, and that it consequently has not been introduced into the stomach or into the powder in the form of the powder of arsenious acid.

"Considering that your patient took the arsenic in the form of the liquor arsenicalis, and was at the time in the habit of taking lime water (a very unchemical prescription, by the way), it is quite easy to see how arsenite of lime should be formed in the stomach along with carbonate, and once formed, its great insolubility would not only account for its being found there after so long a time, but would also explain how so considerable an amount of arsenic should remain in the stomach without producing dangerous or even fatal effects. At the same time it is quite possible that a very small portion might occasionally be dissolved, and produce some of the toxicological effects of arsenic as long as it remained. We must bear in mind, too, that the arsenite of lime, besides its own insolubility, was further protected by the presence of carbonate of lime in large excess, and of agglutinating organic matter, which must have defended it from solvent action. That it must have been agglutinated is obvious, otherwise it could not have remained in the stomach; and there can, I think, be no doubt that, from the very peculiarly morbid state of the stomach and digestive powers, the solvent energy in this case was reduced to a minimum, and that, when the patient's health began to improve, and her stomach to assume in a greater degree its normal powers, the agglutinating matter was absorbed, and the insoluble mass, thus disintegrated, and more exposed to solvent action than before, may have excited vomiting, and thus caused its own rejection. The physical appearance and chemical character, as well as the composition of the powder, indicate very clearly that it has been the result of slow action, the organic matter being equally diffused in every part. It is out of the question to suppose that the powder could have been formed artificially by mixing



arsenious acid with carbonate of lime; for the arsenious acid has certainly not been introduced as a powder. I should say it has been precipitated in the stomach by degrees, carrying with it some organic matter, as all precipitates do in animal fluids; and I look on the characters of this powder as demonstrative evidence that it has been formed by a slow process in the stomach.

"From what I have already said, you will perceive that I do not see any reason why such a powder, enveloped no doubt in organic matter, should not have remained in the stomach for any length of time, as long as it formed a coherent mass, and that without destroying life. The arsenite of lime is so insoluble in water, and above all in cold alkaline solutions, that I should not hesitate to take a considerable dose of it. I should think a very large quantity would be required to destroy an animal, and the experiment might be made; always remembering that when enveloped in a large excess of carbonate of lime, and agglutinated by organic matter, it is still more insoluble than when pure. I do not therefore entertain a doubt, that 60 grains of this powder, containing 9.06 grains of basic arsenite of lime, equivalent to 4.86 grains of arsenious acid, might, under the circumstances, remain for any length of time in the stomach without producing fatal effects; although the patient might suffer in some degree from its presence. It is not certain that 4 or 5 grains of arsenious acid would prove fatal even if pure and uncombined, although it might probably do so. But it is probable that there was originally much more of the powder, and that it has gradually yielded to the solvent actions to which it has been exposed. The symptoms observed, more particularly the vomiting and the garlic eructations occurring after the use of salt, would seem to indicate that some portion, no doubt a very minute portion, of arsenic has been in some way dissolved, possibly by free hydrochloric acid, and has then acted on the system from time to time; and it is probable that, had no marked change taken place in the health of the patient, the same slow process of solution might have continued for an indefinite time. A sudden increase in the action of the absorbents has apparently hastened the termination of the process, and disintegrated the offending mass or concretion, so that the residue of it has been ejected from the stomach.

"The question having been specifically put to me, whether the gritty powder had the appearance of a mixture recently made with a view to imposture, I have no hesitation in saying, that it does not appear to me to possess in any degree the characters of such a mixture. The crystalline carbonate of lime, I think, must have been slowly formed in a solution containing organic matter, and the uniform diffusion of the organic matter in the powder leads to the same conclusion. It seems to me exceedingly improbable that an impostor should have thought of converting the arsenious acid into arsenite of lime; and, had the powder been a mixture of the kind suggested, the arsenious acid in all probability would

have appeared in it uncombined, and in the form of white grains, of which there is in fact no appearance.

"Even supposing an impostor to have known the mode of formation and the chemical characters of arsenite of lime, I consider it in the highest degree improbable that he should have been able to form such a powder as that which I have examined. I am sure that to imitate it would be a very difficult task for the most dexterous chemist.

(Signed) "WILLIAM GREGORY."

Mrs. Bird has for years had an insurmountable dislike to salt (first engendered by the unpleasant eructations previously alluded to), and consequently she never takes any with her food; hence it is more than probable that she has less hydrochloric acid in her stomach than is found in that of most other persons, and this would account for the arsenite of lime being so little acted on by the gastric juice.

J. C. LUXMOORE.

*Rose Mount, Alington, Devon.*

\*\*\* It is impossible for us to publish this case without expressing our admiration of Mr. Luxmoore's indefatigable kindness to the afflicted lady. He resides nearly four miles from her house, is a private gentleman, and a county magistrate, and his arduous exertions were prompted solely by benevolence and the love of scientific truth. Mr. Parker's conduct is likewise above all praise, surrounded as he is by brother medical men reviling him and mesmerism from morning to night. The case treated so perseveringly by Mr. Janson, and detailed in our last number, does him infinite honor: and the great ability and untiring, unflinching courage with which he has long castigated the ignorant and venomous foes of mesmerism in the Exeter papers, lays us all under deep obligation to him. He has compelled them to know and speak of The Zoist, which they would fain not know, or pretend not to know. The medical body of Exeter, with the exception of Mr. Parker, as far as we are aware, have acted a sad part by despising mesmerism, which properly belongs to the profession, and by allowing two gentlemen not of the profession to stand forth proudly as its noblest champions, cultivators, and propagators in their stead.—Zoist.

**EXTRAORDINARY EFFECTS OF MESMERISM ON A GENTLEMAN, PERFECTLY BLIND FOR ELEVEN YEARS.***[Communicated by Dr. Elliotson.]*

DR. ELLIOTSON begs to forward the following letter to *The Zoist*, from Dr. Chandler, of Rotherhithe.

*Conduit Street, March 10th, 1847.*

To Dr. Elliotson :

My dear Sir :—The following very curious and interesting case was introduced to my notice by Dr. Foulmin, of Blackheath, who, having witnessed some of my mesmerist cases, did not hesitate to admit that he believed his own eyes,—though perhaps he “knows human kind” quite as well as some others who suppose their retinas to act as flattering mirrors.

Of course this patient has been malingering for the last 14 years, on purpose to gratify any mesmerist with whom he might happen to come in contact.

Capt. Peach, æt. 55, has formerly commanded large East India ships, and, having three times circumnavigated the globe, has consequently been exposed to frequent alternations of climate, which, together with severe losses by a very protracted Chancery suit, have probably been the cause of the following severe and complicated diseases of his nervous system.

He has been completely amaurotic in both eyes for eleven years. This was about three years coming on; one eye going first, and afterwards the other. For about eleven years he has not been able to distinguish the brightest light from total darkness, except on one or two occasions for a few seconds only, when, under the influence of belladonna, he experienced slight glimmerings of light. He has suffered from partial paralysis of the lower limbs for about the same time. When sitting, he has the power of moving the legs; and, when placed upright, he can balance himself, but cannot raise his foot from the ground. For about six or seven years he has been constantly subject to the most severe intermittent darting pains (of a Tic character) in his limbs; these pains have always been capriciously erratic, but never attacking the trunk or head: he has also had spasmodic tension of the muscles of the lower part of the abdomen frequently to a most distressing degree. But the symptom which he describes as causing him the most intense suffering, since last June, has been a gnawing dull pain in the lower part of the spine, occurring generally on his awaking in the morning, of so desperate a character as to call for his being immediately got up and dressed. The altera-

tion of position appears to afford him some relief. These attacks will occur for several days together; he then may get a few days intermission. They appear connected with a very copious discharge of blood from the bowels, that has existed for three or four years, though the attacks and discharge are now noticed to be invariably simultaneous; and the latter has been observed to be much more copious since the lumbar pains have commenced.

These protracted and severe afflictions have at length produced a high state of nervous irritability, destroying rest and appetite to such an extent that he is worn almost to a skeleton. His pulse is always 100, and often 120; and he gets no sleep but what is produced by narcotics.

Mr. Walsford, of Greenwich, who has attended him for many years, has frequently told him and several members of his family, that medicine could be of no use to him;—but, however, when the pains have been exceedingly urgent (giving occasion to screams which alarmed the neighborhood), Mr. W. has been sent for, and has always administered strong narcotics, which, though they lulled the pains for the time, left him stupid for two or three days.

For several years he has been distressed by extreme flatulence after the smallest quantity of food;—indicative of greatly impaired digestion.

Dr. Foulmin, of Blackheath, who has paid him much disinterested attention for the last few months, and has tried various means, including belladonna and veratrum, &c., asked me to see him in August last, and to say if I thought mesmerism would be likely to benefit him. After a careful investigation of the case, I pronounced it to be apparently a very hopeless one; but, knowing what wonders mesmerism had worked in cases equally forlorn, I recommended that it should be tried if any one could be found in the neighborhood who would undertake it. Accordingly his mother, an old lady of more than 70, and the servant, an ignorant Irish girl, commenced mesmerizing him, and produced, after a very few trials, a most decidedly soothing effect.

Shortly after, I had an opportunity of introducing the case to the notice of Mr. Holland, of New Cross, who is a most enthusiastic non-professional supporter of mesmerism, and he immediately took it in hand; and, as the wonders he has worked will be best related in his own words, I beg to subjoin his reports of the case to me, unabridged.

Laurie Terrace, New Cross,  
5th December, 1846.

Thomas Chandler, Esq.

My dear Sir,—Your own personal obser-

vations, and our communications from time to time, will have made you aware, generally, of the favorable impression which mesmerism has effected in the, otherwise, desperate case of your Blackheath patient, Captain Daniel Peach, so long a martyr to a melancholy complication of ills.

In compliance with your wish, I have now the gratification to communicate a connected statement of my proceedings in this case, and their results.

After you had introduced me at the London Hospital, on the 26th August last, to Dr. Toulmin, as an amateur residing in the "neighborhood" of the patient, to wit, something more than a mile and a half distant, I lost no time in waiting upon that gentleman, at his residence at Blackheath, with the object of being made acquainted with full particulars. These were frankly communicated, and I placed myself at his disposal. Dr. Toulmin is the Captain's neighbor, both figuratively and literally, and I need hardly add, that the application of mesmerism, in this case, has been with his entire sanction and approval, and, occasionally, in his presence:—indeed, he has stated to me on our leaving the patient's residence together that the tranquillizing effect which he had just witnessed, exceeded what he could have produced by the largest "safe" dose of opium, at the same time adding that he was not aware of any ordinary means by which equal amelioration of the general symptoms could have been effected.

I commenced operations on the 11th of September last, and, after six sittings, up to the 21st, the following is the spirit of the remarks which I find in my notes, as regards the amount of mesmeric influence. A tranquil state of abstraction is induced, with more or less of the ordinary consciousness remaining, accompanied by an involuntary closing of the eyes; there is also a perceptible dullness of sensation at the surface (and most probably deeper), with a continually increasing indisposition to motion of any kind. Towards the end of this series of sittings, the above effects have attained a species of intensity which promises the best results.

My mode of proceeding has been as follows:—The patient being seated, I have made downward passes, with and also without contact, before the face, trunk, and limbs, occasionally pointing at the eyes, or intently looking into one or other of them (it must be borne in mind that he is totally blind). Much to my surprise, I found, at length, that the look alone produced some marked physical effects; these, the patient describes as follows:—A dry irritation in the upper part of the eyeball, as if the upper lid were raised and a hard pencil passed over the organ; then a sensation of watering, as if occasioned by smoke, only re-

lieved by a strong closing of the lids. Sometimes the patient has felt as if a fine pencil of wind, proceeding from a point, impinged upon the centre of the eye-ball, occasioning a feeling of heat and mixing with the other symptoms, all which continue to be increased the longer the process is persevered in, so much so that he has more than once exclaimed, while strongly closing the lids, "It is very sharp to-night;" and on several occasions he has stated that the sensations amounted to positive "stinging," similar to that produced by "mustard," by "snuff," or by an "onion." Fluid collects in the corner of the eyes; or eye perhaps, if one only is stared or pointed at.

After being demesmerized, the patient is assisted to an erect position, in which I make contact passes down the spine and limbs, down the latter before and behind.

I have continued similar proceedings up to this date, about three times in each week, from an hour to an hour and a half on each occasion, with only the following slight variations, of having the patient placed at full length on a bed, instead of being seated in a chair, and my manipulating the spine and limbs while he was in the mesmeric state,—the latter mode was suggested by Dr. Elliotson as more likely to be beneficial, the former (the recumbent attitude) had been preferred all along by Dr. Toulmin and also by the patient. I elected to mesmerize him sitting (to him an uneasy position, from the weakness in the lumbar region), in order to be able with certainty to distinguish the mesmeric influence from ordinary sleep, the latter not being so likely to supervene in an uneasy position: as soon as rigidity manifested itself, there was no longer any necessity for this precaution.

The result of continuing mesmerism has been an increased intensity of all the phenomena—great insensibility of mechanical injury on the surface—loss of either ordinary consciousness, or of the recollection after the mesmeric state is over of the occurrences which took place during sleep-waking—inability to describe correctly in his sleep-waking the position in which his limbs may have been placed, for he is beautifully cataleptic, and his limbs obey attraction as distinctly as the limbs of patients whose organs of vision are perfect.\*

\* This exquisite fact I witnessed myself on the two occasions of my being allowed the favor of visiting this gentleman. The whole affair was so striking that, after my first visit to Blackheath, I requested permission to go again. On the second occasion I was anxious that the mesmerism might be begun when there was no possibility of the patient being aware of it. Accordingly, while we were all in conversation, Mr. Holland began to fix his eyes upon the patient, our conversation continuing equally as before. Presently the captain's eye-lids twinkled; he exclaimed, "Are you not mesmerizing me?" A drop of fluid appeared at the corner of one eye, and he was soon in sleep-waking.—JOHN KILLBROOK

Up to the present moment the good which has been accomplished is as follows:

Total cessation, since the first week of his being mesmerized, of that excruciating pain at the bottom of the spine that was wearing him to a shadow. His shuddering recollection of this pain, which was comparatively recent, is more vivid than that of any other of his afflictions: his mode of expressing himself, in allusion to it, is "No tongue can tell the agony," &c.; "it struck my very vitals," &c.; "if I had the ability I should have made away with myself," &c., &c.

The hæmorrhage from the bowels (the consequence of internal hæmorrhoids, in the opinion of Mr. Walsford of Greenwich) has been entirely suppressed, not even a tinge having manifested itself since the first application of mesmerism.

The tension at the lower part of the abdomen, as well as the extreme flatulence, have entirely disappeared.

The capriciously erratic, and fierce darting pains (spasms of the "tic" character), whose attacks were almost incessant of late, and more or less present for years past, have been very considerably ameliorated; indeed, out of 85 days which have elapsed since he was mesmerized (from 11th September last), there have only been 13 on which these spasms have returned—one relapse continued for 5 consecutive days, the others were short, with two intervals of 14 and 19 days, respectively, on which there was no return of spasm at all. Immediately previously to mesmerism having been resorted to, and during the greater part of the preceding summer and spring, these spasms, together with the gnawing pain in the lumbar region, were so frightful, that the patient's cries often alarmed the neighborhood, and attracted the notice of policemen on duty near the spot.

On Friday, the 27th ult., I found him suffering from a return of these spasms, and, as the relief derived from mesmerism, on that occasion, epitomized the whole case in that regard, I add a verbatim extract from one of my notes of that evening.

"The potency of mesmerism strongly evidenced this evening—a return of spasm yesterday morning (inside of left thigh), very severe through the day and night—less so since this morning, but quite sufficiently marked. I had to attack him in the midst of intermittent spasm, and it was full 25 minutes (instead of 6 or 8 ordinarily) before he came under the influence—the paroxysm still continued for a quarter of an hour more, as evidenced by strong startings, but less and less violent, which did not, however, occasion the usual contortion of the countenance, and the ordinary exclamation. Finally, and for the last half hour up to being demesmerized,

he had the appearance of placidity personified, without the least motion of any kind. I dispersed the influence, as usual, by quiet transverse passes before the face—he awoke very gradually, commencing with sundry very energetic gapes, accompanied by various grimaces and contortions of the muscles of the face, as if each stood in need of being stretched (altogether indicative of the refreshing effect of deep sleep)—for some time he replied incoherently to my questions, appearing to be solely occupied with the process of awakening, and the first indication (to-night) of his senses being collected, was his exclamation, 'Thank God, the pain is gone!' When fully conscious, his countenance and manner were quite cheerful, and he entered into the spirit of some facetious remarks which ensued. This contrast was effected by mesmerism in less than two hours; he admitted that he had dropped off two or three times (in fact, the influence was very deep this evening), but, as usual, asserted that he was generally conscious of what was passing. In this he was wrong, as he was not aware that I had turned him on his side, in order to manipulate the spine; neither was he conscious that a young lady had won a pair of gloves of him, which she did very prettily at my instance."

The high state of nervous irritability into which his afflictions had plunged him, together with its exponent, viz. a weak pulse from 100 to 120, or even 140, have entirely subsided; his appetite, with slight exceptions, continues good; his spirits are improved, his strength increased, and he usually rests well, the pulse ranging from 72 to 85, or very rarely 90. He has partially discontinued the use of Batley's Sedative Drops (wholly omitted on the nights of being mesmerized), and entirely that of stimulants (ale, wine, spirits, &c.), which Dr. Toulmin had recommended with a view to counteract the tendency to "sinking," which his late distressing symptoms occasioned.

The partial paralysis of the lower extremities remains much the same, as regards voluntary motion (or rather the want of it) in an erect position; nevertheless a tendency to increased power is also perceptible here.

In ordinary circumstances, it would be "hoping against hope," to expect a restoration of vision in this case,—but under the benign influence of the agent employed, what may not be accomplished! Already it has produced, on very many occasions, short intervals of "glimmer," so much so that the patient has been able to distinguish the return of day, as well as the "diffused whiteness," or "glare," from the fire or the flame of the candle. He has repeatedly inquired, "Is it not a very bright day?" "Is not the

fire very bright?" I presume that these interruptions of the perfect blindness (which is ordinarily so complete, that I have repeatedly, by means of a lens, condensed the image of the flame of the candle upon the pupil of his eye, so as exactly to fill it, of all which he has remained totally unconscious) indicate merely functional debility in the visual organs, without alteration in their structure; if so, let us hope on and persevere, looking to our polar star, which, in the teeth of adverse influences, has for the last ten or twelve years maintained its due elevation, and continued to shine with undimmed brightness, the centre of an increasing galaxy of similar intelligences.

If I could spare the time to mesmerize this patient every day, I have no doubt that matters would move faster, and therefore more satisfactorily. My avocations will not, however, permit this; and it is clear that cases of this description could only be met by a public establishment, devoted to the diffusion of the incalculable benefits flowing from the beneficent agent which we employ.

Believe me very truly yours,  
J. HOLLAND.

Laurie Terrace, New Cross, }  
6th March, 1847. }

Thomas Chandler, Esq.

My dear Sir,—I have the pleasure to inform you that, notwithstanding the trying character of the season from which we are now about to emerge, our patient, Captain Peach, has, by the continued aid of mesmerism, been preserved in a comparative state of ease, in the teeth of the debilitating tendency of his exotic mode of existence.

Since the 27th November last, he has had but one severe relapse (spasm), which commenced on the morning of the 12th of January last, and tormented him incessantly through the whole day. I visited him in the evening; and, contrary to my expectation, he was fully mesmerized in less than one minute, advantage having been taken of a temporary lull. On this occasion the attack was in the upper part of the large muscle on the under side of the left thigh, and was proportionally violent, returning almost directly after he was mesmerized. Each spasm lasted from 2 to 4 or 5 seconds, and recurred at intervals of from 20 to 40 seconds (by my watch), with occasional lulls of greater duration. There was the ordinary expression of agony, accompanied by a suppressed inarticulate cry, but without the least tendency to rouse the patient from the mesmeric state; indeed his countenance relaxed into perfect placidity the instant the several attacks passed off. I manipulated incessantly, and it was only at the end of the first 50 minutes that there was a perceptible

diminution of the symptoms; but at the expiration of 20 minutes more, he was sleeping like an infant, and continued so for other 20 minutes, when I left him, thinking that it would be more beneficial to suffer the influence to exhaust itself; besides which, I dreaded to awaken him, lest the attack should return and the labor have to be recommenced. However, there has not been any return, but he was very much shattered for two or three days; still he came round more kindly than had been his wont on former occasions before mesmerism was resorted to.

None of his other late complicated afflictions have returned since the date of my former letter.

I may mention that the fixed look alone continues to produce a highly irritating effect on the patient's eyes; and, if continued for 10 minutes or a quarter of an hour, becomes totally unbearable; they water copiously, and put on a highly inflamed appearance; the nasal passages also sympathize. This treatment has been repeated perseveringly with the object of rousing the paralysed optic nerve to natural action, and I am much disappointed at its not yet having had that result, more particularly as such high susceptibility to nature's own stimulus ought, one would think, to act in that direction. The main difficulty, no doubt, arises from the affection having been so long established, and being so deeply seated. This view is borne out by the fact that the late frightful pain in the lumbar region, which was of comparatively recent occurrence, yielded almost instantly to the mesmeric influence.

Independently of the grave afflictions mentioned in my former letter, he has suffered for a long time from various comparatively minor complaints, which have only been mentioned to me, when attention has been drawn to them in consequence of an amelioration having taken place. Among these may be mentioned an insensibility (of very long standing) in the parts administering to micturition, and also a chronic "weakness" in the inside of the left thigh. The latter has totally disappeared for some time past, and the former has been considerably relieved.

There is no indication in the mesmeric state of any exaltation of the senses or faculties in this patient, nor indeed of any other "high phenomena;" but it may be worth while to state that, in addition to the induced rigidity formerly mentioned, the sensation of thirst can invariably be brought on by merely placing the ends of my fingers lightly under the patient's chin. The sensation is always indicated by a sucking and swallowing action, and *viva* *viva* the question be asked. That this fact is not the

result of "association" or "mental suggestion," was fully demonstrated by the following occurrence. On the first occasion of my trying the experiment, Mrs. Peach's notice was attracted to it, and a circumstance was thereby recalled to her mind, which to her had no significance at the time. Some time previously the servant was mesmerizing her master (who was seated), in the course of which ordinary sleep was combined with the mesmeric influence, and his "jaw dropped." Her mistress directed her to "put it up." In performing this evolution, the captain called out, "What is Jane doing?" &c., &c.: at the same time complaining of thirst, and distinctly showing by the sucking and swallowing action, that the salivary glands were excited. Some surprise was felt at the time, but the occurrence had been altogether dismissed, and was only recalled from witnessing my experiment.

I cannot note any decided alteration as regards the amaurosis, or the partial paralysis of the lower limbs. Still the fitful "glimmerings" continue to recur, and there is a very perceptible increase of strength, though voluntary motion (in the erect position) is not at command. However, his general health is certainly improved, his spirits are better, and his appetite is not to be found fault with; a bad night is now the exception.

He is making the attempt to discontinue opiates, and, hitherto, has succeeded better than could have been expected. His perseverance has been stimulated by having Miss Martineau's case read to him. This experiment was commenced on Saturday, the 20th ult., since when he has abstained altogether. He has had three or four sleepless nights in consequence, accompanied by great restlessness and craving; the effects of which have, invariably, been removed entirely, by the next dose of "nature's sedative," instead of "Bailey's."

The patient has large expectations that the "advance of the sun" will tell in his favor. Hoping they may be realized,

I remain, my dear Sir,

Yours, very truly,

J. HOLLAND.

What can be more beautiful and conclusive than this case? Yet no doubt our scientific (?) profession will find something to cavil at. I do not complain of medical men refusing to believe mesmerism from mere report; it would, indeed, be unworthy of them to do so. But, when they see some of the first men, not only in our own profession, but also in the church and at the bar, openly and enthusiastically advocating the cause, I think they might at least examine for themselves. And I do not hesitate to state that he must be a most unfor-

tunate individual who, taking five persons indiscriminately for the purpose of experiment, does not find at least one of them susceptible at the first trial. I am quite sure the average is much above this in my own practice. I may instance an extraordinary circumstance which lately happened to me, by which a whole party became convinced of the truth of mesmerism. In January I went to Devizes to meet a party of relations and friends at dinner. Mesmerism was of course talked of, and many a joke passed at my expense, but you shall see how I turned the tables. Having offered to mesmerize any of the party (but without pledging myself to be successful), a lady volunteered. Her husband objected; I, however, left him with his wine and joined the ladies. The offer was soon renewed, and I commenced: in ten minutes she became a living statue, though for the first five she was talking and laughing incredulously; I then called her husband and the rest of the party to see her, and much enjoyed their look of amazement and fright; they did not doubt her being asleep, and the next question was, how I was going to awake her, for she could not even smile when her husband spoke to her, though of a very lively disposition. After three quarters of an hour I convinced them that I could dissipate the effect as easily as I had produced it, and in a few minutes restored her to her former self. She described her sensations as having been most delightful. She had been perfectly conscious, but could not speak or move. She heard her husband cough, and wished to speak to him, but could not articulate.

This lady is not a young hysterical female, but the mother of a large family, some of them as tall as herself; she is well known to the whole neighborhood, and I have no doubt the affair will make a little talk in the town.

Cases of this description make more converts than public exhibitions; indeed mesmerism had been much depreciated in the town of Devizes some years before by an itinerant mesmerizer, who could not of course inspire that confidence in his auditors, without which the most genuine phenomena appear like imposition.

In reference to the ether mania, which is now in course of finding its proper level, it may be remarked that mesmerists can have no objection to its monopolizing operative surgery. They would only wish to receive the same justice as regards their results, at the hands of the profession, that has been so eagerly accorded to the new agent.

I remain yours, very truly,

THOMAS CHANDLER

58 Paradise street, Rotherhithe, }  
March 10th, 1847. }

## CURE OF ST. VITUS'S DANCE.

(By Dr. Engledue.)

DR. ENGLEDEUE states that he has sent us "the following case of cure of St. Vitus's dance, not because there is anything unusual in the course pursued, but because it is another instance of the value of mesmerism after the usual medical appliances had been tried in vain.

John C——, aged nine years, had been suffering for more than a month from St. Vitus's dance. His father consulted me in June, 1846. He presented the usual appearances, which it is unnecessary to enumerate. He could neither walk nor feed himself, and was in a truly miserable condition. After the administration of purgatives, he was placed under the influence of iron, and this was continued in gradually increasing doses for six weeks, at the expiration of which period he was not in the least degree improved, though no doubt further perseverance would have cured him. However, I persuaded his father to take the cure into his own hands, to abandon medicine and to try mesmerism, having witnessed its beneficial effects in other cases. He acceded to my wish, and made passes before his son for half an hour, night and morning. At the end of a fortnight there was a slight improvement. In three weeks this was much more manifest, and in two months he was quite well. During the whole of this period he took no medicine. While the disease existed he did not pass into mesmeric sleep, but so soon as this disappeared, his father was enabled to send him into the trance with the greatest ease. I believe this is not unusual. Sleep is not essential. Although in the majority of cases it is looked for, and to be wished for, nevertheless it is not necessary for the cure of disease.

Southsea, Hants.

## CURE OF TIC DOULOUREUX.\*

(By Miss Collins.)

DR. ELLIOTSON begs to forward the enclosed to The Zoist.

Conduit street, Jan., 1847.

Newark, Dec. 23, 1846.

Dear Dr. Elliotson.—The accompanying case I take the liberty of forwarding to you, as I feel persuaded it will afford you pleasure

to know that mesmerism has again proved of infinite service in a most obstinate complaint, the sufferer from which had tried all means that the faculty advised for her recovery. But all was found to be alike unsuccessful, until she had recourse to mesmerism. About the same time that Miss Wolstenholme was afflicted and deriving benefit from mesmerism, a young lady, a friend of mine, was troubled fearfully with the same malady (tic douloureux), when my mother undertook to apply the same means, and which were attended with equal success. She was mesmerized every day for about a fortnight, when she was quite cured, and she has had no return of pain since.

I am happy to say I am quite well; and with grateful remembrances again apologizing for the intrusion upon your time,

I am, dear Dr. Elliotson,

Yours ever obliged,

ELEANOR COLLINS.

John Elliotson, Esq., M.D., }  
London.

## [SEVERE CASE OF TIC DOULOUREUX.]

On the 24th June, 1846, Mr. Wolstenholme, an officer of Excise, called upon my father to borrow an electrical machine, in order to employ it for his daughter, who is about 24 years of age, and was suffering, and had suffered for several years, with tic douloureux. As the instrument was not in Newark at the time, my father advised mesmerism to be tried, and I am happy to say it was employed with complete success. My father and I went to her house during the afternoon, and Miss Wolstenholme informed us that she had been suffering from tic douloureux in both sides of the face for nearly five years, and to so great a degree that she dared not, during the whole of last winter, venture into a room where there was a fire, but was obliged to remain up stairs in a cold apartment; and her sufferings were so great, that her life, she stated, was perfectly miserable. She had been under medical treatment for two months, but grew worse instead of better, though everything that could be thought of had been tried for her relief. I saw her this afternoon for the first time, in company with my father, who mesmerized her by downward passes for half an hour. In fourteen minutes she appeared drowsy, but did not go to sleep. At the expiration of the half hour the pain had diminished. My father then locally mesmerized her, which produced great pain in her arms and legs, more especially in the right arm, as well as pain under the left ear; but all was removed before we had been there an hour, and we left her feeling very comfortable.

\* The cure of this young lady's contracted foot by mesmerism, and the history of the beautiful phenomena of her mesmeric state, will amply repay the perusal in Nos. xi. and xii.

25th. The patient came to our house this morning much better; she had had but little pain in the night, and very little this morning early. The effects by mesmerizing her were the same as those produced yesterday, with the addition of pain in the neck. The general and local mesmerization lasted for three quarters of an hour, when she said that she felt better than she had done for months; and she returned home quite free from pain. She called in the evening to be mesmerized, as slight pain had come on about five o'clock. She went away quite well.

27th. Has had no pain in the night, but she had a very little in the morning early.

28th. Her health and general appearance much improved, though sleep has not yet been produced. Violent pain returned for an hour at six o'clock in the evening, and for ten minutes at half-past nine.

29th. My father being obliged to leave home for a few weeks, she became my patient, and this morning I mesmerized her; she would have gone to sleep but for several interruptions. She had no pain at all on the 30th or following day, and only very little for a short time in the evening at the usual hour (five o'clock). Whilst mesmerizing her on the last-mentioned day, she experienced the sensation of hot water running down the left side.

July 2d. Had no pain since yesterday, except for a very few minutes this morning. After mesmerizing her for twenty minutes, she fell into a light and quiet sleep, which lasted for seven or eight minutes, and was exceedingly sleepy the whole of the half hour. Extreme pain came on for an hour in the afternoon, which she attributed to having walked very quickly.

3d. Went to sleep in a quarter of an hour, and slept six minutes; experienced great stiffness, and a prickly sensation in the left arm and hand.

4th. She says her pain daily diminishes. I made only a few downward passes to-day, but kept my fingers pointing at her eyes, which made her drowsy in a very few minutes; she slept for a quarter of an hour much deeper than she has hitherto done. Excruciating pain came on in the neck and head, which was removed by breathing upon, and then blowing over, the seats of the pain.

5th. Had a deal of pain before she went to bed; did not rest quite so well, and suffered very much till I mesmerized her. She attributed these uncomfortable feelings to the change of weather. I locally mesmerized her for an hour and a half, when she assured me she was quite easy again.

6th. She went into the mesmeric state in a quarter of an hour, and remained in it for sixteen minutes. She could recollect every-

thing when she awoke, but said that while asleep she could hear very indistinctly, and felt all over as heavy as lead, and that sometimes she fancied she was falling into some place, and at other times that some one wanted her and pulled her head to the left-towards the place where I was then sitting.

7th. I mesmerized her for half an hour, when she slept for twenty-five minutes. Went away quite well.

8th. Had a very good night, and no pain since she left me at twelve o'clock yesterday morning. She went to sleep in ten minutes, and slept for twenty minutes. In the evening, though she had had no pain, I mesmerized her again; she slept for thirteen minutes, when something in the street disturbed her; but in five minutes she again went to sleep, and remained for a quarter of an hour.

9th. Daily improves, and in ten minutes the sleep was induced, and she remained in it for twenty minutes, and for thirty on the following day. I locally mesmerized the face before she went to sleep, and removed the pain in two minutes.

11th. Did not succeed in getting her to sleep, but sent her home quite well.

12th, 13th, and 14th. No pain except for a very few minutes. Went to sleep in five minutes and slept for half an hour. I asked her several questions, which she answered in a whisper.

15th. Pain gradually diminishing. In four minutes she was in a sound sleep, which continued for a quarter of an hour; again in the evening for twenty minutes. She had a severe pain in her head, which was greatly relieved by local mesmerism.

16th. Had no pain since I saw her yesterday.

17th. Has had pain in her face since yesterday afternoon. I took all pain away before she left, but it returned in two hours afterwards, and did not leave her till mesmerized this morning, when she went to sleep in five minutes, and slept for twenty: she went away quite well.

18th. Much better to-day; has had no pain since I mesmerized her last evening. I got her to sleep in three minutes, and she slept comfortably for half an hour. She fancied, as has been usual, lately, that her head was separated from her body.

20th. To-day my mother mesmerized her for me. She did not go to sleep, but said she felt as though hot water was running down her. The pain, which comes on but occasionally, now lasts but a very few minutes, and then is so slight as not be worth naming.

21st, 22d, 23d. Three minutes is now sufficient to send her to sleep, in which she remains happily and soundly for about half



an hour, when it expends itself and she awakes spontaneously. If by any chance she awakes before the usual time, two or three passes will send her off again.

28th. Very well indeed, and came for the last time.

Dec. 23d. I saw Miss Wolstenholme to-day, and she informs me that she has had no pain whatever since last June, and that she is now quite well.

ELEANOR COLLINS.

Newark, Dec. 23d, 1846.

"I have carefully read over the above statement of my case, and declare that every part of it is strictly correct.

"MARY ANN WOLSTENHOLME."

# CASES OF TIC DOULOUREUX AND OTHER NERVOUS AFFECTIONS, CURED WITH MESMERISM.

(By Dr. Storax.)

27 Brock street, Bath, }  
Dec. 1st, 1846. }

CASE I.—A gentleman, residing at Lansdown Place, called in February last to consult me about his wife, who had been suffering for a long time from acute pains and restlessness; she had had no sleep for the last two or three weeks, notwithstanding opiates had been prescribed by her medical attendants. He wished to know if mesmerism would be of any use; I told him I thought it would, and made an appointment to see her at six o'clock in the evening.

I found the patient in bed, in great pain; she told me candidly, that she only consented to see me to oblige her husband; she had no belief in mesmerism, and therefore did not expect any benefit.

I proposed a trial, to which she consented, and though interrupted two or three times by her own remarks, I was enabled to induce sleep in less than twenty minutes,—by half-past six. She remained in this state until nine o'clock, when she awoke, asked the time, appeared surprised, turned her head, and again fell asleep, and continued in this state until the next morning, six o'clock. She told her husband how refreshed she felt, and how much better she really was.

This report I received when I called the next day.

The patient's appearance also corroborated this statement as regards her looks. I then proposed a second trial: she said it was perfectly useless, then, as she felt so much better and refreshed, that she was certain mesmerism could not produce any further effect.

She wished the operation postponed; I urged the present time, as it would more decidedly test its power. She incredulously consented, and told me, whilst trying her, I was only wasting my time; but opposed to all this, in less than twenty minutes, she was again asleep,—about half-past ten o'clock. A conversation was held in the room that did not disturb her, and I left directions for her to be allowed to sleep on. This she did until past two o'clock,—when being told the time, she made an effort to rouse herself,—and having friends present, succeeded. She awoke quite free from pains, dressed in the afternoon, and again passed another comfortable night. I wished to continue my attendance during the week, but a summons to the country prevented that; though I was glad to be informed some time afterwards, that the pains and sleeplessness were both removed, and her general health improved.

CASE II.—A lady, residing at Camden Place, Bath, sent for me in July last to see her. I was informed that she had been suffering from violent pains about her head and face for the last few weeks; she had been attended by two medical gentlemen, who considered the case to be tic dououreux, and prescribed various remedies, but without any good effects. A friend of her's, who had been greatly benefited by mesmerism, advised a trial; the lady consented, but told me she expected no benefit, having no belief in its powers.

I saw her on Sunday about two o'clock, for the first time, and found her suffering from acute pain, particularly on the right side of the face and temple. After a short time, I proposed a trial of mesmerism, and in a quarter of an hour produced sleep, with apparent freedom from pain. She remained in this state for half an hour, when I demesmerized her. She said she was now certainly free from pain, but she could not believe that to be the effect of mesmerism, inasmuch as she had not been to sleep; she however requested me to see her again soon, as about six o'clock the pains were always more violent. I returned about that time; she had been better since I left, but was evidently fearing the threatened attack, which was however much slighter than usual. I mesmerized her in less than ten minutes. There were, as before, two friends of her's, present, who, knowing her expressed denial of the first sleep, now requested me to adopt some plan to satisfy her own mind when awake.

I moved the arms backwards and forwards several times, and placed one hand for five minutes over her face. After the half hour I again woke her, as her friends did not like my leaving her in the mesmeric state, which I wished.

When demesmerized, she was quite free from pain; but again doubted having been affected, until satisfied by her own friends of what had occurred. Monday morning, I was informed that the patient had passed a quiet evening, had refreshing sleep, and only a slight return of pain this morning when she left her bed-room. All her doubts had vanished, and she had been anxiously looking for me. I again mesmerized her about ten o'clock and left her to awake spontaneously, which she did about one o'clock, and remained perfectly comfortable during the day. I saw her again in the evening, and left her asleep. On Tuesday I was told she had passed an excellent night, and had no return of the pain in the morning. I mesmerized her about three o'clock, and though the sleep did not last very long, she continued free from pain, and passed a good night. I continued my visits during the week. She had no return of the pains, says she feels her health generally improved, and intends next week going on a visit to some friends. I heard from this lady two months afterwards, and she says that she has had no return whatever of her pains, and that if they should again annoy her, she will lose no time in having applied the only remedy she has yet found successful.

**CASE III.—MOST VIOLENT CASE OF TIC DOULOUREUX GREATLY RELIEVED.**

Mrs. West, *etat.* 50, residing at St. James's Parade, was sent to me in January last, by a medical gentleman residing here, with an opinion from him to the following effect:—that it was one of the worst cases he had ever seen, and that he had exhausted all his means without doing any good. The poor woman states, that she has suffered severely for the last three or four years, that sometimes the pain is so severe as to cause her to bite her lips, that she has frequently been without sleep for two or three weeks together, her eyes are constantly suffused with tears, and her mouth drawn aside by the pain. She has had several teeth removed with the hope of relief, but all to no avail. She has been under several medical men, and her case has excited much commiseration.

I willingly consented to try mesmerism, and though it was commenced during the coldest part of last winter, after a fortnight's mesmerizing there was evidently induced a remission of the more severe symptoms; for instance, the pain lessened, she slept better, she was much more placid during the mesmeric sleep, though frequently awaked by spasm, and her eyes less watery. I steadily persevered for about six weeks, and had the extreme satisfaction of seeing a marked change for the better. From fear of being

troublesome, she unfortunately omitted to attend, and in three weeks' time she became worse; I then resumed mesmerism, and in a few days brought her round to her previous improved state.

I continued mesmerizing for another month, making fully three months, when she was so much improved, that some who met her did not know her for the same person. She now slept well, ate well, and was altogether a different person. In the summer she went away for two months, and imprudently sitting on the grass after rain, caught severe rheumatism, but her tic did not affect her. When she returned to Bath, finding her still suffering from rheumatism, she was again mesmerized, and in three weeks greatly relieved. The tic has scarcely returned. Should it do so, I have no doubt but that mesmerism will soon relieve it. She is now very susceptible of mesmerism, and when I am busy Mrs. Storer finds no difficulty in affecting her.

In such a very extreme case, with a disposition to rheumatism, I can hardly hope for an entire cessation; but the good already effected has gone beyond anything yet accomplished by medicine.

The gratitude of the poor woman is extreme, and, what is equally satisfactory, the good effects of mesmerism have in this case been acknowledged by three different medical men.

**CASE IV.—CASE OF GREAT NERVOUS DEBILITY AFFECTING THE HEAD.**

Mrs. H., a respectable married woman, consulted me some time since in reference to her general health; she complained of great general debility, which she described as making her feel quite exhausted, with a constant head-ache, rendering her unequal to her duties at home.

As she had taken a good deal of medicine, and without any benefit, her husband recommended her to try mesmerism. I found her very susceptible to its influence, and after a few times mesmerizing, her head-aches ceased, and her general health became much improved. She is very liable to cold, which generally affects the side, and has usually been treated by depletion; but her husband, perceiving the good effects of mesmerism in the first instance, when her next attack began, in July last, sent for me. I found her with pains all over her, particularly in the side, and viewed the case as pleuritis with rheumatism. Knowing her susceptibility, I at once mesmerized her, and left her asleep; she continued in this state for nearly three hours, and when she awoke, expressed herself much freer from pain. I saw her in the evening, and put her again to sleep.

Her husband informed me the next day

that she had slept nearly all night, and that in the morning she was much more free from pain, and the side also was considerably better: I found her up in an easy chair, and again mesmerized her. She remained in this position for two hours, and, when she awoke, expressed herself to be nearly well. I attended her for two days more, making only four during the illness. She is now quite well, and looking altogether improved. Her husband and herself assure me that her last attack was precisely similar to her former ones, and that she has generally been confined from two to three weeks, and always remained extremely weak for a considerable time, until the present occasion.

This individual has been mesmerized now by me a great many times. Her case presents, in a very marked degree, almost all the mesmeric states, and on each occasion, after mesmerism, she expresses herself better. I sometimes avail myself of her offer, when I wish to give a private demonstration on this subject, her object being, as she says, to extend the knowledge of so valuable a remedy.

#### P.S. NOTE TO MY EPILEPTIC CASES IN NO. XVI.

The number of these and similar cases, occurring amongst the poor in every city, is very great, and yet even a trial of the most simple and the safest remedy, mesmerism, is still withheld from our public hospitals.

It was only a short time since, that a gentleman here recommended a poor epileptic youth to one of the hospitals, and, having seen the good effects of mesmerism in several cases, ventured to suggest it to the medical officers. The written answer was, and that from one of the leading (!) men, "That none of the men of the Bath United Hospital understood the science (so called) of mesmerism." Another was asked some time since, why, in surgical cases, he did not give the poor, at least, the benefit of a trial; his reply was, because he thought there was nothing in it.

This same individual's attention was again more recently directed to the subject in consequence of the many painless surgical operations which had been actually performed. He then said, he should be afraid of trying it, lest apoplexy should ensue. What! apoplexy be induced by nothing. Certainly, between the two opinions, there is only one step from the ridiculous to the sublime.

In justice, however, to two or three of the medical gentlemen connected with the hospital, I beg to say that all are not unbelievers, and that it is only the existence of certain prejudices or obstructions that prevents them giving it a fair trial.

J. S.

## CURE OF INJURY OF THE SPINE AND CONTRACTION OF THE LEG.

(By Mr. H. Hudson.)

Liverpool, 30th Dec., 1846.

To the Editor of the *Zoist*:

DEAR SIR,—I perceive in your publication several accounts of cures effected by means of mesmerism, and think it will yet be made a great blessing to the community if properly applied. I cured a young woman in this town by means of it, whom I providentially met as I was looking for a place of worship. Perceiving she was quite lame and apparently in much pain, I proposed to mesmerize her. But not understanding what that meant, she did not know what to say, yet felt inclined to submit to anything calculated to do her good, but at the same time she said she had no money to pay me. I told her if I could cure her she would have nothing to pay. Upon inquiry, she informed me that about seven months since she had fallen while cleaning the outside of a window, and had injured her spine; the doctors called it a bruise of the spine; that she had been in York Infirmary five months, when she came to the one here, where she underwent several operations without receiving any benefit. She also said that she had had upwards of 200 leeches on her back, and had consulted about a dozen different doctors, but they could none of them do her any good.

During that time her left leg became contracted at the knee, so that she had to walk on her toes, and with great pain in her back. Her parents being very poor, she was almost reduced to the necessity of going to the poorhouse, having spent all her money, besides pledging her clothes for support. Her mother was present during our interview. I desired the young woman to sit down, and was enabled to put her in a trance in about four minutes; her mother thought she had fainted, but telling her she was asleep, I tried to make her sing by singing myself, when she immediately joined me. Having desired her mother to assist me, I took hold of her leg and brought it quite straight, without causing her the least pain. On trying if she could walk by exciting the organ of Self-Esteem, she did so quite well, which alarming her mother, she ran out and left the girl with me. In a few minutes her sister and another person came in, apparently much excited and alarmed, and I awoke her. It took me about four minutes, as she was in a very deep sleep. On asking her to walk across the floor, she got up and immediately said, "What have you been doing to my leg? it is now straight," and then walked about very well; but I perceived her heel was not properly on the

ground. Having asked her if her back was still painful, she said the pain was quite gone, but it felt sore. I put her to sleep again that evening and the day following; but the next day being the Sabbath, I left her till Monday, when I brought her leg into a rigid state, which stretched the sinew at the back of the heel. On waking her she said, "Thank God, I have got my heel to the ground again." I put her to sleep several times. On the Wednesday following, she stood all day at the wash-tub, and was perfectly cured. This was about four months since. I procured her a situation with a friend of mine (Mr. R. N., at Wallington, near Newcastle-upon-Tyne), where she has been ever since, without any return of her old complaint, and gives perfect satisfaction to her master and mistress. Her name is Elizabeth Harley, and she lived in Edmund Street with her mother. She lived last, when at service (where she left on account of her lameness), at Mr. Garthorpe's House of Correction, City of York.

This case has already been inserted in the *Liverpool Mercury*, and copied into several other papers from that. I have mesmerized several persons, and have always found it to do good when it takes proper effect. I will not trouble you further, but hoping this will meet with your approval, I have the honor to remain,

Your humble Servant,

H. HUDSON,

*Cor. Sec. of the Liverpool Seamen's Friend Society.*

P.S. We have made careful inquiries respecting the above-related particulars, and have ascertained that she lived with Mr. Garthorpe; was injured in her back, and dismissed from both infirmary and hospital; that she was at Leeds for some time, and sent to the House of Correction at York, with a good character, and taken into Mr. Garthorpe's service, remaining in some time, and proving himself a most excellent servant. On leaving it, she was at York entrapped and engaged by a woman who kept an improper house, but no sooner discovered this than she determined to make her escape; the woman refusing to let her go, and keeping her in the house by force. The poor girl watched her opportunity, dressed herself in the best clothes she could lay her hand upon, got out through a window and made the best of her way to Liverpool, to which she was traced by a police officer and taken back to York, and tried by the Recorder, Mr. Elsly, who was about to pass sentence of transportation for seven years upon her, when, in her defence, she detailed the whole story; and persons being present

who could confirm it, her sentence was commuted to confinement for a short period in the House of Correction. She was taken by Mr. Garthorpe again into his service, but not liking her confinement she attempted to escape, fell from a ladder and injured her spine. She then gradually became unable to work, entered the York Infirmary, and after remaining there unrelieved for a length of time, and finally pronounced incurable there and at the hospital, she went to some friend at Liverpool. All this information was given by Mr. Garthorpe himself, who declares she was a most excellent servant, and that he is ready to give her a character to that effect.—*Zoist*.

#### MESMERISM NOT TO BE TRIFLED WITH, THOUGH IT KILLS NOBODY: OR, JAMES COOK ALIVE AND HEARTY.

[By M. W. G. Smith. Communicated by Dr. Elliottson.]

DR. ELLIOTSON forwards to The *Zoist* an authentic account which he has received of a lad unexpectedly sent to sleep with mesmerism two or three years ago, at Deptford, and whom the Times and other papers represented as incapable of being awakened; so that thousands now believe he never woke, and positively died, and many thousands fear mesmerism, lest the party mesmerized should never wake again, whereas every person who goes into the sleep wakes sooner or later spontaneously.

Conduit Street, March 10.

2, Deptford Bridge,  
February, 1847..)

My dear Sir,

In an interview I had some time since with Mr. Chandler, of Rotherhithe, he gave me to understand that various unpleasant and ill-founded reports were in circulation, tending very much to retard the progress of mesmerism and produce a feeling of terror of it in those who would otherwise avail themselves of that great therapeutic agent. These reports are, "that the lad, James Cook, mesmerized by me, is now dead, and had died in consequence of his being mesmerized." I beg most positively to deny this statement, and thus publicly to declare that he is alive and well, has grown up a fine young man, and was never in better health than at the present time.

It is true that his sleep was of a prolonged character, and so excited public attention that the police deemed it necessary to inves-

tigate the case. I was therefore visited at 2 a.m. by a special commission of that enlightened body (grave fellows, by the way, to report on a case of mesmerism), consisting of an inspector, sergeant, and private of the force, who, like Dogberry of old, showed their profound wisdom in their mode of examination, by summing up the evidence, and promising all parties a lodging in the station-house. Not being thoroughly satisfied whether they were acting right or wrong, a messenger was dispatched for the police surgeon. Myself and Mr. Taylor, awaiting his return, sat in suspense, the sable pall of night being for a time illumined with the presence of these worthy functionaries. ("We felt inclined to suspect their places, and in good faith to write them down—"). We reasoned for a time upon the imprudence of such a step, but "they knew the law" (they were good and true subjects). The worthy *Æsculapius* came. He very blandly and candidly assured us he was quite ignorant of the ills or benefits of mesmerism. After feeling the pulse, gravely shaking his head, &c., &c., he said he should advise the inspector to leave the case in our hands, for should anything serious happen we could easily be found. We were pleased enough to hear that decision, for the inspector's impressions a few minutes previous led us to expect something worse; and well for all persons it happened so, as the consequences of a separation from the patient at such a time would, no doubt, have been attended with serious results; and I take this opportunity of publicly thanking Mr. Downing, the police surgeon of Greenwich, for his favorable decision, and saving me from the ordeal of an examination before a magistrate.

It may be well here to narrate some few particulars in reference to this case, trusting it may serve as a warning to those who would tamper\* with this agency, especially the timid and inexperienced, who have no idea of the many inconveniences in which the young experimentalist is placed, when he loses that great essential to a mesmerist—confidence, or of the care invariably requisite to prevent another person from coming in contact with his patient.

Having attended an experimental lecture in Greenwich, by a Mr. Taylor, and witnessed a young lady (the daughter of a much esteemed minister), mesmerized, after being casually selected from the audience, at the first sitting, in ten minutes, and some of the higher order of phenomena produced in her, I naturally experienced a desire to know something more. During the subsequent

week I read one or two cases, and I asked myself, why, if those effects were real, I should not produce them as well as other persons? my curiosity awakened, impulse pointed to me a patient. I then called James Cook, a lad in my father's employment, asked him to stand before me quite still, and look me in the face. He complied with my request; I placed him with his back against an iron steam pipe, which was affixed to some brickwork; I passed my hands in the way I had seen Mr. Taylor, and after making the downward passes for two or three minutes, his eyes closed, his breathing became accelerated, he lost all consciousness, and would have fallen had I not caught him in my arms.

This very much alarmed me, and I called to a young man (one of my father's workmen) to hold the lad while I procured a seat. No sooner had the man touched him than he went into a state of complete frenzy: he rose, threw his arms in all directions, strided along the workshop, and, in a few minutes, became quite furious and dangerous to approach; he opened his eyes and stared wildly, uttering incoherent sentences, and fancied he was pursued by some demon, saying, "That he had run him through with his sword, and had him under the drawbridge by the castle," and at length sank on the ground exhausted.

At this time I became terrified. My feelings it would be vain to attempt to describe. So completely was I overpowered that I allowed the boy to do as he pleased for some time without making any effort to restrain him, having so completely lost my power over him.

It occurred to me that a second lecture on mesmerism was to be given that evening in Greenwich, by Mr. Taylor, and to him I dispatched the young man who had innocently done the mischief, desiring him, under no pretence whatever, to return without Mr. Taylor. The interval was to me dreadful. Imagine, Sir, yourself alone with a maniac, and you have a description of my position for nearly two hours. At some times during this interval he would narrate, with remarkable accuracy, any event that had taken place in his life, or passages of tales he had read; he was performing mental journeys with the rapidity of thought, accurately describing places, as if he were present, that he had never before seen.

Mr. Taylor, upon hearing the facts of the case, with a generosity and kindness I can never forget, resolved to attend immediately. He only stayed to explain to an audience of 150 persons his reasons for absenting him-

\* Medical men are the most fit to practice it IF they would.

\* He was rather fond of reading tales of chivalry, which would account for his using such language.

self so abruptly. They, naturally thinking he was playing them a hoax, questioned him, and were clamorous till they heard the name. As soon as the name was mentioned, a great part of the audience who knew me accompanied Mr. Taylor and beset the house. I allowed them to enter, and numbers who an hour before were sceptics, departed convinced. They communicated to their friends what they had seen, who doubting everything unless it was corroborated by the evidence of their own senses, begged, as a favor, to be admitted also. Thus, on the first evening (though my inclination was to keep the affair secret), a chain of circumstances, over which I had no control, caused the reports to circulate, which produced an excitement and interest in the public mind almost unparalleled by any other case.

When Mr. Taylor arrived, the boy was on a mental journey to the Temperance Hall, looking for Mr. Taylor, and watching the young man's actions, and accurately described the place and persons there. I will affirm, previous to that time, he had neither seen the place nor the lecturer. The numerous persons continually pouring into the workshop, he did not notice. Having mentally travelled home, he cast his eyes about the workshop, and pointing to Mr. Taylor from among a group of persons, said, "That is the gentleman Walton (the young man who had handled Cook) was talking to at the Hall." It was impossible he could have heard who was Mr. Taylor, for among all the persons who were continually arriving, there was not a word spoken, except by myself and the boy. We adopted many means of awakening him, but in vain: on our questioning the boy on his own condition, he said, "If I do not wake in twenty minutes, you must take me to bed, and, if I am not awake in the morning, you must send for this gentleman." Precisely on the expiration of twenty minutes, he seized my hand and dragged me away as quickly as he could through a dark room, avoiding any obstacle in the way, and threw himself on the bed. Some of the most striking of his clairvoyant powers showed themselves during the night; and several severe and satisfactory tests were applied, convincing to all who applied them.

After a long, long, and wearying night, the morning came at last; but with it no hope, no improvement: his eyes remained hermetically sealed: he rose, washed himself, and ate his breakfast, and could observe the most minute object with as great accuracy as if he were in his normal condition. The whole of Friday passed in unsuccessful attempts to restore him. Towards the latter part of the day he opened

his eyes; but to me his aspect was more distressing than before: his looks excited pity in all who saw him. The great excitement caused in the town induced hundreds of persons to visit him, by which, from a desire on my part that all by seeing him should be convinced, I was little aware I was retarding his recovery.

Nothing particular occurred that day: at night I was honored with a visit from the police, as I previously narrated. When morning arrived, the lad was conscious of that had taken place, and added that had he taken us away he would have followed wherever I went: for separation from us would have injured him.

Throughout the whole of Saturday numerous persons visited the case, including several medical men, also a Mr. D. Hope, now keeping a small chemist and druggist's shop on Deptford Bridge, but then a medical student on board the Dreadnought Hospital Ship, all of whom declared the boy to be in a very extraordinary state. In their experience they had never seen such a case before. Mr. Hope also to test whether the boy was insensible to pain, slyly ran a needle into his foot, and declared before a company of respectable inhabitants in a neighboring street he was in the habit of visiting, that there was not the slightest manifestation of pain, and from his conversation led every one to believe in the reality of the mesmeric state. This Mr. Hope was not only exceedingly interested in the lad, but did all he could to persuade him to take a powder he had prepared, as there had been no natural rest from Thursday morning till Sunday morning. But the boy resolutely persisted that "medicine would do him no good." How true must have been the boy's prevision, as was subsequently shown by the written communication you so kindly forwarded to me, in which in my then critical situation, although I had a firm belief in the boy's ultimate recovery, burst through the dark clouds of despondency, diffused a bright ray of hope, and cheered me in the severest moments of trial through which I had afterwards to struggle. At this crisis your kind advice raised my drooping spirits, imparted fresh vigor to my exertions, and nerved me to the task I had before me.

Several persons determined, should anything serious have occurred, to have raised a subscription to prosecute me. Mr. Hope afterwards wrote an untrue and impudent letter in the Times, and refused to repeat his charges of deception before a meeting of medical gentlemen that was convened; the chairman of that meeting, Mr. Atkins, surgeon, affirming "that there was neither delusion nor collusion in the case."

On Saturday afternoon, my situation and that of my patient, became to myself and all concerned, very alarming. About this time, sir, my mother called on you, when you, in the most gentlemanly and liberal manner, gave your valuable advice, which led to the boy's restoration, by our complying with your injunctions, much earlier than could otherwise have been done. You will recollect, sir, you requested no one should touch the patient but the mesmerizer; that he should also have whatever he desired, provided it appeared not decidedly improper: but to give him no medicine unless he prescribed it himself, as he would be his own physician. These injunctions were strictly adhered to, and after the crisis, which appeared about 10. 30 P.M., a gradual improvement took place, and on Sunday, 6 P.M. (as the boy had predicted), he returned to his normal condition, though he labored under extreme nervous debility for two or three days afterwards, and it required great care to subdue any returning paroxysm.

During the trance, he could relate with astonishing accuracy all the minutiae of the coming pains and paroxysms, the date to the very minute, and the nature of the pain and the means to remove it; water was his sovereign remedy, external and internal, with mesmerism, to his ultimate recovery. All his statements were verified to the letter in the presence repeatedly of a numerous circle of friends, who stood by me during my trials, and prevented that depression of spirits which might possibly have occurred had I been thoroughly deserted. Some of those gentlemen had the pleasure of meeting you at one of your mesmeric demonstrations some short time afterwards, who could testify to the genuineness of the statements I now advance, and whose names, a delicacy on their parts prevents me from publishing.

But to return to Mr. D. Hope, for I cannot allow such conduct to pass unnoticed, reflecting as it does on the characters of all persons concerned. Mr. D. Hope's letter was inserted in the Times, and all his assertions stereotyped in every brain as facts. But how was it they were never contradicted? They were replied to and flatly denied by me in an answer I wrote. Not only the editor of that public journal but the editor of the Examiner treated my communications in the most contemptuous manner—never noticed them; they published untruth, and denied me an opportunity of replying. So much for the liberty of the press.

Thus I have furnished you with a brief statement of facts that occurred in connexion with this extraordinary case; as I have given them from memory, I have omitted a considerable

portion; for from the excited state of my feelings at the time, and want of rest, not having slept throughout the Thursday, Friday, and Saturday, a period of 88 hours, I was unable to take notes. The lad required my undivided attention, nor could I attempt to use a pen in his presence, for his curiosity to know what I wrote was intense, and if unsatisfied would have produced immediate paroxysms, and yet I dared not read anything about his own case to him. Some accounts reached the newspapers greatly exaggerating the leading features of the case: many were correct, but no authentic statement has before been published.

I do trust this letter will remove the impression from the minds of all who have hitherto been misled as to the effects produced on the "boy Cook of Deptford," and make it generally known that mesmerism, instead of injuring him, has, when subsequently properly applied, contributed very largely to restore to health a previously weak and ailing constitution.\* I have mesmerized a great deal since in accordance with his own wish, as he continually was saying during his trance that he must be mesmerized a great deal before he "got quite well."

Thanking you sincerely for the interest you have taken in this case, and the courteous and kind manner in which you have always received me and imparted so cheerfully any information I have required,

I remain, my dear Sir,

With respect and gratitude,

Yours, very sincerely,

WM. G. SMITH.

To Dr. ELLIOTSON.

# CURE OF DEAFNESS AND DUMBNESS OF ABOVE NINE YEARS' STANDING.

(By M. La Fontaine.)

To the Editor of the *Zoist*

SIR,—Having received from my friend, Dr. Burnett, the accompanying letter by M. La Fontaine, and believing that the facts therein stated are of great importance, I forward it to you in the hope that it may be inserted in the next number of your journal.

I am, Sir,

Your obedient servant.

JOHN ASHBURNER.

13 North Audley street, }  
6th Nov., 1846. }

\* He is a surviving twin—the last child, and has a sister subject to fits. The father and mother and nearly all the family are of highly nervous temperaments.

Bagnères de Bigorre, }  
 Aug. 30, 1846. }

Sir,—Your letter of July 19 arrived but yesterday; I lose no time in complying with your request.

Miss Georgiana Burton, 11 years old, became deaf and dumb at nine months, after convulsions. She had also a paralysis of the face, which was so drawn that the left corner of her mouth almost touched her eye. She heard only when her left ear was shouted into, and then could not distinguish sounds.

Drs. Donellan and Mesnier proposed an operation in the throat; but did not promise success.

On the 29th of January, 1843, her family brought her to me. Having ascertained that her case was what I have mentioned, I determined to mesmerize her without sending her to sleep.

In an hour there was some effect on her sensibility, and afterwards she heard and endeavored to repeat all the vocal sounds.

I continued to mesmerize her every other day for three months. At the end of this period, her deafness was completely removed; as were also the palsy and contraction of her features; and by the 1st of May she was really a pretty child.

During the three months of treatment, her sisters taught her to read, write, and reckon, and to speak. But for an individual to learn to speak who has been deaf and dumb, and who has been made to understand in any way, requires much time and patience. A child is a year old before it is taught to say papa, &c.

The last time I saw her was in June, 1844. Her hearing continued: she did not yet speak well. Her face was natural, except when she smiled, and then a little contraction appeared.

I trust, sir, that this account will be satisfactory to you. If you desire further information, I shall be in Paris about the 19th of September, and at your service.

I have the honor to remain, &c.,

CH. LA FONTAINE.

64, Rue Neuve des Mathurins, Paris.

INSTANCES OF CLAIRVOYANCE AND  
 DOUBLE CONSCIOUSNESS INDEPENDENT  
 OF MESMERISM, IN A FATHER  
 AND HIS GROWN-UP CHILDREN.

By one of the parties: in a letter to Mr. Clark, Surgeon, of York Place, King'sland Road.

July 11th, 1846.

Sir,—The present very interesting number

of the *Zoist*\* you have so kindly lent me for perusal has brought to my recollection cases of double consciousness in my own family.\*

In the years 1841–2, my dear respected father was frequently attacked with mental derangement, originating greatly I believe from the knowledge of the unfortunate circumstances in which I, his beloved daughter, was placed, owing to the sudden death of my husband.

The various scenes of mental delusion I was called to witness, are not uncommon to gentlemen of your profession. I therefore pass them over simply to relate his strange knowledge of events.

When he was first attacked, I went to see him, but it was only at times that he recognised me.

My attention was first excited by the following incident. So soon as the meal for dinner was brought from the butchers, of which he could have no possible knowledge, being confined to his bed and out of the reach of either seeing or hearing, he exclaimed (pointing to the floor underneath which was the room it was in), "What a nice rump-steak, I will have some." Struck with his manner, and also knowing that it was not our intended dinner, I replied, "No, father, there is no rump-steak; we are going to have mutton chops:" he went into a great passion, declared that there was rump-steak, that he could see it, and described the dish. I went down stairs, and to my utter astonishment beheld it as he related.

In the morning, without making known my intention, I took a basket and went into the garden to cut some cabbages and gather strawberries. The garden being at the side of the house, where there was no window to look into it, it was impossible for him to see me by ordinary vision. However, he turned to my sister, saying, "That basket into which Belsey is putting the cabbages and strawberries, had better be moved out of the sun, or the fruit will be spoiled; tell her she is not gathering strawberries from the best bed; she had better go to the other." When I was told of it, I was completely puzzled. During the time of my visit, wherever I went, whatever I did or thought of, was open to his view. My sister afterwards informed me that his medical attendant lent her some books for her perusal; one morning my father said to her, "The Doctor sends his respects, and will be obliged for the books." Supposing some message had been sent, my sister replied, "Very well." In the course of a short time after, the Doctor's boy ar-

\* This (the 14th) number contained some wonderful instances of double consciousness without mesmerism.—*Zoist*.



ived with his master's respects, and request for the books. On inquiry, she found no previous message had been sent, nor inquiry made for them. We have both come to the conclusion that he must mentally have travelled to the Doctor's, and heard the message: should think the distance three quarters of a mile.

Another time he said to my sister, "There is a handsome young man and an old woman coming by the coach this afternoon, to see me." Sure enough, to her surprise, when the coach arrived, it brought my brother, and a nurse for my father. No one had any knowledge of my brother's coming, or of his bringing a nurse with him. The distance from whence they came was eleven miles. I wish to call your attention to the circumstance, that here he did not recognise the parties, though both well known to him; calling my brother a young man and the nurse an old woman, instead of mentioning their names.

When in his senses he knew nothing of what had transpired, and had no recollection of my coming to see him. He wasted away to a skeleton, and died, mid-summer, 1842, in the 64th year of his age. He never, until the time stated, had any mental derangement, though he certainly was for years very nervous. At that time I knew nothing of phrenology, so cannot give his development. I know he was a talented and very active man, a kind and affectionate father.

My second case is that of my eldest sister, though in priority of time before my father's, yet not so interesting. She was in a bad state of health some years, I suppose what might be called nervous. The circumstance I am about to relate occurred during a severe illness, in which mental derangement took place. At one time she would take no food, at another eat most voraciously. One day we had ribs of beef for dinner. How it came to her knowledge I could never ascertain, but so it did, and she insisted to have some for her dinner. I gave her some, she wanted more. Fearing to make her worse, I would not give her: she declared she would have it, but soon after went to sleep. I went quietly down stairs, took the meat out of the kitchen, carried it down through the beer cellar into the wine cellar, covered it over with a tub, put a weight on it, went up and found her just as I left her. During the night, through fatigue, I fell asleep, and was awakened by her calling to me. What was my astonishment when I beheld her sitting in bed with a slice of this beef cut the whole length of the ribs, devouring it like a savage. I asked her how she obtained it, and she positively declared that she fetched it herself while I slept; that while lying in bed she

saw me go down, take the meat, and she described every particular. I believe she never left her bed when I hid it; and had she, there were three doors which I closed after me, and I must have seen her. When she recovered, she knew nothing about it, but on a relapse told me all the circumstances again, laughing heartily at the trick she had played me.

In 1833 she died of the cholera.

My next circumstance is different, not occurring under derangement; but accurately remembered to this day.

My youngest sister, when seriously ill a few years back, saw distinctly the saucepan on the fire, and the watch, and she told the time by it. She was terrified at herself, and mentions it now with a sort of horror.

I leave these cases for your consideration, wishing I had known formerly as much of mesmerism as I now do. I most certainly should have made use of its great benefits, I should more minutely have watched these singular phenomena.

To your professional friends you can make what use you please of this paper; I am willing to come forward before them at any time, but my situation prevents me having my name made public. I do not possess the firmness of an Elliotson, or I might not care about publicity: my three children hold me back; the day may come when it may not affect them, and then I should like nothing better than to declare publicly what mesmerism has done for me. I was thinking this morning what an infinite source of trouble I have been to you three years next week since you first mesmerized me. A waggon-load of vagaries you have driven out of my head, perhaps saved me from a miserable end. I think I was following in my father's steps. My extreme excitability was awful: now I have none of it: I am calm and take untoward circumstances quietly. But had I fallen into some mesmerists' hands, they would have been sick of me ere this. You have persevered, and I have gained the benefit. And what have you for it? just what your master gets (Dr. Elliotson, I mean), that is, nothing; and I have nothing to give you, but my gratitude. Accept this then, as all I have to offer.

I remain, Sir,

Yours, respectfully,

.....

Mr. Clark informs us that the writer of this account has experienced the very same affections, but in a less intense degree. Her name is attached to the account, but we of course omitted it.

Mr. Clark was a student of University

College, and has for ten years fearlessly admitted the truth of mesmerism, practised it, and advocated it, and would at this moment fearlessly cure by its means, were he allowed, some remarkable cases in Shoreditch Workhouse, of which he is surgeon. But he is forbidden by the philosophical authorities, and nothing is done for the poor sufferers. We fear the Poor Law Commissioners are not without fault in this.—*Zoist*.

### MAGENDIE'S EXPERIMENTS ON THE CEREBRO-SPINAL FLUID.

THE following observations from Mr. Paget's Report of the Progress of Physiology, show on what uncertain data opinions are sometimes formed. They illustrate the necessity of taking all facts into account, before any positive conclusion as to cause and effect—

“M. Longet has found that the peculiar, unsteady, tottering movements, like those of drunkenness, which M. Magendie ascribed to the removal of the subarachnoid fluid of the spinal cord, are really due to the division of the muscles of the occipito-atlantal region, which is made to form a passage, through which the fluid may be drawn off. Whenever M. Longet drew off the fluid, without injuring these muscles, the animal preserved the power of motion unimpaired; but when he divided the posterior sub-occipital muscles (including always the recti capitis postici minores, and the supra-spinous ligament in the animals in which it exists), the peculiar defects of motion were produced, although the cerebro-spinal fluid was left untouched, and the sheath of the cord unopened. He ascribes the impairment of motion in these cases to the falling of the head, when its attachments to the atlas are destroyed, and the consequent dragging and pressure of the upper part of the cord, and especially of the medulla oblongata and pons; for the effects of the division of the muscles and other tissues are completely prevented, by artificially supporting the animal's head in a raised position; and in different animals, the degree in which the movements are impaired is directly proportionate to the amount of separation which takes place between the occiput and atlas, when their connexions (the occipito-atlantal ligament excepted) are divided. The speedy recovery of the animal, which Magendie ascribed to the rapid reproduction of the fluid, M. Longet considers to be due to the readiness with which the nervous masses (especially in animals) adapt themselves to

new and unnatural pressure. He observed a striking analogy between the effects of division of these muscles, and those done by M. Flourens and himself, in consequence of injuries of the cerebellum; and he draws another evidence, that the force is due to the pressure and dragging of the muscles and pons, with which the crura of the cerebellum are connected.”—*Lancet*.

### OBSERVATIONS ON THE INHALATION OF ETHER.

[By Richard Chambers, M.D., Physician to the Essex and Colchester Hospital.]

Colchester,  
April, 1847.

A PERIOD of four months has elapsed since the inhalation of ether as a means of producing insensibility to pain, was brought to the notice of the profession in this country, and notwithstanding the repeated trials which had, no decided opinion has yet been arrived at, as to its value as a therapeutical agent. Contrary to what generally obtains, in estimating the value of scientific discoveries, the occurrence of a few adverse cases has sufficed to counterbalance the favorable ones, which the safe result in innumerable cases ought naturally to have produced. In admitting that there have been some adverse cases, may not the result be dependent much upon the mal-administration of the remedy as on any inherent noxious properties it may possess? Doubtless, ether is a two-edged sword, but not more so than several other remedies in daily use.

As one of the few fatal cases that were aware of occurred under my own observation in the Essex and Colchester Hospital, and as I am of opinion that it ought never to have been adverted to, to throw discredit upon the use of this important remedy, I feel it a duty I owe to the profession (before whom it has been so prominently brought), to state my opinion on the subject.

I refer my readers to the several medical journals of the last month for the particulars of the case, which have been so lucidly detailed by my colleague, Mr. Nunn; I may, however, be permitted to add, that the operation was well and ably performed.

After having inhaled the ether for a few minutes, the patient became fully under its influence, even to the extent of stertorous breathing, and the face and lips presented a livid hue; the nose-spring was then for a moment removed, but it was gently re-applied and the stertorous breathing kept up. From the first inhalation to the commencement of

the operation, occupied a period of ten minutes, and the completion of the operation in minutes more. During the first half (five minutes) of the period occupied by the operation, the patient was kept under the full influence of the ether, but during the remaining five minutes its use was somewhat relaxed. In the whole, then, we may say that the ether had been used for twenty minutes. The patient gradually became restored to consciousness, but at first he replied to questions, evidently without comprehending their meaning or his replies.

The operation was performed a little after two o'clock on Friday, and from that time till about the same hour on the following day, the patient continued in a quiet, passive state; but about this time, twenty-four hours after the operation, he was seized with a severe chill, upon which the very intelligent house-surgeon, Mr. Taylor, gave him two ounces of brandy diluted with water. He continued after this in a quiet dozing state, when he was visited by Mr. Nunn, who deemed it necessary, in consequence of the extreme prostration, to direct the free exhibition of stimulants. A consultation of the hospital staff was also requested for the next morning, at which we all met, about forty-four hours after the operation. It only remained for us to add our approval to, and recommend a continuance of, the treatment which was being pursued. The patient, notwithstanding, continued to sink, and died at five o'clock the same afternoon: I happened to be in the ward at the time. A post-mortem examination was made in sixty-seven hours after death. I transcribe from the published account the appearances observed:—

“Membranous congestion of the brain, but no effusion; brain firm; lungs permeable throughout—anteriorly exsanguineous, posteriorly engorged; heart flaccid, of a natural size, and nearly empty; left kidney pale, the right slightly congested; the bladder and the adjoining parts presented the usual aspects after an operation.”

I witnessed the examination of the brain and lungs; but having been called away, I did not see that of the other viscera, which, I doubt not, has been accurately described.

To the foregoing account of the examination, I wish to add, that the substance of the brain was paler than natural, indeed I might even say blanched.

Considerable stress has been laid upon the congested appearance of the membranes of the brain, and the engorgement of the posterior parts of the lungs. But when I consider the total absence, during the last hours of life, of any dyspnoea, or other symptom indicative of cerebral congestion, I am compelled (which I do readily) to conclude that conges-

tion of either organ had nothing whatever to do with causing the fatal result. A heart so feeble that its sounds were only distinctly audible through the stethoscope, could not, and did not, propel much blood to the brain, and as a consequence of the imperfect flow of blood from the heart, the return of blood through the veins must naturally have been retarded; in addition to which, we must make considerable allowance for the influence exercised by post-mortem gravitation, aided by the fluidity of the blood, in producing the appearances revealed by the examination. And to the same causes do I solely attribute the pulmonary appearances. Indeed, the appearances were such as the symptoms during life would have led one to expect.

I must allude to some other circumstances in the case that may have exercised an injurious influence upon it. The man was of a spare and timid habit, and of indifferent constitutional powers, subadded to which, he had (not known till afterwards, and at all times a dangerous prognostic) a presentiment of death; nor must I omit to state, that some small vessels which were divided in the operation, bled rather freely—I should say to the extent of a pint. This, though not in itself of consequence, may, with the other circumstances, have interfered with reaction; and although I am inclined to attribute the death to the secondary depressing action of the ether, aided by the causes just mentioned, I contend that, on the closest examination of the case, there is nothing to be found in it that ought to militate against the proper use of the remedy. The same reasoning that would be applied to forbid the therapeutical use of ether, in consequence of the fatal result in this case, would likewise be applied to forbid the therapeutical use of opium, prussic acid, or any other powerful remedy which should happen to cause death, when given in an over quantity.

The fluidity of the blood which existed, may properly be attributed to the ether; not to any direct specific action exercised upon the blood, but indirectly by interfering with its supply of nervous influence. But nevertheless it does not follow that a moderate use of ether would produce a like effect.

The peculiarities observed in the action of ether when inhaled, depend, I think, upon the readiness with which it enters the circulation through the medium of the lungs, and the smallness of the quantity requisite to produce its effects, rendering the latter of only a temporary character. Upon the latter point its safety depends.

The effects of ether are exhibited upon the cerebral, spinal, and ganglionic systems; through the cerebral system, by inducing insensibility; through the spinal system, by

causing stertor, and in some cases strong convulsive action; and through the ganglionic, by depressing the heart's action. Its primary action is unquestionably stimulant; its secondary action depressing and narcotic; but the preponderance of ether is so much influenced by accidental or constitutional peculiarities, that it is not possible, *a priori*, to anticipate which may preponderate. Its employment is contra-indicated in individuals of full habit, or where there exists any tendency to cerebral or cardiac diseases. Its effects are but feebly exhibited upon the habitual drunkard, tending, I think, to prove that the action of ether is allied to that of ordinary alcoholic drinks, the difference depending upon the different modes by which admission is obtained into the circulation.

After insensibility occurs, the utmost caution ought to be observed, should it be necessary to keep the patient for any time under the continued influence of the remedy; because the insensibility is an evidence of a certain amount of cerebral congestion; and after this every portion that is inhaled favors the production of spinal or ganglionic symptoms, the result of which we can neither anticipate nor control.

In consequence of having read Mr. Nunn's account of the case, a writer (Mr. Beckingsale) in several of the journals condemned the stimulating treatment that had been adopted, and recommended the abstraction of blood. I think that, without injury to his modesty, he may have assumed that those in attendance were the most competent to decide upon the adoption of the most proper treatment. I allude to the matter more particularly, because it appears to me that his advice was carried out by the accidental hæmorrhage already alluded to, and from which I am quite sure that no benefit was derived.

Although there is a certain amount of congestion produced, it is so evanescent as not to call for a remedy (*sublata causa tollitur effectus*); for I consider that we are not justified in employing the remedy in individuals likely to suffer an amount of congestion that would demand, nor ought we in any case to carry the inhalation to the extent of justifying, the adoption of blood-letting. From what I have seen of the subject, I would recommend the early adoption of stimulants, should not a proper amount of reaction set in; for my observation in cases of ague leads me to look upon venous congestion as an antecedent to a chill; and as I have already mentioned, I view the venous congestion here as a sequence to the depressed action of the heart.

I feel assured that the writer of the letter before alluded to, will be the first to regret its publication: but before dismissing the sub-

ject, I must protest, in the name of common sense, against an individual attempting to instruct others upon a subject, of which he confesses to have seen nothing, and (as it really would appear) knows less. Several other suggestions have been put forward with a degree of confidence they little deserve; indeed, some of them are of a character to induce me to believe that they were written under a forgetfulness that the fundamental principle of our profession is, TO SAVE LIFE.—*Lancet*.

#### MEETING OF THE SCIENTIFIC ASSOCIATION AT OXFORD.

SIR R. H. INGLIS took the chair; and after a brief introduction, delivered the following address—

##### THE PRESIDENT'S ADDRESS.—EXTRACTS.

I begin with ASTRONOMY.—The progress of astronomy during the past year has been distinguished by a discovery the most remarkable, perhaps, ever made as the result of pure intellect exercised *before* observation,—and determining *without* observation the existence and force of a planet; which existence and which force were subsequently verified *by* observation. It had previously been considered as the great trial and triumph of Dynamical Science to determine the disturbances caused by the mutual action of "the stars in their courses," even when their position and their orbits were fully known; but it has been reserved for these days to reverse the process, and to investigate from the discordance actually observed the existence and the place of the wondrous stranger which had been silently, since its creation, exerting this mysterious power. It has been reserved for these days to track the path and to measure the force which the great Creator had given to this hitherto unknown orb among the myriads of the air.

I will not presume to measure the claims of the two illustrious names of Leverrier and Adams: of him, who, in midnight workings and watchings, discovered the truth in our own country, and of the hardly happier philosopher who was permitted and enabled to be the first, after equal workings and watchings, to proclaim the great reality which his science had prepared and assured him to expect. I will trust myself with only two observations: the one my earnest hope that the rivalry not merely of the illustrious Leverrier and of my illustrious countryman Adams, but of the two great nations which they represent, France and England, respectively, may

always be confined to pursuits in which victory is without woe, and to studies which enlarge and elevate the mind, and which, if rightly directed, may produce alike glory to God and good to mankind: and the other, my equal hope, that for these (some of whom I trust may now hear me) who employ the same scientific training and the same laborious industry which marked the researches of Leverrier and Adams, there may still remain similar triumphs in the yet unpenetrated regions of space; and that—unlike the greater son of a great father—they may not have to mourn that there are no more worlds to be conquered.

It is a remarkable fact that the seeing of the planet Neptune was effected as suddenly at Berlin by means of one of the star-maps, which has proceeded from an association of astronomers, chiefly Germans; such maps forming in themselves a sufficient illustration of the value of such Associations as our own, by which the labor and the expense—too great, perhaps, for any individual—are supplied by the combined exertions of many kindred followers of science.

It is another result of the circulation of these star-maps, that a new visitor, a comet, can hardly be within the range of a telescope for a few hours without his presence being discovered and announced through Europe. Those comets which have been of larger apparent dimensions, or which have continued longer within view, have, in consequence, for more than 2,000 years been observed with more or less accuracy; their orbits have been calculated; and the return of some has been determined with a precision which in past ages excited the wonder of nations;—but now, improved maps of the heavens, and improved instruments by which the strangers who pass along those heavens are observed, carry knowledge where conjecture lately dared not to penetrate. It is not that more comets exist, as has sometimes been said, but more are observed.

An Englishman—a subject of this United Kingdom—cannot refer to the enlarged means of astronomical observation enjoyed by the present age, without some allusion to the noble Earl, Lord Rosse, one of the Vice Presidents of this day, who, himself educated amongst us here, in Oxford, has devoted large means and untiring labors to the completion of the most wonderful telescope which Science, Art, and wealth have ever yet combined to perfect; and which the Dean of Ely—a man worthy to praise the work—pronounced to be a rare combination of mechanical, chemical, and mathematical skill and knowledge. Its actual operations have been suspended by a cause not less honorable to Lord Rosse in another character than the

conception and early progress of his great instrument were to him as a man of science. They have been retarded, so far as he himself is concerned, by the more immediate and, I will say, higher duties which, as a magistrate, as a land-owner, and as a Christian gentleman, he owed, and has been paying, to his neighbors, his tenantry, and his country, during the late awful visitation which has afflicted Ireland. Yet perhaps my noble friend will permit me to say, that while we not only do not blame him—we even praise him cordially for having devoted his time, his mind, and his wealth to those claims which could not be postponed, since they affected the lives of those who, in God's providence, surrounded him—there were, and there are, others,—two, at least, in his own country, and one his most illustrious friend, Dr. Robinson (but I speak without any communication on the subject from that great observer and greater philosopher),—who might have carried on the series of observations which this wonderful telescope alone can effect, and might thus have secured for his own division of the empire the discovery of the planet Neptune.

The doctrine of the influence of the moon and of the sun on the tides was no sooner established, than it became eminently probable that an influence exerted so strongly upon a fluid so heavy as water, could not but have the lighter and all but imponderable fluid of air under its grasp. I speak not of the influence attributed to the moon in the popular language and belief of nations, ancient and modern,—of Western Europe and of Central Asia, in respect to disease; but of the direct and measurable influence of the moon and of the sun in respect to the air. It is now clear, as the result of the observations at St. Helena by my friend Col. Sabine, that, as on the waters, so on the atmosphere, there is a corresponding influence exerted by the same causes. There are tides in the air as in the sea; the extent is of course determinable only by the most careful observations with the most delicate instruments; since the minuteness of the effect, both in itself and in comparison with the disturbances which are occasioned in the equilibrium of the atmosphere from other causes, must always present great difficulty in the way of ascertaining the truth—and had, in fact, till Col. Sabine's researches, prevented any decisive testimony of the fact being obtained by direct observation. But the hourly observations of the barometer, made for some years past at the Meteorological and Magnetical Observatory at St. Helena, have now placed beyond a doubt the existence of a lunar atmospheric tide. It appears that in each day the barometer at St. Helena stands, on an average, four thousandths of an inch higher at the two periods when the

moon is on the meridian above or below the pole, than when she is six hours distant from the meridian on either side; the progression between this maximum and minimum being moreover continuous and uninterrupted:—thus furnishing a new element in the attainment of physical truth; and, to quote the expression of a distinguished foreigner now present, which he uttered in my own house, when the subject was mentioned, “We are thus making astronomical observations with the barometer”—that is, we are reasoning from the position of the mercury, in a barometer, which we can touch, as to the position of the heavenly bodies which, unseen by us, are influencing its visible fall and rise. “It is no exaggeration to say,”—and here I use the words of my friend, the Rev. Dr. Robinson,—“that we could even, if our satellite were incapable of reflecting light, have determined its existence, nay, more, have approximated to its eccentricity and period.”

The extensive and diversified field of physiology presents so many objects of nearly equal interest, as to make it difficult, in a rapid sketch like the present,—and above all for one like me,—to select those which may least unworthily occupy the attention of the Association.

In Physiology, the most remarkable of the discoveries, or rather improvements of previous discoveries, which the past year has seen, is perhaps that connected with the labors of the distinguished Tuscan philosopher, Matteucci; who, on several former occasions, has co-operated with this Association in the sections devoted to the advancement of the physical and physiological sciences. I refer, in this instance, to his experiments on the generation of electric currents by muscular contraction in the living body. The subject he has continued to pursue; and, by the happy combination of the rigorous methods of physical experiment with the ordinary course of physiological research, Prof. Matteucci has fully established the important fact of the existence of an electrical current—feeble, indeed, and such as could only be made manifest by his own delicate galvanoscope—between the deep and superficial parts of a muscle. Such electric currents pervade every muscle in every species of animal which has been the subject of experiment; and may, therefore, be inferred to be a general phenomenon of living bodies. Even after life has been extinguished by violence, these currents continue for a short time; but they cease more speedily in the muscles of the warm-blooded than in those of cold-blooded animals. The Association will find his own exposition of the action of the electric current, in his work, “*Lçons sur les Phénomènes Physiques des Corps Vivants*,” 1844.

The delicate experiments of Matteucci on the Torpedo, agree with those made by our own Faraday (whom I may call doubly our own in this place, where he is a Doctor of our University) upon the *Gymnotus electricus*, in proving that the shocks communicated by those fishes are due to electric currents generated by peculiar electric organs, which owe their most immediate and powerful stimulus to the action of the nerves.—In both species of fishes, the electricity generated by the action of their peculiar organized batteries—besides its benumbing and stunning effects on living animals,—renders the needle magnetic, decomposes chemical compounds, emits the spark, and, in short, exercises all the other known powers of the ordinary electricity developed in inorganic matter, or by the artificial apparatus of the laboratory.

ETHERIZATION, a kindred subject,—one to which deep and natural importance is now attached,—may not unfitly follow the mention of Prof. Matteucci's investigations.

It is the subject of the influence of the vapor of ether on the human frame—a discovery of the last year, and one the value of which in diminishing human pain, has been experienced in countless instances, in every variety of disease, and especially during the performance of trying and often agonizing operations. Several experiments on the tracts and nerve-roots appropriated respectively to the functions of sensation and volition, have been resumed and repeated in connexion with this new agency on the nervous system. Messrs. Flourens and Longet have shown that the sensational function at first affected, though temporarily, suspended under the operation of the vapor of ether, then the mental or cerebral powers, and finally, the motor and excito-motor forces are abrogated. It would seem that the stimulus of ether applied so largely or continuously as to produce that effect, is full of danger—and that weak constitutions are sometimes unable to rally and recover from it; but that when the influence is allowed to extend no further than to the suspension of sensation, the recovery is, as a general rule, complete. It is this remarkable property of ether which has led to its recent application with such success as may well lead us to thank God, who, in his providence, has directed the eminent physicians and surgeons amongst our brethren in the United States to make this discovery:—a discovery which will long place the name of Dr. Charles J. Jackson, its author, among the benefactors of our common nature.

At the same time, much careful observation on the *modus operandi* of this most singular agent, seems still requisite before a general, systematic, safe, and successful application of it can be established for the relief of suffering

humanity. So great, however, is the number of well-recorded instances of its having saved the patient from the pain of a surgical operation without any ill effect in reference to his subsequent recovery, as to make the subject of the influence of the vapor ether, upon the nervous system, and the modification of that influence on different temperaments one eminently deserving the attention of the Physiological Section of the British Association.

### NATIONAL MEDICAL CONVENTION.

THE National Medical Convention, at Philadelphia, last week adjourned on Saturday, after a session of three days, to meet again in May, 1848, in the city of Baltimore. Previous to adjournment, the following resolution was proposed and adopted—

“Resolved, That this Convention do now resolve itself into the ‘American Medical Association.’”

An election was then gone into for officers for the ensuing year, when the following gentlemen were chosen—

*President*—Dr. Nathaniel Chapman, of Pennsylvania.

*Vice Presidents*—Drs. J. Knight, Connecticut; A. H. Stephens, New York; Moultrie, South Carolina; Buchanan, Tennessee.

*Secretaries*—Drs. Stille and Dunbar, Philadelphia.

*Treasurer*—Dr. J. Hays.

The discussions upon the various professional topics introduced during the session, were animated, able, and harmonious, so that the final action upon almost every question was unanimous, or nearly so. Measures were taken to secure a higher order of scholastic education as preliminary to the admission of students into our medical colleges, and the standard agreed upon is nearly equal to the requisitions for the degree of bachelor of arts in the academic department of any of our colleges. The elevation of the standard of qualifications for the doctorate was insisted upon, with recommendations of extending the lecture term in all medical colleges from four to six months, and a provision requiring the students to attend throughout the entire term, or forfeit credit for a full course; enlarging the curriculum of the college course; calling for seven years professors in each medical school; demanding that three months be required to be steadily employed in practical anatomy, and claiming clinical instruction to be included in each college course.

The large representation of the profession present from almost every part of the country,

pledged themselves to sustain these several improvements in medical education, and advise their students to attend the lectures only in such colleges as show a disposition to conform to the resolutions just adopted for elevating the standard of education.

An extended discussion took place on the proposition lately urged in various quarters, that there should be a separation of the licensing from the teaching power in medical schools, and that an independent board of examiners should be appointed in every state, by which the doctorate should be awarded, and license to practise physic and surgery exclusively conferred. The most pacific and conservative counsels prevailed even among those most zealous for reform, and this whole subject, after having been discussed in two candid and able reports of committees, was happily disposed of by reference to the appropriate standing committee, who are to deliberate thereon and submit a plan to the national society, in May next.

### CEMENT IN DENTISTRY.

[Communicated to the New York Courier & Enquirer.]

**GENTLEMEN**—Having noticed considerable discussion in your paper, as to the good and bad qualities of Cement, as a filling for decayed teeth, and having been strongly urged by a large number of patients and others, to express my opinion in relation thereto, I beg leave through the medium of your journal to say, that it has been my uniform practice,

First, to fill all teeth which could be permanently preserved with gold.

Second, to fill teeth, the nerves of which have been destroyed, and teeth greatly decayed, with tin.

Third, to fill shells of teeth, and tender teeth, which would not bear the pressure of ordinary filling, with cement. This cement is composed of pure silver filings ground for a few seconds with a little quicksilver, and immediately forced into the tooth, where in a short time it becomes as hard as a rock, and is not acted upon by the secretions of the mouth. Its action is rather sedative, as is proved by the fact that aching teeth are often relieved by the filling. I beg further to observe that, I have thus been enabled to save many hundred valuable teeth. That I do not believe it can ever exert any injurious influence. That it is rapidly coming into use among the first dentists in the country, as a valuable adjunct in their practice; and I am convinced that those who condemn its occasional use, do so either from interested mo-

tives, or from a want of knowledge or experience as to the proper method of its preparation and use.

S. SPOONER, M.D.,  
106 Liberty street, N. Y.

# MAGNETISM OF THE HUMAN SYSTEM AND MAGNETIZING MEDICINE. RESEARCHES OF BARON VON REICHENBACH ON MAGNETISM.

[From The Popular Record of Modern Science, Edinburgh.]

WE have examples of magnetized medicines in our possession in which the magnetism imparted to them has remained in them many years.

"The adhesion of a living hand to a magnet is a fact unknown in physiology as in physics, and few have seen it: it, therefore, requires explanation. Madlle. N., being in catalepsy, insensible and motionless, but free from spasms, a horse-shoe magnet of twenty pounds power was brought near to her hand, when the hand attached itself so to the magnet, that whichever way the magnet was moved, the hand followed it as if it had been a bit of iron adhering to it. She remained insensible; but the attraction was so powerful, that when the magnet was removed in the direction of the feet, further than the arm could reach, she, still insensible, raised herself in bed, and with the hand followed the magnet as far as she possibly could, so that it looked as if she had been seized by the hand, and that member dragged towards the feet. If the magnet was still further removed, she let it go unwillingly, but remained fixed in her actual position. This was daily seen by the author between six and eight, P.M., when her attacks came on, in the presence of eight or ten persons, medical and scientific men.

"At other periods of the day, when she was quite conscious, the phenomena were the same. She described the sensation as an irresistible attraction, which she felt compelled, against her will, to obey. The sensation was agreeable, accompanied with a gentle cooling aura, or stream flowing down from the magnet to the hand, which felt as if tied and drawn with a thousand fine threads to the magnet. She was not acquainted with any similar sensation in ordinary life; it was indescribable, and included an infinitely refreshing and pleasurable sensation when the magnet was not too strong."

Similar results were obtained with Made-moiselle Reichel and Madlle. Sturmann, and the statement of the various modes in which the veracity of the patients and the accuracy of the experiments were tested, is such as to inspire the most unreserved confidence in the experimenter. Mr. Baumgartner, the distinguished natural philosopher, was one of those who, amongst others, tested in a very ingenious way the above phenomena.

With regard to magnetized water, Baron Von Reichenbach, although strongly prejudiced against this "mesmeric idea," was compelled to admit that a palpable effect was produced.

"He saw daily that his patient could easily distinguish a glass of water, along which a magnet, unknown to her, had been drawn, from any others; and this without failure or hesitation. He found it impossible to oppose a fact like this by arguments; but when he saw the same result in many other patients, he ceased to struggle against that which, whether he understood it or not, was obviously a fact. He then perceived that it was more rational to admit the fact, and to wait with patience for the explanation."

The experimenter then determined to see, whether bodies besides water could be magnetized, so as to produce similar effects. He passed the magnet not only over all sorts of minerals and drugs, but over discriminate objects, and they all affected the patient more or less powerfully. But although all were equally magnetized, the results were different, some substances producing a strong, and others only a slight impression. It was therefore clear, that the different results must have been caused by an inherent difference of power in the various kinds of matter, and he resolved to test if this difference would manifest itself, when the substances were applied in their natural condition. To his astonishment they still acted on the patient, and with a power often little inferior to that which they had when magnetized.

"Amongst the various substances tried (of which a well-arranged list is given), distinct solitary crystals were found to act in the strongest manner.

"In trying the effect of drawing the point of rock crystal, 7 inches long and 1 3/4 thick, from the wrist to the points of the fingers, and back, as in magnetizing, the author found that the sensation experienced by the patient was the same as with a magnetic needle or bar, nearly five inches long, one-sixth inch broad, and one-thirtieth inch thick, weighing nearly 180 grains, and supporting about three-quarters of an ounce. The patient felt an agreeable cool aura in both cases, when the crystal or magnet was drawn from the wrist to the point of the middle finger; if drawn in the opposite direction, the sensation



was disagreeable and appeared warm. A crystal, thrice the size of the first, produced, when drawn downwards, the same effect as a magnet, supporting two pounds of iron; and when drawn the opposite way, a spasmodic condition of the whole arm, lasting several minutes, and so violent that the experiment could not well be repeated."

The most singular experiment is that with a glass of water.

"If it be grasped from below by the fingers of one hand, and from above by those of the other, during a few minutes, it has now acquired to the sensitive, the taste, smell, and all other singular and surprising properties of the so-called magnetized water. 'Against this statement,' says the author, 'all those may cry out who have never investigated the matter, and to the number of whom I formerly belonged; but of the fact, all those who have submitted to the labor of investigation, and have seen the effects I allude to, can only speak with amazement.' 'This water, which is quite identical with that treated with the magnet or with the crystal, in all its essential properties, has, therefore, received from the fingers and hand an abundant charge of the peculiar force residing in them, and retains this charge for some time, and with some force. It was found that all substances whatever were capable of receiving this charge, which the sensitive patients invariably detected. The inevitable conclusion is, that the influence residing in the human hand may be collected in other bodies, in the same way, and the same extent, as the influence residing in crystals."

[For the Dissector.]

# THE PRINCIPLES OF NATURE, HER DIVINE REVELATIONS, AND A VOICE TO MANKIND.

[By and through Andrew Jackson Davis, the "Poughkeepsie Seer" and Clairvoyant.]

It must now be confessed that we have something "new under the sun." We have "Divine Revelations" besides those which the world has been wont to distinguish by that appellation. These are "by and through Andrew Jackson Davis, the Poughkeepsie Seer and Clairvoyant." There is something very appropriate in *divine revelations* being made through the ignorant, as they were formerly made through illiterate fishermen; and the authority of those which are now "presented to the world," is partly, at least, based on the ignorance of this modern "seer."

Not to waste words, we will at once confess

that the "boy" is ignorant enough, too ignorant for one of the age of 19; and that being the case, we see nothing wonderful in his revelations. Such nonsense from any person of ordinary intelligence and education, would indeed be astonishing, and we wonder what sort of minds they were who could swallow and prepare such absurdity for the press. See with what an "air of pomposity" this revelator looks down upon those who shall presume to criticise and call in question the truth of his revelations, or of what he calls the "Principles of Nature." "Man," says he, "who has now approached to some degree of knowledge, feels sustained by surrounding beings, who wonder at his indulgence. . . . He assumes a spirit of arrogance, and with an air of pomposity takes the stand of a foolish critic. . . . He will laugh at the appearances which the world manifests, and assume the ground which nothing but ignorance can prompt him to maintain—daring to sneer at the great laws which govern this and other worlds, when in reality he has not the capacity to comprehend the component parts of one atom that goes to compose the universe!" What wonderful stupidity, indeed, in the "foolish critic," not to be able to "comprehend the component parts of one atom!" No wonder that he should be so ignorant as to "complain of the great laws which compose the universe." (Page 16.) Here is an intimation of a new "atomic theory," and to make it still more ridiculous, the emphasis is put on the word *atom*, and the mark of exclamation at the end of the sentence.

This A. J. Davis, or perhaps we should say, Nature through him, throws Lord Bacon with his principles of *induction* entirely into the shade; for he says we must proceed first from the cause to the effect, and not the reverse. We cannot find out the cause by the effects, he says, for we must know the *principle* before we can know the effects at all. How then shall we know *what the cause* is, so that we may know the effect? you very simply ask. Why, go to the oracle for it, of course, and take it for *granted*. Listen now how he talks of this mode of reasoning from cause to effect. (Page 26.) "I will here indicate the order of reasoning and investigation to be pursued. First, we are to commence at the First Cause, and trace causes to their effects, until we reach the *human body*, which is an ultimate effect of the Great Cause. . . .

And this process will be understood by the following familiar illustration: The germ, roots, body, branches, limbs, buds, blossoms, *beauty*. Or this: Water, steam, ether, *immaterial*. Or: Fall, winter, spring, and summer in its brightness and beauty." This is an illustration of reasoning from

cause to effect! The germ of a tree losing itself in the *quality*, or spiritual *idea of beauty*—water becoming first steam, then *ether*, and then IMMATERIAL—fall being the cause of winter, and of all the seasons in succession—these are indeed philosophical ideas beyond the ordinary comprehension, and man could not learn them except by a revelation.

To enforce the doctrine that the cause must first be admitted, he insists upon the position that "the effect cannot be relied on while the cause is hidden," and illustrates thus, page 27: "Again: A man has a carious tooth: he tells you he experiences a severe pain; but you doubt his word and ask for proof. He points you to the tooth, which is the object tangible. But does the evidence of which your senses admit, convince you that he has a pain? The tooth is the external, the ultimate: the pain is the invisible, but reality." So it seems that the *cause*, which he calls the "invisible," the "reality," is the *pain*, and that the *effect*, which he calls the "external," and "ultimate," is the *tooth*. The pain is the cause of the tooth, and the caries is no cause or evidence of the tooth-ache at all. And yet the language has a *sound* of logic, equal to that of Dr. Johnson's famous syllogism, proving that "every cat has three tails."

Much has been said of Davis's wonderful knowledge of Anatomy, Physiology, and kindred branches, among other things, in proof of his having knowledge infused into him without having gone through the labor of study. If names and technical phrases are evidence of medical or scientific knowledge, or of acquaintance with all languages, as is claimed for him, doubtless he surpasses in these respects many learned professors, who judged by the same rule can know but very little indeed. Poor, ignorant professors—here is something in Anatomy and Physiology for their edification, page 31: "Man possesses two coatings, which are classified as *serous* and *mucous surfaces*. The *serous* covers each organ, nerve, and fascia of the muscles, including the whole of their surfaces. The *mucous surfaces* constitute the inner of every organ, nerve, and *muscle*." How the serous membranes can cover each "nerve and fascia of the muscles," and the mucous membranes "constitute the inner of every nerve and *muscle*," is difficult to comprehend; but it is Nature's "Divine revelation," and we must believe it. "The serous surfaces are susceptible of feeling, while the mucous surfaces are not"—and "the nerves of sensation terminate in the serous surfaces, while the nerves of motion terminate in the mucous surfaces"—so says A. J. Davis. How did he get his medical knowledge? It would be an imputation to say that he got it from the mind of his magnetizer, the doctor, and a still worse

imputation to say that he received it from the "Great Focus," by which he means Divinity.

But this oracle of the temple of science is also a *Psychologist*. The "*reflections*" which objects "cast upon the mind," he tells us, "*are ideas*;" and vibration of sound, he says, "undulates the portion of the mind with which it comes in contact," and "this vibration is the *idea*." The mind being "*impressed*" by *reflections*, and *undulated* by *vibrations*, and the reflections and vibrations being themselves *ideas*, the mind must be *material*, and this is precisely what he would have us believe. He speaks of water becoming so *evaporated* as to be "immaterial," and this, if any, is the sort of *immateriality* which he attributes to the soul. He says plainly that "the mind" is "an ultimate organization," page 39; and "all ultimates, to me, are still *matter*," page 47. In this he "out-Herods Herod." The doctrine of the materialist that "the mind is a function of the brain," is surpassed by the doctrine that matter is converted into mind, which is what our philosopher calls a "*metamorphosis*." When ponderable substances are so sublimated as to become invisible, this "Poughkeepsie air" perceives that their atoms are destroyed, and that they become "*unparticled matter*," which of course could have no form or size, and therefore be no *substance*. This consolidated, this "*unparticled matter*," this nothing, is what Davis calls the *mind* of man. "The natural senses," says he, page 46, "are cognizant of corporeal and formal investiture; but when things pass into their various progressive conditions, they are lost sight of. Like the *water*—which, while remaining as such, is perceived by the senses; but, when it passes into steam, air, and the luminous ether, becomes rare and refined—the natural mind and senses lose the perception of its existence, and apply to it, as to all unparticled matter, the appellation of *spirit*, for the want of a better term to define its condition. To me, this all is known: as matter become rare and unparticled—as the *ultimate* of matter, to which is applied the word *spirit*." Immediately after this, he speaks of the mind being a "collection of *particles* or *substances*"—of some kind, at least—saying that the mind cannot have as "*absolute knowledge*" of "its own continuance and progression," but only a *belief*. "For no collection of particles or substances of any kind," says he, "possesses the power of self-analysis." Is it possible that the persons who transcribed, assisted, and witnessed the delivery of these revelations, could thus have assented to the materialist's creed in its most irrational form! "It is the law of *Matter*," says the lecturer, page 50, "to produce its ultimate, *Mind*. It is the law of mind to produce its corresponding principle,

*spirit.*" Which is the greater, the cause or the effect? A. J. Davis's body or his mind? His "mind is the ultimatum of his organization," and his Psychology is the ultimatum of his scientific knowledge. These are a thousandth part of the errors and absurdities contained in the first 50 of about 800 pages of these "Divine Revelations." There is undoubtedly something remarkably "*precocious*" in this lad of 19, though there is no necessity for claiming for him extraordinary ignorance and lack of education. To us there is something extremely ludicrous in such a lecturer, such lectures, and such an audience, that makes us think of Goldsmith's "Country School Master," and his auditors. *He,*

"With words of learned length, and thundering sound,  
Amazed the listening rustics ranged around;  
And as they gazed, the more the wonder grew,  
How one small head could carry all he knew."

R.

[For the Dissector.]

## REMEDIAL INFLUENCE OF ANIMAL MAGNETISM.

To the Editor of the N. Y. Dissector:

DEAR SIR—In an early number of the Dissector, you copied an article, written by Rev. Mr. Beecher, detailing the evidences of remarkable clairvoyance of William Henry Child, and of the curative influence of Animal Magnetism in his case. He was a lad, ten years old, the son of Rev. Eber Child, Byron, Genesee Co., N. Y. He had been afflicted for a long time with exceedingly bad fits. For a week together, he often had fits most of the time. They were first induced, I believe, by some local injury in one of his legs. When first magnetized by Rev. Mr. Beecher, he became highly clairvoyant. He had become very much reduced by his fits, and was easily magnetized. Being asked what they should do for his fits, he replied, that should they magnetize him just as the fits were coming on, it would prevent them. This course was pursued by some members of the family, and with complete success. His fits were entirely broken up; and his health rapidly improved, until he became so strong that the family were no longer able to magnetize him.

I called at his father's residence in April, 1843, and having heard of his remarkable powers of clairvoyance, I proposed to mag-

netize him, to which he consented. In five minutes he was in sound magnetic sleep. His powers of clairvoyance were truly astonishing; which I tested in several ways; but especially in the examination of Mrs. G——, a lady of my acquaintance, who was in a diseased state, and at her own residence six miles distant. Her case was described with very great accuracy. The detail of this examination would occupy too much space in this communication; it will be deferred for the present; but I will endeavor to furnish it at as early a period as my pressing duties in attending to a sick family, and to parochial labors, will permit.

Some time in July, 1843, his father called on me and stated that though his son had no fits, still he was not perfectly well; and that he wished me to take him into my family and magnetize him for his health. He came by my consent. His fits were cured; but he still suffered severely from incubus and palpitation. He could not walk a quarter of a mile without inducing violent palpitation; and his sleep and rest were seriously disturbed by night-mare. Under the magnetic treatment he improved rapidly, and in three or four weeks, was quite well, and walked, one day, about seven miles, with very little fatigue.

## BLEEDING AT THE NOSE.

He was often afflicted with bleeding from the nose; and was also cured of this by magnetism. When somniscient, he directed me how to magnetize him; also to place my finger on a particular spot in his head, where he said a vein was uncapped, which was the cause of his bleeding.

## HEALING OF A WOUND.

While with me, he cut one of his fingers badly, with a wood-saw. It was bound up with a dry bandage, and left magnetized, when he was awakened from magnetic sleep. And though the wound was bad, and had been torn open, so that it could not heal by the first intention, still he could use it without inconvenience, at once, pressing against the wound; and in a few days it was perfectly healed, with no other appliance than animal magnetism.

He remained with me about seven weeks, and left with health unusually good.

## SECOND CASE.

Mrs. E. F., of Mumfordsville, Monroe Co., N. Y., was a member of my congregation, while I resided in that place, in 1842 and 1843. During March, 1843, she was se-

variously afflicted with Ophthalmia of her right eye. She had been treated some years before, for the same disease, in the Eye Infirmary, in New York; and for a long time wore a silver tube in the Lachrymal Duct.

The recurrence of this affection was apparently induced by a portion of calomel, ordered by her family physician, as she was rather ill. She found no relief from any remedial appliance used; and when brought into a state of insufferable anguish from extreme nervous irritation, she sent to me, requesting me to make the effort to relieve her by animal magnetism. I found her in great anguish,—tossing in agony upon her bed. She had had no rest for two or three days and nights; and was truly a great sufferer. She had disbelieved in animal magnetism; and was induced to send for me, by extreme suffering, from which she could find no relief.

The first application was made by placing the hand on the organ of Firmness,—willing a quiet state of the nervous system. This was effected in about five minutes; when she became entirely calm and quiet. I then made passes, magnetizing the diseased eye. The Lachrymal Duct was closed up; and there was a lump in the inner corner of the eye, about the size of a small flattened pea. In about ten minutes more, her eye was entirely free from anguish; and the inflammation much abated. She rested well that night; and subsequently, I believe, she was magnetized once or twice more. In a few days her eye was almost well; when her physician again called to see her, and gave her another portion of calomel to cleanse her stomach. Soon after taking this, her eye became inflamed again, and was as bad as when I was first called to see her. I magnetized it daily for a week, and it was nearly well. She went out on a visit April 10th; the air was cold and damp. She took cold, and was again visited with all the afflictive symptoms in the diseased eye.

I again called to see her, but being unable to stay long enough to magnetize her fully, —I magnetized a piece of money, and gave her directions to magnetize herself with the money. She soon reduced the inflammation by holding the money in one hand, looking at it, and making passes with the other, at the same time *willing* the effect, as she would do, if magnetizing another person. In a few days she completed the cure, and became quite

well by her own efforts, without my presence.

Your very much obliged friend,  
SAMUEL GRISWOLD.  
*Lyons, Hamburg, June 30, 1847.*

[For the Dissector.]

#### DIRECTING CLAIRVOYANTS TO DISTANT PATIENTS.

DR. SHERWOOD:—As Clairvoyants are often greatly fatigued by tedious journeys to find far-distant patients, and sometimes even shrink from the toil; it is an object, as you have suggested, to relieve them, especially as they will be better able to examine the patients to whom they are sent. And as I have practised on a plan more simple than any suggested in your Manual—ninth edition, page 151—it is here suggested for the benefit of yourself and others.

When you put a person into the somniscient state for the express purpose of examining a distant patient, you have only to tell him your object; and will him to be present with the patient when he becomes clairvoyant; or if already in the somniscient state, will your clairvoyant to be at the residence and in the presence of your distant patient.

In this way there will be no weariness experienced in finding the residence or distinguishing the person of your patient. It will be done with perfect ease and exactness; and equally so, even if you are entirely unacquainted with your patient, or the particular house in which he resides.

Your much obliged friend,  
SAMUEL GRISWOLD.

I noticed some typographical errors in my communication on the Polarity of the Human Hand. Near the close is an important mistake, as follows: "In magnetizing for diseases of the (internal) organs, the right hand should generally be placed on the spine opposite the organ diseased," &c. It should read: "The left hand should generally be placed over on the spine, opposite the organ diseased, and the right hand over the place where the pain is felt."

S. G.

## THE DISSECTOR.

NEW YORK, JULY 1, 1847.

Davis's Revelations.

*The Principles of Nature, Her Divine Revelations, and a Voice to Mankind. By and through ANDREW JACKSON DAVIS, the Poughkeepsie Seer and Clairvoyant. New York: J. S. Redfield. Clinton Hall. 1847. 800 pp. 782.*

NOTES of preparation have often been sound-  
ed during the last two years, of the advent of  
these revelations, and they have at last ap-  
peared.

The book gives first an account of the  
manner in which it was composed from Da-  
vis's lectures, by his amanuensis William  
Fishbough, and then a miraculous account of  
the selection of witnesses to hear the revela-  
tions, whom Davis addresses in the following  
language: "Being thus situated, surrounded  
by witnesses earnest, desirous, and qualified  
to receive the truth; a scribe spiritually ab-  
sorbed in the things related; and a manipula-  
tor to govern the action in delivering these  
things, I have been *impressed* without obstruc-  
tion, to present these disclosures.

"Such, brethren, were the *external* means  
by and through which this book has made its  
appearance. Your duty is to *search*; and  
after searching, ask nature and your own *su-  
perior judgments* how much practical truth  
there is herein revealed. In doing this, you  
will display the dignity of your natures, per-  
form your highest duty, receive the most un-  
bounded interior approbation, and obtain  
Mental Happiness?"

It will be observed that Davis says he has  
been *impressed* to present these disclosures,  
and he often repeats these expressions; and  
the question arises at once: From what  
source did he receive his impressions? He  
answers this question in the following para-  
graph, pp. 43-4: "The free unshackled  
*spirit*, then, should be considered as the es-  
sential principle belonging to the organi-  
zation, that with one sympathetic chain, en-  
circling all *spheres* of this existence, can re-  
ceive *impressions* instantaneously of all

things desired, and with its *spiritual* senses,  
communicate with *spiritual* substances.\* And  
as all these must be in a *sphere* necessarily  
attached to this (or first) *sphere*, it is *there*  
that I receive my *impressions*. I do not re-  
ceive these from the Great Supreme Mind,  
but from this *second sphere*, focus, or medium,  
which legitimately belongs to *this globe alone*.  
When you ask me a question, I am then ex-  
isting in the medium or *sphere* of the body  
(his spirit is); but investigating and finding  
the answer, I pass to the (second) *sphere* (his  
spirit does), where I can associate with truth  
and reality," or with the spirits of the sec-  
ond sphere, or of second persons."

This is precisely the manner in which  
other persons in the magnetic state obtain in-  
formation on any subject whenever they find  
it difficult to obtain it in any other manner;  
for there is nothing so easy for a person in  
this state as to read the minds of other per-  
sons.

They will not only copy with great facility  
from the minds of other persons, but they  
will copy from books much faster than they  
can read it in their natural state, and they  
will often copy whole pages nearly verbatim  
from books they never read in their natural  
state. Some of these persons have been in-  
duced to make speeches and deliver lectures  
in the magnetic state on various subjects like  
Davis, and some of these have been distin-  
guished for delivering very superior lectures,  
and often those that were equally luminous  
on the opposite sides of the same subjects,  
whether of history, religion, philosophy, or  
politics. They also often, in delivering these  
lectures, mix up with or add to the informa-  
tion obtained from second persons their own  
opinions, and then attempt to pass them  
off for knowledge obtained from a higher  
source; and finally, there are those who, in  
the magnetic state, are not only much better  
speakers in that state, but are much greater  
liars than they are in the natural state.

It should be observed here that Davis, after  
having nearly exhausted his powers of cir-  
cumlocution in delivering himself of the idea  
that he received his *impressions* from the *sec-  
ond sphere*, which belongs to *this globe alone*,

\* He constantly confounds *spirit* with *matter*.

and *not* from the Great Supreme Mind, was *impressed* by one of his auditors that he had acknowledged too much—that it was understood to be no great affair for a person in the magnetic state to read the minds of other persons, and then people did not care about the minds of other persons,—they wanted information from a higher source, when Davis was immediately *impressed* with the necessity of contradicting what he had before said in regard to the source from which he received his impressions, and he does so in the very next paragraph, and in the following words:—

“It is impossible by *words*, to convey a full and adequate conception of the manner in which I arrive at truth. I can only employ such words as convey all the idea that words can convey, of this process. *My information is not derived from any persons that exist in the sphere into which my mind enters, but it is the result of a law of truth, emanating from the Great Positive Mind.*” Now this last expression, or Great Positive Mind, Davis often uses as synonymous with Great Supreme Mind, as he does in this case.

There are many other glaring contradictions in the work; and besides, many of the statements and theories in it are glaring absurdities that are contradicted by the plainest and well ascertained facts. Mythology is also often hashed up in the work, with realities, in the most delectable manner.

The work is divided into three parts, as follows:

Part I.—The Key. Part II.—The Revelation. Part III.—The Application. We have given a few examples of the KEY, and we will now give an example of the REVELATION. “IN THE BEGINNING, the Universe-cœlum was one boundless, undefinable, and unimaginable ocean of LIQUID FIRE! The most vigorous and ambitious imagination is not capable of forming an adequate conception of the height, and depth, and length, and breadth thereof. There was one vast expanse of liquid substance. It was without bounds—inconceivable—and with qualities and essences incomprehensible. This was the original condition of MATTER. It was without forms; for it was but one form. It had no motions; but it was an eternity of Motion. It was without parts, for it was a

Whole. Particles did not exist; but the Whole was as *one* particle. There were not Suns, but it was one Eternal Sun. It had no beginning, and it was without end. It had not length; for it was a Vortex of one Eternity. It had not circles; for it was one infinite Circle. It had not disconnected power; but it was the very essence of all Power. Its inconceivable magnitude and constitution were such as not to develope forces, but Omnipotent Power,” page 121.

The whole of the above paragraph is so glaringly and positively absurd as to prevent it from obtaining credence in the weakest minds, and does not require further remark.

*Origin of the law of gravitation.*—After a long and tedious story, we come to the origin of the law of gravitation. “The infinite mass of Matter developed heat and light by virtue of inherent fire. And Power being positive, developed a negative, or the eternal law of gravitation. Thus Motion was eternally established in and throughout the vast material composition.”

“The extension of the atmosphere from the Great Body was likewise *infinite*. And the Great Centre or Sun constantly gave off heat and light, each of which was a development of Matter, thrown off by its repelling power.”

So it seems after all, the *infinite* mass of Matter—of liquid fire which filled *infinite* space, was nothing more than a Sun, whose atmosphere extended through *infinite* space. How ridiculous!

“Thus an incomprehensible and incalculable number of Centres or Suns were produced by the development of heat and light, and their gradual condensation. And from these were created systems of planets, each of which revolved around its controlling centre, according to the development of the circular and spiral motions, and the influences of attraction and repulsion, or the laws of centripetal and centrifugal forces,” page 128-9.

We have now seen how the Suns and planets were formed, and put in motion, according to these revelations, and we may proceed to the revelations on other subjects.

“The condition of the earth at the period now under examination, is again very different from what it was at any previous period.

The many vicissitudes of the seasons were numerous and extreme, rendered so by the influence of the lines of variation and no variation upon the fluid and ethereal elements," page 296. Every schoolboy knows better.

"The dissimilarity of the temperature of the poles at different times is owing to the varying conditions of an existing element in its lower and higher degrees of development, which, though it is not generated by foreign bodies, is assisted by them to sustain a connexion with the whole envelope of the earth from the lower to the higher state of the atmosphere." He is entirely mistaken, and knows nothing on this subject. "The north has been considered as the location of the magnetic pole, evolving incessantly attractive, electric fluid, which determines the direction of the magnetic needle. In the torrid portions of the earth, the particles thrown from the sun (which, when decomposed, produce light) act upon the water and atmosphere, which action results in a constant sublimation and development of heat, or the magnetic medium. It is here termed magnetic for distinction; but properly it is the unfolded heat contained in the previously-cold medium. The imperceptible rushing of this current towards the north determines the direction of the magnetic needle.

"There are likewise three distinct fluids crossing the earth from the south to the north, and from the north to the south, by a mutual exchange of elements from the poles. There is also an intersecting fluid that crosses each of the others; and this has been termed the dia-magnetic fluid. The former fluids are in relations of equality to each other. Their termination at the north is the nucleus of the magnetic pole. The direction of these fluids establishes the lines of no variation. The action of their attending fluids determines the lines of variation. These lines revolve from east to west half-way round the earth while the sun is passing through one of the signs of the zodiac," page 288-9.

Now observations have shown that the location of the magnetic poles determines the direction of the magnetic needle, and in the clearest and most satisfactory manner. Observations have shown, too, that the lines of no variation is a great magnetic circle connecting the magnetic poles in the most direct

and strongest manner, and corresponding with magnetic axes between the magnetic poles of iron or steel magnets. Observations have also shown that the magnetic poles and lines of no variation perform a revolution around the earth from east to west in 666 years, and in the clearest and most satisfactory manner; yet we are told in these revelations that these lines revolve half-way round the earth while the sun is passing through one of the signs of the zodiac, or in 2133 years.

It would be very difficult to find anywhere so much profound ignorance in so small a space as that quoted in the above paragraphs. Davis knew nothing about the subjects of these paragraphs; nothing about the formation of suns or planets; nothing about the cause of the direction of the magnetic needle; nothing about the cause of a dissimilarity of temperature at the poles in different periods—nothing about the magnetic poles, lines of no variation, or their time of revolution, and these revelations are consequently humbugs.

It is now a well established fact that the Tides are produced by the action of the sun and moon, but Davis's revelations say, "That this cannot be true; for attraction is not an established principle, especially beyond the atmosphere of any body or substance," page 244.

There is displayed here the most consummate ignorance of the cause of the tides, and of the laws of motion; and yet this revelator has the ridiculous vanity to tell us that "minds properly constituted and directed will repose entire confidence in these immutable teachings of Nature, of the Universe, of the Divine Mind," page 392.

Davis adopts the Plutonic theory in the creation of suns and planets, and the theory of the Vestiges of Creation in the creation of man, as will be seen in the following paragraph:

"The germ of man has thus been discovered in the lower forms of the animal kingdom, and traced through all of its progressive stages of development, rising from the lower degrees through the great body of the animal creation, with its many and diversified branches and their modifications, up to the blooming perfection of the living tree, whose

fruit is the organization of man," page 328.

On the subject of religion, Davis adopts Tom Paine as his model, and often refers to Swedenborg as a co-worker in new revelations, and says:—

"I am also impressed to recognise the important revelations made by and through Emanuel Swedenborg, the Swedish philosopher and psychologist," page 587.

In the third part of the work on association and the re-organization of society, he takes Fourier as his model, and says:

"Hear ye not, when a noble and expansive mind, like that of Charles Fourier, demonstrates the interior truth, even to your senses, that the world of mankind is composed of the requisite notes to play a perfect tune of peace and harmony.

"Concerning this very noble personage, and his philosophy, more will hereafter be related, especially when the principles of his microcosmogony make their appearance prominently in the third part, or application of this work," page 586.

Davis commences the third and last part of the work, called "A Voice to Mankind," with an attempt to array the working against the other classes of society, as will be seen in the following paragraph:

"The Human Race is composed of three distinct parts, classes, or societies. The poor, ignorant, enslaved, oppressed, and working classes, constitute the lower stratum of society. The semi-wealthy, learned, enslavers, oppressors, and dictating classes, form the second or transition stratum; and the rich, intelligent, enslaving, oppressing, and idle classes, form the third stratum, and serve to complete the body of mankind," page 679.

Having now given a concise view of the three different parts of this work, we should observe here that there is no *clairvoyance* in it from the beginning to the end, and that this fact was, and is well known to Davis, Fishbough and company, and the fact that he was not a *seer*, or *clairvoyant*, as is pretended, was not only well known to that company, as will be seen, but it was known to other persons. An attempt was consequently made to avoid this important point in the following ingenious manner.

"The expression 'I see,' which I frequently use in familiar conversation during examinations of various descriptions, would, *literally* understood, convey a *wrong* impression. *If I should use any other term you would not understand its signification.* This expression naturally conveys the idea of *vision*—of an optical knowledge of a foreign substance. In reality the expression simply conveys the idea of *knowing* by a peculiar process; for the knowledge of a foreign substance is obtained through the imperceptible reflection which the substance casts upon the retina. So it is knowledge, *sight* being simply a process to convey inward the existence of the outer. Hence if the expression 'I know,' were ordinarily used (which would be correct), I would use the same to give the impression of what I know, independently of optical or other processes of rudimentary perception. Therefore, 'I see,' means simply 'I know,'" page 52.

Davis thus labors to have it believed that *clairvoyants* do not see *literally*, but "*know*" from *impressions* only as he does. Such labors are, however, perfectly futile, for it is not only well known to thousands of persons who have been in the daily habit of investigating this subject, that *clairvoyants* do see *literally* as in the natural state, but it is equally well known that little or no dependence can be placed on the *stories* of those who do not see *literally* in the magnetic state, but have impressions only, and are not therefore *clairvoyants*, but mere impressionists.

#### La Roy Sunderland Again.

We published Mr. Sunderland's theory of Mesmerism in the January number of this Journal at his request, and we also reviewed it in the same number in the most mild and tender manner, notwithstanding the bare pretensions and glaring absurdities by which it was everywhere distinguished. Mr. S. does not, however, appreciate in a meek and becoming manner our forbearance, but pours out from the Wooster Medical Journal vials of wrath upon us to appease his private griefs.



THE PRETENDED REVELATIONS OF  
CLAIRVOYANT DAVIS.\*

[From the New York True Sun.]

ONE William Fishbough and a Dr. S. S. Lyon, have issued to the world a book which they claim to be the record of a divine revelation from the spiritual world—which is equivalent to a revelation from God—and made through the medium of a boy named Davis, while in a real or pretended abnormal or preternatural state that is termed clairvoyance. The history of the book is briefly this:—Some four years ago a mesmerizer lectured in Poughkeepsie, and amongst his converts was a certain tailor named Livingston, who discovered in himself a most wonderful mesmeric power. Among the acquaintances of Livingston was this Davis, a shoe-maker's apprentice, about 17 years of age, and utterly illiterate, on whom the former exercised his art. It was soon found that the young cordwainer was in an extraordinary degree susceptible of the mesmeric influence, and after about three months of practice, the sewer of cloth and the sewer of leather abandoned their trades, and set up the business of prescribing for the sick—Livingston operating as the mesmerizer, and Davis in the clairvoyant state *diagnosing* the disease and prescribing the remedies. These practitioners of course took to peripatetics, and at Bridgeport, Ct., Davis became acquainted with Dr. S. S. Lyon, and, at this place or elsewhere, also with the immortal William Fishbough. A bargain was struck up (Davis all the while in the clairvoyant state) between the three: Dr. Lyon was to act as the mesmerizer of Davis, who, being put into the clairvoyant state, was to enter the spiritual world and bring back to the natural revelations in science, morals, and religion, while the modest but immortal William Fishbough was to act as the scribe or reporter, recording the words as they fell from the oracular lips of the shoe-maker's apprentice. In the meantime in conjunction with Dr. Lyon (who it seems had cut out the tailor), Davis was to continue the clairvoyant practice of medicine in order to obtain for this trinity of revealers grub and garments, without which even the spiritual explorer himself could not sustain his mission. To facilitate this design, the city of New York was selected as the scene of operations, and here, accordingly, for 18 months, terminating last April, have the three co-workers been engaged (aside from the doctoring business) in uttering, writing, and printing the "astounding revelations" which have

now been published in the book to which we have referred.

The subject of mesmerism has of late years attracted a good deal of attention, and some of the extraordinary phenomena it claims to have presented, have found many intelligent believers. It is but natural, therefore, that this work, claiming to be the record of impressions received by the mind in a mesmeric state—which impressions also are claimed to have come from the spiritual world, or from heaven, or from God—should be regarded as worthy of examination by all believers in mesmerism. Prof. Bush, a man of Hebrew and Oriental lore, whose mind, never well balanced, has now been completely upset by religious excitements, has also given to the pretensions of Davis's associates, a notoriety and consequence they could not otherwise have received. The claims which he has asserted for Davis, leave but little doubt that his credulous mind has been grossly imposed on. To cap the climax of notoriety, comes the self-constituted champion of anti-innovators—the famous "T. L."—who, with more bigotry than brains, maintains that, if this work have not been produced by human imposture, then was Davis directly inspired by the devil to reveal to the earth the Bible of Hell in opposition to the truths of science and philosophy, and of the revealed Word of God.

We have examined this work of Fishbough, which he calls the "Revelations of Davis," and have been "astonished," yea, even "astounded;" not, however, at its "marvellous revelations," or "the ponderousness of its science," but at its wish-washiness, its insipidities, sometimes at its utter fatuity, and sometimes at its numerous school-boy truisms. We have seen but few things in the book we would decidedly call falsehoods or undoubted errors, and they have excited in us no surprise, for they are to be found in all scientific and philosophic works—good, bad, and indifferent. Speculations about Fourierism, the inhabitants of Saturn, the heavenly bodies, laws of nature, the animal kingdom, Swedenborgianism, etc., are simply fanciful or absurd (chiefly the latter), and one cannot, we think, properly predicate of them either truth or falsehood. The book contains an attack on all revealed religion (that is Davis's or Fishbough's alone excepted), and especially on the Christian religion. The miracles of Christ and his apostles are denied, and many silly attempts are made to ridicule passages in the New Testament, and indeed to ridicule the whole Bible. As a specimen of this clairvoyant-wit, we will mention that of Fishbough's calling the Holy Bible "*excellent soft bark*." We see nothing specially alarming in the fact that this book is an infidel work. It but re-

\* Revelations, &c., by A. J. Davis, the Poughkeepsie Clairvoyant. For sale by W. H. Graham.

iterates the stale attacks on Christianity that are now afloat in forty thousand books. There is nothing new in this infidel philosophy. Any ordinary compiler, without the incumbance of thinking powers to lead him aside from his task, might have collected the same infidel dogmas, and woven them into the tissue of technical formulas. He would have to rely somewhat on recent writers, such as Benjamin Constant, De Wette, the Swedenborgians, the author of "Vestiges of Creation," &c., as well as Kneeland and Tom Paine. Some of the speculations in regard to physical phenomena are absolutely new, and we have something that is really news from the inhabitants of Saturn. But what then? One night, without the aid of Davis's sojourns in the spiritual world, bring forward a new theory of the moon's inhabitants. Suppose that we should maintain that the lunatics carried their heads in their mouths instead of under their shoulders as has been heretofore supposed by some. Such a supposition might also be received as an "astounding revelation." The greatest marvel to us is that the spirit of Davis should, from its journeyings to another world, bring back so many platitudes, fatuities, undeniable and more than common-place truisms, most of which even idiots would perceive and utter. We aver that much of the book is true, and we doubt whether any other than a small school-boy mind could write so many truths, or rather truisms within the same space. As a specimen of the greater part of this work, we give one passage, the first in the book, which passage, at least, could not have been brought from the spiritual world by Davis, as it appears to have been plagiarized from the first English composition written many years ago by a small boy in a district school in Connecticut. The following is Fishbough's plagiarized passage:—

"Reason is a principle belonging to man alone. The office of the mind is to investigate, search, and explore the principles of Nature, and trace physical manifestations in their many and varied ramifications. Thought, in its proper nature, is uncontrolled, unlimited. It is free to investigate, and to rise into lofty aspirations.

"The mind cannot be chained! It will leave its resting place, and explore the fields of science, and not satisfied with the investigation of terrestrial things, it has soared to the heavens and counted the stars."

The following is the original from which the above seems to have been paraphrased into philosophic technicalities:

"Man has got a reason or soul, but brutes have not got any reason. The mind of man thinks and studies, and knows all about nature and everything else. His thoughts run

all over creation and nobody can stop them. You can't fetter the mind as you do a horse, or chain it up to a post. It will mow down all the meadows of science, and climb up to the moon and way beyond and go to counting the stars."

If we should translate the whole of this work into every day language, and publish it as the reflections of some ordinary man, we believe it would be regarded as a very harmless and very stupid book by the very few who would give it any attention whatever.

But whatever may be the character of the contents of the book, still the following inquiry must be satisfied. Was the book dictated by Davis while his mind was in an abnormal state, termed clairvoyance? or is such a claim for its origin founded in fraud and injustice? Mr. Fishbough asserts that Davis, while in the clairvoyant state, selected three witnesses to attest the delivery of his lectures, as they are termed, and that others also witnessed their delivery. Yet, by some strange oversight, not one of the witnesses—by affidavit, or even by a single note or word, appears in connexion with the book, to test its genuineness, with the exception of an extract from the manuscript of a man now dead; we have no assurance but the word of Fishbough, that Davis, with collusion or deceit, ever delivered these lectures. Mr. Fishbough claims, however, to possess the attestation of these witnesses in manuscript. It is acknowledged by Mr. Fishbough that the language of the book is his own, that Davis used bad English, and incoherent language; consequently he did but deliver the substance of the lectures attributed to him.

But admit the doctrines of mesmerism, and that Davis, in a clairvoyant state, did utter from his lips substantially the contents of this book, while Fishbough took down his words, and dressed up the ideas in their present arrangement and style. Even then, by the acknowledged philosophy of mesmerism, still the pretence that Davis uttered a divine revelation from the "interior," or "spiritual" world—that is, from God—is an imposture.

There is much evidence—and evidence, too, which many educated and truly philosophic minds have acknowledged as convincing—that persons can be put into an abnormal state, sometimes termed the "mesmeric sleep," and that persons in this condition are insensible to pain. There is also evidence that some patients in a certain degree of this mesmeric state have the power of clairvoyance.

All the proofs we have to show the power of clairvoyance go to establish the doctrine that the clairvoyant can only utter more fully his own thoughts, and also utter the thoughts and ideas of persons with whom he is put in

a sympathetic or mesmeric connexion. There is no evidence of any other clairvoyant power than this, and intelligent mesmerists have claimed no other. This doctrine will explain the origin of the lectures, admitting Davis to have delivered them. He was put in connexion with others, chiefly Fishbough, who in reality dictated the lectures through the medium of the clairvoyant state of Davis's mind. But Prof. Bush says there are doctrines of Swedenborg in the lectures which neither Davis nor his immediate associates could have previously read, and offers a reward of \$500 to any one who will prove the contrary. Prof. Bush does not understand this matter. Dr. Lyon, the mesmerizer, put Davis in connexion with Prof. Bush, or some other Swedenborgian, and thus obtained what Fishbough did not know. We have no doubt that the book from beginning to end is substantially Fishbough's, and (if there be truth in clairvoyance), though he may have produced it through the medium of the clairvoyant mind of Davis, yet he might have written it as well without, as with, this mesmeric aid. The only advantage in employing the clairvoyance of Davis, seems to have been, the enabling the authors of the work to practise the imposture of a claim to have made, through the medium of this ignorant boy, "divine revelations" from the "spiritual world."

# DR. G. SCHMID'S HOMŒOPATHIC TREATMENT WITH UNDILUTED MEDICINES.\*

[From the British Journal of Homœopathy, July, 1847.]

[THERE are few questions of greater interest to the Homœopathic practitioner than that of posology, or the proper doses to be administered in the treatment of acute and chronic diseases; and none, we may say, in which there exists greater discrepancy of opinion among the disciples of Hahnemann;—for it offers free scope for every variety of opinion, there being two posological extremes, a happy medium, and eclecticism without number. In fact, we may almost say, there are as many opinions as there are practitioners, and each is prepared to prove the superiority of his own by an imposing array of cases. While all are held together by the principle "*similia similibus curantur*," each thinks the subject of dose an open question; few (if any) abide by Hahnemann's latest standard of decil-

lionths; those who arrogate to themselves the appellation of orthodox Hahnemannians, have travelled far away, under the guidance of Gross, into the mystic regions of the 200th, 800th, and 10,000th dilutions, while the section, by the former styled *specifickers*, have gradually descended to the lowest numerals in the scale of dilutions until they have attained their *ultima Thule* in the Schmidian tinctures and first triturations. To some this variety of opinions and practice appears to be indicative of the untenableness of Hahnemann's dogma, but to us it merely shows that, as long as practitioners remain faithful to the Homœopathic principle, they will meet with a large amount of success in practice under almost every variety of dose. That there must be some rule for the dose, and that this rule will ultimately be discovered, we cannot doubt; and for the solution of this problem the best plan undoubtedly is to examine the evidence of all parties; and hence we make it a duty to present to our readers in the pages of this Journal, every variety of practice where the therapeutic law discovered by Hahnemann is the guiding star. In our last number we revealed the transcendental terminus of the posological line; and in this we display the opposite material terminus, where we find our old friend, G. Schmid, the very antipode of those who avail themselves of the aid of the horse-training Jenichen's mysterious manipulations,—in good old style

—"prepared with death to wrestle,  
Armed with a mortar and a pestle,"

and meting out his doses by the drop, the grain, and the scruple.]—EDITS.

## INTRODUCTORY REMARKS.

A few words only are necessary on the subject of my doses in general. Of those medicines which yield their medicinal virtues wholly or in part to Spirits of Wine, being thus fitted for tincture or solution, I give for the most part, the undiluted tincture, and the more or less concentrated solution. As the vehicle for the medicines fitted for tincture or solution, I use water, or milk-sugar, or sweet-sugar: chiefly water for diseases in which the patients are confined to bed or the house; milk-sugar for patients able to go about; and sweet-sugar for children.

Trituration of several medicines with milk-sugar, or any other indifferent vehicle equally well adapted, has a very great influence on their activity. Although this is chiefly to be observed in medicines which exhibit little or no activity in the untrituated state, yet, even in the heroic medicines, which, in the undiluted state, display powers dangerous to life,

\* From Homœopathische Arzneibereitung und Gabengrösse. Von Dr. G. Schmid. Wien, 1846. P. 110.

such as Arsenic, the influence of the trituration is essential and welcome in their therapeutic employment, inasmuch as they are by this means brought into a quantitatively serviceable dose for therapeutic purposes.

But I think I can best exhibit my doses and mode of treatment by the faithful and exact narration of some individual cases.

[Before giving these cases, Dr. Schmid reminds the reader that they are not intended as complete histories of cures of diseases, but merely such parts as bear distinctly on the subject, and illustrate clearly the effect of some individual medicine in a certain dose.]

### I.—ARNICA—(TWO CASES).

A girl of two-and-a-half years old had been affected with diarrhoea for several weeks; the stools were frequent, fluid, frothy, acrid, and very foetid, accompanied by much flatulence. The belly was distended; the appetite small; frequent foetid eructation; the sleep at night restless and interrupted; the temperature of the skin changeable, at one time cold and at another warm; complexion earthy, and looks unhealthy; the child was weak and fretful, and had a frequent short cough.

On the 10th December, 1844, I gave 6 drops of the pure Tincture of Arnica in about three ounces of water, to be taken in six doses in the course of twenty-four hours.

This remedy was continued for three following days with such good effect, that, on the 15th, not only all the functions were natural, but the little one was again strong and cheerful, playing about as usual.

### II.

On the 9th of February, 1844, I was consulted by a patient on account of a very troublesome and painful prolapsus of the anus. It comes on after walking five or ten minutes, and the pain hinders him from going any further, and forces him to return without delay. He had formerly suffered much from hemorrhoids. The prolapsed portion of the rectum still displays flaccid hemorrhoidal excrescences of a bluish red color, after the replacing of which the pains instantly cease. These troubles have already lasted from October last; that is now four months. The remedies hitherto used have all failed to give any permanent benefit, and the only thing that has given even relief for the time is washing the whole body with cold water. Besides this painful prolapsus, the whole system of this patient is in a weakened and relaxed state. The most prominent symptoms are, bad digestion and occasional attacks of very painful head-aches, which are either beating

and pressing in one or other temple, or burning on the crown of the head. The head-ache is accompanied by darkness before the eyes and loss of vision, giddiness, and incapacity for all exertion. Every excitement of the mind, which is very irritable, aggravates all the symptoms. It is a circumstance to be remarked, that during the head-aches the rectum does not fall down, and *vice versa*; and that, further, the head-ache is most quickly and certainly removed by a cup of coffee. His state of mind is most pitiable, and he passes many nights sleepless.

I gave Arnica in the concentrated tincture prepared from the fresh root: three drops for a dose, five times a day till the 22d February.

The action of this remedy was surprisingly rapid and beneficial on the rectum; so that from this time forward no further complete prolapsus took place, and the slight threatenings of it soon also subsided. Besides this, during the use of the Arnica the general state of the patient was materially improved. At the same time I must add, that, for the progress and continuance of the improvement, other remedies were also used; but these I have not particularly noted. The object of the improvement was, however, so far gained, that though in the following year the patient suffered once again from disorder of the rectum, it, however, was not this time prolapsus, but arose from swelled hemorrhoidal excrescences, and this, after some discharge of blood, completely subsided in a few days, under the use of Aconitum, in the dose of three drops of the concentrated tincture five times a day.

The patient had suffered from hemorrhoidal symptoms many years before, when he was in a much stronger state of health; and he was then also stronger, and continues so till the present day.

### III.—BELLADONNA.

A boy six years of age, who had been ill for two months, was seen by me for the first time on the 3d February, 1844. Of a naturally lively and cheerful disposition, he had become gradually cross, lazy, weaker and thinner, and looked very ill. His appetite is very small; the fecal evacuations irregular; at one time firm, scanty, whitish, and unfrequent; at another, frequent and pappy. For the last fourteen days he is attacked every evening with heat and increased thirst, restless sleep and morning sweating, frequent cough, with copious expectoration of tough, greenish mucus; the nostrils are also often filled with similar mucus.

All these symptoms had gradually increased

to such a degree, that he was seized on the 2d February with distinct fever, and could no longer remain out of bed. On the forenoon of the 3d, I found the pulse above 90, the head hot, the cavity of the mouth, the tongue, and tonsils remarkably pale and dry, the last being also swollen, the stomach distended and sensitive even to slight touch and to inspiration; the abdomen likewise distended, besides the above-mentioned symptoms in an increased degree. I gave *Belladonna* in the dose of one drop of the tincture six times in the course of twenty-four hours.

The night of the 3d February was passed in quieter sleep, and in the morning moderate perspiration came on. Next morning there was considerable relief of all symptoms. The medicine was continued in the same dose and repetition till the 6th February, when it was reduced to five doses daily, and on the 9th to four doses. On the 12th the medicine was discontinued, and the boy was quite well and all the symptoms gone.

#### IV.—*BRONIA*.

A man near forty had suffered for two years from cramp in the stomach, as he himself termed his disorder. It consisted in the following:—The stomach becomes constricted and squeezed together, so that the breathing is thereby impeded; then an acrid corrosive fluid rises into the mouth (waterbrash) in large quantity. Such an attack has come on for a long time daily, at least once. There is, besides, diminished appetite and bad digestion, torpid and irregular bowels, and the abdomen distended with troublesome flatulence. The patient had hitherto been treated Allopathically, and had used a great variety of medicines, but all without benefit.

I gave him *Bryonia*, in the dose of four drops of the concentrated tincture four times a day.

Already on the following and immediately subsequent days the patient felt only a threatening of his trouble. After that he had no further complaint during the time he continued the medicine, which he earnestly requested to be allowed to do for several weeks, in order completely to eradicate his disease of two years' standing. At the same time the digestion and action of the bowels returned to their normal state. —

The patient has, up to the present time—already above a year—had no return of his complaint.

#### V.—*CANTHARIDES*.

A man upwards of fifty, whose physician I have been for the last six years, had suffered, when I first began to treat him, from pa-

ralysis of the lower extremities, so that he was not only unable to walk without assistance about the room, which he had not been out of for four weeks, but was no longer able to stand upright without support. Up till this time he had been treated Allopathically. The last medicine used was Corrosive Sublimate in the form of pills. Years ago the patient had suffered from ulcers in the feet, which were now healed, leaving discolored spots and cicatrices. *Sabadilla* was the medicine which in my hands restored him to the use of his legs again.

But the case which I wish to report is the following:—The patient had often since the above illness, during the night and for several nights in succession, paroxysms of violent pain in the lower extremities, sometimes in one spot, and sometimes in another. The painful spot was neither swollen, nor red, nor hot, nor tender on pressure. The pain was digging and cutting as with a knife, and often so violent and continued that he mostly passed the whole night in moaning. Neither heat, nor cold, nor mustard plasters, which the patient himself applied in despair, gave even the smallest mitigation of the pain. Several medicines administered by me were also equally fruitless. But all the more strikingly beneficial and rapid was the action of *Cantharides*, in the dose of two drops of the concentrated tincture every hour or two hours, according to the violence of the pain. The result was, that always in the first night of the use of this medicine a great remission of the pain took place, and on the following night there was at most only a threatening of it.

#### VI.—*CARBO VEGETABILIS*.

E., a man of forty had suffered, in December, 1843, from an attack of pleurisy, according to his own report (it was most likely an inflammation of the heart or pericardium). For this he had been treated Allopathically; local bleedings, cataplasms, and very warm relaxing drinks were used, with directions to keep very warm, and these, along with inward medicines, kept the patient in a constant profuse perspiration. Even before this illness, since the beginning of the previous summer the patient had been for the most part out of health, though he had never been confined to bed. According to his own report, he had suffered from different disorders of the abdominal viscera, and from rushings of blood; violent perspirations were brought on by even slight causes of excitement. Against these complaints he had used a great variety of medicines, without procuring any material and permanent relief.

When the patient was at length freed from the above-mentioned inflammation, which ha-

lasted longer than usual, still he could not regain his health and strength. Among the remaining symptoms it was chiefly the rushings of blood that not only annoyed and weakened the patient, but also, for the most part, deprived him of rest at night. This vascular orgasm was most marked and visible in the heart, by strong pulsation causing anxiety to the patient. Neither the venesection employed on account of it, nor the internal remedies—Aqua Laurocerusi, Digitalis, Sulph. Quininae—had produced any improvement. Even Muriate of Morphia was unable to procure for the patient any refreshing sleep; the feeling of weakness after the night was spent, was greater than on the foregoing evening. Under the protracted duration and even increase of this disorder, at length wandering pains in the extremities came on, against which frictions and fumigations, with juniper berries, had been used. Thereupon these pains, it is true, ceased; but, on the other hand, there came on again such oppression of the breathing and constriction of the heart, that the patient, who was in great danger of his life, was already provided with the consolations of his religion when I entered the sick-room.

I found, besides the above symptoms, which still persisted, the pulse extremely irregular, intermitting, very frequent, weak, and empty; the beat of the heart of a corresponding character; profuse sweat, soon growing cold. The patient had no cough, but complained of great inward heat, of anxiety, and of violent thirst. A paralysis of the heart seemed to me not improbable. I saw the patient in the evening, and gave Arsenic in the 2d trituration. The night was passed pretty well, and the patient was even better, on the whole, next morning; the beat of the heart and pulse were no longer intermittent, and displayed also more energy. Auscultation and percussion showed no abnormality either in the heart or the other contents of the thorax. That was (if I mistake not) in February, 1844, between the 24th and 27th. On the 1st of March, the symptoms still persisted in their essential character, though better, and I gave the patient Carbo Vegetabilis, in the dose of five grains of the 1st trituration (2 to 100) every two hours. During the following days, while this medicine was continued—six of the above doses in the twenty-four hours—the state of the patient was so strikingly, so rapidly, and materially improved, that I visited him for the last time by the 5th of March, although the medicine was still continued for several days, whereupon he was able to visit me.

The patient was, by the use of this medicine alone, not only freed from his vascular

&c., but also the abdominal disorders which he had suffered from before the above-named inflammation, were removed. Among these disorders, more particularly, he had never had a regular evacuation of the bowels since the summer of the year before. The stools were ash-grey, mostly consistent, but of a remarkably small size. Carb. Veg. brought also the stools to their normal appearance.

#### VII.—CROCUS—(THREE CASES.)

On the 1st February, 1844, I was sent for in the night to see a boy of ten years old, who had been unwell for several days. Towards the evening of this day his face became suddenly much flushed, and then soon pale again; and this recurred several times at irregular intervals. He displayed indifference to what was going on around him, and at length, in one of the attacks of flushing, he became more abstracted, and fell into a short sleep. On waking he sat up in bed, and then stood up in it, and made various movements with great rapidity, without any consciousness of what he was about. After such a paroxysm, there followed a short season of rest, in which he came to himself, but without any recollection of what had been done in the paroxysm. After the rest, came again an attack, followed again by remission, and so it went on. When I saw him he was quiet, had increased heat and redness of the face, slow pulse, scarcely sixty in the minute, and the individual beats unequal. He was unconscious, but when roused, he came to himself, and recognised the bystanders and me also. The eyes were fixed and brilliant, the urine pale and scanty, abdomen retracted, no stool the past day. No desire for food or drink. In former years he had often suffered from copious bleeding of the nose, and more lately from various eruptions on the skin. His mother I had frequently treated for hæmoptysis, and she had first come under my care as a hopeless case. His father died suddenly in a mad-house. The patient received Crocus: of the pure tincture twelve drops in about four ounces of water, to be taken in six doses, one every two hours. The same remedy was continued for the four following days, only seldom repeated, because the condition of the patient was materially improved on the next day. After the four days all functions were again normal. Also since that time the disorder has not returned, and the boy has not been again ill up to the present day.

#### VIII.

On the 14th of March, 1844, I was sent for to a puerperal female who had been de-

livered the day before. The after-pains and the great hemorrhage and prostration of strength had excited apprehension. She complained of the sensation of inward heat and anxiety. The pulse was feeble and intermittent, and slightly increased in frequency. Fœtid odor of the mouth and perspiration, tongue moist and dirty, coated in the middle, frequent eructation, bowels torpid. She received twelve drops of the tincture of Crocus in about four ounces of water, of which two table-spoonfuls were to be taken every hour. Next day she was quite well, and afterwards suffered no further inconvenience.

## IX.

A hemorrhoidal subject, about fifty years of age, who had formerly been operated on for degenerated hemorrhoidal excrescences, and whom I had afterwards once treated for inflamed piles, suffered thereupon from occasional icteric symptoms. There followed upon that a disorder of a peculiar character, of which the following were the chief symptoms:—Fulness and distension of the stomach; eructation and rancid heart-burn; nausea, and at length straining vomiting of variously-degenerated fluids; fine cutting pain, beginning in the region of the heart, then spreading to the region of the stomach and fixing there; abdomen retracted, no stool during the attack, and clysters do not act well, and any artificial evacuation of the bowels affords no relief; pulse slow, seldom above sixty, and intermittent; as also the beat of the heart. Auscultation and percussion show no trace of any organic disease of the heart. At the height of the attack, the patient is seized with such difficulty of breathing that he is scarcely able to contain himself.

I have already treated this state in the same patient pretty frequently, and have had much trouble with it. Many of the medicines employed, such as China, Arnica, Ipec, Digitalis, Colchicum, Belladonna, Laurocerasus, Hyosciamus, Aurum, &c., have left me more or less in the lurch, and afforded, on the whole, only slight and tardy aid, so that this state has several times reached a dangerous height, and lasted above a week.

Crocus, in the dose of one to three drops of the concentrated tincture every hour, or two hours, is the medicine which alone has hitherto quickly and certainly relieved the attack. And this has happened several times visibly, so speedily, that not only after it has the attack ceased, but immediately the appetite has returned, and the digestion and action of the bowels been restored. The first stools are generally pappy, and of a yellow color.

*Remark.*—I have not unfrequently cured

obstinate cases of constipation with Crocus. Their fundamental character is indicated incidentally by the foregoing case, and it is, perhaps, sufficient to add, that those kinds of constipation which depend on disorders of the portal system of veins, such as often happens in new-born children, frequently find their radical cure in Crocus. In such cases, at least in new-born children, I have often seen the exhibition of one drop of the pure tincture of Crocus several times a day, followed by natural evacuations, and have never observed any bad effects from it.

## X.—DIGITALIS.

Josephine N., aged 30, had been ill for about two months, of the following symptoms, which had gradually become worse:—Want of appetite; inconvenience after eating even a small quantity of the lightest food; distension and tenderness of the region of the stomach; wandering pains in different parts of the extremities, which at length increased to a stiffness, painful, particularly on motion; gradual decline of the strength and natural heat of the body; restless, unrefreshing sleep; great depression of mind and despondency. The painful stiffness of the limbs went away after a time; but, on the other hand, intense jaundice spread over the whole body. The region of the stomach became more tender and distended; therewith, disgust for food and frequent nausea, retching, and even vomiting of small quantities of tasteless watery fluid; distended abdomen, and bowels confined for days in succession; urine scanty and dark colored; great prostration of strength, and coldness of the body; melancholy, and disposition to shed tears.

I had visited her on the 8th of February, and given China in the tincture, till the 12th, without any good effect. On this day I gave Digitalis, in the dose of four drops of the concentrated tincture, seven times in the course of twenty-four hours. Thereupon she became sick and inclined to vomit; nevertheless, I let her continue the medicine till the 16th, in the same dose and intervals of repetition. Even by the 14th, improvement had manifested itself, and on the 16th there was desire for food and decline of the jaundice; the urine already almost of its natural color again; the region of the stomach no longer distended and tender; the abdomen likewise no longer distended. On the other hand, there appeared again at times wandering pains in various parts of the body, and a feeling of painful stiffness in the shoulders. The bodily strength increases, and the disposition to weep has ceased, and the patient is even cheerful. The Digitalis was continued till the 20th, in the dose of three drops five times a day.

From this time there was no longer a trace of jaundice. I did not see the patient again till the end of March, and her state of health was then and had been in every way quite good.

**XI.—HYDRARGYRUM MURIATICUM MITE—  
CALOMEL. (Two Cases.)**

The patient was a girl of four years old, of pale and delicate appearance, with a swelled belly, and often suffered from irregularity of the bowels. Towards the end of November, 1844, she was attacked with diarrhœa, and, according to the report of the father, it was at first accompanied with violent fever, but afterwards of a slow character. The evacuations are preceded by pains which were at first violent, but now milder; the evacuated matters are chiefly white and flocculent. She passes from three to six motions daily. The urine is scanty and turbid, with a white mucous sediment. The child is shy and cross, and disinclined to play. On the 18th of December, she got from me Hyd. mur. mite, in the dose of three grains of the 1st trituration (5 gr. to 300), five times a day: continued for the four following days, three times a day.

On the 20th, the diarrhœa had ceased, and there was no stool at all till the 23d, when it returned, and has continued regular and daily since; the urine has regained its natural appearance, and the patient is in other respects quite well.

**XII.**

A boy of five months old had diarrhœa. His mother was at the time ill of typhus, for which reason the infant had been weaned. The stools are mixed with matters like chopped eggs, acrid, and excoriating the anus, and are passed frequently, with much flatus. The infant is weak and feverish. On the 25th December, I gave Hyd. mur. mite, in the above trituration (three grains), four times a day. Next day the diarrhœa had ceased, and the child was lively and well.

**XIII.—IGNATIA.**

A woman above forty had been ailing for the greater part of the summer of 1844. As she was no friend to physic, she would not have sought medical aid for her complaints, had it not been for the appearances of a new ailment, which excited in her serious apprehensions. This disorder came in paroxysms generally recurring about twice a day, and was of the following description:—An anxiety and disquiet as if she had done something wrong, or as if a great misfortune were about

to happen, so overpowers her, that she can with difficulty refrain from weeping. During this she has oppression of the breathing, but feels distinctly that the oppression begins at the stomach and spreads up into the throat. She is during the time very weak, incapable of work, and disinclined to the company of others. The paroxysm often lasts for hours. She has, besides, no appetite; the bowels are torpid and insufficiently moved, and do not act daily. This irregularity of the bowels always accompanies any illness with her; but on the day that she has no evacuation she always feels much worse, and therefore the action of the bowels is a matter of much moment to her. She has no fever. She first consulted me on the 19th of September, 1844, when these attacks had already troubled her for several weeks.

She got Ignatia: about ten grains of the first trituration—(2-100)—dissolved in four ounces of water, to be taken in five doses in twenty-four hours. The action of this remedy was so strikingly beneficial that she praised it highly at my visit next day, and begged that it might be repeated. It was continued for six or eight days, and by the use of it alone she was freed from her disorder so completely that, after a threatening of it only once on the second and third day, it has never returned since. She also complained no longer of weariness, recovered her looks and appetite and the regularity of the bowels, and, on the whole, her state was so satisfactory that no further medical treatment was required.

[To be Continued.]

**THE BLUNDERS OF PRINTERS.**

PRINTERS by leaving out some and adding other words in a sentence, often make an author say things he never thought of, and on page 152 of this number may be seen an example of another kind of blunder, in which a note intended for the end of an article quoted from the popular record of modern science is placed at the head of that article.



# THE DISSECTOR.

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## CURES WITH MESMERISM.

Cure of long-standing intense Pains and other Sufferings, and extreme Debility, with Mesmerism, after the failure of endless and distressing measures.—By Dr. ELLIOTSON.

TOWARDS the end of October, 1845, I received a visit from Mr. Morgan, of Bedford Row, the gentleman who some years before had so humanely and rationally yielded to the request of a poor woman in Three Cups Yard, behind Bedford Row, that he would apply to me for mesmerism to her child, who was afflicted with insanity, fatuity, dumbness, and prostration, and upon whom he had exhausted all his remedies in vain, and the wonderful mesmeric cure of whom is recorded in the fourth volume of *The Zoist*.<sup>\*</sup> Mr. Morgan's present object was similar. But the rank of the patient for whom he now requested my assistance was very different. She was a young lady residing in Eaton Square, and her father and brother were in Parliament. Some of the most fashionable physicians had been called in. A royal physician in ordinary, and two other royal physicians, had exhausted all their means upon her as fruitlessly as Mr. Morgan had exhausted his upon the poor child in Three Cups Yard. I accordingly met him at her father's house, and found the young lady very pale, sickly and emaciated, so feeble as not to be able to sit upright, and suffering agonies in many parts of her system.

After hearing the history of the disease, I examined her carefully, and finding no sign of structural disease, though some perfectly unfounded fears had been entertained respecting one of her lungs, I declared that no reason appeared why she should not get well, and that mesmerism would probably cure her. According to my custom, I refrained from being so presumptuous as to declare that it would be sure to cure her. Mesmerists should always remember that in a host of cases there may be something inappreciable by our means of investigation

that will baffle all our power, and that the most promising cases may eventually foil us. Medical men, on the other hand, who despise mesmerism, should remember, when mesmerists are so foiled, that they themselves with their *legitimate* (that is the orthodox word) medicine are foiled every day, and every hour of the day if they have an extensive practice, perhaps after prescribing the most painful measures, and that this sad imperfection of medicine and surgery it is that makes patients fly to mesmerism and other abominations. For sick people are circumstanced still like the woman in the gospel nearly 2000 years ago, who "had suffered many things of many physicians, and had spent all that she had, and was nothing bettered, but rather worse."

It was therefore arranged that the young lady should be mesmerised, and Mr. Morgan goodnaturally and liberally offered to operate if I would show him the way. He, however, lived at a great distance, and fancied he produced no effect; and the maid tried and she was thought to produce no more. Seeing that the thing would not be done at all unless I did it, I offered to take the case in hand myself, though I very rarely do unless there is likely to be something peculiarly interesting in the phenomena. I premised that I never had mesmerised professionally, and never would, however high in rank a patient might be, and that if I took the case in hand I must act entirely as a friend. I really pitied the poor sufferer, and had soon discovered that she had every lady-like feeling and habit, and was not only unaffected, but courageous and sincere, straightforward and noble-minded.

The following is the account which she at once cheerfully consented to draw up for me of her case.

"Five years ago, I caught a severe cold, and had a cough which lasted for more than three months, and pulled me down so much that I could hardly make any exertion without feeling so exhausted, depressed and ill,

that at night I was forced to throw myself on the bed and lie down for some time before I could be undressed. After trying a great many remedies without the least benefit, I was obliged to take to my bed and have a blister on my chest; and was relieved for a time; but my nerves became so dreadfully disturbed that I was hysterical, and the least noise affected me painfully. About this time I heard of the sudden death of a great friend in India, and received a shock greater than any one knew, and the recollection of her haunted me day and night. I was continually fainting and had violent hysterical paroxysms. My medical attendants—a neighboring practitioner and a physician, thought that “rousing” would do me good, and ordered me to be “well talked to,” although I was taking stimulants which seemed to excite me more than was proper. The “rousing” seemed only to make me much more worse, so great was my excitement. After a long time I appeared to rally, and was ordered to go out if I could. But I was quite unequal to it, not having left my room for some time, and the merely going down stairs amongst my family was the cause of a relapse so severe that I kept my bed for many weeks. Dreadful head-aches came on with violent bleedings at the nose. Leeches were continually applied behind my ears, and on the temples. The relief from them was very great. Blisters, too, were applied to the nape of my neck; but, though they relieved my head, the agony from their irritation was so great that I could scarcely endure them. A large extent of surface over my spine was raw and discharged exceedingly for some time. Violent hysterical attacks were induced, which sometimes lasted three hours. For them I was literally drenched, sometimes for three hours together, with cold water, thrown at me to “rouse” me. I used to sink down thoroughly exhausted by all I went through I had no rest at night, and my maid was constantly getting up to try to quiet my excited state, and would remain with me for two hours at a time, although really not knowing what to do for me, or how to pacify my truly wretched condition. Everything was tried. I was drenched with medicine of all sorts; but none did any good. Tonics brought on such an inward fever that I was forced to leave them off; my lips became parched and peeled through the fever, which for three weeks was so intense that I lived on nothing but ice water. This state continued for more than six months, sometimes a little better and then again worse. My head-aches were at times so bad that I could bear no noise: any one

walking across my room almost drove me wild, and really at times I knew not what I did, and the subsequent depression was extreme that for days I have felt unable to speak. I got quite disgusted with the medical men who saw me, and I determined to give up all medicine for a time and trust to nature. This I did for many weeks, though obliged to have leeches continually, so as to prevent my head-aches, which notwithstanding were relieved but losing blood. Not getting any better, I was again induced to see a physician, and did see another, who gave me some quieting medicine, which, however, proved of little use. The bleedings from my nose were constant, and the more I bled by leeching the better I felt; but I was always “roused” soon afterwards by being “well talked to,” and the excitement which this produced was quite dreadful, so that I have rolled about my bed like a wild person.

“My illness at times seemed to change; the cough again troubling me, together with great weakness, and my head-aches were being so violent. I was under all sorts of medicine, at times better, and then worse. Violent head-aches came on, if I walked across my room; and at last I was carried from my bed to the sofa, and even this would bring on faintings and hysterical attacks, which would exhaust me for a long while. I continued the leeches for a year, almost every other day, and they still gave me relief, always making me lighter and cooler. They, however, were the only remedy which did me good; but as this plan, of course, could not go on for ever, I now took advice of a third physician, and he forbade all leeching unless nothing else would answer; ordered me mustard baths up to the knees, and gave me steel in an effervescing state. For a time I rallied, but only for a time, and I again began to go back; my head getting worse, and my nose sometimes bursting out bleeding in the night, so that I was quite alarmed, though the relief was great to my heavy head. The tonic medicine I was taking I was obliged to discontinue as fever came on again, with sickness and retching, and at one time continued for a very long period. I was ordered salines, which I took for some time with great benefit. I determined again to do without a doctor, so heartily tired was I of all the remedies that had been tried. My sufferings were so terrible, that I have lain many a day without noticing any one, the tears rolling down my cheeks from agony; yet I got somewhat better again, and tried a shower bath, which proved of service, and I was enabled by degrees to get about my room, and then down

stairs, and to take a drive; but yet could not bear much, and noise still distressed me greatly. Yet on the whole, I was decidedly better, and as the autumn was coming, I was ordered to try change of air, and went to Bath to stay with some friends, and drank the waters. But after a little while they seemed to disagree with me, as I felt continually sick after them and feverish, and had a noise in my head and ears. By the advice of a doctor there, I gave them up. He ordered me to be careful not to over-exert myself, and prescribed salines. I unfortunately caught cold, and was again troubled with cough, which reduced me sadly, and I got into such a weak state, that I felt illness was again creeping over me; and so bad did I become, that I took to my bed and never stirred from it for a month, except to have my bed made, and some days not even that, and my wretched head became most troublesome. Leeches were again applied continually, always with a great relief; but I became so ill, that it was an exertion to turn in my bed, and my spine began to cause me such pain that, when I attempted to walk from my bed to the sofa, I was in misery, and at last could not, but used to slide across the bed to it. Unfortunately, the house could not be kept as quietly as I wished, and, after much suffering, I was moved up to London. The journey was the cause of great misery to me; I for a week after never moved out of my bed. The room was kept dark, as light brought on severe head-ache; if I were the least roused, the excitement was dreadful. Some days have passed when I have not even turned in my bed, and I felt so ill, as if I really were dying gradually. Ice was applied to my head, which had been shaved, and cold lotions also, with relief for a time; but still my sufferings I think increased, and nothing but the greatest quiet, and leeches almost every day, give me any relief at last. Often have I clenched my hands and beaten myself about for hours, wild with pain, and then such sobbing fits would attack me, that the bed has shaken under me.

My exhaustion after these attacks was of course great. Still my room was obliged to be darkened all day, so painful was light to me; and if any one ever whispered in my room, it drove me wild; I never spoke or took the least notice, and felt gradually sinking; a kind of exhausted sleep came upon me, which lasted for some time; but I was generally disturbed out of it by some noise, and the frightful state of excitement I was then thrown into, must have been sad to witness. To raise myself in bed was impossible, or even to put my foot to the

ground, as my spine gave me pain up to the head by the attempt. I was again obliged to see a physician, making the fourth, and he ordered me to be kept quiet, but *not too quiet*, as I should otherwise never be able to bear noise; not to have leeches every day, but now and then; he gave me some German waters, and afterwards iron, but I could not continue this for head-ache; and he ordered water to be thrown over my head continually in large quantities, and this relieved me. Again I got better, and was able to be outside of the bed for a little while, then to be set upon the sofa, and by degrees to sit up much longer. Yet I made no further progress, excitement coming on violently if I was talked to for long. As my cough again troubled me, my physician thought there was some internal change going on, and examined my chest. He said the right side, or rather lung, was sore and delicate, and that I must be careful, and, as soon as I could, be moved away for change of air; and he recommended Norwood. So I went there and remained two months, my cough continuing, and incessant, and I expectorated much; nothing quieted the cough, and it wore me down greatly, as well as distressing my head. As the winter was approaching, I returned home, not worse, but yet not better. I was often obliged to keep in bed, my spine causing me great suffering, particularly from the coughing, which distressed my head as well. My physician ordered me an opium plaster down the spine to soothe me, but I could not bear it; the irritation it occasioned was so bad that I was obliged to have it torn off as quickly as possible, and my cough and head-ache still went on for more than fourteen months, and I expectorated a great deal. My physician said it was useless his coming, as he could do nothing for me, and directed us to send for him if I got worse. Thus I remained for a long time, some days better, some days worse. The whole spring and summer passed away, and I was unable to move, except from the bed to the sofa, and even that was a trouble to me. I sighed for the fresh air, and felt it would do me good if I could breathe it, but I was unable, as every exertion brought on great pain to my spine and head. The winter was advancing, and I was still so ill, I again saw the physician who had last attended me; he advised me by all means to be moved, in as easy a manner as I could, to some quiet house about the Regent's Park, as the noise of our own house was too much for me. In fact, I could no longer bear it, my nerves were in such a sensitive state. My nights were dreadful; often my maid was up with me half the night, to soothe my wretched

state, and the following day I was so ill, I could bear no one coming near me. In February I was moved to St. John's Wood, where I remained nine months. The quiet was most grateful to me, though at first I was obliged to have recourse to leeches almost every day, and was getting so bad that I really thought my mind must go. For hours together I was like a wild person, particularly if disturbed after the leeches; my head got so weak that I could not bear any noise. I felt that the relief from the leeches was still very great, yet they seemed to be gradually injuring me. I saw my physician again, who said I must not have them, though he knew not what to do for me: he thought I could rouse and exert myself more. But I had not the power: I really could not. I asked him if he thought a seton would benefit me; he said perhaps it might, but he could not say, and advised me, if I wished it, to try it. To have the prospect of any relief was so delightful, that I determined to try the seton, and by his orders had one put in the nape of my neck. This was kept open a year, and for a longer time than anything else did me much good; my head-aches were wonderfully relieved, and by degrees I left my bed, and was able to move about my room, and at last to get down stairs, a thing I had not done for many months, and as the summer advanced, I got out into the garden, but could not walk; and driving was still painful to my spine and head. Yet I was better, for I was able to see people at times, but was still obliged to be quiet, as excitement and great exhaustion were generally the result, if I was long talked to. I was wretchedly thin, and my cough was again becoming troublesome and weary to me. As the winter was approaching, my own medical man (who had attended all our family for years) induced me to try a winter at Hastings, for I felt the cold so much; and in October I was moved there in a bed-carriage, by railroad. After having been there some time, I began to feel better, and when it was warm, I went out for half an hour in the Bath chair. But the exertion was very great, and I could not walk at all. I, however, remained away from home for six months, and was much better till within two months of my leaving, when I began to feel ill again, but my complaint seemed now to have assumed a different form. My head-aches were very bad, though my seton discharged very well. A sense of heavy weight oppressed me after eating, and a kind of torpid state came over me, so that I felt I could not move; and although I craved for food I have been obliged to abstain, so wretched was the state which eating caused me. I

used to feel in a kind of dreamy existence directly after eating, with a wish to sleep, but if I did it was most disagreeable. My head felt heavy, and I was quite unable to move for a long time, and had a great deal of fever, and was obliged to remain in my bed, for I could not move about the room without violent pains in my back; the seton did not discharge as it used, and it gave me great pain. I sent up to my physician in town to know what to do; he said I ought by all means to return to town, as I would not have advice at Hastings; and as soon as I was able, I did, in a bed-carriage. The next day my doctor saw me, he thought me extremely ill; I was miserably thin; he said my seton had literally worn itself out, and that it must be closed up, as it was only injuring me: it had been kept open a year. He gave me some medicine, as I was in such a feverish state, and had a continual gnawing pain under my right shoulder; for the latter he dry-cupped me. He tried many things, and thought I got better for a little while under these remedies, yet it was only for a little while I was better. Taking little in the way of food, I was greatly reduced; I could take nothing but light puddings, and sometimes not them, for I was more troubled by sickness after eating, and pain at the pit of my stomach; I was obliged to go many hours without food, although I longed for it, as I could not keep in my stomach what I took, and I felt so much easier and lighter when I took nothing. But of course this would not continue. I tried various remedies as my stomach was so irritable, and I was obliged to take powerful aperients. I continued in a most wretched state, never leaving my bed-room throughout the beautiful spring and part of the summer months; I was only able to lie on my sofa, and sighed for fresh air, I felt so weak and sinking. Nothing, however, seemed to do me any good, and I was heartily sick of all the doctors; I gave up all remedies and resolved to trust to nature again, and, as I at times felt easier, I resolved to try if a drive for a little while would benefit me. The air felt indeed truly delightful, but my head suffered much from the motion of the carriage, and I therefore went out but twice or thrice, and began to get so ill that I knew not what to do. My limbs became affected with violent darting and gnawing pains; I was in my bed for days, had no rest at night, and was completely worn out.

"Often has the pain caused me to sob for many an hour, and I tried morphine to give me sleep; but it was of no avail. I got so bad and irritable I could not bear myself, and felt as if I must gradually die, at times, from

my dreadful pains and excitable state. I therefore determined to see our own family medical attendant, who had always been most kind to me, though from living at a distance, he had not attended me through the illness. He advised me to see some other physician: and about this time I was urged much to think of mesmerism, which I laughed at and ridiculed; and I said, 'I would not hear of it, as it was all nonsense: after four years of such illness, and after every thing had been tried, to think of mesmerism doing good was absurd; and I did not like it or believe in it.' I however heard all that was said, and a book was sent me with the case of a lady who had been ill for fifteen years, and had tried everything, and was told she must die, when she heard of mesmerism and tried it, and was cured. Yet, though all this surprised me very much, I would not listen to being mesmerised. I asked the opinion of our family medical attendant, and he said it was a thing that must be left entirely to my own decision; he had seen a remarkable case of a child, who had been cured by it; and, though he did not himself understand it, he would, whenever I wished, call on Dr. Elliotson, and ask him to see me. After thinking over it a long time, I determined to see Dr. Elliotson, and ask whether he thought it might in some degree alleviate my sufferings, although I had no faith in it, and felt nothing now would do good. My doctor called on Dr. Elliotson, and told him of my case, and how I had suffered and was still suffering; also that one physician had said my right lung was diseased. Dr. Elliotson said he must see me first to judge for himself; he had known mesmerism work wonders where everything had failed, and as I so much wanted to be soothed and to obtain rest, he did not see why it should not be tried. Dr. Elliotson came, and after examining my chest very carefully with the stethoscope, told me there was no disease anywhere about the lungs; that my cough was entirely from nervous irritation of the air passages; and, after some farther examination, he began to mesmerise me. I shall never forget the effect it had on me the first day, it was so dreadful; I was all the time in a wretched state of weakness, and could not sit up on the sofa without being bent double. As he made the passes, I became most restless and started up from the sofa, so that my own doctor, Dr. Elliotson, and my maid, were obliged to hold me to keep me quiet. This continued for some time, and at last, after great patience on Dr. Elliotson's part, he got me quiet, and I burst into a violent fit of sobbing and was relieved. Dr. Elliotson remained with me

nearly two hours, and was most kind. After trying to cheer me up, he left me, and desired I might be kept very quiet, saying he would see me the next day.

"My state after he left me was most dreadful. I was again seized with violent hysterics, jumped up off the sofa, and became quite unmanageable. My maid was forced to hold me to keep me quiet; and after an attack of two hours, I sunk down perfectly exhausted, and went to bed. But no sleep came upon me; and the next day, though I was up, I felt so strange and ill, that I wished I had never tried mesmerism, it so completely seemed to have routed (I may say) and disturbed my whole system. However, Dr. Elliotson persevered every day for nine months, half an hour at a time. His great kindness, patience and perseverance I shall never forget. He was always the same, and unlike all my other medical men, who had seemed to imagine I might get well if I tried; just as if I would not if I could, and I have often cried for hours to be what I once was. And really I used to wonder how he could go on from day to day, for there were no visible effect for more than three months. Certainly after the first two or three days I began to be much quieter while he was mesmerising me, and at last I lay quite quiet, and felt no wish to move, and the cough left me. He encouraged me, by telling me it might be many days, perhaps many weeks, before sleep came on, but he thought that when it did, my relief would be great. I still had no faith in mesmerism, and often, after he has left me, have I thought to myself what nonsense it was going on with it, and have longed to ask him to give me up. But my maid persuaded me to persevere, as she thought, though it was very slight, she could see an improvement working in me, and that I was calmer, and not so irritable, as when Dr. Elliotson first saw me.

"I was taking violent aperient medicine every night, as I was obliged. He told me I must begin to leave it off by degrees, it was injuring me greatly, and that mesmerism would not take effect as long as I did. So by degrees I left it off, and at the end of two months I began to take only a dessert spoonful of castor oil, and that only once in five days; and at last a teaspoonful was sufficient, and that once in ten days. I now at the end of three months began to feel a change; something different seemed really now to be taking place. I could sit up better on my sofa, and my appearance got better, not so ghastly and worn; and though the improvement was slight, still I felt something which I had never before experienced, and Dr. Elliotson himself began to think I

was really mending. Every day I became quieter; my head was better, and my limbs also. He ordered my maid to mesmerise my limbs at night, to ease the pains; and I obtained relief. My rest at night improved; nightmare, that I used to be horribly subject to, entirely left me; and I felt I was getting on.

"When Dr. Elliotson first attended me, I was continually in bed; but gradually I was able to leave it oftener and longer: every day for a week or fortnight together, and so on, until I seldom kept it for a whole day.—Of course, at times I was not so well; but when I think of the improvement that took place, I am thunderstruck. My depression was not nearly so great, and I could sit in an easy chair for some time, and felt lighter. Formerly I would be for hours totally unable to speak, and so depressed that the tears used to roll down my cheeks from the state of exhaustion and suffering that was upon me; and no one knows how utterly wretched I have been. All this had left me; and when mesmerism had been tried for four or five months, I began to feel a different creature. The spring too was fast approaching, and Dr. Elliotson allowed me to go out for a drive for half an hour. Though I was carried up and down stairs, the exertion was very great to me, but I persevered by his directions, only being allowed to go out at first once a week, thence twice, and so on to every day. The air indeed was delicious, though my exhaustion was very great; but nevertheless I bore it wonderfully well, and by degrees walked down stairs—a thing I had not done for many months before he first saw me; and after a time I walked up slowly as well as down, and next was able to drive to Kensington Gardens in the morning, and walk for ten minutes, and gradually up to half an hour.

"Mesmerism now began to take great effect, and I began to believe in it most *truly*. A sensation of torpidity came over me, so that I felt I could not move off the sofa, even if any one had attempted to kick the door down in order to get into my room (as my maid always locked the door after Dr. Elliotson left, that no one might disturb me) I used sometimes to remain in this stupified state for two hours, feeling more like a person, I should think, who was *dead drunk*; when the effects went off, I used to get off the sofa, and I shall never forget my face on looking at it; I was so altered, just like a tipsy person. But by remaining quiet for some time, all this went off, and in the after part of the day I felt as if I were quite well; so well and exhilarated I could do anything, and have done too much for my own strength.

Indeed, my sister happening one evening to see me from a window *pacing* up and down my room, could not believe it was I, and looked twice to convince herself: so surprised was she after seeing me like a dead person caring for nought so long, that she could not comprehend it. No one indeed can tell what a truly happy and blessed relief was now upon me. I never felt such an exhilarated feeling as from the effects of mesmerism. I lost all nervous excitement; my whole appearance was improved; I could read now a little and see more people without suffering, and began to feel as if I were getting like my own self. Sleep came gradually upon me, so that often after Dr. Elliotson had left me I have slept unknowingly for more than half an hour, and the *refreshment afterwards was like I know not what*, and did me more good than two hours common sleep. I used to wake up wondering what had happened and where I was, and was not aware my maid had left the room; and yet formerly, not even a person slightly whispering or working with a needle could be allowed in my room, so great was my agony from the noise. In fact mesmerism was working wonders, and I was obliged to ask Dr. Elliotson to *diminish* the time, which he did to twenty minutes, as the effect was so very great that I could not recover for hours from the stupified state. He gradually decreased it to fifteen minutes, and then to ten. Even this now was becoming too overpowering, and he tried five minutes, which was enough; till at last three minutes did; and as he was going to Switzerland in September, he advised me to leave it off, and not be mesmerised unless I felt ill. He had shewn my maid how to do it, and therefore I could always be mesmerised if necessary. I began now to get about like any other being. I never took during the whole nine months any medicine beyond aperients, and those less and less; I took but little nourishment, and only cold water and light puddings, and often not them; so that really I may say mesmerism was my only remedy.

"I can never cease to look back with feelings of gratitude to Dr. Elliotson for his great thought, kindness and patience; and what I feel at my wonderful recovery it is impossible to express; indeed I sometimes fancy I am dreaming now, so strange is it to be well and about. I thought if mesmerism could even quiet my wretched state it would be a blessing, but certainly never expected to be as well as ever, and more active than ever I was; and when I reflect that everything had been tried, and think over all I have gone through, and the heartless speeches that were made concerning my getting

well if I chose to exert myself, whereas I was never one to give way, and was always most active, I am so astonished that I cannot at all comprehend it. I am now quite well, and able to take very long walks, and still drink nothing but water, and take not as much nourishment as many take who do not walk as I do; and when many people who had not seen me for four years meet me, they start back and tell me it must be a resurrection, and that I am a living wonder. Yet, notwithstanding all this, I fear many will not believe mesmerism has cured me, or that there is anything in it. I only wish they could feel the effects I have felt from it, when gradually it worked upon my system, at first so uncomfortably, and then so soothingly. I cannot bear to hear any one for a moment laugh at it, for to it alone, I must maintain, do I owe my recovery. As I said, Dr. Elliotson's great attention and kindness will ever be remembered by me with feelings of the greatest gratitude; and much do I regret I did not try mesmerism long before, for I would all along have given worlds to have recovered, so unlike my former self was I when in this wretched state of suffering."

The painful excitement which the patient in the preceding account describes as the result of my first mesmerising her was possibly only an hysterical emotion at the novelty of the measure and of myself, who had never seen her before. I have known occurrences of this kind in other instances of the first mesmerisation. I recollect that when Dr. Roots and myself allowed Mr. Chenevix in 1828, to make trials of mesmerism on some of our patients in St. Thomas's Hospital, a female, under the care of Dr. Roots for violent hysterical fits, had a sharp one almost as soon as the manipulations were begun the first and only time, Dr. Roots not allowing her or others to be mesmerised again, and pronouncing mesmerism to be injurious, and since then, I understand, not entertaining a more favorable opinion of it. An epileptic young man from Welchpool had a violent epileptic fit when I first saw him and mesmerised him: but he was mesmerised regularly from that day and never had another,—becoming perfectly cured, and his case, with all its interesting mesmeric phenomena, is detailed in the first volume of *The Zoist*. Various catchings, pains, and other annoyances, even fits, when the patient is subject to them, may occur from mesmerism at first, and recur at every mesmerisation for some time; but I have always found these inconveniences gradually and com-

pletely disappear if mesmerism was persevered with.\* Still I cannot assert that these are not results of mesmeric influence independent of emotion.

For mesmerism is a much more remarkable power than many suppose. The mesmerism of one person will affect a certain individual differently from the mesmerism of another; and this even in regard to local effects,—when employed but locally; and where imagination cannot be conceived to have any influence. A variety of persons will, for instance, induce a variety of sensations in a mesmerised knee or arm. Some are much more affected by one mesmeriser than by another. Some derive no benefit from one mesmeriser, and great benefit from another. Also changes occur. I have a patient whom I send to sleep with one pass, or indeed by merely holding my hand for a second before her face, and whom I benefit exceedingly. But such is her susceptibility, that if another, not to say makes a pass before her, but stands or sits near her in her mesmeric state, unless that person is already in the mesmeric state, she is rendered very ill and exhausted. The same occurs in her natural state if any one but myself for a moment attempts to mesmerise her. Formerly a single pass from myself, even when she was in her natural state made her very ill. I had long attended her, and long did not propose mesmerism to her. But the attempt by myself or a young lady who knew her well made her ill for many days; whereas her sister, who was not like us in good health, sent her asleep for many hours twice a day with the greatest benefit. At length her sister did her no good; and my mesmerism was, and now is, not only borne, but productive of the very highest benefit. A mesmeriser therefore need not feel hurt because his mesmerism disagrees with a particular individual. The very person who agrees with his patient may disagree with another. It is wrong to urge perseverance with himself when he does not suit a patient. By making the attempt but slightly, however, and by behaving in the very kindest manner, his mesmerism may at last be borne; and it may be objectionable to make the attempt slightly at distant intervals. It is probable, nay almost certain, that imagination, without the patient being at all aware of it, may contribute to the degree and character of the effects of different mesmerisers in some cases.†

The ultimate augmentation of the power of mesmerism, even to inconvenience, that occurred in the present case, I have noticed

\* *Zoist*, Vol. II., p. 199.

† *Zoist*, Vol. II. p. 49. 52.

in others. It was remarkable in the young gentleman from Welchpool, permanently cured of epilepsy. Daily mesmerism at length produced head-ache, inability to collect his thoughts, flushing and heat of his face; and it was performed but every other day for a week; then every fourth day; then but once a week; and then omitted for good.\* Mary Ann, spoken of in so many *Zoists*,† has been mesmerised daily for epilepsy above four years. The more she was mesmerised the better she was. Finding her improve very little, I not only allowed her to sleep three or four hours every morning at my house, one pass being sufficient for this, but her father always sent her into mesmeric sleep as soon as she was in bed, and this sleep was allowed to expend itself, as it always did in three or four hours, running into ordinary sleep, the proof of which was her always remembering in the mesmeric state the next day all her thoughts and everything else which had occurred during the first three or four hours of her sleep the previous night, and no more. This additional mesmerisation for some time did her good; and if I deepened her coma by laying my hand upon her forehead, this did her good. But at length the additional quantity and the additional degree did her harm; rendered her faint and feeble for perhaps hours. If, in her mesmeric state, she mesmerises any one, or touches for a minute any one in the mesmeric state, so powerful is the effect, that she always has dropped senseless and exhausted. But now, if even another is mesmerised by passes in the same room where she is in the mesmeric state, she drops senseless and exhausted, and her limbs can no longer be stiffened. There is not a spark of affectation or fancy in her. The effects I know to be genuinely mesmeric. I now no longer attribute to fancy the restlessness and faintness which I have seen some persons exhibit when in a room where others were being mesmerised. In Mary Ann I now refrain from producing deep mesmeric coma, and from having her mesmerised more than once a day; and she is decidedly improving. The ultimate power of mesmerism in the young lady whose case forms the subject of this paper, and its gradually increasing production of unpleasant effects, are very remarkable. Could I have induced absolute coma, possibly she would have experienced none of that miserable confused state. But she never went to sleep while I was with her; and I could not deepen her heaviness, for she was made uncomfortable by longer continuance of the down-

ward passes before her face by which I always mesmerised her, or by placing the points of my fingers upon her closed eyes or my hands upon her forehead; and neither metals, nor a very large magnet, nor crystals exerted any power over her. All this holds good with medicines. Some persons are little or not at all affected by a particular drug; some are exquisitely susceptible of its effects; some are affected agreeably, others disagreeably; and in some a complete change will occur. Persons insusceptible, or almost insusceptible, of the effects of a medicine, may become very susceptible of them; and those with whom a particular medicine always did good, or at least agreed, may ultimately find it not merely useless but positively injurious; and there is no more evidence of imagination in the case of mesmerism than of these medicines. Attention to these points, and the adjustment of the force, is no less indispensable in mesmerism than in the exhibition of medicines. The minutest amount of mesmerism may be requisite in a case which once required all the mesmerism that could be bestowed.

Imagination cannot be alleged as the cause of the cure. The patient had strong sense and strong resolution, and a thorough contempt for affectation, fancies, whims, and the desire of sympathy and notice. It was long before she could be induced to try mesmerism; and, long after she began to try it, she continued to regard it as nonsense. She had no opinion of it till, to her surprise, she found herself improving. Exactly in the same way, Rosina, whose charming case is recorded in the second volume of *The Zoist*, submitted to be mesmerised solely to please her father, and regarded it as nonsense till she actually found her fits were less frequent and her illness less after each fit.\* Yet I

\* "She had continued to come to me in obedience to her father, but as she has since told me, still regarded the affair as a piece of folly, not believing that I ever sent her to sleep, and determined not to sleep. She found, however, that her fits were much less frequent, and that she suffered much less after they were over, and this made her begin to think there was something in it; and no wonder, for she had, independently of the mesmeric process and state, but three in eighteen days, each milder than the preceding, and the last without a struggle. The ignorant argument of mesmeric effects being all the result of imagination was absolutely ridiculous in her case. She both despised mesmerism, and defied it; and her intelligence and resolution are of no ordinary amount. But she could resist no longer, and is now as disgusted with those who talk their childish nonsense against the reality and utility of mesmerism, as she was originally with those who believed its truth. Even a little sister who used to run out of the room when her fit began, remarked the improvement in the violence and number of her fits, and said in a week, 'Mother, what a good thing it is you took Rosina to that new Doctor.' The excitement of an attack by the mesmeric process gradually declined."—Vol. II, p. 190.

\* *Zoist*, Vol. I, p. 498.

† Vol. II, pp. 216, 247, 388. Vol. III, pp. 322, 374, 454. Vol. IV, p. 53.



have no doubt that imagination has great influence over mesmeric patients. I feel certain that there is *first* the genuine mesmeric influence transmitted from one person to another, often unconsciously in regard to one or both parties, and even transmissible by the intervention of inanimate substances, and it is perhaps a modification of galvanism, magnetism, and other powers of inanimate matter, which may be fundamentally one and fundamentally the same as that which produces vital phenomena and the mental phenomena of the brain or other mental organs, if others there be. But I am as certain that, *secondly*, imagination, suggestion, emotion, or whatever name we choose to employ, has a frequent share in producing the phenomena; and that, *thirdly*, the mere will of another person very often is able to produce them, though I have never been able to make it even probable in any trials I have made that my will has had any share in producing the phenomena which I have effected by mesmeric means. A very remarkable example of the true mesmeric influence was that of Mr. Henry S. Thompson and a lady, who, being both determined sceptics, resolved to play a trick upon a party. It was arranged that he should make passes and she go to sleep and exhibit phenomena; when to his utter astonishment his passes proved effective, and the lady fell into a true mesmeric coma.\*

The present case affords an additional proof that the common idea of sleep or some other sensible effect being requisite to benefit from mesmerism is unfounded. No sleep nor any sensible effect resulted while yet the cure began and proceeded.†

It exhibits also the necessity for steady and long perseverance in the absence of all prospect of improvement. For three months I was not able to discern any improvement nor any effect. I confess I began to feel a little despair. But I knew how slow are many of nature's results; I knew no reason why I should not succeed; and I went calmly on as I have done in supporting mesmerism against the efforts of nearly all the profession. I have seen some mesmerisers give up a case in a few months, or weeks; or even not persevere if there was no sensible effect of some kind the first or second time of mesmerising. Patients and their friends may be excused such conduct on the score of ignorance; but those who take upon themselves to practise mesmerism should know better.

This case proves the error of a common fancy that mesmerism is the effect of a strong

person upon a weaker; and that the weak are the most susceptible. I have often at once powerfully affected persons of fair strength and health; and very often have persevered a very considerable time day after day without causing any effect with persons of extreme debility, debility being usually attended with irritability which probably resisted the influence.\* While this lady was very weak, I was not aware of any effect; and, as she regained her strength, the power of mesmerism became more and more manifest, and at length became painfully great. So in ordinary medicine, during a severe disease doses are borne and required which disagree as the disease declines, and cannot be borne at all when it ceases. In very low fever and in violent pains, a quantity of wine is taken without inconvenience and with benefit that excites injuriously as the health returns, and we have gradually to lessen the amount.

If this case affords important mesmeric instruction, it furnishes a grave lesson to those medical men who scoff at mesmerism. Here was a fellow-creature of the gentle sex suffering by no fault of her own the severest torments. Several of the most popular practitioners in the highest circles were called in: and no doubt did their best. But to what did their efforts amount? After large expense, and the actual exasperation of all the sufferings by many of their measures, she was in the end just as bad as ever; and I feel convinced that, had nothing been done, she would not have been worse in the long run, and in many respects would have been much better. They practised no better than the humblest general practitioner of the village or the obscure street: no better than any practitioner who lived a thousand years ago. But if they did no better, they did no worse than others would have done. They practised according to the present imperfect state of medical science. Yet I must differ from them in many of their measures. I regret the injunction to excite her and distract her with noise and other harsh measures, while her nerves were all agonizingly sensitive. This practice was the same as ordering a man with an inflamed eye to be exposed to the sun with his eyelids held open, or as pouring brandy into an inflamed stomach. The excessive leeching, the blistering, and strong physic, were all measures which I would not have employed. Neither should I for a moment have hinted to her or any one so unjust an opinion as that she could prevent her sufferings and would get well when she thought proper. Such views appear to me erroneous in these diseases of

\* See Zolst. Vol. I., p. 73, 165, 334. Vol. II., p. 197.  
† Zolst. Vol. I., p. 128; Vol. III., p. 302.

the nervous system. The exquisite sensitiveness of various nerves, and the mental agony in these cases, is just as real as the pain of pleurisy. The various morbid sensations of different nerves in these cases, as well as occasional strange inclinations and thoughts which we witness, are all real.—The inferences of danger which patients in nervous diseases draw from their sufferings are unfounded: but their sufferings are as real as they represent. They may not be sensitive to noise and other things at one moment, and be very sensitive at another, perhaps the next, moment: but it is just the same with the states of the nerves that cause the shootings of *tic douloureux* or convulsions. A patient may be free from these one moment and agonized or distorted the next. Nervous patients are too often very cruelly treated. When not very bad they may help themselves by exertion; just as a madman near sanity may by some argument addressed to him shake off his diseased idea: but they can no more by effort cure themselves of their agonies while in full force than the inmates of Bedlam can be cured by reasoning.\*

Some medical men behave unworthily to their patients when no better; stoutly declaring that they are better, and attempting to bully them into a confession that they are better, while the poor creatures feel and know they are no better: and I have witnessed this both when the object was to continue attendance upon a private patient, and in hospital practice from unwillingness to admit the imperfection of their art,—and even when the patients had no nervous affection and were steadily approaching the grave.

What is the grave lesson to medical men in the innumerable cases which they know by woful experience they cannot cure, or in which, though they have hoped to effect a cure, they are baffled?

I have always urged upon the mesmeric world and upon patients that mesmerism should be regarded as a holy thing—a thing involving the most solemn responsibilities of striving with all simplicity and earnestness of purpose to benefit our fellow-creatures, and of regarding ourselves as placed in a sacred relation, demanding perfect integrity and perfect purity of feeling. The person who holds not these convictions, and acts not entirely upon them, is unfit to mesmerise, and should be detested and openly discountenanced by us all: equally with the medical person who forgets his solemn responsibilities in the confidential intercourse

which his profession allows him. But I must urge upon the medical world and all those who may have influence over the treatment of invalids, that they likewise have a solemn responsibility in regard to mesmerism. Here is a *simple* and *innocent* method, alleged by very numerous persons of respectability to have effected very numerous cures of diseases which had proved too stubborn for all the established methods of medicine and surgery in the hands of the most eminent as well as of merely popular practitioners, and to have procured alleviation and comfort in incurable cases when the established methods had done not even this. Such endless cases are fully detailed with every personal reference which can be desired. No facts in medical records are more satisfactorily presented. The falsehoods of those who have previously attended the patients in vain, the shocking slanders of these men and others leagued with them, are too gross to deceive: and the previous notoriety of the cases, and the living testimony of the patients with the full-blown proofs of cure in their countenances and persons, render impotent every attempt to set aside the facts. Nearly all medical men profess to be Christians: many vent religious sentiments in season and out of season, in their lectures and their publications, are seen regularly at church, place religious books about the rooms into which their patients are shown, and unsparingly pronounce those of their profession, whom from merely some bad feeling they dislike, to be irreligious, infidels, even atheists,\* or something else, the reproach of which they know is calculated to do injury to the best man in the present ignorant and immoral state of society. And yet these virtuous men forget that religion is a farce, if it values people for their mere opinion upon mysteries, supernatural, incomprehensible matters, such opinions not being the result of proof, usually springing from the feelings and external influences, and requiring infinitely more knowledge and hard thought than fall to the lot of one person in ten thousand; if it does not penetrate the whole frame, influence our very smallest actions, and engender perfect good will and commiseration for those whom we think in error and that modesty which renders us aware of our scanty amount of knowledge and our disposition to proud injustice; and if it does not render us anxious to learn all that can be taught us which is calculated to enable us to be more useful to our fellow-creatures. I am compelled, there-

\* My readers will remember the absurdities of Mrs. Chlck, who considered that poor Mrs. Dombey had only to "make an effort," and actually perished for want of having made "an effort."

\* Not only were the terms infidel and atheist bestowed upon Newton and Locke, but Christ himself is in the list of Atheists published in the *Dictionnaire des Athées*.

fore, to regard those professing medical Christians who, while gravely praying and singing in the sight of men at church, refuse to examine into the facts of mesmerism, refuse to go and witness them and experiment for themselves, and insanely declare they would not believe the facts if they witnessed them, to be such as Christ were he on earth again would inveigh against with all severity as he did against the hypocrites of old; and to be most immoral and unrighteous, indulging bad passions while calling themselves miserable sinners and bestowing all sorts of fine expressions upon the object of their worship and pretending reverence for his precepts of humility, justice and mercy.

Had the medical attendants of this young lady made themselves acquainted with mesmerism, and not through unfortunate prejudice remained behind this knowledge of the day, they would have recommended mesmerism in her case, and spared her years of suffering from both the disease and the means employed.

By mentioning the name of one medical man, her residence, and a circumstance or two of her family, I have put it in the power of all her friends to recognize the case and given all the proofs of authenticity which the world can desire. But though I have not given her full name, she nobly gave me permission to print it: and I cannot refrain, though without permission, to terminate this account with the note which accompanied the history, and which displays the truthfulness, kindness, modesty and courageous independence, that, when combined, render the female character so beautiful.—*Zoist*.

"Dear Doctor Elliotson:—

"I have sent you my case, which I trust you will be able to make out, and let me know if it is as you wish. I think I have done it as clearly as I can, and all of it is as true as it can be; indeed I have not said half what my sufferings were, but I do think I have said enough. If my name would be of any advantage to you, pray by all means put it in, as I feel I cannot be sufficiently grateful to you for all your kindness, &c., and I think such a recovery as mine deserves being made public, though of course I do not wish to make myself conspicuous.

"Yours sincerely,

"Eaton Square, "E—— B——.

"June 1st, 1847."

*An Instance of Clairvoyance independent of Mesmerism.*

COMMUNICATED BY DR. ELLIOTSON.

FROM my early demonstrations of mesmerism in University College Hospital to the present time, I have never ceased to remind the world that nothing is produced in the mesmeric state that does not occur spontaneously and independently of it. I have been favored with the following account from a friend.

J. ELLIOTSON.

The anecdotes relative to the extraordinary prophetic power possessed by a Brahmin of Bombay are extracted from the "Oriental Memoirs" of James Forbes, Esq., of whom a slight account is prefixed; as a relation so extraordinary requires every proof that the relator is a person on whose veracity we may rely.

The prospective power of the Brahmin is a remarkable contrast to the retrospective displayed by Zschokke. H. S.

James Forbes, Esq., author of "Oriental Memoirs," Member of the Royal and Antiquarian Societies, and of the Arcadian at Rome, lineally descended from the Earls of Granard, was born in London in May, 1749. He was educated at Hadley by the Rev. David Garron. Before the age of sixteen he obtained an appointment to Bombay. After having filled several important situations in different parts of India, with equal talent, honor, and integrity, he returned to England in 1784. In 1787 he married the daughter of J. Gayland, Esq., by whom he had one daughter, married to the Count de Montalambert, peer of France. He was a man of ardent piety, unbounded charity, and universal philanthropy, and considerable literary attainments. His drawings of the natural productions of the countries he visited, together with the manuscripts, fill a hundred and fifty folio volumes. He died in 1819, aged 70.

*Extract from Forbes's "Oriental Memoirs."*

\* \* \* \* "These persons (sooth-sayers) abound in all parts of India; but there are among the Brahmins a small number, who seem to differ from all the descriptions of people before mentioned; they appear also perfectly distinct from the fortune-telling Brahmins and pretended astrologers, who, like the gipsy tribe in Europe, are well known in India. Those I now speak of seem to be gifted with a talent possessed only by a very few of the quiet, retired, literary Brahmins. To one of these I shall

now confine myself; he was a man well known to many of my contemporaries in India, and I have occasionally met with him at Bombay, Surat, and Cambay, where I believe he chiefly resided.

"I shall relate three anecdotes in confirmation of the penetrating spirit, preternatural gift, or whatever term may be allowed for the talent which this man possessed. I know that the predictions were made long before the events happened and were literally accomplished.

"On my arrival in Bombay in 1766, Mr. Crommelin, the governor of that settlement, was under orders to relinquish his situation at the beginning of the following year, and then return to England. Mr. Spencer, the second in Council, was appointed his successor in the Bombay government, instead of Mr. Hodges, chief of Surat, who considered it as his right. Mr. Hodges had become acquainted with this Brahmin during his minority in the Company's service.

"This extraordinary character was then a young man, little known to the English, but of great celebrity among the Hindoos and every other description of natives in the western part of the peninsula. The Brahmin expressed an affectionate regard towards him, and, as far as the distinction of religion and caste allowed, the friendship became mutual and disinterested. The Brahmin was always justly considered as a very moral and pious character; and Mr. Hodges was equally well disposed; his Hindoo friend encouraged him to proceed in that virtuous path which would lead him to wealth and honor in this world, and finally conduct him to eternal happiness. To enforce these precepts, he assured him he would gradually rise from the station he then held at Cambay to other residences and inferior chiefships in the Company's service; that he would then succeed to the higher appointment of chief at Tellicherry and Surat, and would close his Indian career by being Governor of Bombay. Mr. Hodges, not being enjoined secrecy, spoke of these Brahminical predictions among his associates and friends, from their very first communication, and their author was generally called Mr. Hodges's Brahmin. These predictions for some years made but little impression on his mind. Afterwards as he successively ascended the gradations in the Company's service, he placed more confidence in his Brahmin, especially when he approached near the pinnacle of ambition, and found himself chief of Surat, the next situation in wealth and honor to the government of Bombay.

"When, therefore, Mr. Spencer was appointed Governor of that settlement, and Mr.

Hodges dismissed from the chiefship of Surat and suspended the service, he sent for his Brahmin, who was then at Pulparra, a sacred village on the banks of the Tappee of which I have already spoken, on a religious visit. Mr. Hodges received him at the chief's garden-house, where he was sitting in the front veranda. He immediately communicated to him the events which had lately taken place to the disappointment of all his hopes and future expectations; and slightly reproached him for a pretended prescience and for having deceived him with false promises. The Brahmin, with an unaltered countenance, as is usual with his tribe on all such occasions, coolly replied, 'You see this veranda, and the apartments to which it leads; Mr. Spencer has reached the portico, but he will not enter the palace; he has set his foot upon the threshold, but he shall not enter into the house. Notwithstanding all appearances to the contrary, you will attain the honors I foretold and fill the high station to which he has been appointed. A dark cloud is before him.'

"This singular prophecy was publicly known at Surat and Bombay; and the truth or falsehood of the Brahmin was the subject of discussion in every company, when an express arrived overland from England to annul Mr. Spencer's appointment, and to invest Mr. Hodges with the government of Bombay. All which accordingly took place. Mr. Spencer embarked for England in the same ship in which I arrived in India in December; and Mr. Crommelin sailed in January, leaving Mr. Hodges in complete possession of the government. It is almost needless to remark the ascendancy of this Brahmin over the mind of Mr. Hodges during the remainder of his life; nor is it to be wondered at, that the new governor undertook no important step without consulting his Brahmin."

The second anecdote relates to the same Brahmin, and was as well known to the inhabitants of Bombay as the former. Mr. Forbes had been on terms of the closest friendship with the parties to whom it relates, from the first day of his landing in India. After stating some circumstances connected with his voyage and the friend to whom he was then introduced and with whom he remained for forty years on the terms of the closest intimacy, he says:—

"The lady sitting at the head of my friend's table when I made my bashful entry, was a widow at the time he married her. Her first husband died when she was very young, leaving two children, a son and a daughter. The latter remained with her mother, the former was sent to England for

education, and at the age of sixteen embarked for Bombay, with the appointment of a writer, some years prior to my arrival there. The ships of that season all reached the island in safety, except the one in which this young gentleman sailed, which at length was deemed a missing vessel, and her safety despaired of. A mother could not so easily give up hope: her usual evening walk was on a sandy beach, forming a bay on the western side of the island, in full view of the ocean. Maternal solicitude frequently cast a longing eye to that quarter where the ships from Europe generally appeared. The shore of that bay was also the place where most of the Hindoos erected the funeral pile and burnt their dead. This ceremony is attended by Brahmins, and Mr. Hodges's Brahmin, then at Bombay, was occasionally among them. Observing the mother's anxiety, he asked her the cause; the lady being a native of India, and well knowing his character, inquired in his own language why a man so extraordinarily gifted, should be ignorant of the cause of her tender solicitude. The Brahmin was affected, and said, "I do know the reason of your sorrow; your son lives: the ship will soon arrive in safety, but you will never more behold him." She immediately mentioned this conversation to her friends. A signal was made not long after for a ship from Europe: on the pilot reaching her, his private signal indicated the missing ship: boats were sent off to bring the passengers on shore. The expected son was not forgotten; his mother's friends went on board, and were informed that he had remained at the Brazils, where the ship having been long detained for repair, the Jesuits converted this promising youth to the Church of Rome. Instead, therefore, of conducting him to his expecting parent, they only delivered her letters, replete with affectionate exhortations and entreaties that she would follow his example, and enter the true church. A mother's disappointment is easier to conceive than describe. Her son continued at Rio de Janeiro, and occasionally wrote to her, until the suppression of the Jesuits in the pontificate of Clement the 14th, on which occasion, with many other members of that society, he was sent from South America to the prisons of Portugal, and no more heard of.

"The unfortunate mother came to England some years afterwards with her husband and only daughter, who was married, and died soon after her arrival. This was a stroke her fond mother was little able to sustain; a bereavement which seemed to admit of no consolation. The downy wings of time, the balmy comforts of religion, aided

by every effort of an affectionate husband, were of no avail in extricating her from a state of apathy and despair.

"Not long after this event, an intimate friend of the family having remitted a considerable sum of money from India by bills on Portugal, went to Lisbon to recover them. Walking near a prison in that city, he was supplicated for charity by a voice from a subterranean gate, and being addressed in English made it the more impressive. Not content with affording transient relief, he entered into conversation with the prisoner, and found he was the long lost son of his disconsolate mother. The intelligence was immediately conveyed to England, and tenderly communicated to his sorrowing parent, with the addition that her husband had already remitted money to Lisbon, and exerted such means for his deliverance that there could be no doubt of his speedy restoration to her maternal arms. This news shed a momentary gleam of joy on her countenance, but it was soon succeeded by renewed pangs of sorrow, and a continued exclamation of "The Brahmin! the Brahmin!"

"The friend at Lisbon, when all was happily accomplished, lost no time in informing her son that his mother lived, was married to a gentleman of fortune and respectability, who was waiting to welcome him to their parental roof; and their interest and liberality had procured his liberty, which he was the happy instrument of effecting, and was then come to conduct him from a scene of misery to life, and light, and joy! Although the communication was made in the most considerate manner, he scarcely believed the reality of his emancipation from those dreary walls, where he had for years been excluded from the light of the sun and the fresh air: for 'hope deferred maketh the heart sick.' The sudden transition from hopeless despair in the dungeon's gloom, to the sight of the sun, the fanning of the breeze, and the sympathy of friendships, were too much for his emaciated frame; he faintly uttered the effusions of a grateful heart, and expired!

"Thus was the Brahmin's prediction to his mother, uttered full thirty years before, completely fulfilled!

"The last anecdote I shall relate respecting this man is very short. Some months previous to my first leaving India, a gentleman and his wife arrived from England at Bombay. He, having been appointed to a lucrative situation at Surat, proceeded thither at an early opportunity, leaving his wife in a friend's family until he should have procured a house, and made suitable provision for her reception at Surat. They were both young and had an only child. In a few weeks she

followed him to Surat. The evening before she embarked, sitting in a mixed company of gentlemen and ladies, anticipating her approaching happiness, the same Brahmin came into the verandah, with the gentleman of the house, who was high in station at Bombay. He introduced him to the company, and in a sort of jest asked him to tell the destiny of the happy fair one, lately arrived from Europe. To the surprise of the whole company, and particularly so to the object of the inquiry, he gave her a penetrating and compassionate look; and, after a pause, said to the gentleman in the Hindoo language, 'Her cup of felicity is full but evanescent! A bitter potion awaits her, for which she must prepare!' Her husband had written that he should come in a barge to Surat bar, to accompany her on shore. He did not appear, but a friend of mine went on board to announce to her his dangerous illness: he was then in the last paroxysm of a fever, and expired in her arms! I came home a passenger in the same ship with the widow, and another lady who endeavored to alleviate her sorrow by every tender assiduity. The name of a Brahmin was never mentioned at table, nor any thing relating to Hindoo astrology. The anniversary of her husband's death happened during the voyage, and was indeed a day of woe."—*Zoust*.

## CURES OF NEURALGIA

Of various parts, After Pains, Abscess, Ophthalmia, acute Rheumatism, Deafness, and an instance of Prevision, being a few Cases selected from Mr. Parker's Mesmeric Experience during the last eighteen months. By Mr. John B. PARKER, Surgeon, Exeter.

### I. Neuralgia of the Face.

Miss ——— had suffered from tic douloureux for six years, during which time she had tried all the well-known remedies without any marked benefit; besides having many of her teeth extracted. On my first visit I found her in the greatest agony; the act of speaking aggravated her suffering so much, that she could with very great difficulty articulate two words in succession, and this occasioned great distortion of countenance. Six days mesmeric treatment quite relieved her from pain. During the past 14 months she has experienced two slight returns of the pain: on each occasion the complaint was removed by one mesmeric sitting. She is now quite well.

### II. Neuralgia.

Mr. Davidge, Milk street, Exeter, had suffered very severely from tic douloureux

for several years. The various remedies recommended for such cases having entirely failed, mesmerism succeeded in relieving him the first application, and in five days he was able to attend to his business as usual.

### III. Neuralgia of the Hip.

Miss ——— having for five months suffered much pain about the hip, so that she could with difficulty and in much pain walk across the room, consulted her ordinary medical attendant who pronounced it a hip complaint. The parents having heard of many of my mesmeric cures, sent for me; when I recommended the mother to mesmerise the daughter. In five days she was quite well and able to walk three miles, and she has remained well to this, now 12 months since.

### IV. Abscess of the Lachrymal Sac.

The sister of this young lady had been suffering from an abscess in the lachrymal sac for 18 months, accompanied with very distressing pains over the orbit and cheek. She had consulted several eminent surgeons in London who advised a pin to be worn in the lachrymal duct. Leeches had been previously applied, and suppuration of the leech bites had invariably followed. Mesmeric treatment was had recourse to, and in three weeks all the distressing symptoms subsided.

### V. Prevision of Cure.

A lady had a large tumour of the left ovary of nine years duration which has been completely removed by the application of leeches to the os uteri. This treatment had been had recourse to by myself with very decided benefit before she had ever been mesmerised; but in her mesmeric sleep-waking her intromission was so correct as to tell me how many applications of leeches would be necessary to remove the whole of the tumour; and her prevision has been most truly verified. The tumour of the side was so large as to cause the trunk to be swerved on one side to such an extent as to produce a very visible distortion of the spine.

### VI. Removal of After Pains.

April 13, 1847, Mrs. C. was delivered of her fifth child, after a natural and short labor, at eight in the morning. The after pains were very violent and I ordered her several doses of morphine and mesmerism. The morphine was taken during the day and through the night. On my visit in the

morning, I found her in great distress—the pains constant and very violent. The mesmerism had been omitted. She was then mesmerised in my presence, and in twenty minutes the pains ceased. I requested the operation to be repeated if the pains returned. On my visit the following morning I found my patient quite delighted with the wonderful effects of mesmerism; there had been no necessity to repeat the operation.

#### VII. Neuralgia of the Heart.

Mrs. ———, æt. 42, subject to violent palpitation of the heart with considerable pain of the organ, occasionally attended with faintness and much pain on the inside of the left arm, much aggravated by going up stairs. The pain was quite subdued by the first application of mesmerism, and in three days she was able to resume the active duties of life.

#### VIII. Ophthalmia.

My own little boy, æt. 6, had a very severe attack of catarrhal ophthalmia, for which I ordered leeches, blisters, aperients, soothing and astringent applications, without the least relief. In fact the pain was becoming more and more severe. He was then mesmerised twice daily, and from the first trial, the pain was much subdued, and in the course of a few days all the symptoms were removed and the eyes resumed their natural lustre. Under ordinary circumstances this would have become strumous ophthalmia—the most troublesome complaint at all our ophthalmic institutions. From what I have witnessed in this case, I am quite satisfied that mesmerism is the true remedy for all scrofulous affections, as it is certainly a transfusion of the nervous energy: and as diseases may be transferred from one individual to another without an act of the will, there is much more reason to believe that health may be transferred with the additional assistance of the will, as is exhibited in my daily experience.\*

#### IX. Deafness.

Ann ———, æt. 23, had been very deaf for 3 years, I could scarcely make her understand a single word. She was mesmerised daily for a month, when her hearing was quite restored, and she now hears conversation in the lowest tone.

#### X. Acute Rheumatism.

Mr. C. for three succeeding years has had a severe attack of rheumatic fever: each at-

tack commencing with more violence than its predecessor. April 16, 1847, he sent for me. He was then suffering very acute pains in the whole system. I had bled him during the former attacks as well as in this. In the preceding attack his wife had some prejudice against mesmerism, and consequently he had very little benefit from it. But on this occasion his wife mesmerised him when he had any acute pain, and immediate relief has invariably followed every mesmeric operation. In the former attacks he had been unable to move till a month or five weeks; in this attack he was convalescent at the end of a fortnight. The result of this case is the perfect confidence of the whole family in the remedial agency of mesmerism.\*

Not a day passes without my being consulted for pains in the face, ear-ache, or rheumatic pains; and in the great majority of these cases, a single mesmeric operation is quite sufficient to remove all the pain. Such a multitude of these cases has now passed under my own observation, that mesmerism is resorted to in Exeter by the industrious classes as a most extraordinary remedial agent.—*Zoist*.

#### Cure of Shortsightedness

And Tic Douloureux, and painless Extractions of Teeth. By Mr. SARGANT, Surgeon, Reigate, Surrey. Communicated by Dr. Elliotson.

LAST year, Mr. Sargeant, a medical gentleman at Reigate in Surrey, called upon me to enquire whether I thought mesmerism would be of use in a very extraordinary case of some standing in which he had lately been consulted. I replied in the affirmative, and shewed him a case or two and the method of making the passes, since he knew nothing of the subject and had viewed it as Mr. Wakley represented it in the *Lancet*, till of late when the constant abundant accession of indisputable facts compelled him to believe that he had been deceived. In five minutes he was put into the way of mesmerising and demesmerising. He returned home, began mesmerising his patient, produced wonderful benefit and striking phenomena, and the extraordinary case will in due time, I trust, be placed among the cures recorded in *The Zoist*. Like an honest and courageous man, he resolved that his patients in general should benefit by mesmerism whenever it was possible, and openly both avows his convictions and practises the art. The fol-

\* See cures of ophthalmia and of scrofula in Vol. II., p. 239; Vol. III., pp. 519, 24, 236; Vol. IV., pp. 406-4, 401-3.—*Zoist*.

\* See similar cases in Vol. II., pp. 66, 257, 364; Vol. III., p. 336.—*Zoist*.

lowing are a few of his cases illustrative of the benefit of mesmerism.

To me Mr. Sargant's conduct is peculiarly gratifying, from the course taken by an old practitioner in his neighborhood, who ought not to have acted as he has done in reference to the great subject of mesmerism.

JOHN ELLIOTSON.

"Reigate, June 4th, 1847.

"My dear Sir.—I herewith send you a few cases, which, should you think them sufficiently calculated to further illustrate that great boon—mesmerism—to suffering humanity, and to open the eyes of those who are so blind that the sun in its meridian is darkness to them, I shall with yourself and others feel repaid if we can only 'convert one sinner from the error of his way.'

"Believe me, my dear Sir, with every feeling of gratitude for your kindness,

"Ever yours faithfully,

"JOSEPH SARGANT."

"Dr. Elliotson."

#### I. *Shortsightedness.*

Rebecca S., æt. 25, a servant for some years in a respectable family, was compelled to leave her situation from shortness of sight, in August, 1846, the time I was attending the family; and I advised mesmerism, to which she very gladly consented, though at the same time I was doubtful whether any benefit would be derived. But to my great astonishment, after mesmerising her eight times, her vision has returned as strong as when she was a child; and she has now been in service for the last three months.

#### II. *Tic Douloureux.*

Sarah B., æt. 22, had suffered from tic douloureux for six months, and had tried all the usual remedies without any benefit. In August, 1846, she came to my house, a perfect stranger, to witness mesmerism, and likewise to consult me as to my opinion of its effects upon her case. My answer was, that we had cases on record which had been, if not cured, very greatly relieved. After witnessing some phenomena, she sat down, and in three minutes was sound asleep. I then locally mesmerised the side of the face, and allowed her to remain for half an hour, and then awoke her. She left my house and walked home, went to bed, and slept from ten o'clock until eight the next morning, without the slightest knowledge of pain, which she had not done for the last six months. Being delighted, she dressed,

and, not giving herself time for breakfast, ran up to my house to be mesmerised, fearing I might have left home. I again mesmerised her for an hour as before, and in the course of the day she had a few twinges, but slight compared to her former attacks. I continued to mesmerise her for a fortnight, when she was obliged to leave the neighborhood, and said should she feel the slightest return she should come down to me. I have heard from her since, and she continues quite free. These cases occurred on the 17th August, 1846.

#### *Painless Extractions of Teeth.*

I. August 27th, Miss B., æt. 16, at a ladies' seminary, was suffering with a severe tooth-ache. I mesmerised her and extracted one of the molares in a very decayed state, without her having the slightest knowledge of the operation; evincing not the slightest feeling of pain, not so much as the distortion or movement of a single muscle.

II. September 19th. At the same place I extracted a decayed molar tooth from Miss C., æt. 11, in the mesmeric state, without the child being at all conscious, she having a great dread of the operation. I had promised, if she would allow me to mesmerise her then, I would instantly awake her, when she should have her tea, and then be mesmerised and the tooth be extracted. But finding, on first mesmerising her, she was so soundly asleep, I embraced the first opportunity and extracted the tooth. On awaking her to enable her to cleanse the mouth, she said, "Oh dear, why you have taken out my tooth, and I never felt you."

III. S.P., æt. 19, came to my house to have her tooth extracted, and said, "You send people to sleep before you take their teeth out; don't you, Sir?" "Yes," I replied, "and I will send you to sleep if you like." She sat down, and in six minutes she was sound asleep. I then desired her to open her mouth, which she did; lanced the gum and extracted the tooth without her moving a muscle, and awoke her to cleanse the mouth. She was quite surprised. Her mother was in the room, and asked her, "Did not you feel Mr. Sargant pull your tooth out?" She replied, "No, mother, I never felt it all."—*Zoist.*



## Cure of Affection of the Heart

By Mr. ADOLPHE KISTE. Communicated by Dr. Elliotson.

I HAVE received the following letters and documents from Mr. Majendie.

"Hedingham Castle, June 7th, 1847.

"Dear Sir—I send you the case of Eliza Barrett, in which the benefit derived from mesmerism seems to me proved by most direct evidence. It is most improbable that the able physicians and surgeons of three London hospitals should have been mistaken in supposing disease of the heart to exist, if it were not so; and that Mr. Hands, who examined Eliza Barrett before mesmerism was applied,\* should also have been in error. It is most improbable that you, with all your experience in the use of the stethoscope, should, on examination after mesmeric treatment, have failed to detect disease of the heart, if it still remained.

"The so-called reasoning of *post hoc non propter hoc*, is hardly admissible, as it is most improbable, that when, after failure of all other medical appliances, mesmerism was employed and benefit ensued, the cure should be a mere matter of chance. If the whole is to be resolved into the effect of imagination, the sooner doses of imagination are prescribed according to an orthodox formula, the better for suffering humanity.

"Very sincerely yours,

"ASHHURST MAJENDIE.

"Dr. Elliotson."

"In the beginning of February, Mr. Adolphe Kiste, expressed to me the wish to meet with some sick person whom he might endeavor to benefit by mesmerism. I mentioned this to Mr. Decimus Hands, and met at his house Eliza Barrett, a girl of twenty-two, who had just left St. George's Hospital, suffering from disease of the heart, considered incurable.

"I took her to the studio of Mr. Kiste, in Great Marlborough street, who speedily put her into the mesmeric state, and sleep-waking soon declared itself.

"She slept that day about five hours, and continued to do so daily for three weeks. Mr. Kiste then desired she should pass twenty-four hours in mesmeric sleep. I accompanied him to the sister's house one morning,

\* Before any non-medical mesmerist takes a case in hand, he should have it examined by a medical man, and the opinion pronounced upon it should be written down. Lamentable experience makes this necessary. When a fee cannot be given, no medical man who is a mesmerist will refuse this good office.—*Zeist*.

when he put her to sleep; and he went again the next day at the same hour, when he awakened her.

"The benefit which was apparent from the first day of trial, was, from the time of the long sleep, more decided. Dr. Elliotson kindly offered to examine the state of the heart.

"Eliza Barrett walked in the mesmeric state from Marlborough street up Blenheim Steps, got into a cab, and proceeded to Conduit street, where she remained an hour. Dr. Elliotson examined her minutely, and found no trace of disease of the heart. She was taken back without being awakened. She had been in a most deplorable state, unable to maintain herself by needle-work, unequal to service from the pain in the side brought on by exertion, and without resource.

"After about six weeks she appeared to be in good health, and was endeavoring to get a place as housemaid. But an attachment, which had been broken off, as I believe, on account of the desperate state of her health, was renewed.\* She married in the month of May, and Mr. Kiste finds on enquiry that she is perfectly well.

"ASHHURST MAJENDIE."

"To Adolphe Kiste, Esq.,

"37 Maddox street.

"June 26th, 1847.

"Kind Sir.—I return you my sincere thanks for the cure which, under God, I have received at your hands by mesmerism. I can truly say, that for more than one and twenty years of my life I never knew what it was to enjoy health, and when the physicians at three hospitals, and St. James's Dispensary, and many other medical gentlemen had, after using all the means and medicines they prescribed, failed to do anything more than relieve the pain for a time, I came to you in February, 1847, in a very weak state, utterly incapable of earning my own living, then laboring under disease of the heart, and pains in the limbs. The first time I was mesmerised I received benefit from it. When I had been mesmerised six or seven times, five hours a day, I could lie down on my left or right side, not having been able to lie upon either for some time previous, without considerable pain. The violent beating of the heart, and shortness of breath then left me; I had, I believe, been mesmerised two and twenty times,

\* The patient at Bideford, cured by Mr. Davey, after being dumb seven years, was, before her illness, engaged to a young man; but the marriage was broken off. Her cure removed all difficulty; the advances were renewed, and through mesmerism she became a happy wife.—See *Zeist*, Vol. IV., p. 451.

when I was quite cured. You mesmerised me five times after that, which made the cure more permanent. I have now enjoyed perfect health for above three months, being well six weeks previous to my getting married, which was on the 9th of May. I have had *much mental anxiety and exertion of body, without the least return of pain or palpitation.* After suffering so much for so many years, I am well able to appreciate the cure which I have received through mesmerism. With many thanks for your kindness towards me, believe me to remain,

"Your very humble servant,

"ELIZA HARRIS.

"No. 4 Duke street, Bloomsbury."

"To Adolphe Kiste, Esq.

"Sir.—From the age of one year to fifteen years I was afflicted with fits, abscesses and tumours. It was at this age I first suffered with palpitation of the heart and rheumatism in my limbs, which caused them to swell at times very much. In February, 1845, being then twenty years of age, I became so bad, and having no home, I went to Middlesex Hospital to try to get in, but could not. I then went to St. Pancras Infirmary. It was here I had the rheumatic fever and began spitting of blood. When I had been here seven weeks, suffering so much from the heart, and a complaint in the throat which they gave me a gargle for, and getting no better, I asked Mr. Cooper to give me an order to go out, which he did. I then went on the following day to St. Thomas's Hospital. Dr. Barker ordered sixteen leeches over my heart the day I went in, and salivated me. I was there six weeks, when Dr. Barker told me he could do more for me. I had no prospect before me but to go into the workhouse when I left there, being incapable of earning my living; I asked Dr. Barker to be so kind as to give me a note, stating that I had been under his care and what was the matter with me. This was on Saturday, the 3d May, 1845. On the following Monday he sent me one from his house by the post to the hospital, stating that I had a disease of the heart and what kind of a one. I then came out of St. Thomas's Hospital, and I obtained a letter for Middlesex Hospital, of Mr. Bell, chemist, Oxford street. Tuesday being Dr. Crawford's taking-in day, I went there and was taken in, had a warm bath and was put to bed. The first medicine I had there stopped the spitting of blood, and when I had been there a week, Dr. Crawford ordered me to have cold shower-baths of a morning, every other day at first, and then every day.

I had blisters applied to my side and to the back of my neck. I had turpentine fomentations applied to the stomach and side, and the medicine I was taking brought me out in boils all over me. They healed up again; I got so well that I was enabled to come out of the hospital, and having no clothes scarcely, and my father being ill in the infirmary, I had no one to assist me, so I took the letter which Dr. Barker gave me with me to the work-house. This was in June, 1845, on a Thursday; on Friday I was called to the board-room of the work-house, Mr. Cooper was there, and Mr. Lee the master of the workhouse; I gave them Dr. Barker's letter and told them what I had come there for, and that a friend had got me a situation; and they gave me some clothes, and I came out and went to place. I kept pretty well for two months, and then I had the attendance of Mr. Parts, of Camden Town. It was from this time I began taking calomel for to ease the pain, and I have taken it all along till I got so bad in November last. Before I left my place, a lady my mistress was acquainted with gave me a letter for the St. George's and St. James's Dispensary. I went there, and saw Dr. Dew. He ordered me to be cupped on the left shoulder and a blister over the heart; he gave me some medicine and ordered me rest. It was not convenient for me to lay up at my situation, and he said he could not get me well without I did, and that I had better go into the hospital where I could have rest. I obtained a letter for Middlesex Hospital, and went there and saw Dr. Crawford again, December 4, 1846. But he told me he could not possibly take me in till the next week, but he put me under Dr. Latham's care. I saw him that day, and he gave me some medicine; and on coming home with it I lost my senses and fell down in Cavendish square. When I came to, a young woman kindly offered to lead me as far as Mr. Sommerfield's, in Marylebone Lane, who sent his servant home with me. I was to go to the hospital on the following Friday, and as I got much worse my mother was obliged to lead me there. While I was waiting to see Dr. Latham I was very bad, and Mr. Corf came and spoke to me, and asked me if I should like to stay then and go to bed. I said I should like to stay, so he ordered one of the nurses to take me up into Queen's Ward. At night I had a warm bath, and I had a blister put on my forehead; when I had been there a week, Dr. Crawford ordered me shower-baths again. I had been here rather better than a fortnight, when Dr. Crawford said he should not keep me there any longer, as he thought I should be better out and have the

air. I was no better when I left, for I no sooner got down stairs and went in the board-room to return thanks, than I became very ill again. Dr. Crawford, when he discharged me, the Tuesday before Christmas, made me out-patient under Dr. Latham's care. I was seized with a trembling fit whilst waiting to see him. When I reached home I had a worse attack, and I was a week getting worse, when I went on the following Tuesday down to St. George's Hospital to see if I could get a letter for to go in. I was unsuccessful, and I was forced to give a little girl something to lead me from Hyde Park corner to Bond street. She then left me, and when I had got half way up Bond Street I fell down in a fit. When I came to a young man kindly offered me amidst the crowd that was round me to see me home, which he did. On the next day I went again to St. George's Hospital. I obtained a letter at No. 7, Belgrave Square, and I went and saw Dr. Jones, who immediately made me an in-patient. I had two of these trembling attacks, and I was taken up stairs to Holland's Ward and put to bed. Dr. Jones, when he saw me again, sounded me a good deal, and I think he then called my complaint an affection of the heart and chest. Afterwards I was sounded by several other gentlemen and Mr. Fuller. They changed my medicine a good many times and fomented the stomach. Dr. Jones ordered me vapour baths for the pains in the limbs, and would not suffer me to get up at all. Mr. Fuller sounded me again for about three quarters of an hour. This was when he found out what the complaint was. Afterwards Dr. Jones sounded me again: it was then he said Mr. Fuller was right in saying it was a chronic disease of the heart. The doctors all complained of a confused murmur or grating sound in the heart, which they heard when they sounded me. I used to feel sometimes as though the heart would beat out of the side, and then all at once it would stop and seem to take my breath with it. To lay upon my left or right side I could not, and if I laid upon my back the palpitation was so great that it shook me in my bed. I remained in St. George's Hospital four weeks, when Mr. Hamilton, the house-surgeon, discharged me. When Dr. Jones heard of it, he said he was very glad of it, as he was afraid that he should have me get worse again if I stopped there, but he would make me an out-patient if I liked. But I told him it was no use of his doing that, as I could not walk so far. It was previous to this that he said he could not take out my heart and put me in a new one. They gave me steel medicine to take, and the last medicine I took from there was

ether and hartshorn. Dr. Jones ordered a bella-donna plaster over the heart and a strengthening plaster round the loins. I sent for my sister to fetch me home. When I had been home three days, I saw Mr. Hands in the prayer meeting along with Mr. Miller. On the following Friday, Mr. Hands sent to my sister's for me to come down to his house. I went there, and he then spoke to me about mesmerism, and said he thought he knew of a gentleman that would undertake to cure me if I would make up my mind to be done, and mother would give her consent to my being mesmerised, which she did on the Saturday previous to my coming to you on the Monday. I blessed God that ever I was mesmerised, for I have been only one and twenty times in that state, and am now quite cured: for which I return you my sincere thanks.

"I remain, Sir,

Your very humble servant,

"March 28th.

"ELIZA BARRETT."

There can be no question that the view taken of the disease by the various physicians was correct; and their treatment of it sound and excellent. It was evidently a case of acute rheumatic pericarditis, or inflammation of the heart's covering, that became chronic, and probably induced after a time a degree of hypertrophy or overgrowth of the heart; and there was the addition of hysteria. She was treated by all with the greatest kindness as well as skill. But in the end her disease proved to have been ameliorated only for a time. Ordinary medical means could have effected no more in any hands; and these circumstances render the value of mesmerism the more striking.\*

I have seen her this week, and she is perfectly free from all disease of the heart and from hysteria, though the troubles and bodily exertion she has gone through lately have been great. She tells me that mesmerism appears to have changed her constitution altogether, for, from having all her life been ill in some way or other, she is now perfectly hearty.

JOHN ELLIOTSON.

June 28th.

\* The utility of mesmerism in affections of the heart is exhibited in Vol. I. p. 465.

## Case of Neuralgia of the Stomach

With Excessive Debility, &c. &c. By Mr. SYMES, Surgeon, 77 Grosvenor street.

Miss ———, having been in rather delicate health for a twelvemonth previously, was suddenly seized on the 28th of January, 1843, with violent cramp-like pains of the stomach (gastrodynia) accompanied by distressing vomiting, faintness, great flatulent distension of the abdomen with borborygmi, &c., coldness of the surface and particularly of the lower extremities, extreme pallor of the countenance, &c. Hot brandy and water was administered, and hot fomentations applied to the stomach, but it was above an hour before she experienced any relief, she remained very weak and languid for some days and then had a recurrence of the pains, &c., more severe even than at first; after which the attacks returned more and more frequently and with increased intensity, lasting three or four, or even five hours at a time, and producing sometimes absolute fainting from excessive pain and exhaustion. She could not take the smallest particle of solid food, not a single crumb of sopped bread, without inducing one of these distressing paroxysms, which would likewise come on from any little mental agitation, and frequently, too, without any apparent cause. Her menstruation had always been regular and with scarcely any pain, but now her periods were attended with intense pain of the loins and anterior region of the uterus; and this again would invariably bring on a recurrence of the stomach affection. After attending to the alvine secretions, I ordered hydrocyanic acid three times a day, beginning with a small dose and gradually increasing it to as large a dose as my patient could bear, combining it in turn with lime water, sesquicarbonate of soda, and with stramonium, and afterwards also with creosote and trisnitrate of bismuth, &c. Full doses of capseut oil were administered during the paroxysms, &c., &c., but with only temporary relief. In short I tried every medicine I could think of as applicable to the case, and at length nothing seemed to give the slightest alleviation of pain except strong stimulants combined with large and repeated doses of opium (muriate of morphine was the form employed) but this was followed with such distressing head-ache, sickness, and thirst, that nothing short of the intense agony she suffered would have justified its exhibition.

Nine weeks had now elapsed since the commencement of these attacks. I have said that my patient was unable to take a particle of solid food, she obtained scarcely

any sleep at night, and became weaker and weaker, until one day she nearly fainted in trying to walk between two assistants from her bed to a sofa in the same room; and, at length, she could scarcely bear to be lifted from one to the other to have her bed made without faintness or pain. I saw with alarm that no permanent benefit was derived from any of the powerful remedies I had prescribed, and I felt that my patient must shortly die unless some better means could be devised. I had long felt desirous of attempting mesmerism in this case, but knowing that the lady's friends were strongly prejudiced against it, I had not suggested its adoption, especially as at that time I had never seen a similar case so treated; but, in despair of affording relief by any other means, I now ventured to propose it to the mother as a last resource; her reply was, "Well, Mr. Symes, you know our confidence in you, and whatever you say is necessary shall be done." I had on that occasion only a very few minutes to spare, but, determined to lose no time, I at once commenced mesmerising my patient, and was pleased at seeing an evident effect produced at the end of ten minutes, although she did not go into the mesmeric sleep: this was on the 6th of April. On making my visit on the following day, I was highly gratified at learning that she had passed a better night than for two months previously.

6th. Mesmerised her 25 minutes; she became drowsy and could with difficulty keep her eyes open but did not sleep, yet she felt so much better afterwards that I determined upon discontinuing all medicine. She passed, in her own words, "a most excellent night."

7th. Mesmerised 25 minutes. The eyes closed spontaneously, but without loss of consciousness; she felt however so much better and stronger afterwards that she rose from the sofa of her own accord and walked across the room without assistance. I now gave her the yolk of an egg, raw, which she bolted and retained on her stomach without any ill effect; slept well all night.

8th. The eyes closed in spite of herself a few minutes after I commenced the passes, and she was unable to open them until I ceased; still she did not lose consciousness, but was enabled to take her yolk of egg and walk about the room for ten minutes afterwards. She passed another good night, and the next morning attempted to walk about the room before being mesmerised, but was soon obliged to sit down from faintness. After being mesmerised half an hour, with no other effect than on the previous day,

she could walk about with impunity for a quarter of an hour.

10th. My patient had had no recurrence of her attacks since the first day she was mesmerised; but this being her monthly period, I had looked forward to it with anxiety. She complained of lassitude and severe pain in the back, but had entirely lost this pain after half an hour's mesmerising; ate two yolks of eggs, and walked about a quarter of an hour without fatigue.

11. The eyes closed as usual, and she experienced the usual benefit.

12. Was discomposed by letters of a distressing kind, and felt ill in consequence. Mesmerised half an hour, but with little effect, being much disturbed during the time; the eyes did not close, she was unable to walk afterwards, and passed a restless night.

13th. After half an hour's mesmerism I ventured to allow her a little chicken, which caused no inconvenience; she slept naturally for an hour afterwards and awoke refreshed.

14th. The eyes closed as usual, she made a hearty meal, and felt so well that I gave her permission to take an egg for her breakfast the next morning.

15th. A violent attack of pain, vomiting, &c., &c., was brought on by eating the egg before being mesmerised, and left the usual faintness and prostration of strength; but after being mesmerised three quarters of an hour, felt so much better that she walked about and ate a hearty dinner without inconvenience.

16th and 17th. Felt as usual, weak and listless in the mornings, but strong and well after the mesmerism.

18th. Went into the mesmeric sleep for the first time to-day, after which she made a hearty dinner, and read aloud great part of the evening without fatigue: a fortnight before she could not even endure a little conversation.

Still mesmerised half an hour daily, the eyes always closing in spite of any efforts to keep them open, but without her losing consciousness; felt so well on the 20th that she was induced to dine before being mesmerised; about twenty minutes after it, however, the old symptoms of pain, vomiting, flatulence, &c., returned, but ceased entirely after the mesmerism, and she was able to read aloud and walk about all the evening—formerly after such an attack she was always obliged to go to bed.

Went on well till the 29th, when some cause of excitement occurred in the evening, which kept her awake great part of the night; and a renewal of the annoyance on the following morning induced a painful at-

tack, which was relieved as usual by mesmerism.

May 6th. Monthly period. Had considerable pain in the back, &c., which was entirely removed by mesmerism, and the sleep was induced for 27 minutes.

Had an attack on the 13th from the sudden communication of a family affliction; and on the 18th the same symptoms were just commencing when I paid my daily visit. Mesmerised her three quarters of an hour, prevented the attack from coming on, and left her quite comfortable. With these exceptions she went on favorably, the eyes always closing during mesmerism, but the sleep only coming on occasionally till the 23d, when she went out for a drive for the first time since the commencement of her illness; it was a cold easterly wind, and an hour after her return she was seized with head-ache, sore throat, cough, and loss of voice. After half an hour's mesmerising the head-ache was entirely relieved and the throat better; the voice did not return for several hours, and the cough continued troublesome for a day or two.

The mesmerism was continued till the 27th, on which day it was omitted; she passed a restless night in consequence, and awoke next morning with one of her attacks, which continued till she was mesmerised; she had also a little pain on the 31st, from not being mesmerised until several hours after her dinner.

June 4th. The periodic pain in her back, &c., removed by mesmerism. Continued for the next nine days, always feeling weak and low of a morning, but strong and in good spirits after the mesmerism, which was omitted on the 13th, and at bed-time she began to feel unwell. Took some beef tea, but rejected it almost immediately, and was restless and uneasy all night. A rather severe attack came on her after her breakfast the next morning, leaving her weak and ill till the afternoon, when the mesmerism restored her, and she enjoyed a hearty meal.

30th. Went out to spend the day, and probably from over fatigue had a slight attack in the evening, which was soon subdued by mesmerism. This was continued daily until the 9th of June, when she was persuaded to go for change of air to stay at the country-house of a friend, and not having been mesmerised had an attack in the evening, which lasted two hours.

10th. Lay down to sleep for an hour in the middle of the day, and was most careful of her diet, in the hope of avoiding an attack; but it again came on in the evening even more severely than on the previous day.

11th. Weak and ill, lay on the sofa great part of the day, and went to bed very early, but a most severe attack ensued. Her friends there, who had hitherto laughed at mesmerism, now confessed that she, at least, could not do without it, and agreed to drive her up to town to see me on the following morning.

12th. She arrived at my house with her mother, so weak that she could with difficulty step out of the carriage into my dining room. I immediately mesmerised her for an hour, after which she expressed herself as feeling quite well; had a ravenous appetite, returned to the country and ate everything before her. The young lady of the house, who had often seen her friend mesmerised by me, and acknowledged the invariable improvement in her appearance after it, yet retained an unaccountable antipathy against the remedy, and could never be persuaded than an hour's natural sleep in the course of the day would not have an equally beneficial effect; but seeing that no precautions would keep away the attack, save "the one thing needful," her natural goodness of heart and sympathy for her friend's sufferings overcame her prejudices at this time, and she consented herself to apply the remedy. Accordingly from the 13th to the 20th this lady mesmerised my patient for half an hour daily, and there was no return of the pain till the 21st, when a slight attack was induced by a fright, which the lady soon relieved by the usual means; yet

"—— true 'tis strange,  
And passing strange 'tis true,"

her antipathy against this, to her friend, invaluable blessing, is at this day greater than ever; nay, I am told that she has so far imbibed the prejudices of a religious friend as to ascribe the mesmeric influence to satanic agency. Other friends of my patient do not scruple to declare this same conviction: one lady in particular, a near family connexion, who has likewise witnessed the remarkable sanative effects of mesmerism in this case, and the failure of all other means, for she was staying in the house at the time is most bitter against it and all who practise it; yet she too, under the influence of her better feelings, has more than once, on witnessing Miss ——'s agonizing pain, offered to mesmerise her. Others again rudely laugh at her for adopting such absurdity. Miss —— herself knew nothing about the science until applied to her own case, and her mother had a feeling against it; but both have, from the commencement, been deeply sensible of, and grateful for the benefit conferred, and can afford to laugh at the

folly of those who have tried to set them against it.

22nd. My patient returned to town, and I recommenced mesmerising her daily till the 5th of August, when she went into the country, feeling quite well, and continued so until the 13th, on which day she awoke with great pain in her back from the usual periodical cause. A severe attack came on after her breakfast and lasted two hours. She could not move off the sofa all day, and took nothing but a little chicken broth, yet another paroxysm came on in the evening, leaving her very weak and ill for days after; but she had not another attack till the 31st, when the carriage was nearly upset, and she had to alight and walk a considerable distance: this induced a slight paroxysm, and on the 5th of the following September an alarm of fire produced another, when the young lady who had formerly mesmerised her being fortunately present, kindly exerted her satanic (?) influence, sent her to sleep in spite of the pain within 5 minutes, and in twenty minutes she awoke feeling quite well. One must presume therefore that Satan is tired of walking up and down like a roaring lion seeking whom he may devour, and prefers assuming the form of a ministering angel assuaging the ills of mortality. Probably these ladies are not aware that the same absurd outcry has been raised against every new remedy—vaccination, bark, &c., &c., but how they can reconcile it to their consciences, under any circumstances to employ such a remedy, if they really do in their hearts ascribe it to such a source, I must leave it to themselves to explain; "I only know that" I "would not have done so."

Most of the dates in the foregoing narrative are taken from a journal kept by my patient for a sister who is abroad, but from some cause not sent to her, and put into my hands to "make what use I pleased of." Miss —— escaped any attack for some months after this, and in her letter to her sister, dated April, 1844, says she is quite well. She was indeed restored to comparative health, and I am as fully convinced as she is herself that her life was in imminent danger when I commenced the process, and has been saved by it. The tendency, however, to a recurrence of the attacks has continued: and although sometimes she has been free from them for many months together, at others she has had them severely, requiring to be mesmerised very frequently afterwards: thus in November, and again in December, 1844, and several following months, she had some severe attacks.

It is worthy of note that Miss ——

mother, an elderly gentlewoman, has been subject to attacks of gastrodynia for three or four years previous to Miss ———'s illness, during the whole of which time *they had slept together*, and as I afterwards learnt they had been in the habit of sleeping with a hand locked in each other's hand; and during the whole of her daughter's illness, up to this time, Mrs. R. had not suffered a single attack. I did not for a long time connect these circumstances with Miss ———'s illness farther than as giving the hereditary predisposition, and when I did so, I had some difficulty in inducing the ladies to occupy separate sleeping rooms, but I did at last insist upon it, and since then Mrs. ——— has had occasional returns of gastrodynia, although not so severe or so frequent as formerly. I have now little doubt that the younger lady's illness was originally induced by sleeping in this way with her mother, and that the obstinate predisposition to a recurrence of the attacks, and the debility and lassitude so constantly experienced of a morning, are ascribable to the same cause. In truth, the beneficial action of my half hour's active mesmerism in the day was constantly being counteracted by the injurious tendency of the mother's eight or ten hours' passive mesmerism, so to speak, at night.

After a time, Miss ——— went habitually into the sleep-waking state when mesmerised, and although on this occasion I have dwelt principally upon the curative powers of the agency, different highly interesting phenomena have been induced. I had often great difficulty in awaking her, sometimes for hours together; her eyes, too, would remain closed for some time after coming out of the mesmeric state, in spite of her own and my efforts to open them. On one occasion, I tried in vain to get her eyes to open for about an hour after the waking, but not being able to accomplish it, I was obliged to leave her, telling her that without doubt they would presently open; but if not, that she might be pretty sure they would open when she awoke in the morning after a night's rest. To my surprise, however, I found them still closed on paying my visit the next day, though they opened readily after I had again mesmerised her. But at length she was enabled in the sleep-waking state, to instruct me how to avoid this difficulty in future. She would also tell me how long it was necessary for her to sleep, and if I awakened her before that time, she would be sure to have an attack. If I could make her promise to awaken spontaneously at the end of a given time, as in twenty-three, or twenty-five, or thirty minutes for example, she would do so precisely at that

time. Then she acquired the power of foreseeing to an hour in how many days or weeks the next attack would ensue if not mesmerised; and if I delayed ever so little after the time specified, I was sure to find her ill. But as I have always taken care to mesmerise her if possible before an expected attack, she has rarely had any, and when they have come on, I could always clearly trace them to some imprudence on her part, or to mental agitation, or other exciting cause; and they are always readily subdued by mesmerism. At one time, however, when she required to be mesmerised daily, as was always the case after an attack, I was undergoing excessive fatigue and anxiety, and I found myself hardly able to affect her; so my friend, Dr. Elliotson, kindly undertook to mesmerise her for me for a week or two. He could produce the effect without difficulty, and when I recommenced, under more favorable circumstances, I was equally successful.

In November, 1845, too, she unfortunately had an attack when I was out of town, and not liking to trouble Dr. Elliotson, she sent for a neighboring practitioner, who dosed her with powerful medicines for some twenty hours, without the slightest relief; and when I arrived, I found her completely exhausted with pain and fatigue.—Although I could usually induce the sleep in a few passes—I have effected it by merely gazing at her for a second or two at the distance of her drawing-room—it was now above an hour before I could succeed, and in her sleep she told me it would be necessary for her to be mesmerised daily for two months, unless she could be kept in the mesmeric state six or eight hours a day for a fortnight; but as she would neither allow any one, except the mesmeriser, and those who had mesmerised her, to approach her, nor suffer her mesmeriser to leave her in the mesmeric state for more than a few minutes at a time, I could effect this only by begging her to come on a visit to my house for a fortnight, during which time I regularly mesmerised her night and morning for an hour or two, and my wife for some hours in the middle of the day; and thus we got over the effects of this violent and protracted attack.

I can excite in her some six or eight of the phrenological organs, as well as the phenomena of traction, and alternate rigidity and relaxation of the limbs, &c.; and by making her promise, during the sleep-waking, to do anything in her natural state, she will certainly do it, although having no recollection of anything that has occurred in the mesmeric state.

I must not omit to mention, that my patient

is now happily married, and that I saw her a few days since in excellent health and spirits.

The case is highly interesting and instructive in many points of view. It has served thoroughly to convince me of what I had before but a vague notion of, viz., the great impropriety of allowing young persons to sleep with the aged, especially when the latter are afflicted with any disease, even though not of a kind usually considered contagious. Had I immediately on the commencement of the malady insisted on my patient sleeping alone, and could I have devoted several hours in the day to mesmerising her, or had she been blest with friends ready to do so, and thus to co-operate with me in my anxious and strenuous efforts to effect a cure, instead of thwarting me and annoying her, by decrying and persuading her to discontinue the only remedy she found of use, I feel assured her recovery would have been as rapid as it was protracted. It shows, too, how long it is sometimes necessary to persevere with this remedy, just as with any other therapeutic agent, in order to effect one's object; and it may serve as a lesson to all of us never to presume to give an opinion upon subjects we are unacquainted with.

This lady has herself effected several striking cures by means of mesmerism. For example: on visiting the cottage of a poor woman in the country, she one day saw a child which had been suffering for weeks from ophthalmia. She succeeded in mesmerising the child. On the following day the eye was much better; she repeated the operation, and in two days all traces of the inflammation had disappeared.

On calling at a friend's house in town, she found the infant screaming in the nurse's arms, and was told that nothing would pacify it; it had been crying all night, and the mother, quite worn out, had just gone to lie down. Without saying anything she took the child in her lap, mesmerised it for twenty minutes, and restored it asleep to the nurse. The mother had no idea how the change had been effected, but wrote to her the next day to say how much better the child had been ever since her visit; it had slept so much, and had scarcely disturbed her all the night afterwards.

Only a few weeks ago, spending the evening at my house, I saw her remove toothache in a few minutes, from a gentleman who had just before been pacing the room in agony with it.

Before concluding I may perhaps be permitted to mention, although it has nothing to do with the above case, how highly I was

gratified a few days since at witnessing, by the kindness of Mr. Chandler, the extremely interesting phenomena induced in his blind patient, Captain Peach. The gentleman who usually mesmerises Captain P. readily sent him into the sleep-walking state by a few passes, and then exhibited the phenomena of traction, community of taste, &c. While the Captain was still asleep, a lady, who is also in the habit of mesmerising him, entered the room; she is said to have greater mesmeric power over the Captain than any one else, and it was agreed that after he was awakened she should send him to sleep again without his knowing she was present. She did speak however after he was awakened, but we went on talking to the Captain, and at a given signal she, sitting a distance of at least six feet, commenced making passes and pointing towards him. His eyes presently began to quiver and fill with tears, as they always do when mesmerised, and his head dropped several times upon his chest, he each time rousing himself with a start, moving uneasily about upon his seat, and apologizing to us for "not being able to keep awake." The lady at length advanced towards him, and in a few moments sent him quite off, and then readily produced the different phenomena before alluded to. It is indeed a most satisfactory case, and the usual effects occurring as they do in a gentleman who has been blind so many years and when he could not know what was being done, it shows that at least these phenomena may be induced quite independently of "the imagination."

#### **Cure of Tic Douloureux**

In two sittings. By Mr. HAYMAK, Lect. Mesmerist, Sidmouth.\*

ABOUT the middle of April, 1845, Anne Llewellyn came on business to my shop, and having heard I mesmerised, expressed a wish to be present at one of the sittings, though much prejudiced against it from believing it to be satanic. I consented, and took her into the parlor where there was a youth in the mesmeric sleep. I began by exciting the phrenological organs, and having touched Veneration and Language, he slowly rose from his chair, clasped his hands, fell upon his knees, and poured forth a most beautiful and affecting prayer; upon which Anne declared herself satisfied, as the devil

\* A subscriber to the Mesmeric Inquiry, and acquainted with Mr. D. Hands.—*Edin.*



would never teach a man to pray. She then determined to come to me the next day and try what could be done for her. She was then about 30 years of age and had been suffering from tic douloureux ever since a severe cold in 1840. It was accompanied by tightness, weakness and oppression of the chest, and frequent spasms. The nose was much affected, the tip scarlet, burning hot in acute pain. She had consulted several of the medical profession in Exeter and Exmouth, who coincided in declaring her to be in a highly nervous state and that medicine could not avail, though nature might.

Anne came according to her promise, and her sister and brother-in-law came with her. I proposed to commence by mesmerising the man, and therefore began by making the passes over him at the same time that I forcibly willed that she should feel the effect instead of him. After some minutes, I turned to her and said, I feared I could not give her much time, but found she was already partially collapsed. I took her thumbs and in about four minutes she felt back unconscious, but seemed to labor under great oppression and difficulty of breathing; a few downward passes quickly relieved her. As I made them down the limbs and off from the feet, her countenance brightened, testifying the comfort and pleasure she felt. I then spoke to her and so did her sister and brother, but she did not answer. I then excited language and called her by name, "Anne" "Yes" "Are you comfortable?" "Yes; but in great pain." "In what part?" She placed her hands on her chest without speaking. "Do you think I can do you good?" "Yes, I know you can." "Tell me then what I am to do, how to proceed." She put both hands on her forehead, drew them gently down, pressing on the chest with her thumbs; then down to the hips, pressing there; continuing to the feet: then throwing off the influence, she repeated this process, and I closely observed her directions. As my finger accidentally touched the tip of her nose, her features sparkled with pleasure. I again excited Language, and the remainder of the sitting was filled up by proving my power over her. I made her sing, and excited Terror and Ideality, when I was obliged to quiet her: I then demesmerised her. She walked twelve miles the following day, and two months afterwards called on me to show me how well she was. I then tried to mesmerise her by pointing, and she exclaimed I was throwing fire at her, and then at the beautiful colors. She saw each of my fingers as I pointed forming a different color, with sparks of fire; she then said she saw the interior of her

mesmeriser, and described the different arteries; the circulation of the blood, the appearance of the brain, &c., &c., calling the *lungs* the lights. One of my hands felt cold, the other hot. All of a sudden she became very sad, and cried and sobbed out, "Oh my husband, my husband." On being questioned, she said she saw him, that he had been bled in consequence of an accident, being crushed between a waggon and a wall; that the hurt was in the shoulder, and he had been in bed four days and was wishing for her, but did not like to send for her; he had no bones broken.

I cautioned the sister not to say anything of this to her when awake, but to go home as soon as they could. On their arrival the whole account was found perfectly correct.

I have seen her repeatedly since, and she remains in good health and has not had any return of her complaint since April, 1845.—

Zoist.

June, 1847.

#### Dr. Esdalle's First Monthly Report

Of the Calcutta Mesmeric Hospital and his Experiments with Ether used with the same view as Mesmerism in Surgical Operations. Painless Operations at Madras, by Dr. Johnstone, upon a European lady, in the Mesmeric state. Appointment of a Mesmeric Committee at Madras by the Government.—Communicated by Dr. ELLIOTSON.

THE following is the printed report which I have received:—

"The Government having been pleased to sanction the publication of monthly reports from my hospital, as the best means of diffusing correct knowledge among the people on a subject of practical importance to them, I shall in future furnish a monthly summary of the cases treated in the hospital, that the public may know what is doing, and that my statements may be corroborated or contradicted on the spot, while the facts are fresh in the memory of those who witnessed them. It is impossible for me to give the names of the persons who witnessed what I relate, very few of them being known to me, but I hope that they will freely, and without scruple, correct any statement of mine that does not in all essentials correspond with their own observations.

"I regret that there is no novelty in the nature of the cases treated last month, and for this reason: in consequence of the success I have met with, in removing the tumors so common in this country, while the patients were in the mesmeric trance, persons

afflicted with this disease resort to me from great distances, and a notion has gone abroad among the people, that my 'charm' is only applicable to such cases; add to this, that the natives are totally ignorant of the efficacy of mesmerism in medical diseases, and it will explain the sameness of my proceedings since coming to Calcutta. The field will gradually open, however, and in proportion as the public become familiar with the subject, and its extensive application to medical as well as the generality of surgical diseases, I shall be able to communicate more varied and interesting matter.

"In recording last month's proceedings, I shall put the reader in possession of the facts, and then make some comments on them.

"November 9th, Doahmony, a peasant woman, aged 50, has come from Benares to get an immense scirrhus tumor of the right breast removed. It commenced two years ago, and is moveable, hard, and elastic; there is no enlargement of the axillary glands, and she does not look in very bad health.

"On the 7th day of mesmerising, she was entranced, her arms were partially cataleptic, and she was insensible to pricking. Next day, she was again put to sleep, and two-thirds of the tumor removed without her moving or appearing to feel it. She then awoke up, and appeared to recover her senses before the operation was finished. No manual restraint was used during the excision of the mass, but she became very violent immediately after, and required to be forcibly held down while the arteries were being tied.

"The breast weighed 7 pounds.

"December 29th. Discharged at her own request, her friends having come for her from Benares. The sore is nearly healed.

"Ramlochun Doss, a weaver, residing in Serampore, aged 60. He has got one of the usual tumors of 30 years' growth. Having been entranced for five days previously, he was operated on the 1st December.

"I intended to save all the parts, if found to be worth keeping, but the organ on the left side was diseased, and was therefore sacrificed; the other being healthy, was kept.

"There was not the slightest shrinking from the knife, or the smallest movement in the trunk and lower extremities. An indistinct moaning was heard when the cord was cut across, but the man lay perfectly passive and motionless during and after the tying of the arteries. His pulse being nearly insensible from the great loss of blood, I thought it expedient to awake him to administer a cordial.

"He was with considerable difficulty aroused, and was very unwilling to be disturbed, but at last opened his eyes, and instantly asked, 'Why so many people were standing around him?'

"He said that he felt very well in every respect; that there was a slight heat in the seat of his complaint; this caused him to carry his hand to the part, and he then became aware that the tumor was gone.

"It weighed 40 lbs.

"December 31st. He has had no difficulty in recovering, and the wound is nearly healed.

"December 6th. Katick Doss, a washerman; has been afflicted with a tumor for 16 years. He was entranced on the fifth day of mesmerising, and was operated on two days after. Having injured my hand, I was unable to operate, and Mr. R O'Shaughnessy obligingly took my place. The dissection was tedious and severe, but he lay motionless, till about the middle of the operation; he then began to awake, and was completely aroused before it was over. He complained for a good while after, that *he could not see*—this fact will be met with again soon. The organs were all saved. Weight of tumor, 30 lbs.

"December 31st. This man has been in a very dangerous state, sloughing, diarrhoea, and fever having ensued, but I think that he is now likely to recover.

"I hope that the reader will give the following strange eventful history his best attention, as in it nature herself will be seen partially raising the veil, and admitting us to a glimpse of the mysteries of the inner life of man.

"November 21st. Sheik Manick, a husbandman, has come from Burwan to have an enormous tumor removed. He is subject to fever twice a month, but his constitution appears to be wonderfully little impaired. We succeeded in entrancing him on the third day, and for four days after, but fever, followed by diarrhoea then attacked him, and the process was discontinued. On the 4th December, he was again mesmerised, but it was found that we had to commence *de novo*, his system having thrown off the mesmeric influence in the interval. I determined on account of the periodic derangements of his system, to operate on the first occasion that offered.

"December 12th. His arms, which were crossed upon his breast, were rigidly fixed in that attitude, and could not be extended; pricking him all over did not disturb him. I therefore proceeded to operate.

"I ought to have noted, that after testing

him, I awoke him daily, to ascertain if he had been conscious of any annoyance in his sleep.

The tumor was so immense, that no attempt could be made to save the deep-seated organs; I therefore performed the operation in the manner described by Dr Stewart, in a similar case on which I operated in the Native hospital.

About the middle of the operation, he cried out, and showed other signs of suffering; but his exclamations were unintelligible or had no reference to his present position. Soon after all was over, he vomited a full meal, and his pulse became imperceptible. He answered questions in a wild distracted manner, and all we could make out was that he could not see, although his eyes were wide open. When I tried to give him a cordial, his teeth were found to be firmly clenched, and considerable rigidity still remained in the arms. He continued to complain in a distracted unintelligible manner for an hour, that I remained with him.

The tumor weighed 100 lbs.

He was operated on at 12 o'clock p. m., and I returned to see him at 4 o'clock. He was sleeping soundly, and I awoke him; he said that he was in full possession of all his senses, that he saw very well, and he spoke loudly and earnestly as usual. He had slept soundly since 10 o'clock (his mesmerising time,) he said, and was awake this moment by me. I asked him when he last saw me? he replied, *'yesterday when you awoke me as usual.'* He had no recollection of having been disturbed, and said that he certainly had not vomited to day. Being farther pressed to remember if nothing had annoyed him when asleep, he said, 'Ah! Yes, now I recollect being awake for a moment by the ants biting me, but went to sleep again till you awoke me this moment.'

He now missed the weight of his burden, and sat up to look for it; on seeing the altered state of things, he expressed the greatest surprise, and said, 'Why did you not tell me you were going to do it to day?'

I desired him to go over the events of the day up to the present moment, and he did this with the greatest minuteness till 10 o'clock, his mesmerising time, but after that he only recollected being annoyed by the ants for a moment, and slept well till awoke by me just now. He repeated, that he had not seen me since yesterday. I found him entranced when I came to the hospital to-day, and therefore was not among his waking recollections—his existence from 10 till 1 o'clock was a complete blank. He seems to me to have awoke up from the most intense degree of the mesmeric trance into

somnambulism, (of which the patient has no recollection in his waking state) in which there was a disturbance of the instinctive powers of life caused by the sudden and profuse loss of blood, but the life of volition continued torpid and enchained till the moment that I awoke him.

December 13th. The wound was stitched to-day, and there was no want of meaning in his exclamations; they were most emphatic and appropriate, and he abused everybody in the most expressive Bengalee terms.

December 28th. He has had no difficulty in recovering, and has been walking about for several days.

December 4th. Sheik Nemoon, a Khitmutgar; aged 30; he has got a small tumor. He was entranced on the 8th day, and the operation was performed two days after.

The operation was very difficult and severe, from the almost cartilaginous hardness of the skin, and its adhering closely to the subjacent organs.

Towards the end of the operation, he exhibited the usual signs of pain, and asked for water and a punkah, but on coming thoroughly to his senses, in about ten minutes after, he asked when and by whom it was done? The organs all saved.

December 31st. Is doing well.

From the foregoing, it will be seen that two, if not three, patients awoke into consciousness before the end of the operation. The extraordinary case of Sheik Manick I consider to have been as satisfactory as if he had acted the part of a corpse throughout. For when the convulsive movements often seen leave no memory of them in the brain, and no trace of suffering in any part of the system is visible when the person comes to his senses, such cases are surely for all practical purposes *painless operations*. If a man has had no apprehension of an operation, and knows not that it has been performed when he awakes, what is this to be called if not a *painless operation*?

As a practical man, I am quite satisfied if my patients assure me that they felt no pain, especially when every look, word, and action correspond with their statements. To the careful observer, those vague convulsive movements are as specific and characteristic of an extraordinary state of the system, as a corpse-like endurance of the most cruel torture. When the trance is only disturbed, but not broken, the motions often seen are as objectless as those of a galvanized corpse, or the fluttering of the fowl after its head has been cut off; the spinal nerves seem

only to be irritated, without involving the brain, or voluntary part of the nervous system, *and as long as there is no volition, there is no sensation, as will be shortly seen.* There is no attempt to withdraw the part from under the knife, the patients never try to remove it with their hands, and it is quite evident that they have no idea of the source of their discomfort. If the *will* had prompted the movements, some memory of them would remain, *but there is usually none.* I think it very probable that this muscular irritability might be generally extinguished altogether by prolonged treatment, but it is not worth the trouble, for the system suffers as little as when there is not a quiver of the flesh. This I have been long aware of, and acted up to, but I now come to an equally practical fact, in working out which I have usefully spent a considerable part of last month.

"It is no small triumph of science, and no trifling boon to humanity, to render men insensible even to *half* the horrors of terrible operations, but having been long accustomed to save my patients *all* knowledge of the injuries inflicted upon them, I was dissatisfied with the half-successes that occurred last month, and suspected that there was some disturbing influence at work which had been overlooked, or that I was ignorant of, as many imperfect operations happened in one month as in the last year and a half, and I resolved not to move a foot farther till the disturbing cause was detected.

"In the hot weather, the patients are all but naked and in this state are entranced, and operated on. But last month, they were mesmerised under two blankets and a sheet, with their faces only exposed. Having been tested in the mesmerising room, they were carried on their beds into the operating room, through which a current of the cold north wind blew, and that every movement of the body might be seen, they were exposed stark naked to the spectators. I remarked on several occasions, that a deep inspiration, and other involuntary movements immediately followed this exposure of the body to the cold air, although the persons had a moment before been quite indifferent to the loudest noises, pricking and pinching. The demesmerising influence of cold, when artificially applied, was familiar to me, as will be seen in my *Mesmerism in India*, and it will appear surprising that I should not have been more on my guard against it as a *natural agent*. I can only plead in extenuation, the stupefying influence of a successful routine; but failures, when improved, are often more instructive than complete success.

"Mothoor, a bearer from Cutlack, has

got one of the usual tumors. He was sent to me by his brother, Bogobun Doss, from whom I removed a 50 pound tumor in the trance, a year ago, at Hooghly; he also sent Morali Doss, on whom I operated in the Native Hospital, in presence of the mesmeric committee.

"December 27th. Mothoor being entranced to-day, was subjected to the action of the electro-magnetic machine with the central magnet in it, his hands and body trembled in synchrony with the shocks, but his countenance remained perfectly placid; in about ten minutes, his head turned convulsively to one side, but his features were not disturbed, and he slept on.

"When handling his arms, I saw a boil on one of them, and made a crucial incision into it, without his shrinking in the least. He was then carried under the blankets, and his bed placed in the north door of the hospital; the blankets and sheet were suddenly pulled off, and he was exposed naked to the cold air; in about two minutes he shivered all over, his breathing became disturbed, and he clutched right and left for the bed-clothes, but still sleeping; they were supplied to him, and he huddled himself up under them with the greatest satisfaction, still sleeping however. The bed was then carried back to the mesmerising room, and he was artificially awoken. He had slept profoundly without a dream, he said, and awoke this moment from feeling cold. When shown the wound in his arm, he was greatly surprised, and showed the usual signs of pain, saying, that he had struck the boil against something in his sleep, he supposed, and it had burst.

"December 28th. The magnetic machine awoke him to-day on the second application.

"December 29th. He was more deeply affected to-day, and lay unmoved for several minutes in the open air: he then shuddered all over, his breathing became irregular, and he immediately awoke into the full possession of his senses; the cold had awoke him, he said.

"Dec. 30th. I covered the wound in his arm with nitric acid to-day; the flesh became instantly white, but he did not shrink in the least; a pin was also thrust through the flesh between his fingers, and left there, of course without his minding it. He was then exposed in the northern door-way, and awoke in less than a minute after being exposed to the air. The cold awoke him, he said.

"The pin sticking between his fingers greatly perplexed him, and he drew it out, expressing as much pain as most people would do on having it stuck into them. The whitened sore on his arm was now shown

to him, and he immediately exhibited signs of the greatest pain, as people always do when any raw surface comes in contact with the mineral acids; the pain was so severe that I ordered his arm to be fomented with warm water.

"A stove was ordered for the operation room.

"Dec. 31st. The room being agreeably heated to-day, I proceeded to operate on him in the presence of numerous spectators, exposing only the diseased surface. The operation was very severe and tedious from the hardness of the diseased mass and its adhering closely to the delicate organs below, which were all saved. No sound escaped the man, there was not the slightest shrinking under the knife, and the only movements observed, I was told, were some slight contractions of the toes and forehead.

"He awoke in about ten minutes after all the arteries were tied, as if from a natural sleep, stretched himself well, complained that he felt his thighs and arms stiff, and seeing his *bhai*, Bogobun Doss, he asked him to shampoo them for him. He had slept very well, he said, nothing had disturbed him, and he felt no pain in the part. The wound was at last shewn to him, and he expressed the greatest horror and alarm, exclaiming that it pained him excessively. After a while, I asked him if Bogobun Doss had told him the truth. 'On! yes,' he answered, 'it was done exactly as he described.'

"Dr. Dickens from Cuttack, visited the hospital a few days after, and was recognized by Mothoor.

"After telling him all about it, he confidentially asked, 'But how did the Dr. Saheb do it?'

"Chand Khan, aged 35, has got the same complaint. We commenced mesmerising him on the 8th December, and on the 25th he was insensible to pricking, &c.

"December 27th. He was carried on his bed, under the blankets, to the north door. I called upon him loudly by name, and plucked a pinch of hair out of his moustache without disturbing him. I then drew off the bed-clothes; in less than a minute he shivered, sighed deeply, like a person after a shower bath, and eagerly sought for the bedding, straining his eyelids to open them, but in vain. He soon after awoke from the cold, he said.

"December 28th. Again exposed to the cold air, after inflicting different tests of sensibility. After shivering, and seeking for covering, as yesterday, but finding none, he rolled himself up like a hedge-hog, and tried

to make the most of it, but soon awoke, and from the cold, he said.

"December 30th. Acted precisely the same as yesterday.

"December 31st. I stuck a pin into his nose, and left it there a moment, before drawing off the bedding. He awoke exactly as he had done on former days, and from the same cause, cold.

"When getting up he rubbed his nose against the bed, and the pin fell out to his great surprise.

"After he got up, I gently pricked his nose with the pin which he resented as much as any one in the company would have done.

"Next day he was operated on without knowing anything about it, and although the operation was not the formidable one expected, it was very curious, and will be related next month.

"From the foregoing facts, I consider myself entitled to say, that it has been demonstrated, that patients in the mesmeric trance may be insensible to,

"The loudest noises.

"Painful pricking and pinching.

"The cutting of inflamed parts.

"The application of nitric acid to raw surfaces.

"The racking of the electro-magnetic machine.

"The most painful surgical operation, and yet be aroused into full consciousness by the exposure of their naked bodies, for a few minutes, to the cold air."

"All the persons admitted last month for operation have been disposed of, except one.

"JAMES ESDAILE, M. D.

"Calcutta, 1st January, 1847."

In the *Delhi Gazette Overland Summary*, for March 22, are the following paragraphs:—

"His Highness the Nawab Nazeem of *Moorsheda ad*, accompanied by Mr. Torrens, Mr. Cooper, and the native gentlemen in his suite, visited the Mesmeric Hospital on the 10th. Dr. Esdaile offered to operate on a patient who had been brought to the proper state, and the Nawab declined to be present, but munificently presented the doctor with 500 reals, to be applied to the purposes of the hospital.

"The *Englishman* of Feb. 23, is glad to hear that steps have been taken by several of his wealthy fellow-townsmen to give greater publicity to Dr. Esdaile's proceedings

\* "This will be provided against in the London Mesmeric Hospital, no doubt.—J. B."

and successful cures among their countrymen than it would seem they have hitherto attained."

The following paragraph will amuse those who have watched the conduct of the adversaries of mesmerism in Europe.

"The *Hurkaru* states that Government, on the representation of the medical visitors to the Mesmeric Hospital, has withdrawn the permission which it had previously given for the publication of the reports of this institution. The public will remember that Dr. Esdaile has from the very first been anxious that the utmost publicity should be given to the whole of his proceedings, and he has always courted the free expression of opinion regarding the nature of his operations, confident that the result of discussion would be the triumph of the cause he has espoused. One monthly report as our readers know was published, and it is impossible not to see the advantages which arose from its publication. Dr Esdaile challenged any proof of the inaccuracy of his statements, and this challenge brought forth two antagonists in the columns of a contemporary. One of these writers boldly asserted that Dr. Esdaile had given an incorrect account of the month's proceedings; that he had spoken of operations as painless, which were in reality not so. *Dr. Esdaile came forward, and vindicated himself most satisfactorily from this charge, and in the end Medicus retired in discomfiture.*

It delights me to inform the European public that Dr. Esdaile has shown no unworthy feeling respecting the inhalation of sulphuric ether, but has had recourse to it and begun most dispassionately to investigate its properties. Without any communication with the mesmerists of Great Britain, he has displayed the same pleasure at the discovery of its powers, and not for an instant thought of attempting to depreciate them. The conduct of the mesmeric world in this particular has, I fear, disappointed their adversaries. Truth and universal benefit were the sole objects of us here and in India. Dr. Esdaile printed the following letter in the *Englishman* of March 3rd.

"THE INSENSIBILITY PROCURED BY MEANS OF ETHER.

"To the Editor of the *Englishman*.

"Sir,—The moment that the rumors of the possibility of procuring insensibility to pain by the inhalation of the vapour of ether assumed a positive shape, I made experiments with it in my hospital.

"On the 23rd Feb, I caused two men to inhale the fumes of nitric ether, (not having sulphuric ether at hand) but only with the effect of making them disagreeably drunk for several hours without any remarkable modification of sensibility. On the 25th February, having procured sulphuric ether, I put two ounces of it into a pint of water, and desired two of the hospital coolies, then in perfect health, to inhale the fumes from the common inhaler used in hospitals, in the way that they smoke a hookah. It was very disagreeable, and I had some difficulty in getting the first man to persevere for five minutes. He then became very drunk, and begged to be allowed to go and lie down, which he was permitted to do. Up to this point he was sensible to pricking, and named the place injured.

"Another man was made to smoke the hookah for seven minutes, with considerable intermissions, and when he ceased to be able to smoke, I held the bottle of ether under his nose. At the end of seven minutes, he begged to be taken to bed, and had to be supported to it. Immediately after lying down, he became insensible to all questions, and to pricking all over his body. This I was quite prepared for, knowing that we can be made sooner insensible by the lungs than the stomach often, by means of carbonic acid gas, opium, hyang, stannicum, &c. But judge my surprise when I found him to be as completely cataleptic as any person I ever saw in the mesmeric trance! Not only so, but he exhibited the same spasmodic closure of the eyelids, and trembling of the eyelashes, and his insensibility from head to foot was perfect. On forcing open his eyes, the white of his eye could only be seen, and in no respect could I have distinguished his condition from that of a person in the most intense degree of the mesmeric coma.

"The pulse when he desired to lie down was small and frequent, but when the coma was established, it became full and regular, like a healthy or mesmeric sleeper's, and his breathing was quite tranquil without snoring. He was reduced to this state at ten minutes after 1 o'clock p. m. I pricked him most pertinaciously all over, at intervals, for ten minutes more, and tried to awake him by rubbing his eyes, blowing in them, squinting water into them, and sprinkling his face and chest with cold water, but all to no purpose.

"His teeth were firmly clenched, and he could not be made to swallow a drop of fluid. The catalepsy continued intense all the time. At twenty-five minutes past 1 o'clock, I desisted, and desiring him not to be disturbed, I drove to the medical college, a mile off, in

the hope of finding Dr. Mouat, as I wished to have a competent witness of the man's condition. I found Dr. Mouat at home, and he obligingly accompanied me to the hospital. We reached it at twenty minutes to 2 o'clock, and found the catalepsy to be going off, and the man beginning to move. The spasm of the eyelids continued, and the eye was still turned upwards.

"When urged by questions, he answered precisely like a person in the mesmeric somnambulism, but when pricked all over, he said that he felt nothing. We now attempted to rouse him farther, by causing him to inhale the fumes of carbonate and liquor of ammonia, which seemed to disturb him a little, but he said that he smelt nothing, and it did not materially dissipate the torpor of the senses. Shortly, after, he began to call upon me by name, begging me to open his eyes, which I tried to comply with, but could not succeed in effecting, and still the insensibility of the skin continued. At ten minutes to 2 o'clock, he was carried out of doors, and seated on the steps leading to the hospital. A bluestie was placed several steps above him, and was ordered to empty his muscuk slowly on his head and spine. He was asked if he felt anything? He replied, 'nothing.' In about six minutes, he opened his eyes for the first time, but it was evident that their sense was shut, and he said *I was a Baboo*. The cold affusion was continued, and at 2 o'clock he suddenly jumped up; an instantaneous expression of intelligence spread over his countenance, and he showed that he was restored to full consciousness, by getting into a passion with the bluestie for wetting him. This was the first moment of consciousness since he had gone to sleep, and as is often seen in mesmeric sleepers, he had no recollection of the means used to put him to sleep. In a word, the state of comatose and somnambulism was perfectly identical with the parallel mesmeric conditions."

"How long this man's state of unconsciousness would have continued, if not so violently dissipated, I cannot pretend to say, but I am certain that he might have been flayed alive for fifty minutes without feeling it, for he was quite insensible to external impressions in his half-roused state of somnambulism, or sleep-waking rather, and in this also he resembled a mesmeric sleeper."

"4th March. I have done the same thing again to day, and contrated the catalepsy and somnambulism caused by ether, with the same states induced by mesmerism, and they could not be distinguished. The former was only more intense, and would yield to nothing but long continued affusion of cold water. But I suppose the ethereal effects were real, and the mesmeric ones delusion or humbug.—J. B."

"The other man did not attract so much of my attention at first, as he continued sensible to pricking for some time after lying down, and he only seemed very drunk. But when I returned with Dr. Mouat he was fast asleep, and it took much cussing and pulling to get him to answer. There was no catalepsy in his arms, but on Dr. Mouat lifting his legs, he found them to be in a singularly rigid state—another mesmeric symptom."

"We continued to rouse him with ammonia, &c, and got him to speak plainly, and then he complained of not being able to open his eyes; the eyelids seemed glued together, and while begging to have his eyes opened, he was insensible to my pricking him assiduously. It was now upwards of an hour since he had smoked the ether, and we could not yet dissipate its effects. He also therefore was subjected to the cold affusion for several minutes, of whose action he was quite unconscious, although he kept rubbing his eyes all the time to open them, and occasionally answered questions correctly. He at last suddenly awoke into the full possession of his senses, and recollected nothing that had happened since he went to sleep."

"Here then is a most exact imitation of the physical phenomena witnessed in the mesmeric trance, and the sleep-waking state caused by ether beautifully illustrates the distinction between *remotion* and *consciousness* so often seen in the mesmeric state, and which I have insisted upon so frequently, with little effect I fear. These men were capable of talking and acting, and made the reasonable request to have their eyes opened, although they were unconscious of a deluge of water that was falling on their naked bodies from a height."

"The opponents of mesmerism will probably have little difficulty in believing all this, because it was done '*secundum artem*,' with an orthodoxly nauseous drug."

"I am satisfied that the man least affected might have been operated on to any extent a most, not without *appearing* to feel it, but without being conscious of it afterwards, just as is seen every day in mesmeric operations."

"Here then is a prodigious engine for good or evil, according as it is used or abused, for if the advantages are most striking, the evils are not less so in the above examples."

"*'E celo descendit Ether'* is no doubt gracefully ejaculated by the medical opponents of mesmerism, to whose aid it has come at their greatest need; but if their love and gratitude are not tempered with discretion, they may find their new ally a dangerous enemy."

"The speedy induction of insensibility of long duration is most satisfactory and complete, and I apprehend no danger from prolonged etherial coma, for the pulse was natural during its greatest intensity, and the breathing not disturbed, nor did the men suffer afterwards from what they had undergone.

"I believe that any amount of mere pain might have been inflicted without the knowledge of the patient, but I should be extremely reluctant to perform a capital operation entailing a great loss of blood on a person in this state, till I had obtained more command over my too active ally.

"In many of my late operations in the mesmeric trance, for example, the pulse became insensible from the sudden and profuse hemorrhage, and it became necessary to revive the sinking system by restoratives. The patients were therefore awake for this purpose, and this can be generally very easily done. But in the coma from ether it has been seen there was no power of swallowing left in one of the men, and that stimuli applied to the skin and nose had no decided effect on the torpor; in fact there was no means of getting at the vital powers. Now, if this man's life had depended on our being soon able to restore him to consciousness and sensibility to ordinary stimuli, I think it very probable, and Dr. Mouat agreed with me, that he would have died before this could have been done.

"But let us hope that we shall soon be able to regulate as easily as we can set in action, this potent influence. In the man most intensely affected, one-tenth of the power exerted would probably have sufficed for all practical purposes, and more control might therefore have been preserved over the vital functions. By cautious and graduated doses, and with a knowledge of the best antidotes, I think it extremely probable that this power will soon become a safe means of procuring insensibility for the most formidable surgical operations even.

"All mesmerists, who are lovers of truth, and not mere traders, will rejoice at having been the means of bringing to light one truth more, especially as it will free them from the drudgery required to induce mesmeric insensibility to pain, which, although the most striking, is the least important branch of the subject.

"It is only of late years that the application of mesmerism to surgery has been prominently brought forward, principally with the view of affording an ocular demonstration of the existence and power of this great vital agent.

"But the great field for a display of its

usefulness is in the treatment of medical diseases, where it often comes to our aid when all other resources have failed, and it would take a library to contain the volumes of well-attested cures performed through its agency on the Continent, before it was ever heard of for surgical purposes.

"Not the least curious part of this history is to observe how the passions and prejudices of men have been made not only to establish known truths, but to discover new ones.

"I am, your obedient servant,

"JAMES EDAILE

"Calcutta, 1st March, 1847."

I have received a pamphlet published at Madras in February, entitled, Notes of a Case of painless Surgical Operation performed while the patient was under the influence of Mesmeric Agency, by J. W. T. Johnstone, M.D. Edin. Licentiate of the Royal College of Surgeons; late President of the Royal Medical Society; Member of the Medico-Chirurgical Society, Edinburgh, &c. Madras: 1847." I make the following extracts:—

"I am at liberty," says Dr. Johnstone, "to mention that my patient in this case is the lady of a clergyman of the church of England. Both she and her husband have perused the following notes in MS, and are most thankful to be able to bear testimony to their entire correctness."

"Mrs. ———, European, of a well regulated mind—a well formed figure—and a system remarkably free from any kind of nervousness. Has been six years and a half in India. General health good. Before leaving England she observed a tumor about the size of a field bean over the posterior aspect of the right shoulder. It continued to enlarge gradually but slowly, and at the end of five years had attained the size of a small egg. For the last two years, it has increased much more rapidly, and now constitutes a tumor of an adipose nature, lobulated, mobile and kidney shaped. It measures about six inches in length, four inches in breadth, and two and a half inches in thickness at its thickest part, and stretches from the spinous process of the seventh cervical vertebra, downwards and outwards towards the acromion and outer third of the spine of the scapula, along the upper border of the trapezius muscle. A sensation of weight, and slight numbness of the right arm are the chief inconveniences complained of.

"I recommended extirpation on first seeing it, twelve months ago, but the patient would



not consent. Leeches, discutient ointments, &c., were had recourse to with no good effect. Seeing it thus increase, she at last made up her mind to have it removed. I recommended her to try the effect of mesmerism prior to the operation, to which she at first objected, as neither she nor her friends believed in its efficacy. She at length consented, and agreed that I should try it on the morning previous to the operation."

Mesmerism was begun on the second of January, and continued daily till the 9th. The events of this day are thus described.

"8th Mesmeric Sitting, January 9th.

"I commenced at a quarter past 7 a. m., and continued for three hours. She felt no drowsiness, sickness nor languor after yesterday's proceedings, and again expressed herself as feeling better than she did previous to the commencement of the mesmeric sittings. Position, manipulations, &c., the same as yesterday. Pulse 80—skin cool—respiration natural—ears filled with cotton. She soon fell into a deep sleep. Muscular twitches were well marked. At 10 o'clock, a. m., the mesmeric trance seemed perfect, the cataleptic condition was well developed, and sensibility to pinching, pricking, loud noises, strong light and ammonia, entirely absent. Soon after 10 a. m., Superintending Surgeon, D. S. Young, who had been requested to be present at the operation, arrived. Professor Key had also been invited and promised to be present, but was unavoidably detained at his class room. The state of the patient's perfect insensibility, and the cataleptic condition were shown to S. S. Young's entire satisfaction. At a quarter past 10, I turned her full upon her face, and made other necessary arrangements, to proceed with the operation. Pulse 80—skin cool—respiration slow and tranquil.

"Operation.—I made two elliptical incisions over the tumor, commencing about half an inch superior and external to the spinous process of the seventh cervical vertebra, and meeting about half an inch below the centre of the outer half of the spine of the scapula. The length of each incision was about 7 inches 3 lines, consequently the extent of skin divided by the knife equalled 14 1-2 inches. I carefully dissected out the tumor, which was slightly adherent, from below upwards. This occupied about three minutes and a half. Three arteries of no great size required ligatures. The bleeding was profuse at first, and seemed not to differ in this respect from an ordinary operation. The edges of the wound were brought

together by four stitches, the intermediate distances being supported by straps of adhesive plaster. S. S. Young kindly assisted me in the operation, and Mr. Smith assiduously kept up the mesmeric passes along the patient's back all the time. The patient's husband, my apothecary, and a nurse were present.

"The time of the operation, from the commencement of the first incision to the application of the last roll of bandage, amounted to eighteen minutes, during all of which time not the slightest trace of suffering or sensibility on the part of the patient could be detected. The pulse continued unchanged at 80, as S. S. Young satisfied himself, and the respiration perfectly tranquil; no moan or sigh escaped her lips—no alteration in the expression of her features was observed—no instinctive motion or wincing was detected; once only she moved her head instinctively to free her mouth and nostrils from a little pool of blood which had collected about them, and was interfering with her breathing. She was easily mesmerised, before which care was taken to conceal as much as possible all traces of the operation. When she awoke the following dialogue ensued.

"Q. Well, have you been asleep to-day?

"A. Yes, I think I have.

"Q. Do you think you slept more soundly to-day than yesterday?

"A. I cannot say.

"Q. Did you feel me turn you or do anything to you to-day.

"A. No, but I feel something smarting, and my face and eyes feel stiff.

"She now put her left hand up to her shoulder, as she had often done before, and perceived that the tumor had been removed, of which she confessed perfect unconsciousness. The stiffness of the eyelids and face was caused by dried blood. Pulse 80—respiration natural.

"The tumor weighed 3 lbs. 1 dr. two hours after removal. The wound was dressed with cold dressings, and a most entirely healed up by the first intention. She suffered no pain in the wound, continued perfectly free from fever, and was confined to her room only one day. The pulse continued at 80 for two or three days after the operation, when it rose to 90, apparently its natural standard. She speedily recovered, and now feels better than she did previous to the commencement of the mesmeric sittings."

Thus Mr. Young, the Superintending Surgeon of the Presidency, requested to be present (observe the word requested) and

assisted in the operation: and another medical man, "Dr. Smith assiduously kept up the passes along the patient's back at the time."

This was not all. The Superintending Surgeon forwarded Dr. Johnstone's account of the operation to the Medical Board, hoping "that the present most triumphal illustration of the practice may be brought to the notice of Government."

"In making this request," continues Mr Young, "I am impelled by a sense of justice to call the Board's especial attention to the merits of Dr. Johnstone, a private practitioner at this Presidency, by whose well-directed and unwearied skill and perseverance, the great work has been achieved for the first time in the case of an *European patient* in *British India*, or indeed in the eastern world. Nor can I close this letter without reminding the Board that Assistant Surgeon G. Smith, who so admirably seconded Dr. Johnstone's efforts throughout, is the same promising young medical officer who, when the cholera broke out in H. M.'s 57th Foot at Arcot, elicited my warmest commendations by his humane exertions, as well as a highly favored report on his professional acquirements."

"I have the honour, &c."

"(Signed) D. S. YOUNG,

"Superintending Surgeon."

"SUPT. SURGEON'S OFFICE, }  
Madras, 19th January, 1847." }

Did the Medical Board of Madras spurn the account in imitation of the Medical and Chirurgical Society of London? No. They ordered the following reply:—

"Sir,—I am directed by the Medical Board to acknowledge the receipt of your letter, No. 44, with its inclosure, a Report of a Case of 'Painless Surgical Operation,' under mesmeric influence, performed by Dr. Johnstone of Madras."

"2. The Board request you will be so good as to communicate their thanks to Dr. Johnstone for his very interesting communication, which they consider highly creditable to that gentleman's professional talents and zeal in the pursuit of science, and it has afforded them much pleasure to bring his report to the notice of the Madras Government."

"I have the honor, &c., &c."

"(Signed) GEO. FRARAE, M.D.

"Secretary Medical Board."

The matter was next laid before the Government in Council by the Medical Board, and this was the acknowledgment:—

"The Most Noble the Governor in Council has perused with much interest the communication above recorded, and will be glad to receive the further reports on the same subject promised by the Medical Board."

"2. His Lordship in Council fully concurs with the Medical Board in considering the exertions of Dr. Johnstone in the case now brought to notice, highly creditable to that gentleman's professional talents and assiduity in the cause of science."

"(True Extract.)"

"(Signed) C. A. BROWN, Lieut.-Col.

"Secretary to Government."

After reading all this, I confess myself distressed on reflecting upon the sad conduct of my professional brethren in England. I will not, however, dwell upon it, but make one more extract from the pamphlet.

"I am glad to learn," says Dr. Johnstone, "that other medical men at this Presidency have incurred the same risk, and I observe that the subject has been taken up at the Medical School, since the concurrence of this case, where the students have been mesmerising one another under the superintendence of the surgeon at the head of that institution. It is said to have been first tried on two native pupils, and then on a few of the apprentices, and 'on the whole with complete success.' I further observe on the same authority (an anonymous writer in the *Athenæum* newspaper) that some of the sick inmates of the Male Asylum have been mesmerised under directions of the surgeon of that institution. where, it is mentioned, 'the patients who had been previously afflicted with internal diseases awoke perfectly recovered.' Be this as it may, the simple fact that mesmerism has been tried in the above institutions, leads us to hope much interest is about to be manifested in its behalf at Madras, and that the least success will stimulate to further inquiry in all institutions where such opportunities for its investigation present themselves."

"It is not my intention to offer any remarks whatever on the nature, pretensions, &c., of the general subject of mesmerism. I will merely mention that at one time I was as great a sceptic in its belief as any one could be, regarding it as a subject so novel in its nature, and so irreconcilable in its general conclusions to all past experience, that nothing short of the most complete inductive evidence, entirely incapable of being explained away, ought to be admitted in support of it."

"In the course of time, I saw men of high and established reputation,—accustomed to investigate such matters;—men of acknow-

fledged wisdom and probity, whose authority on other subjects would not be doubted for a moment, not failing to come forward and add their unswerving testimony in support of some of the facts of mesmerism. I was thus led to the conclusion that, however encompassed with error and abused by imposters and charlatans, it no doubt deserved to be regarded more as the abuse of some great truth than an absolute fiction, and that instead of treating it with the ridicule and contempt with which it was received at the hands of many of my professional brethren, it better became every candid observer to endeavour to find out what part of it was true, and what was false. With these sentiments I carefully attended to all well-attested reports upon the subject, and incidentally instituted a few experiments of my own, limited more from want of opportunity in prosecuting them in such a place as a public hospital, than from any disbelief in many of the conclusions arrived at by others, and, partly by the evidence of my own senses, was compelled to acknowledge that Dr. Elliotson was not altogether wrong when he declared, years ago, 'that he should despise himself if he did not declare his conviction of the truth of mesmerism.'"

By the order of Government a Mesmeric Committee has been formed at the Presidency of Madras, as one was in Bengal; and I learn that Bombay is also wide awake, and we may soon expect to hear of a mesmeric hospital there. Mr Clark visited Dr Esdaile's hospital before going to Bombay, and was deeply and favourably impressed with the importance of the subject.

JOHN ELLIOTSON.

#### Case of St. Vitus's Dance

Cured by Mesmerism in less than a month, after seven years of suffering, and upwards of nine months passed in several Hospitals. By MADAME MARIE.

CATHARINE HOGAN was sent to me on the 4th of January, 1847, with a note from my friend, Mr. Briggs, entreating me to try what mesmerism would do for her, and giving me a short account of her case. It appeared that seven years previous, when she was four years of age, she had been frightened on her return from market by a boy snatching her basket of vegetables and running off with it, on which occasion she wandered about the streets for several hours, fearing to return to her mother, who at last discovered her and took her home. Some days afterwards she fell in with a party of boys and girls romping, one of whom laid his stick across her

shoulders. The consequence was a fit that lasted three quarters of an hour; on recovering she was attacked with St. Vitus's Dance, and was taken to University College Hospital, where she became an out-patient under Dr. Davis. She seemed to recover, but two years afterwards, having a severe relapse, she went to the Middlesex Hospital as an in-patient, where she remained four months. They then made her an out patient, but the distance was too great to permit her attendance. She then was admitted into St. Bartholomew's, and remained there nine weeks; returned to the Middlesex for seven weeks, and University College Hospital for six weeks; making in all thirty-eight weeks. Middlesex, 16 weeks; Bartholomew's, 9 weeks; Middlesex, 7 weeks; University, 6 weeks.

When Catharine came to me she was about twelve years of age, and I then took down her appearance and symptoms as follows, premising merely that I was encouraged to undertake the case from the late observations of Dr. Elliotson in the January number of *The Zoist*, who there mentioned his success in curing the same disease by mesmerism, though failing in producing sleep.

On the 4th day of last January I began my operations on her, and henceforth shall transcribe from my diary, commencing by the statement of her case and appearance as I first formed my opinion.

Catharine Hogan, age twelve, short, thick set; temperament sanguineo-lymphatic; hair and eyes dark, the latter expressing idiotcy; much trembling and irregular movements of the limbs; continual fits of hysteric laughing and crying; her hands incapable of holding anything; frightened to be alone or in the dark; suffering from frequent headaches, sickness of stomach, giddiness, palpitation of heart, much pain, bowels co-tive, not being relieved more than once in ten or fourteen days.

January 4th, 1847. Mesmerised Catharine Hogan for about half an hour, making long passes from the vertex of the head downwards, along the chest, arms, the region of the lungs, down the spine, breathing on the occiput and the shoulders. She complained of faintness and sickness, but felt warm, whereas she was very cold when she came.

5th C. said she had felt very drowsy after she left me yesterday, and slept at night better than usual.

6th C. says that on her return home yesterday she slept an hour, and very soundly during the night; she seemed to feel my influence more than usual to-day.

7th and 8th. I was prevented mesmerising.

9th. I found it very difficult to fix her attention; she complained that I made her eyes smart, and my passes were like pins and needles pricking her: at last, however, she went into a sound sleep, and though she did not perceive the entrance of a stranger and his departure, yet she did not lose all consciousness. She is naturally very cold, but a few passes are sufficient to excite warmth, and the trembling of her limbs is quite cured; she can now nurse the baby, and hold anything in her hands; her bowels act daily; she is no longer so nervous; this day on my exciting the organ of color, she saw bright light like stars.

10th. Sunday.

11th. Catharine says she went to sleep several times on Saturday, for a quarter of an hour at a time, but was faint and sick yesterday.

13th. Mesmerised her and she slept half an hour.

15th. She felt cold, and her left arm was very painful; a few passes completely warmed her; all her nervous trembling is now imperceptible.

Till the 20th. No perceptible change; on that day she slept profoundly for a long time, and when she went home slept again for four hours. Whenever she experiences great coldness, I breathe on her through muslin, which invariably warms her, and relieves the pain.

February the 2nd. Catharine fell asleep in three minutes by my merely looking at her; she has been so much improved that I now mesmerise her twice a week only; she has not had any trembling since the first week of being mesmerised; she has taken no medicine; her bowels act regularly; her nerves are strengthened, and she does not mind being alone or in the dark; indeed she voluntarily visited a friend who had died, and stayed with the body. The last sign of St. Vitus's Dance was on the 29th of January, this is the 31 day of September: from the month of February last, that is from the 28th, I did not see her till I sent for her, August 24th; her appearance was very different from what it was last January; she has no pretensions to beauty, but had now the countenance of an intellectual person. Finding her delicate I proposed to resume mesmerism, and she was under my influence immediately.—Zost.

MARIE.

22 Thayer street, Manchester Square.

Sept. 7, 1847.

#### Removal of Rigidity of the Neck,

Debility and dys-peptic disease of the Heart, irritation of the Bladder, and severe Pains. By Mr H. S. THOMPSON

#### I. Relaxation of rigidity of the Muscles of the Neck.

A POOR woman was severely burnt about the neck and face three years ago, in consequence of which the muscles had become so rigid that she could not raise her head or move it to the right or left, and, from the time of the accident had never been able to masticate any food that was hard or solid, obtained immediate relief from mesmerism: that is, the muscles were all completely relaxed, she could move her head about freely, and could masticate anything. The injury was so severe that pieces of bone are continually exfoliating and working out; the irritation caused by this reproduces to a degree the rigidity of the muscles of the neck, but the operation of mesmerism soon relieves her, and renders her comfortable for days. The relaxation of the muscles was very extraordinary.

#### II. Cure of extreme debility and derangement of the Digestive Organs.

A case of extreme debility was much benefited by the operation of mesmerism. A young man, one of my tenants, became suddenly so weak that he was not able to go about his usual avocations. This debility increased that it was with difficulty that he could walk about. He had constant aching of the limbs from the slightest exertion, a sense of faintness, cold sweats, and loss of appetite, and his evacuations perfectly black. His sister was attacked in a similar way last year, and then died of consumption. It was more than three months from the commencement of his illness that I first saw him. He had run the round of physic and tonics by the advice of his medical men, but had only grown the weaker. The first time I mesmerised him he felt stronger, and during the process the aching sensation up his limbs was removed. He rapidly improved. On the third day his appetite returned, his evacuations were natural, and he was able to ride eight miles. I continued to mesmerise him almost daily for three weeks, at the end of which time he had nearly quite recovered his strength, being able to ride any distance and to walk tolerably well. The only trace of weakness that he complained of was in his legs if he walked any distance. As I left home about that time I sent him to the sea for change of air.

### III. Wonderful benefit derived from Mesmerism in serious Disease of the Heart.

The patient had been afflicted several years; but the complaint had advanced rapidly during the few last weeks. When I saw her she had been confined to her bed six weeks, suffering great agony in her head, shoulders and back; constant "palpitation of the heart and fluttering in the chest; a sense of suffocation so great that she was constantly obliged to be raised; her legs and body had been much swollen for some weeks; she had been unable to use them. She was instantly relieved from her pain, and half an hour sufficed to restore use to her legs; she gradually from that day improved; in a month she was able to walk daily from her house to mine and back again, which is rather more than a mile—a thing which she could do with difficulty a year ago. She enjoys herself, can attend to her family, and seems daily to gain strength. This case was pronounced by the profession as incurable from the first; but, as we have already overcome so much that was then pronounced impossible, I hope that in a short time I may be able to add that she is quite returned to health.\*

### IV. Removal of irritation of the Bladder.

This is another instance proving the use of mesmerism in inflammation of the bladder. A friend of mine had suffered a very severe attack, from which he was slowly recovering when he was obliged to go to London on business. I chanced to be there at the time. His journey brought back the symptoms, and he wrote to me saying how ill he was. I went to see him: he was suffering from constant irritation, great pain, and tenderness of the abdomen; so much so that he could scarcely bear the pressure of the bed-clothes. I asked him to let me try whether I could do him any good. He consented, and in half an hour the tenderness and pain were removed. I remained with him two hours, during which time he had no irritation nor pain; though, previously to my visit, the irritation was constant and the pain unvarying. The following day he was so much better that he was able to go out and attend to the business which had brought him to town, and on the day after he was well enough to return home.†

\* We entreat our readers to compare this case with those in Vol. I., p. 465, and Vol. V., p. 161.—*Zoist*.

† We entreat our readers to compare this with the cures in Vol. IV., pp. 50, 187; and Vol. V., p. 82.—*Zoist*

### V. Relief of Pain.

This is another curious instance of the power of mesmerism to relieve pain. I was told that an old man in the village near which I reside was suffering great pain. I went to see him. He is *stone blind*. I found him on his bed, groaning and moaning, and clenching his hands. I asked him what was the matter with him; he said his head was very painful, he could only bear it in one position, and that he had great pain in his legs and arms; and added, "I have not an easy spot about me." He spoke in a most piteous voice. I did not tell him what I was doing, but made passes over him. He very soon said, "Ah, that's nice; the pain is all going." I continued making passes for a few minutes, when I asked him how he felt. He spoke quite cheerfully, saying, "Very nicely, thank you, Sir. I have no pain now;" and in a few moments he was in a sound sleep. He has had little or no pain since, and when it does return, a few wafts of the band remove it. He cannot live long: he is very old, and has a constriction of the oesophagus, but it is very certain that he can be spared all pain.

### VI. Cure of inflammation of the Eyes, and opacity and prominence of the Cornea.

The sixth and last case that I shall at present send, is one of inflammation of the eyes and opacity of the cornea: the patient was a lad twelve years of age. From two years old his eyes had been defective. At that age he had serious inflammation in them, which has never entirely left them, being more severe at times. The cornea had become opaque and very convex. The inflammation, in the course of a few times mesmerizing, was gone; the eyes began gradually to assume a natural and healthy shape, and the only trace of disease at present is the slightest film or spot on each eye, discoverable only in certain lights. The boy declares he is astonished at what he is able to see now. He does not appear in the least short-sighted. He says that he can see clearly and at any distance; whereas before everything was dim, and he could only see objects that were near him. The film seems gradually wearing away.—*Zoist*.

HENRY STAFFORD THOMPSON.

Fairfield House, near York,

August, 1847.

**A Recent Specimen of Professional Ignorance and Bigotry**

WHILE perusing the half-yearly abstract of the medical sciences, from January to June, 1847, by Dr. Ranking, of Norwich, we noticed the following:—

“The introduction of a new remedy, or a new means of obviating the many undesirable events contingent upon the practice of medicine and surgery, is always regarded in a different light by different members of the profession. There are some among us, on the one hand, who, contented to move along in the mental ‘jog trot’ to which they had been long accustomed, look with suspicion or dislike on any innovation upon the ancient opinions with which they have enfolded themselves. There are the men who ridiculed and opposed the introduction of the stethoscope, and who will continue to ridicule and oppose everything which they had not ‘dreamt of in their philosophy,’ and which either threatens to interfere with the usual routine of their thoughts, or necessitates a greater amount of intellectual application than they are capable of devoting to it—There is, on the other hand, another equally mischievous, perhaps, but far more interesting class of practitioners, whose imagination is apt to lead them to expect something great of every chimera which a busy age is continually forcing upon the attention. These men take up mesmerism, homœopathy, and such like vagaries, &c.”

Now this is written by a gentleman who professes to give his professional brethren the most important and attractive portion of the medical improvements and suggestions of the past six months. He thinks it right and conscientious to sneer at mesmerism and the advocates for its adoption, but he does not think it right to place facts before his readers that they may judge for themselves. He does not quote the “surgical reports” from the Calcutta Hospital, where are beneath his notice—he does not refer to the long list of surgical operations performed in Europe, Asia, and America—he does not in his physiological report notice the inexplicable phenomena presented by the simplest case of mesmeric sleep. All this important information is not to be found in *The Retrospect*—why? This is the course which would be followed by the truth-seeker, by the philosopher; but it is not the course to be pursued by the medical trader. The sale of the book is the first consideration, and to ensure this, the profession must only be

taught what is palatable, they must only have offered to them what it is known they will buy. Sir Benjamin Brodie has said mesmerism is “all humbug;” how then could Dr. Ranking presume to refer to a subject tabooed by the surgical luminary?

O! ye men of the world—ye money-traders, ye would be obstructives! a retrospect of philosophical progress proves that science will be more than a match for ye. The profession will become slowly enlightened, and amidst the contents of some future medical retrospect will be found a summary of mesmeric proceedings. We do not despair of Dr. Ranking even. He will open the pages of *his Retrospect* when it is safe, and the exchequer is not likely to suffer.—But we have not quite done with Dr. Ranking. In the article from which we have just quoted, he says,

“Pain is one of the greatest evils which the operator has to contend with: mere pain may, by contributing to what we are in the habit of calling ‘shock,’ be the immediate and sole cause of death. As a striking instance of this fact we may mention a case which recently occurred within our own knowledge, that of the application of a ligature for the cure of an erectile tumor of the entire breast. The patient, a healthy female, bore the initiatory steps of the operation without a murmur, without failure of pulse, and without change of countenance. The instant the ligature was tightened, which it was with the full force of two surgeons, she gave a yell of agony, the pulse became imperceptible, the countenance became ghastly pale, and in eighteen hours she was a corpse!!”

Horrible, most horrible! Dr. Ranking says that this operation occurred recently.—And this is the cause of our complaint against the gentlemen who had charge of the case. As surely they ought to have ascertained whether their unfortunate and confiding patient could have been placed in the mesmeric sleep. If she had been, the yell of agony would not have been heard, and we may be almost certain that the system would have calmly borne the shock of the sudden application of the ligature. Let us contrast the above horrible operation with the following description by an eye-witness of three operations at Cherbourg, performed during mesmeric sleep:—

“The remarkable calm, and the astonishment of the patients, who, on awaking as suddenly as they had been sent to sleep, were all surprised at finding a painful opera-

tion over, and who had felt nothing, perceived nothing, and been passive and motionless, while the operator forcibly plunged a bistoury into the flesh, dissected away enormous portions of it, and tied the arteries—was certainly a most extraordinary fact, well calculated to arrest the attention of physiologists more and more.” (See last number of *The Zoist*.)

There is no excuse for the conduct of Dr. Ranking's friends. Many years ago Cloquet amputated the breast of a lady without her being conscious of the slightest pain. In 1838, Dr. Elliotson proved that a seton could be inserted without the knowledge of the patient. Dr. Engleclue, in August, 1842, divided the ham-string muscles without the consciousness of the patient. In October, 1842, Mr. Ward, of Wellow, amputated the leg of a man under the same circumstances, and we have by this time a list of upwards of two hundred surgical operations, all performed without suffering; and yet Dr. Ranking, the self-elected editor of a medical Retrospect, tells his brethren that “pain is one of the greatest evils which the operator has to contend with,” and at the same time closes his pages to the description of one of the most important means by which this pain is to be avoided. Dr. Ranking is in a false position, and we have no doubt that he has to thank his *cofrere*, Mr. Wakley, for it. There are many medical men who still form their opinion of mesmerism from what they see in the pages of the *Lancet*. We really feel surprised when we hear a person quote the *Lancet* as his authority for disbelieving natural facts. He little knows the polluted source to which he appeals, nor the disgraceful means which are weekly adopted to bolster up the course the unscrupulous editor has followed for so many years—Here is a specimen. Can any of our readers form the least idea to which page of *The Zoist* the writer of the following disreputable paragraph refers?

“M.D. We shall not allow the filthiest of all filthy slanders contained in *The Zoist* to go unwhipped. Of course the parties concerned in this infamous publication are in a state of perpetual mortification at their fallen and degraded position, and therefore they bite and rail. The leper must be taken with his spots.”—*Lancet*, July 31st, 1847.

This is amongst the notices to correspondents, and similar paragraphs are constantly inserted. The object of the writer is clear. We can quite understand an individual who has never seen *The Zoist*, feeling somewhat

sceptical as to the truthfulness of its contents after reading this paragraph; but then he should have been taught by this time not to go to such a journal for an opinion on disputed scientific subjects. We should just as soon think of recommending our friend to apply to a suspected incendiary to protect his property, as refer him to the pages of the *Lancet* for the purpose of gratifying and educating his moral and intellectual faculties.

L.E.G.E.

#### Instance of the great power of Mesmerism over Pain.

By Mr. G. H. BARTH. Communicated in a letter to Dr. ELLIOTSON.

Great Parndon, Essex,  
Sept. 5, 1847.

To Dr. Elliotson.

DEAR SIR.—Subjoined are a few cases of the cure or relief of pain by local mesmerism, without the induction of sleep being attempted. They are at your disposal for publication, if deemed worthy a place in *The Zoist*. Miss Wallace's, and similar cases as lately published in that journal, are valuable; they teach how readily and easily human suffering may be alleviated by mesmeric means, and carry a conviction of the utility of the process, which comes home to every unprejudiced understanding. Cases of this class are so simple, that they resolve themselves into a question of fact—true or not true. If sceptics can detect imposture and falsehood, let all obloquy fall on the heads of the impostors; if they admit the cases but deny the influence, let them teach us what influence it is which effects the cures. Those who will not admit, nor disprove, nor investigate, should hold their tongues quiet as regards mesmerism. Without investigation they are not in a condition to know, and those who prate about a subject of which they know not anything, are merely garrulous boobies, whose convictions are no more than idle opinions.

Wyniaud Fawl, aged 40, single woman, cook in the family of a friend in this parish, asked my advice on December 4th, 1846, respecting an excruciating pain in her left arm and shoulder. It commenced every evening in the middle finger, travelled up the arm, and remained all night, rendering sleep quite impossible. It abated a little in the morning, but sometimes came on early in the day, and was so bad that, though I

might "think her childish, she could not help weeping with the pain." Had been thus afflicted seven or eight weeks, and had nearly lost the use of the arm; could not dress herself—her fellow servant was obliged to lace and unlace her stays; feared she could not continue in service, but must try and get into an hospital, as she had no friends who could assist her. I desired her to wait until the pain was exceedingly bad, and then come to me, and I would try what I could do to relieve her. Called on me in the evening of December 6th; said she had cried nearly all the previous night with the pain, and that the arm was then in great pain. The arm and hand seemed slightly swollen and reddened. When she had removed her bonnet and was seated, I made a pass at two or three inches distance over her head and face; she described the sensation as a warm wind from my fingers. I tried it down the arm; she felt it distinctly through the sleeve of her dress, its lining and some flannel.

A few passes over the head and face told me I might easily have mesmerised her; but as this was not my object, I went to work on the arm, drawing from the shoulders to the extremities of the fingers, and off. The pain gradually decreased, until in twenty minutes it was not felt. She said, "only a sort of soreness, not anywhere troublesome remained." She left me then, and became so sleepy she could hardly reach home, and had a sound night's rest, the first for many weeks. Three more similar applications of mesmerism rendered the relief permanent. She now resides as cook with James Dobson, Esq., of Harlow, a well-known and long established medical practitioner. I have not had any communication with her since she quitted Parndon, but feel sure she will verify this statement if asked respecting it.

Anne Shipton, housemaid at the same friend's as the above, got a thorn in her thumb. Inflammation and supuration ensued, and a great portion of the subcutaneous tissue or cushion sloughed away, and is not yet renewed. She consulted a highly respectable surgeon of Harlow, who I have no doubt did all that was proper (except trying mesmerism,) according to the established routine of practice. She went to this gentleman several times. On Friday, the 18th of December last, when he saw the thumb, he shook his head, said he was afraid she would lose her thumb, gave her the needful applications and directions, and instructed her to come again on the following Monday or Tuesday, when he would

cut it off, or arrange for so doing, if this was necessary. I saw it at her mistress's request on the Sunday morning: the young woman had suffered so much pain, that she had quitted her bed, and walked her room a great part of the previous night. Servants who work hard in the day, don't do this when they can help it. On removing the poultice, the thumb appeared swollen, black, and gorged with a thick purulent secretion which exuded at the orifice of an opening which had been previously made. I seized the hand, and squeezed out a quantity of thick fetid matter. The pain this caused made the poor girl cry; so, as a matter of course, I mesmerised the thumb: in a few minutes the pain was gone. I requested permission for her to call upon me in the evening; and then more matter had formed, and the thumb, hand, and arm, were in pain. After squeezing out the matter, I mesmerised the arm and hand half an hour. The pain soon quitted, and did not return again. Her medical attendant saw it on the following Tuesday, some forty hours after the mesmeric operation; he was much pleased at its altered appearance; and said it was almost well, but he should like to see it once more. Anne did not tell him of the mesmerism; feared I might not wish her to do so, as I had not given any directions about it. I do not claim for mesmerism the credit of saving the thumb, which had good surgical treatment; but it certainly relieved the patient from severe and continuing pain. In fact, for many days afterwards, the thumb was deprived of sensibility; Anne could not feel any difference betwixt a scalding hot poultice and a cold one: she knew her thumb was on, because she could see it; but she did not feel any thumb on that hand.

I have met with several instances of the sensibility of a part being entirely obliterated for a long time by continued passes in one direction. I mesmerised a young lady in town last year, and made passes for some twenty minutes over her feet before I obtained the result desired. A month afterwards she assured me she had never felt her feet since; her words were, "I know I have feet because I am standing on them, but I don't feel at all below my ankles, neither heat nor cold: I don't feel as if I had feet."

Susan Dennis, a blunt strapping old woman of sixty-four, keeps a shop at Tynges, parish of Netteswell. I mesmerise her daughter who has fits, and many other real afflictions; or I should perhaps, say had; we are doing so well I am not sure that *has* will be correct: and the other troubles have long been consigned to the past. However,



I called one morning, and found Mrs Dennis in great suffering. She said nothing, but looked faint and white. I enquired the cause. A boy, throwing a stone at a cow, missed the cow and hit the woman on the shin, where the bone has very little covering. She had nearly fainted, and described the pain as hardly endurable. The stone was as large as an ordinary fist. "Pull off your stocking and show me your leg." Leg was red, hot, and very much swelled, considering it had not been hurt more than an hour. Mesmerised it five or six minutes, when she exclaimed, "The pain has gone away;" stamped her foot on the ground, and said her leg felt quite well, only stiff. Two days afterwards I made my usual visit; "Well, Mrs. Dennis, how is your leg?" "Thank you, Sir, have never felt any pain since you was here: the swelling has gone down, but it looks very black." Let me see it, I will mesmerise it a few minutes." The front of the leg was discolored from the foot to the knee: so large a blackened-surface surprised me. "You don't mean to tell me, Mrs. Dennis, that you have had no more pain in that leg?" "As true as is the God who made me, I have felt no pain since you did it; why should I say I didn't feel pain if I did all the while?" The leg never gave any more trouble.

January 3d, 1847, Eliza Pretty, No. 7 Evershalt street, St Pancras, severely scalded her foot. Her mistress took me to see her an hour or two after it was done. Found her in bed crying. "Don't cry, my girl, that will do you no good." "I can't help it, Sir, my foot hurts me so." "Poke it out of the bed and let me see it." It had an application of flour and a soft linen cloth over it. Removed this; the top of the foot was covered nearly by a vesica or blister, distended with fluid some four inches long by three wide, I should think; and the remaining surface inflamed. Her mistress held a candle; the girl sat up to see what I was going to do to her foot. "Keep your head on the pillow, I am not going to hurt you; never you mind what I do, tell me what you feel." I feel something warm move over my foot." "What else do you feel?" "Only warm, Sir; it seems like wind, I may be wrong, but I think so." "Well, tell me if you feel anything else presently." I continued passes for four or five minutes, when she laughed heartily and loudly twice, at intervals. Her mistress reproved her, saying, "There was nothing to be laughed at, as we were trying to do her good." I explained that she could not help it. This laughter was in-

voluntary, a sort of hysterical manifestation, frequently seen by mesmerists when their subjects feel the influence.

After a few more passes, she said, "I feel my foot cool now; it is like a cool wind." "How is the pain?" I enquired. "I don't know, Sir, I don't feel it." "Is it gone away? Why! What has become of it?" "I am sure, Sir, I don't know; I can't feel it just now." Nor did she feel it any more at all. The fluid in the vesica was not absorbed in two days afterwards; but she broke it by accident, and let it out. A bit of rag, and some simple cerate to keep her stocking from irritating the surface was put to it, and it was well in a week. It never occasioned the slightest pain after that one mesmeric application.

July 22nd, 1847. Paid a visit this evening, and found an amiable friend and neighbor inconvenienced by a burn on her hand; a portion of the external skin as large as a shilling was destroyed, and a watery secretion oozed from the denuded surface. Now, this was but a trifling matter, and yet caused a very uncomfortable sensation.—Those who venture to doubt, can burn such a place on their own skins, and try the effect. A few passes totally removed the pain; and a few more covered the wound with a firm healthy scab. The lady's husband and a friend stood beside us, and watched the growth of this scab, while I made short passes over the sore place. It commenced at the edge and spread to the centre; somewhat as we see a hot saturated solution of a salt form its pellicle on cooling. This little burn gave no more inconvenience. I do not think it was mesmerised more than eight minutes. I have seen healthy scabs thrown out very quickly an unhealthy, raw, surfaces, after local mesmerism is applied, in several cases.

July 27th, 1847. Emma Reid, Great Pardon, is mesmerised for a disease of her eyes. Found her this evening with a severe burn on her arm, portion of skin destroyed, as large as half a crown, and surrounding surface reddened. She declared it gave her pain, and "I believed her." I made a few passes over it, and she said the pain was gone, and I again believed her. "Credulous simpleton!" exclaims some reader of the Wakleyan school. After inducing her customary sleep, at the end of an hour I awoke her. The burnt place was then protected by a firm scab; the surrounding skin puckered at the edges. It never gave her any more pain.

I might add cases of relief and cure by local mesmerism of gout, painful tumors, neuralgic and rheumatic pains, various other troublesome ailments; and tooth-ache more frequently than I can name, as I make no notes of tooth-aches relieved. But these few may suffice to shew that if mesmerists are, as some *wise people* (?) term them, "humbugs." They are certainly very agreeable, useful, comfortable "humbugs," valuable "humbugs," to all who are afflicted with pain and suffering; particularly when they perform their "mountebank feasts" for love and not money. Whenever I may be afflicted with disease, I pray that I may be able to secure the services of "some healthy and benevolent mesmeric humbug."

I have a patient, John Burton, of Ty-Green, who has allowed me several times to whip his hands and wrists soundly with stinging nettles; when the redness and small pimples are visible, and the smarting and irritation become uncomfortably perceptible, a few mesmeric movements of my hand have perfectly and permanently removed the disagreeable sensation. I have repeated successfully, on this man, some of your experiments with metals; and yet, though I mesmerised him daily for five months, I could not put him to asleep.

I must not omit, dear Sir, thanking you for your kindly seeing Miss Mary Markwell, and advising gratuitously in her case, (one of fits.) In accordance with your advice I persevered with mesmerism. She was mesmerised twice daily for sixteen months, and then once a day for eight months. She certainly derived benefit from the treatment; her fits, though they occurred as frequently as ever, were so slight as to be hardly worth naming, and never attacked her excepting when in bed at night, and then left no subsequent ill effects. She never bit her tongue or lips but once, after being subjected to mesmeric treatment. She got rid of many nervous fancies, and could sleep soundly at night, which she had not done previously.

Nevertheless, I could not, or did not, cure her; for if she was worried or put into a passion in the day, a fit came at night. So commonly did this occur that it appeared as cause and effect. "I had a fit last night, Sir;" "then you have been in a passion, Mary;" and so it always proved. As neither advice nor reproof, could abate the folly, (to use a mild term) of those who irritated her; I threw the case up in disgust, after mesmerising faithfully, and earnestly, and gratuitously for two years. It is probable that in cases of nervous disease when yielding to mesmerism, the cure is retarded by the in-

judicious treatment of patient's friends, more frequently than the mesmerist suspects.

As a humble disciple of that good cause, which you have so nobly and successfully maintained against cruel calumny and ignorant and bigoted opposition, I joyfully congratulate you on the now almost universal acknowledgment of its truth; and am, dear Sir, with warm admiration and respect,

Your obedient servant,

G. H. BARTH.

Zoist.

#### Apparent Clairvoyance

Independent of Mesmerism, but connected with Insanity. Communicated in a letter to Dr. ELLIOTSON.

THE following particulars were sent to me by a medical gentleman who has already contributed with his name to *The Zoist*, but begs his name not to be disclosed on the present occasion: though I am at liberty to mention it to any person privately.

JOHN ELLIOTSON.

Dear Sir.—The perusal of your curious cases of "double consciousness" in some numbers of that most instructive periodical, *The Zoist*, has greatly interested me, as has also that communicated by Mr. Clark, in p. 30, No. XVII., for April, 1847. I have some personal analogous experience. It is nearly nine years since I took the immediate charge of a gentleman of deranged intellect, with whom I reside in intimate association as friend. I have often, particularly in the earlier years of my charge, been thoroughly puzzled to account for his knowledge of circumstances, perhaps mere trifles, with which we did not wish him to become acquainted. I did not deem them worthy of note at the time; that is, I did not make any memorandum of them; and would not now like to trust my memory as to particulars, nor would they be clearly apprehended without entering into tedious, prying details. Suffice it that long before I read *The Zoist*, I had expressed to the able medical gentleman who regularly visits us, an opinion that "our friend seemed to know things as if a spiritual intelligence was at his elbow and whispered in his ear;" "formerly they would have said he had a familiar spirit;" know he certainly does, but how, I can't make out; and such like remarks, showing my impression at the time. Our patient's mental condition has greatly improved, and I do not now often observe

these curious perceptions, or they are not so singular or strongly marked as to preclude the possibility of their being matters of accidental coincidence.

About three years since, for a few evenings, this perceptive power was wonderfully acute; he was in an argumentative and quarrelsome humor at the time. We sat together by the fireside while our tea was infusing, seemingly both engaged in thought, when my friend exclaimed, "I don't think that, Sir; I don't think that." "I don't believe it." "I say I don't believe it." I replied quietly, "Don't believe what, Mr. —?" I have not spoken; what do you allude to?" He immediately, without noticing my remark that I had not spoken, referred to the precise subject of which I had been just thinking, and began to contradict me respecting it. Had this occurred but once, it might be said I was "unconsciously thinking aloud," but several similar manifestations of perceptive power took place about this time; and as I was on my guard I can certainly state, with as firm a conviction of the truth of my avowal as any one who confides in his senses and memory can feel, that I did not speak my thoughts, but that there was a clairvoyant perception of them, or perception in some unaccountable manner. Another instance is well marked, and caused as much interest and wonder at the time.

Four and a half years since it became necessary that M——, our house-steward and butler, should be discharged. As he was an old family servant, and his dismissal might irritate our patient, it was deemed advisable that we should pay a visit to the seaside for a month, and his removal be effected during our absence. This was exceedingly well managed, the secret well kept. Without tedious explanation, I cannot convey the grounds of my conviction, but surely convinced am I that our poor friend neither did nor could know anything of the contemplated change until the day preceding that of our return home. He was then informed by letter that M—— had, for certain reasons, been sent away, and a very comfortable, respectable elderly person, a Mrs. T——, installed in his place. We were at breakfast when the letter was delivered; he perused and handed it to me; enquired why M—— was gone; supposed he would "turn up again some day;" and made such remarks as would naturally occur on being for the first time apprised of the circumstance. Next morning we started for home, a distance of sixty miles. Whilst the horses were being changed for the last stage, our friend, who wanted his dinner, (having declined refreshment on the road,) expressed his hope that

we should find something good when we got home. I explained that as the time of our arrival was uncertain, a cold dinner would be on the table waiting us; that we might be sure our new housekeeper, Mrs. T——, would take care to make us comfortable; that she was a very respectable person—that we would not consider her a *commor*. servant, but call her our lady housekeeper, &c., &c.: in the same strain, trying to impress that she was a very superior person to the one she had succeeded. As I finished we started; my friend threw himself back in the carriage and did not speak for eight or ten minutes, and then said, "I don't see that, Mr. —, (addressing me,) I don't see that; I don't believe it. M—— kept a grocer's shop before he came; Mrs. T—— kept a grocer's shop before she came; one grocer is as good as another; both shopkeepers; no difference in respectability I think." This was strictly true; and the enquiries which I made to discover how our friend knew it only tended to puzzle me, as the attendants whose casual remarks might have been overheard, declared that they did not know Mrs. T—— was a grocer until I named it; and other sources of information there were not.

If those who have the opportunity would take the trouble to notice and communicate, some curious matter of the above kind might, I think, be elicited; such communications could not be otherwise than interesting to all who are engaged in the study of the phenomena of mind, or treatment of diseased mental functions.

Your most obedient servant,

• • • •

It has frequently happened that these highest forms of clairvoyance were connected with insanity.\* Such high powers may be more readily called forth when the brain is in an excited and disordered state, and perhaps exist more readily with a disposition to disorder of the brain. "Great wit to madness nearly is allied." Indeed the greater part of alleged clairvoyants whom we hear of around us talk at times great nonsense. We cannot be too careful in attempting to distinguish between their clairvoyant movements and their periods of wildness.—*Zoist*.

JOHN ELLIOTSON.

\* Such were the cases related in the last number but one of *The Zoist*, p. 30, occurring in several members of the same family.

## CURE

Of a singular Twisting of the Head in a young man. By DA. ELLIOTSON.

"The world has had its laugh at mesmerism. Its mysteries and miracles are nearly forgotten."  
—Mr. Douglas Jerrold. His Weekly Newspaper, Sept. 11, 1847.

MR. DOUGLAS JERROLD is a daring man. He snaps his fingers at our steady and abundant issue of solid facts every quarter, for some years, to his knowledge.

On the 2nd of last December I was consulted by a young man, thirty-two years of age, occupied in a city banking-house, on account of a complaint which had existed seven months and had gradually come upon him. It was a slow but powerful involuntary movement of his head over to the left side, till the face came nearly above the left shoulder, in writing, in brushing his hat or coat, and particularly in taking his meals,—all acts requiring a little stooping and motion of his hand and arm. He could read without this annoyance because neither of these two things is necessary at that time. He began to write at my request that I might observe the phenomenon. His face almost immediately turned slowly round to the left, so that at length he was looking at the paper with the right eye only. The moment he left off writing, he could move it back to its original position.

If watched by others at the time, or excited by any cause, the head turned, he said, the more quickly and forcibly to the left. If he persevered in what he was attempting, the head at length trembled. If he merely raised his hand towards his head, this was inclined to move to the left. In handing a paper to another person, the head turned. If he looked steadily at another person, and was at all excited, though his hands were motionless before him, his head would turn; but not if he held them tightly behind his back.

"He was naturally nervous, but he looked remarkably well: and indeed his general health had improved of late, though, from the time his complaint began, he had felt, and still felt, somewhat heavy after dinner, as well as in the morning before rising, but no longer than he was in bed. The exciting cause had been fatigue and anxiety.

He tried Brighton a month; and Ramsgate six weeks; and, though better while there, was as bad as ever on his return. He had been galvanized for a month and found great benefit for the first three days, but no longer. He had been under a consulting surgeon in the city, who sent him into the

country; and under a physician who gave him slight aperients which reduced him, and then better tonics. I considered that tonics were the most suitable medicines and iron the most suitable of tonics. But he took it in vain. Mesmerism was substituted. He brought a friend whom I instructed in two minutes how to proceed, just as I instructed Mrs Snewing; this friend after a fortnight instructed the father, sixty-five years of age, who mesmerised him regularly and cured him. None of the parties had seen anything, or indeed known anything, of mesmerism.

I lately begged him to write me out an account, and it is as follows:

"Clapham, Surrey,  
"30th August, 1847.

"In the beginning of the summer of 1846 I was attacked with a violent nervous affection in my head, which prevented me applying myself to anything requiring my head to be steady. It gradually increased until I was compelled to resign for a time my usual duties. It produced an involuntary motion of my head, particularly when writing, which was my daily occupation. It almost prevented me from cutting my own food, and, whenever I used my hands, it became worse, until I could scarcely sign my name without supporting my head with my left hand. I believe it to have been brought on by over-excitement and fatigue, together with being employed in a confined office; my constitution not being very strong, my nervous system gave way under it.

"I first applied to a surgeon in —, who told me all I wanted was rest and change of air; he recommended me to have a shower bath every morning, and he had no doubt but by a long relaxation from business I should be once more restored to perfect health; he gave some pills to take occasionally, and said he could do nothing more for me. I then made arrangements for going in the country, previously to which I applied to Dr. —, who quite agreed with all my previous medical adviser had done; he also said it would be a very long time before I got quite well again. I then went to Ramsgate, and bathed every morning for the space of six weeks; when out of doors in the air I felt quite well, but immediately on attempting to write or use my hands in any way, the affection in my head returned. I was induced after spending a week at Ramsgate to apply to a medical man of that place (who I believe is highly spoken of in his profession) for advice; but he likewise seemed to think nothing could be done for me; he gave some medicine to take daily, but was of opinion that nothing but time and

change of air would restore me. After six weeks stay at Ramsgate, and being very little better, I began to despair of my recovery. I returned to London and to business, thinking that employing my mind a few hours in the day would prove beneficial to me. But after having been at business a month, (the weather at the time was very hot and of course very trying to me,) I was compelled once more to resign my duties for a time; the complaint returned much worse than before. I then went to my physician again, who told me I must not think of remaining in business for at least four or five months, but must remain quiet at home, as rest was the only chance I had of recovery.

"I then tried galvanism; was operated upon every morning, Sundays excepted, for a month. The first week I was quite cheered at the effect, it seemed to make my head steadier, and certainly the improvement was quite apparent to myself and friends. But, alas! from that time the improvement ceased, and the complaint gradually returned to its former obstinate position. I then again began to despair, thinking I never should recover; but was again recommended to try once more what sea bathing would do for me. I went to Brighton in the commencement of October, took a great deal of exercise, dieted myself according to my medical man's advice, and used all the means in my power which I thought conducive to my recovery. After spending a month at Brighton, I returned to London, much better in my general health, although still suffering from the affection in my head on applying myself to write or use my hands in any way.

"I again consulted my physician, as to whether he thought it advisable for me to return to business in the state my health then was. He recommended me to do so, but he thought a few hours a day would be all I should at present undertake. My employers very kindly allowed me to remain at business as long as I thought convenient to myself, but all was of no avail: I continued getting worse until the end of November, 1846. A friend of mine advised me to have further advice. He recommended me to apply to Dr. Elliotson, who he said he knew to be very clever in his profession, but was much afraid he would want to mesmerise me. I said Dr. Elliotson might do with me what he thought fit; that if I went to him, I should place myself entirely at his disposal. After a fortnight's delay, being quite low spirited at having tried so many remedies without success, I went to Dr. E., who very kindly took great interest in my case. After explaining to him the nature of my complaint and the means I had used without

success, he prescribed for me, but in vain. Mesmerism was now suggested, and Dr. Elliotson offered to shew a friend of mine, who kindly consented to sacrifice an hour every evening for that purpose. I tried it for a fortnight and was certainly a little better; but thought, as the effect produced was so slight, and as I slept but little during that time, that my friend did not perform the operation properly. I went to Dr. E. to enquire if he thought I should continue it. He told me by all means go on with it at least for three months. I did; was operated upon every evening by my father for half an hour, when in less than a month the change was apparent to myself and all around him. I again went to Dr. E. to inform him of the result, when he again urged me to continue with it, lest the complaint should return: and from that time till the middle of May in this year, I seldom failed being operated upon every evening, and am thankful to say am now quite restored to my wonted health and strength. The effect it produced was sometimes scarcely visible, occasionally it produced sleep; but at all times it so rested me that for a time after I felt quite refreshed, but not at all to interfere with my sleeping at night in bed. I do entirely attribute my cure to mesmerism, and bless God in his providence that I was ever persuaded to try it."

All this time he took no medicine: and resided at home, going daily to business.

The sensible effect of the process was a heaviness and unwillingness to move: without unconsciousness: though for a moment perhaps just forgetting himself. This occurred after the first few days, increasing for a short time, but at length no farther, and was never followed by anything more. It always began in about a quarter of an hour, and lasted half an hour after the mesmerisation was finished. The great effect noticeable was the invigoration he always experienced when the heaviness had gone off.

—*Zoist.*

#### *Cure of Severe Head-Ache,*

*Of Seven Years' standing; with Cerebral Sympathy, Mesmeric Excitement of Cerebral Organs, and Clairvoyance. By Mr. Hockley. Communicated in a letter to Mr. Chandler.*

16, Great James Street, Hoxton,  
27th August, 1847.

DEAR SIR,—Agreeably to your request I beg to forward you a short statement, the daily notes of which I also enclose, of the case of Elizabeth Troth, of Sidemore, near

Bromsgrove, aged 22, who had from the age of 15 suffered (though in other respects in robust health) most severely from attacks of head-ache, which becoming gradually worse (latterly lasting two or three days in each week) had compelled her to leave all her situations. On the 15th Feb., 1846, she having suffered much from head-ache on that day, I commenced magnetizing her, and continued about an hour and twenty minutes with scarcely any effect, she merely going into a dozing state and waking upon the slightest questioning. I repeated the operation on the 16th, 17th, and 18th, for about an hour each evening; she still, however, only went into a doze and woke whenever interrogated, but her head-ache had become much easier. On the 19th, she having had the head-ache all day, I commenced at ten minutes past 8 p.m. to magnetize her: in three or four minutes she fell into a doze, her countenance brightened, she said she was "easy and very nicely," but woke upon being further questioned. I made a few passes and she went again into a doze; she said she felt much easier, especially the right side of her head was very comfortable, and she appeared very unwilling to be disturbed. At a quarter past nine I awoke her; her head-ache had entirely ceased. I continued the operation every evening for about an hour until the 13th of March; but she did not experience from the 19th Feb. up to the 26th June, when she left us to return home, the slightest tendency to head-ache. Her cure was complete.

As my motive in subjecting her to the magnetic influence was to alleviate her pain, I had but little desire to place her in any danger of a relapse by making (to myself) useless experiments. It was not until the eighth time of magnetizing her that she passed into the magnetic sleep, when she at once became to a considerable degree clairvoyant and super-sentient, (as you will perceive by the statement herewith). On 27th Feb., having two friends with me, Mr. W. G. Dixon and Mr. Walsley, both of Hands-worth, and exceedingly sceptical, I, shortly after placing my patient in magnetic sleep, brought Mr. Dixon *en rapport* with her, and to prove to him the reciprocity of taste, Mrs. H. put into Mr. D.'s mouth some vinegar. The patient immediately began tasting, and upon being questioned, said "It was sour and she did not like it;" upon his taking some more she again said it was sour, and by countenance shewed her repugnance to it. Mrs. H. then gave him some sugared milk and water. She said it was nice, it was sour and sweet; Mr. Dixon immediately said that was precisely what he felt, hav-

ing some of the vinegar still in his mouth. I took a pinch of snuff. She said she "did not like it; did not know what it was; wouldn't have any more of it." Tried her lucidity; asked what was on the table, which was entirely hidden from her. She described the candlestick, book, snuffers. I asked what else. She said "Something round; thought it was money: said it was gold." I told her it was silver, not thinking there was anything at all of the kind. She said, "No, it was not; it was gold." It proved to my surprise, to be Mrs. H.'s gold ring. And upon closely pressing her she became very irritable. I tried to excite Benevolence, which I could do but slightly. Tried Mirthfulness and Tune, and pressed her to sing. She smiled and said "No, we should laugh at her;" then said she would and began, "Young Colin," &c. I asked her if she was asleep: she said, "Yes." I told her I thought she was dreaming; and her face assumed a peculiarly mirthful incredulous smile. I asked her how much longer she would sleep. She said, "Fifteen minutes." We then left her alone and quiet. Mr. Walsley immediately looked at his watch. At the thirteen minutes she said, "I'm coming, I'm coming;" and in two minutes more, "I'm coming, Sir," and began to get up, which woke her. Mr. W. said she was precise to a minute.

Both Mr. Dixon and Mr. Walsley, expressed themselves convinced of the mesmerism influence exhibited.

It is most curious that, although she had been so long and so severely afflicted, she expressed but little surprise at being relieved; and when questioned by any one about it, merely replied that "it was a good job master had slept it away." *Zost.*

I am, Sir, yours most obediently,

FRED. HOCKLEY.

Thos. Chandler, Esq.,  
&c., &c., &c.

## CLAIRVOYANCE

In the case of Master Chapman recorded by Dr. Storer, in No. XVI. of *The Zoist*; and Mesmeric Phenomena in a young Lady. By Lieut. Harb. R. N. Communicated in a letter to Dr. Elliotson.

6, Somerset Place, Bath,  
Sept. 2, 1847.

SIR,—Knowing how justly you advocate mesmerism, I take the liberty of communicating the results of a few experiments I have made. Before Dr. Storer left Bath, he

frequently invited me to see his patients under the influence of mesmerism; one of these, (whose case is given by him in the January number for this year, p. 449 of "The Zoist,") Edward Chapman, interested me much. His parents confirm Doctor Storer's account of his malady and cure by mesmerism. After Dr. S. left Bath, he felt sometimes a little faint, and by the wish of his father and mother I frequently mesmerised him. He went readily into the sleep-waking in periods varying from five minutes to ten seconds, exhibiting the change from his natural shyness in the presence of strangers to bold and unreserved loquacity, making fun of persons present, and ridiculing any peculiarity of appearance or manner he noticed in those about him: but upon being awakened he seemed unconscious of what he had done or said. A proof of this occurred on one occasion when I gave him a sixpence, which he placed in his pocket. Upon awaking his sisters asked him to buy some trifle for them in the town, slipping two fourpenny-pieces into his pocket. He purchased the article, and gave the change, and also the sixpence I had given him, seeming quite unaware of having had any money given to him. But the next time he was in the mesmeric sleep he related to me the trick his sisters had played him, asking at the same time that the sixpence should be returned to him.

I could readily make his arms rigid by will, or by passes made at distances varying from one to forty feet, and could produce the same effect from a room above or below the one in which he might be. Upon these occasions the arm suddenly appeared elongated with a start as if electrified. Upon placing round rulers in each of his hands, and making the latter clasp them firmly, I could relax either by gazing intently at it for a short time. I varied these experiments in the presence of friends who, though at first sceptical, confessed the power of mesmerism.

On the 8th of last June, Chapman, whilst in the sleep, predicted that on the following Friday he should soon after 8 a. m. be very ill, have an attack, be unconscious, and that during the time it lasted it would be necessary to hold him and keep things out of his reach or he might do mischief, and that he should have a second and third attack; but he begged his mother not to be alarmed, as he should recover and be in better health than before. I called on Mrs. Chapman on the Friday, and learned from her that her son had been attacked precisely in the manner he described, first soon after 8 a. m., and

a second time during the morning; that he was delirious, and attempted to get hold of things near him. These left him very weak, and he wished me to mesmerise him the next day, which I did. In the sleep there was a convulsive movement of the limbs, which he extended; the attack was very slight. His mother suggested his being awakened; but, upon my commencing reverse passes, he pushed me back, and in a low voice asked me to "send him deeper," which I did. He told us this was the third and last attack, consoling his mother by telling her he should be better than ever. It is only fair to mention that his two sisters were staying with his mother, and that they left on the Friday morning early, which may have made him expect to be excited and distressed at their leaving; but this does not account for the accuracy (as to time and number of the attacks) with which he predicted what would happen to him, that he would be delirious, inclined to do mischief, &c. After this he became better; and when I left Bath did not complain of anything but being a little faint in hot weather.

A young lady whom I frequently mesmerised for debility, nervousness, and pain in the side, occasionally came with Mrs. Chapman and her son. She was far more sensitive; a look at her hand was at any time enough to make it rigid, and a few seconds' gaze would relax it. I could produce the same effect from another room by will or passes. I could also deprive her for a time of the power of speech; sometimes whilst speaking to another person. She never spoke unless I touched her, or I addressed my voice to her hand, when a whisper was sufficient to make her hear and respond; but no other person could make her speak. This young lady was thrown into the sleep with a few passes, but it was always difficult to waken her. One thing I have noticed in many cases, viz., that there is a sympathy existing between the corresponding nerves of the mesmeriser and patient. Thus this young lady whom I could not awaken for many minutes by either transverse or reverse passes or by fanning, would upon my shutting my eyes opposite to her and opening them once or twice, open her's and awake.

If any of the above experiments are worth insertion in *The Zoist* they are at your service. I was requested by a scientific friend to communicate them, for he observed that, coming from a gentleman who has no interest to serve, who is an amateur only, and who can have no object in practising deception, the communication of facts he has witnessed would not excite suspicion. I am

aware there is nothing new in what I relate, at least to a mesmerist.—*Zoist*.

Trusting you will pardon the liberty I take in writing to you,

I am, Sir, yours very faithfully,

RICHARD HARE, Lieut. R. N.

To Dr. Elliottson.

For the Dissector.  
CLAIRVOYANCE.

Mr. BORROR:

IN my last communication, I gave some account of the curative influence of Animal Magnetism in the case of William Henry Child; and made some allusion to his powers of Clairvoyance, with the pledge of a future communication on that subject. I had heard that he had exhibited remarkable powers of somniscient vision, but had never seen him in that state till I magnetized him at the residence of his father in Bergen, Genesee county, N. Y., on the 6th of April, 1843. He became highly clairvoyant, and at my request, he visited a Mrs. Griffing, a very respectable lady, residing in Bergen, an adjacent town, six miles distant. He soon found her house; said there was a lady there, but that it was not Mrs. G. Recollecting that when I called at her residence about two hours before, Mr. G. and lady were at a tavern in the village, waiting on a painter who was taking the portrait of a little daughter. I sent him to the inn, where he immediately found Mrs. G.; but soon said she had stepped out. It was about noon, and supposing they had gone home to dine, I directed him back to her residence, where he found her. I had seen but few cases of Clairvoyance, and had been slow to believe, and therefore was very rigid in my investigations. He told correctly her size, and said that the color of her hair was auburn. I doubted his correctness, for, notwithstanding much intimate acquaintance, I had always supposed it to be black. I asked is it light auburn or dark? He said dark. The following conversation ensued:—"Will you look at her throat?" "It is swollen." "Will you look at the inside?" With a heavy sigh he said, "It looks very red." "Will you examine her lungs?" "They appear to be healthy." "Her liver?" "I don't see but that it is in a healthy condition." "Her heart?" "It is diseased. She has palpitation." "Will you examine her spine very thoroughly, through the whole length, beginning at

the head?" "It is diseased about five inches below the neck." "Is that disease in her spine the occasion of the disease of the heart?" "It is. Some of the nerves lead from that place to the heart, others to the head. That disease in her spine was occasioned by a fall when she was a small girl." As a novice on the subject of Clairvoyance, my attention was again arrested, as I had been informed that the Clairvoyant could see only what the magnetizer saw or knew.

Here were two points that furnished fair tests in regard to his powers, as an independent Clairvoyant. 1. He said that Mrs. G's. hair was auburn, while I fully believed it was black, having resided with my family in a part of Mr. G's. house for six months, on terms of intimate acquaintance, and having seen her almost every day, during that time. 2. He said the disease was occasioned by a fall when she was a small child, while I had neither known or imagined the cause of that disease, or the time of its commencement. He went back at least twenty-five years.

I knew that he was correct in regard to the disease of her heart and throat. About three years before, she had taken white lead for soda, which very seriously affected her whole system, especially her throat.

A few weeks after this interview with Henry, I visited at Mr. G's., and to ascertain whether he was correct, I said to Mrs. G., "What color do you call your hair?" She replied, "Many have called it black, but I never did. I call it auburn." Being told what was said of her being injured in the spine by a fall, when quite young, she replied that she had no recollection of such a fall; but after awhile, she said, I do recollect it. I was quite a small girl—was playing on the fence, and fell and struck my back against a rail. It knocked the breath out of me, and it was a long time before I could breathe again. They took me up and carried me into the house, and my back was sore a great while.

After Henry came to live with me, as I stated in my former communication, I asked him while in the normal state, if he ever knew Mrs. Griffing, of Bergen. He replied in the negative. Soon after, when clairvoyant, he was asked if he recollected visiting Mrs. G., and promptly replied that he did. "What did you say was the matter with her spine?" "She hurt it by a fall." "What was she doing?" "Playing on the fence." "Did she get up and go into the house?" "She could not. They took her up and carried her in." "How old was she?" "About six years." "How long was her back sore?" "About ten months."



I asked him subsequently, while in the normal state, if he ever heard of Mrs. G. of Bergen. He said, you asked me the other day, if I ever saw her. I never heard of her before.

In both these conversations, his vision was like an electric shock, and his answers followed my questions without any hesitation. His first remark about her fall was entirely spontaneous, not having been elicited by any inquiry on my part either real or mental.

August 18, 1843. While in my study in Covington, Genesee county, N. Y., between thirty and forty miles south of Lake Ontario, I put him into the magnetic state, and told him to examine the geological strata in a vertical section, directly under my residence. He commenced with the superincumbent earthly formations, and passed through the aluminous and limestone shales, sand stones and clays, giving an account of each strata, its thickness, species of rock, or earth, with its color, petrifications or boulders, and this with such correctness as enabled me to follow him, and understand where he was, and what formations he was describing; and displaying a knowledge of them, of which he could have no conception in the normal state. For though his mind was naturally bright, yet owing to his fits, he was very backward in even common school education.

When he had passed far down into the earth and had reached the formations of aluminous red sand stone, which border Lake Ontario, I told him to go directly north in a horizontal pathway to the Lake. In this subterranean journey, he passed through several new formations which he had not before reached, as the strata, though nearly horizontal, have a gentle dip in a southerly direction. Each of these he described as he passed on; finally he entered a bed of gravel, containing pebbles and boulders, and when he emerged from this, he found himself in the water, at a considerable distance from the shore, being as he said 62 feet from the surface and 50 from the bottom. Here he was much frightened by something which he thought could not be a fish. He described the size of the eyes, the position of the mouth, the teeth—the position of the pectoral and caudal fins and its peculiar motion, giving very accurately the distinctive characteristics of the lake sturgeon, as I found afterwards by having him examined, while somniscient, by a gentleman, a disbeliever in Clairvoyance, who was very rigid in his investigations, which he pursued without asking any leading questions. He affirmed while in the normal state, that he had never seen a sturgeon, or even a cut re-

presenting one. I supposed that he was describing the sturgeon, but was not then sufficiently acquainted with that fish, to decide accurately, much less to have furnished him the description by his looking upon my mind. He described it as being about nine feet and a half long, and weighing 500 lbs.

He described two different strata of sulphate of lime, or plaster, as they occur, mentioning the drab-colored limestone superincumbent on the one which is worked, for the purposes of fertilization. He also met with two springs or streams of water, the one pure and the other sulphurous. Many things were described by him, which of course I could not test, as they were not within the reach of my vision. But he so described the characteristic organic remains of the different strata, that I could easily trace him in his hidden pathway through the various formation of different geological epochs, attested by their distinctive paleontological records. I might state many other tests by which I proved the correctness of his somniscient vision. But these would render too tedious my already lengthy communication. I will therefore close with a few observations.

1. It is a great mistake to suppose that clairvoyants can see no more than their magnetizers see or know.

In this state, Henry saw many things that I did not know. He was, in this sense, independent. I have produced a good degree of Clairvoyance in inconsiderable number of persons, and all of them saw things beyond my knowledge. Those who can see no more than their magnetizers, cannot be depended upon, they are very imperfect.

2. A good clairvoyant may be of great practical service in many respects. He might discover the seat and cause of occult diseases, and the appropriate remedies indicated—decide whether, in given localities, it would be profitable to dig for water, coal, plaster, or other mineral substances—direct to the recovery of lost articles, and stolen goods that have been secreted—describe the personal appearance and dress, and changes of dress in the case of thieves, robbers and murderers, and the course to be pursued for their detection—and pursue many other important investigations, some of which would be of highly important service in the sciences.

3. Animal magnetism deserves a patient and thorough investigation. After some degree of such investigation, I am fully convinced of its reality, together with its wonderful phenomena of Clairvoyance. I have never known or heard of a single individual who has examined the subject philosophically, by well conducted experiments, who

has not been fully convinced of its verity and importance. It is unphilosophical to decide against the truth and profitableness of any subject, without due investigation. If true, animal magnetism is vastly important; and the wise and good should well understand it and employ it for good, and not condemn and leave it to be employed in the mischievous devices of the wicked.

4. If our men of professional learning would examine this subject thoroughly, I have no doubt that it would very soon be reduced to a regular and beautiful science.

I have no doubt that it is as capable of such reduction as any of the sciences. The learned, with very few exceptions, have treated it as unworthy of their attention. They have prejudged and condemned it without due investigation. And with all due deference to their superior wisdom, it is suggested to them, whether, if they should treat the sciences of Botany, Conchology, Mineralogy, Electricity Mineral Magnetism, and Galvanism, as they do Animal Magnetism, they would not completely destroy their reputation? Have not the learned, almost by universal practice frowned this subject down? Have they conducted a series of experiments on this subject, by their personal investigation—collecting, arranging, and analyzing facts, as they do on the sciences generally? If not, why not?

5. Animal Magnetism must soon rank among the sciences. It is destined no longer to be monopolized by the priest and the juggler for oracular predictions and fortune-telling. It can no longer be frowned down. This is a thinking age. On this subject men will think, and speak, and write. Some powerful minds have taken hold of it; and their investigations, when published, will tell with power upon the public mind; and the learned will be compelled to investigate, or receive in their turn the full measure of scorn which they have meted out to others.

6. When it becomes a science it will be vastly important in a moral point of view. It will be a most powerful restraint of vice and crime. Men will understand that they can be detected, can be known; and cannot sustain a fair character, by concealing their crimes under the veil of secrecy. It will be a powerful stimulant to virtue.

SAMUEL GRISWOLD.

Lyne, Oct. 6, 1847.

#### White Swelling of Knee,

Hip Joint and Thigh, and Curvature of the Spine, also Tuberculated Lungs, cured by the Magnetic Practice.

Albany, Nov. 8th, 1847.

Dr. JOHN FENDEY.—Dear Sir.—Our little girl had scarlet fever more than three years ago—took cold—complained of her leg—during the fall and winter she was in great pain night and day. The knee swelled and was drawn out of shape—she lost the use of that leg; the other knee then swelled—the use of that leg was also lost. She had a large swelling below the hip joint, along the whole thigh—there was much pain in the hip joint. Her back bone got very crooked—she could not lie in bed—we made a chair with wings and front piece—in this she sat and slept night and day for two years—she was quite thin and feeble—had a very grievous cough—her lungs seemed to be much affected. She was visited by many, who wondered how she could live under such racking pains, and thought it would be a miracle if she ever got well. Tongue cannot express what she suffered for two years. We used the prescriptions of the most eminent physicians, and every thing we heard of we tried, without benefit. We gave up all hope of ever seeing her well, or walk. Last February you called at my shop on business; I related the case of my daughter; you said that such cases had been cured under your plan. I could not believe that swelled and crooked joints, and a crooked back bone, and a swelled thigh like hers could be cured, but asked you to call and see her; you did, and said you believed she could be cured. I told you you might try. To our astonishment she soon began to improve—your plaster drew the large swelling in her thigh to one spot, and made it break; it discharged at one time a quart or more; she cried when she saw her limb getting so thin, and thought her thigh was all running away; it ran for three months. The machine and medicine worked wonders. The knee joint which was swelled and out of shape, is now straight, the crook in her back bone is gone, it is as straight as ever. She can walk across the floor without her crutches, and with one crutch she is as nimble as a deer. Her cough is gone—lungs are sound—she has grown quite fat and hearty. Every one who has seen her since she got better, that knew how bad and hopeless her case was, thinks it almost a miracle that she has been restored. We would recommend the afflicted to pursue the course we have adopted—if

anything will heal disease we believe that will.

Yours, respectfully,

JOHN FRIDAY, 93 Swan street,  
Arbor Hill.

The Magnetic treatment is the most successful one in diseases of a tuberculous or scrofulous nature; consumption in its earlier stages is invariably cured and often in its last; diseases of the kidneys, liver, stomach, womb, heart, and the different organs, white swellings, rheumatism, bronchitis, dyspepsia, opacities of the cornea (films over the eyes,) every disease in fine of a scrofulous nature is relieved by this treatment. Dr. Sherwood, of New York, the celebrated inventor of this treatment, an old and highly successful physician, has appointed the subscriber sole agent for the sale of his improved magnetic machines in this city. He has also been fully authorized by him to carry out in practice the principles of the magnetic treatment. He can be consulted at his medical rooms, 41 Columbia street, Albany.

JOHN FONDEY, M. D.

Case of Rapid Consumption Cured by the Magnetic Practice.

Albany, January 28, 1847.

DR. JOHN FONDEY—Dear Sir: For two years previous to my coming under your care I had suffered constantly from pain in my breast, with occasionally a hacking cough; had for a year more, almost constantly, night sweats, which weakened me much—appetite poor, digestion bad,—had been under the care of several physicians for about a year, but received no benefit from their remedies. About October, 1845, I caught a severe cold which settled on my lungs; from this time my health failed rapidly, my cough was incessant—raised much tuberculous matter, night sweats much worse, bled at the lungs, and became so weak that I could hardly walk across the room; I appeared to be in a rapid consumption, and felt that my life would soon terminate unless speedily relieved.—You visited me about the middle of November; under the use of your machine and medicines I experienced speedy relief and improved daily, so that in the space of five weeks I was able to go out and attend to business—have been improving ever since—lungs are now sound! I believe I should have been in my grave long ago had it not been for your peculiar practice.

ELBRIDGE EVERETT,  
696 Broadway, Albany.

Case of Bronchitis, Disease of the Heart, Throat, Liver, Lungs, and Kidneys, cured by the Magnetic Practice.

Albany, February 1, 1847.

DR. J. FONDEY—Dear Sir: About five years since I found myself afflicted with a disease hitherto unknown to me, which grew worse until August, 1843, when I caught a severe cold, accompanied with cough, for which I used several highly recommended medicines without the slightest effect. My cough grew worse, and in the spring of '44, I had an attack of quincy, followed by an occasional raising of blood. During the winter of '45 I suffered much from a violent choking or crawling pain in the lower part of the throat; pain in my chest and right shoulder; hacking cough; severe palpitations of the heart (which was enormously enlarged) accompanied with cold sweats which weakened me much; my throat was so much affected by the swelling as to create a difficulty in breathing and eating; I was subject also to occasional attacks of hoarseness; my kidneys, too, were much diseased, so that I had been kept awake every night for weeks by pain in them. After trying several physicians, who effected no cure, and feeling myself to be already far advanced in a consumption, I put myself under the care of Dr. Fonday, in September, '45, who applied the Electro-Magnetic Machine and administered electro-magnetic medicines. I was laughed at for my folly in going through this treatment, and was told it would end my days; for the first three weeks I found no relief, but soon the scale turned; my strength and weight increased, and in April, '46 I found that the palpitations of the heart, cough, pain in the side and chest had entirely gone; also the distress in my kidneys had departed, and that in my throat was fast subsiding at the time. I am troubled with none of my old complaints except an occasional soreness of the throat from changes in the weather; and this I attribute altogether to the salivations I have experienced before I came under Dr. F.'s care; my constitution is daily improving; any one desirous of conversing with me about my case can call on me at my hat, cap, &c., store.

J. C. TUCKER, No. 635 Broadway.

Case of severe Tubercular Disease of all the Organs cured by the Magnetic Practice.

Albany, February 9th, 1847.

DEAR SIR—I know not how to express sufficiently my gratitude to you for the health which, after years of suffering, I now, through

the mercy of God, enjoy. At the age of 13 I enjoyed comparatively good health, although from childhood sickly; however, I caught cold and was visited with fits which came on monthly; various skilful physicians were employed, but were of no avail. I got worse; delirium set in, and for nearly a year I was a lunatic; at length reason returned; at the age of 21 I was married; after the birth of a child I suffered severely from a womb complaint, which for eight years previous had harassed me: but now keen bearing down pains afflicted me so that for weeks at a time I could scarcely walk; I was troubled too with palpitations of the heart, pains throughout my body, my bowels, stomach, kidneys, lungs, liver, throat, and brain, were much affected. For these complaints I was attended by many skilful physicians in Albany and elsewhere, having been under the care of 20 or more of them. My case, however, seemed a hopeless one, and I looked forward to a speedy termination of my sufferings by death.

In August, 1844, I applied to you, with little faith in your ability to relieve me; but thanks be to God, under your treatment I was speedily raised from my sick bed and daily mended. From the hour I first employed you, I have improved, and my health for the last few months has been much better than it ever was in my life; much better even than when a child. I cannot put in a public paper all the symptoms of my diseases. If any female desires a more particular history of my case I will cheerfully impart it.

Yours,

Mrs. S. A. M., N. Pearl st.

This sketch gives but an imperfect view of the case. The tuberculous disorder involved every organ in the system, and was fast wearing away life. The success attending the treatment of that case affords triumphant proofs of the superiority of Electro-Magnetic practice in diseases of tubercular or scrofulous nature. There is a multitude of chronic diseases, especially those arising from womb complaints in females, which would be speedily cut short were the Electro-Magnetic Medicines and Machines used in their treatment. Females thus afflicted are invited to call on the subscriber, who can give them something more than a hope of relief.

JOHN FONDEY, M. D.

#### CONSUMPTION CURED BY THE MAGNETIC MACHINE.

ALBANY, March 10, 1847.

DR. JOHN FONDEY:—My little girl, now in her sixth year, was troubled with a cough

from infancy; in Feb., 1845, was taken with the whooping cough; her lungs became seriously affected; our family physician said she could not live, and that it was useless to give her medicine, as it would weaken her, and left. In October, 1845, you took her in hands, applied the machine twice a week for two months, and administered medicine; she has been restored to health, a thing which she never had before.

ANN M. CLEMSHIRE,  
107 Second street.

Case of Tubercular Disease of the Heart, Liver, Lungs, Stomach, and Kidneys, of more than twenty years standing, cured by the Magnetic Practice.

DR. JOHN FONDEY,—Over 20 years since I became afflicted with palpitations of the heart and fainting spells; if I ran or did anything in a hurry I would faint away; could not work more than an hour at a time without fainting; have been troubled all this time with pain in my stomach and side; indigestion; disease of lungs and kidneys; no physician has ever given me any relief. This winter, on the 1st February I was attacked with bilious fever and inflammation; expected to die; I sent for you; you broke up the fever in 24 hours, and in a week I was out; you then commenced treating me for the thorough cure of my old complaints; I improved astonishingly under the uses of your Machine and Medicines; I have no more faint spells, no palpitations; can do as hard a day's work as any one; feel well, and am certain I shall get entirely rid of every vestige of my former complaints under your treatment.

CAPT. J. WM. BABCOCK,  
49 Colonie street.

Albany, April 5th, 1847.

Case of severe Neuralgia and Sick Headache and case of Disease of Heart and Lungs cured by the Magnetic Practice.

ALBANY, February 22, 1847.

DR. JOHN FONDEY: For five months previous to your attending me I was affected with neuralgia; the pain commencing in my left hip and darting down through the thigh and leg to the foot; the pain was incessant, like scalding water. I could not work an hour all day, and no day more than an hour at a time; the pain troubled me night and day; nothing relieved me. The application of the machine a week or so enabled me to

rest well at night and I could work for a longer time during the day. You applied it for about five weeks; I was affected too with frequent attacks of sick headache, and had not been well for seven years; your medicines have cured me of this also; my headache and neuralgia are gone, and my health is better than it has been for seven years. My little boy had always from birth been sickly; was troubled with palpitations of the heart and cough. For a long time he had been failing; we thought he was in consumption. Under the use of your magnetic medicines he was cured and is now a healthy child.

JACOB SCOTT, Shoemaker,  
164 S. Pearl street.

DR. J. FONDEY—Dear Sir: I have suffered for some time past from severe palpitation of the heart with great distress in that organ; at night I was troubled with it; my liver was very sore. For the past year also I have been inclined to drowsy; these diseases were brought on by working beyond my strength; after a long illness, about three months since I applied to you, and have been much benefitted by the use of the Galvanic Battery and your medicines, and regret that on account of leaving the city, I will be obliged to give up a course which has relieved me so much, and which if persevered in would, I believe, cure most if not all diseases that have a nervous or tuberculous origin. I feel grateful for the benefit I have received, and you are at liberty to make what use of this you please, if it will be useful to others.

Mrs. C. W., 10 Cross st.  
Albany, April 21, 1846.

#### MEDICAL ELECTRICITY.

If all we read of Dr. Sherwood's success be true, Electro-Magnetism is destined ere long to work a great revolution in the medical world as it has already performed for the physical. To all appearances its power is infinite—there is no saying where electricity can stop. It surmounts difficulties that once seemed insurmountable—it severs mountains—drags our locomotives—in an instant it can deprive us of life, and in another instant give it back to us again—it causes the rain-drops to fall—it fashions vegetation—and in the hands of science may yet deprive "sickness of its sting, and consumption of its frightfulness." We have been led to

these remarks from the perusal of a little work entitled "The Motive Power of the Human System," by Dr. H. H. Sherwood, a gentleman who probably knows more about electricity, galvanism, and their application to the human system, than any other man in the country.—*D. Knickerbocker, Albany.*

## THE DISSECTOR.

NEW-YORK, DECEMBER 1, 1847.

### MESMERISM.

JENNY LIND, AND DR. BRAID.

*From the Manchester Courier.*

"On the 3d inst.," Madlle. Jenny Lind, accompanied by Mr. and Mrs. S. Schwabe, and a few of their friends, attended a *seance* at Mr. Braid's for the purpose of witnessing some of the extraordinary phenomena of hypnotism.† There were two girls who work in a warehouse, and who had just come in their working attire. Having thrown them into the sleep, Mr. Braid sat down to the piano, and the moment he began playing, both somnambulists approached and joined him in singing a trio. Having awaked one of the girls, Mr. Braid made a most startling announcement regarding the one who was still in the sleep. He said, although ignorant of the grammar of her own language when awake, when in the sleep she could accompany any one in the room in singing songs in *any* language, giving both notes and words correctly—a feat which she was quite incompetent to perform in the waking condition. Mr. B. requested any one in the room to put her to the test, when Mr. Schwabe played and sang a German song, in which she accompanied him correctly, giving both notes and words simultaneously with Mr. Schawbe. Another gentleman then tried her with one in Swedish, in which she also succeeded. Next Jenny Lind played and sang a slow air, with Swedish words, in which the somnambulist accompanied her in the most perfect manner both as regarded words and music. Jenny now seemed resolved to test the powers of the somnambulist to the utmost by a continued strain of the most difficult roulades and cadenzas, including some of her extraordinary sostenuto notes, with all their inflections from pianissimo to forte crescendo, and again diminished to thread-like pianissimo, but in all these fantastic tricks and displays

\* October, 1847.

† *Hypnotism*. This new name for mesmerism by Mr. Braid, is a twin sister of *Pathetism* by Mr. Sunderland.

of genius by the Swedish nightingale, even to the shake, she was so closely and accurately tracked by the somnambulist that several in the room occasionally could not have told, merely by hearing, that there were two individuals singing—so instantaneously did she catch the notes and so perfectly did their voices blend and accord. Next, Jenny having been told by Mr. Braid that she might be tested by some other language, commenced 'Casta Diva,' in which the fidelity of the somnambulist's performance, both in words and music, fully justified all Mr. Braid had alleged regarding her powers. The girl has naturally a good voice, and has had a little musical instruction in some of the 'Music for the Million' classes, but is quite incompetent of doing any such feat in the waking condition either as regards singing the notes or speaking the words with the accuracy she did when in the somnambulist state. She was also tested by Madlle. Lind in merely imitating language, when she gave most exact imitations; and Mr. Schwabe also tried her by some most difficult combinations of sound, which he said he now knew no one was capable of imitating correctly without much practice, but the somnambulist imitated them correctly at once, and that whether spoken slowly or quickly. When the girl was aroused she had no recollection of any thing which had been done by her, or that she had afforded such a high gratification to all present. She said she merely felt somewhat out of breath as if she had been running.

Such feats as those above described have often and long since been practised in this country in the magnetic state.

The following very interesting case occurred in Hartford, Conn., and was published in January, 1842.

"An eminent lawyer being introduced to her, she began with him the discussion of some legal question, astonishing us by the clearness of her conceptions, or keeping us in a roar of laughter by the lively sallies of her wit. During this conversation, some one behind her placed his hand near her head, without touching it. She instantly evinced embarrassment, forgot the subject of discussion, and could not go on until the hand was removed. The magnetiser then placing his hand upon her forehead, her recollection was restored and the conversation renewed. The magnetiser then touched the organ of veneration, when she abruptly terminated the discussion, assuming an attitude of devotion, and refused all farther communication with the physical world. Her devotions being ended, she was put in commu-

nication with a scientific gentleman, with whom she held a long and interesting conversation on the subject of Animal Magnetism; boldly controverting his arguments and giving her own view of this extraordinary science with great clearness of thought and beauty of expression. And here she seemed like an ethereal being—a being of another creation—and in the language of the eminent divine to whose church she belongs, 'she appeared perfectly sublimated.' After this she astonished all by determining with wonderful accuracy, the phrenological character of various individuals present, and describing with most minute exactness, their several diseases, acute or chronic, incipient or confirmed. A gentleman present was requested to sing and play a German song for her. The first note struck brought her to the piano, when during the prelude she persisted in standing, but the instant he commenced the song, she sat down by him, and with a full, sweet voice, accompanied him in the very words he sung, although in her natural state she has no knowledge of that language. She then accompanied a French gentleman in one of the songs of his country, and afterward began again the German song, which the pianist had been requested to sing once more. During the performance of this, she was demagnetised, and, of course, discontinued her accompaniment. Being asked by the writer why she stopped, and if she would not still accompany the other voice, she replied that she knew neither the words nor the air."

These apparently strange phenomena are easily and satisfactorily explained, by the well known fact that persons in the magnetic state, read the minds of other persons instantaneously and with the greatest and most extraordinary facility. In fact the minds of other persons often crowd upon the minds of persons in the magnetic state so as to appear to the latter as their minds. Besides persons in the magnetic state are in a *spiritual state*, and are in *communication* more or less with the *spirits* of other persons, so that the knowledge and language of other persons becomes more or less the knowledge and language of the persons in the magnetic state.

**RATTLESNAKE.**—Dr. Lee, of Hartford, Connecticut, says he has successfully treated several cases for the bite of a rattlesnake, with rum, brandy, or gin in doses of a half pint every fifteen minutes. It is said to absorb and deaden the virus and never intoxicates. This is poison or poison. How would it act upon a hard drinker as an antidote? A writer in the Washington Union cites cases of a cure from the bite of a rattlesnake by drinking copious draughts of brandy.

## SOMNAMBULISM ALOFT,

AT WAR WITH THE WEATHER-COCK.

THE most curious case of somnambulism on record took place last Sunday night, about half-past eleven o'clock in this city. A man named Jesse Combs, living at No. 609 Warer street, was discovered at the top of the liberty pole at the corner of Cherry and Gouverneur streets, turning the vane. He was watched by the police and a number of citizens, who had been attracted by his frequent attempts to change the position of the vane, which was as frequently changed by the wind, reminding many of the lookers on of the celebrated fight between Don Quixotte and the windmill. After making several efforts to place the vane in the position he seemed to desire, down he came, and with a nimbleness that the Jack tar might envy, on reaching *terra firma*, off he started, and was closely pursued by officer Martin, 7th ward, and citizens, when, after a sharp run of several blocks, he was captured. He had on a shirt, drawers, hat and boots, and was taken to the station house by the officer. He could give no account of what occurred, and stated that he "felt as if he had been hard at work." His friends and clothes were sent for. The friends stated that he went to bed after 6 o'clock, and that he must have gone out of the dome window, as the doors were all locked. The pole has been measured, and stands one hundred and twenty-five feet high from the ground. The man was three quarters of an hour in the position in which he was first discovered.—*N. Y. Herald. November 2, 1847.*

## CLAIRVOYANTS.

*Impressionists, and their Magnetisers.*

Clairvoyants in the magnetic state see literally by direct magnetic light as they do in their natural state by reflected light.

They see through opaque bodies by the light of the magnetism which is innate in those bodies.

In order to see objects at great distances they go to them—their spirits do, and are guided by a magnetic or spiritual light that goes before them.

Impressionists do not see literally in the magnetic state, but have impressions in their minds, and also from the single and combined minds of other persons, which are sometimes accurate, but often very erroneous like the blind man's impressions of things

he never saw, and besides they generally pass for clairvoyants and are a fruitful source of skepticism in regard to the reality of clairvoyance. Original impressionists are rarely advanced as high as the first degree, and consequently know nothing of the different degrees in the magnetic state except what they have learned from books or other sources. There are, however, another class of impressionists who were originally clairvoyants, but who have lost their clairvoyance under the baleful influences of the wills of their magnetisers. These magnetisers having often and daily *willed* them to have *impressions* of ideal notions, of phantasies or things that have no real existence, they at last lose their clairvoyance and become mere impressionists, but continue to be used as mere decoys for making money. They can, however, as well as other impressionists, be distinguished from clairvoyants as easily as blind men can be distinguished from those who see; with this difference—that impressionists will often read the minds of the persons about them, and thence obtain information from these and other sources, which might be mistaken for clairvoyance.

## Magnetic Machines and Consumption.

We should again direct the attention of physicians to the great importance of the use of the *magnetic machine* in the treatment of consumption, as the use of this instrument with the compound chloride of gold cures every case in the first stage of the disease, and more than nine-tenths of those in the last stage.

We should also again direct their attention to the fact that we first commenced the new, scientific, and successful manner of magnetizing, which gives to these machines all their value, and were soon after compelled to engage in the manufacture of magnetic machines to obtain good instruments for magnetizing, by which the great benefits of the practice might be extended and perpetuated; and that we have sold and continue to sell at a very small profit a great number every year. The great demand for these instruments has, however, excited the cupidity of speculators,

who have engaged in the manufactory of inferior imitations of our machines, and without any knowledge of magnetism or magnetizing, are foisting them upon the profession and the public with all the arts that are peculiar to such geniuses; and if the practice of magnetizing is not entirely ruined and abandoned in a few years, it will not be from any fault of theirs, for a little practice soon shows that no dependence whatever can be placed upon the action of such machines, in the cure of consumption or any other disease.

The actions of the two magnetic forces are opposite, or as different as black is from white, and in magnetizing it is a matter of great importance to know which is the positive and which the negative force, and where to apply the positive and where the negative force; yet neither the speculator who sells, nor the person who purchases, knows anything on these subjects. Besides the forces from our machines are really magnetic, and appear, and are really different from those of other machines as seen by the natural eye and by clairvoyants.

Physicians are not only using these machines in acute and chronic diseases with great success, but they are using the magnetized compound, chloride of gold, in tubercular disease or scrofula, including consumption, and are curing these hitherto intractable cases at a rapid rate. The cases we publish in this number are fair samples of a great number we have received from distinguished physicians in different parts of the Union and the Canadas. —

#### Quacks and Quack Medicines.

Few persons have any conception of the extent and wantonness of the impositions that are daily practiced by the venders of quack medicines, who advertise remedies for every disease, from Taylor's Balsam of Liverwort down to Smith's *Torpedo* machines. Certificates and letters innumerable detailing the wonderful cures performed by these remedies are paraded in handbills, pamphlets, and in whole columns of the daily papers, at an enormous expense, and these expenses are paid out of the enormous profits from the sale of these articles to the poor and

very ignorant portion of the community, for whom they are manufactured.

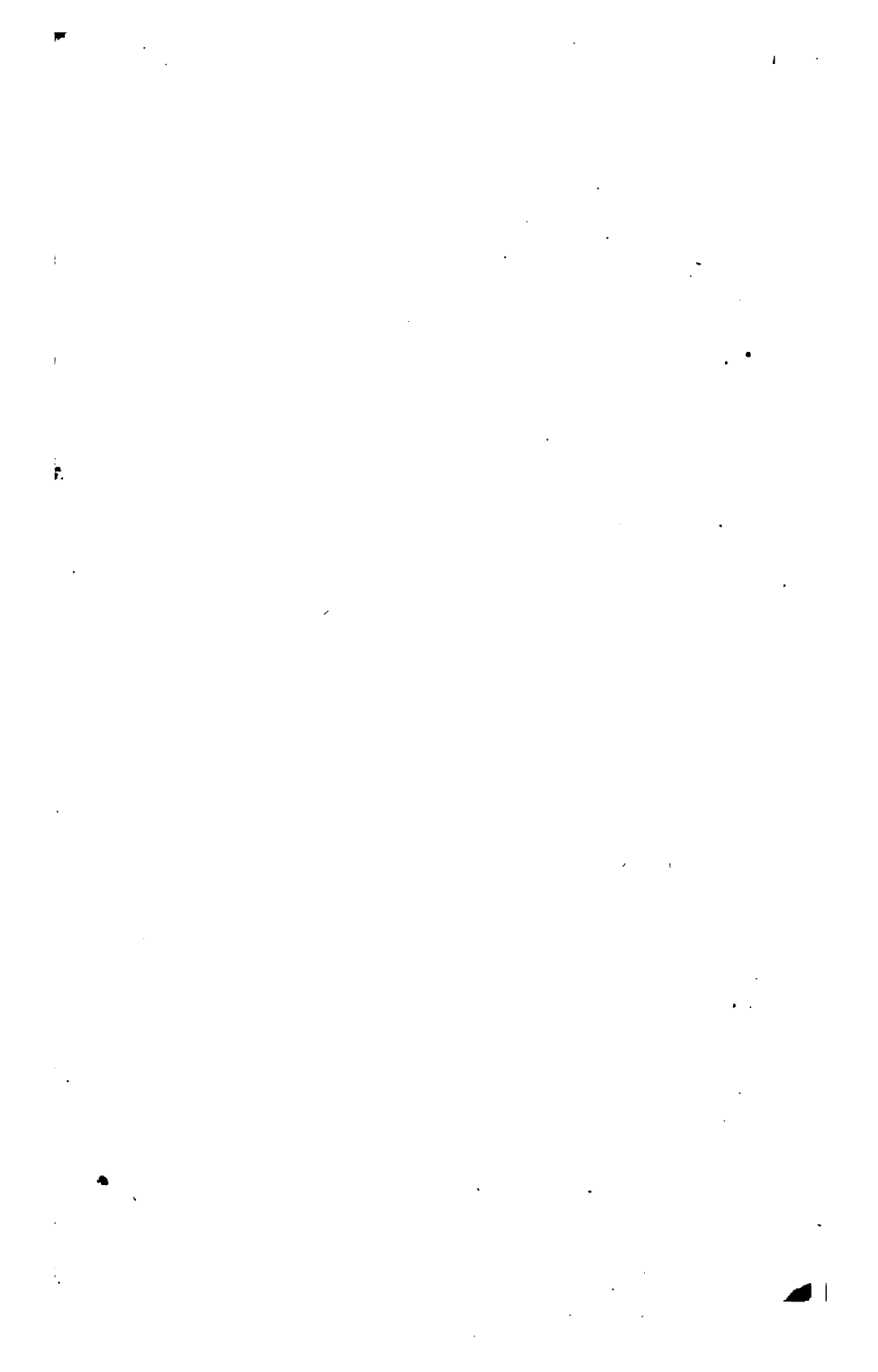
Now it is well known to persons who have examined the subject, that no dependence, whatever, can be placed upon the certificates or letters thus paraded—no matter whether they are sworn to or not, or a thousand dollars offered any person to show they are counterfeit, and besides, it by diligent, active and laborious search, one of these certificate makers or letter writers is run down or caught, he is found to be a poor ignorant creature, or man of straw.

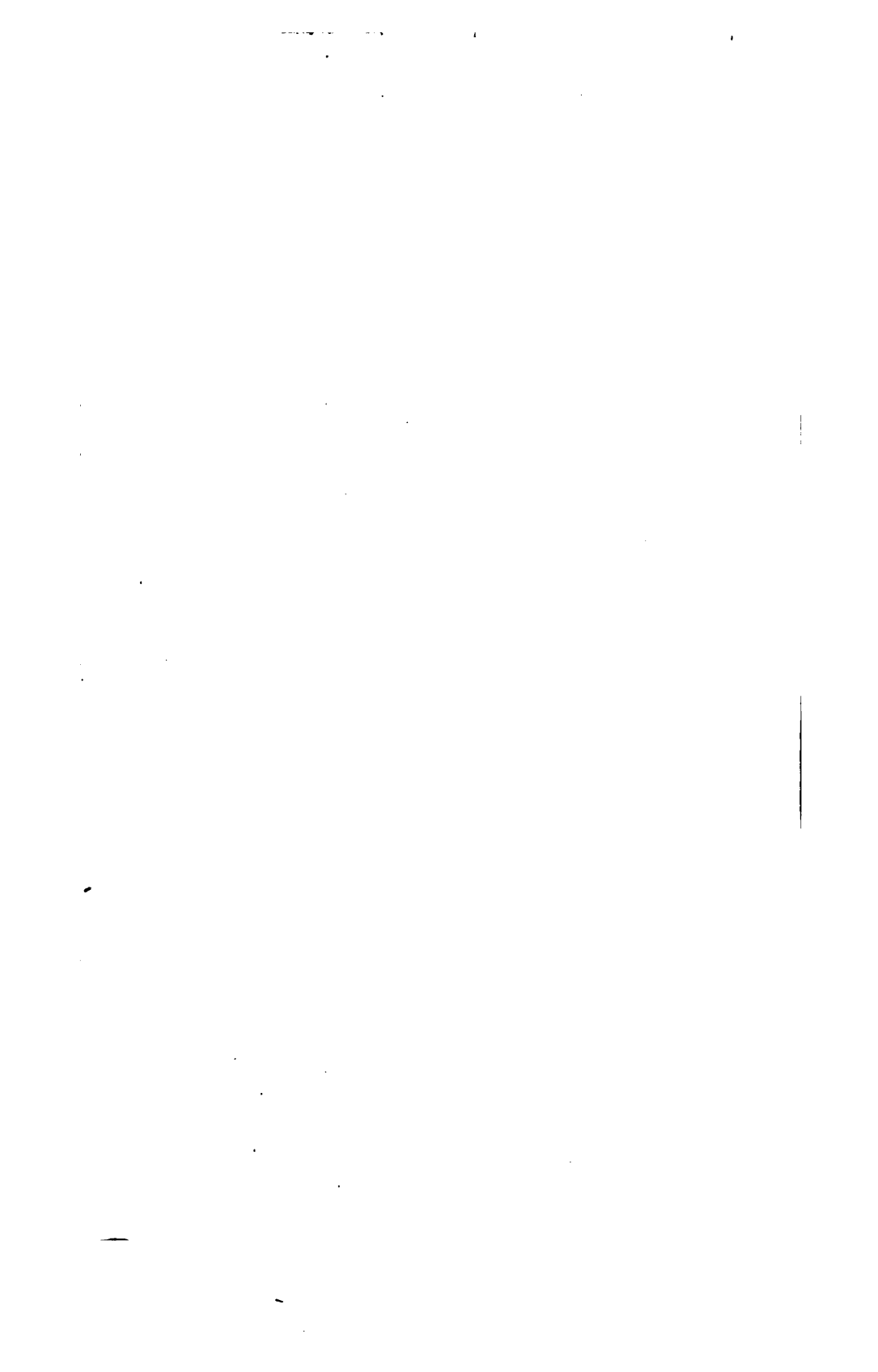
The following morceau from one of Dr. Townsend's pamphlets, is a fair specimen of the wantonness constantly practiced by these geniuses.

"SPINAL COMPLAINTS. The Engravings below illustrate cases of Spinal Complaints relieved or entirely cured by the use of Dr. Townsend's Sarsaparilla. We cannot spare the space to give the certificates which are very interesting, but they may be had at the office. This remedy has, thro' the blessings of Providence, performed some most astonishing cures in this most obstinate of all diseases."

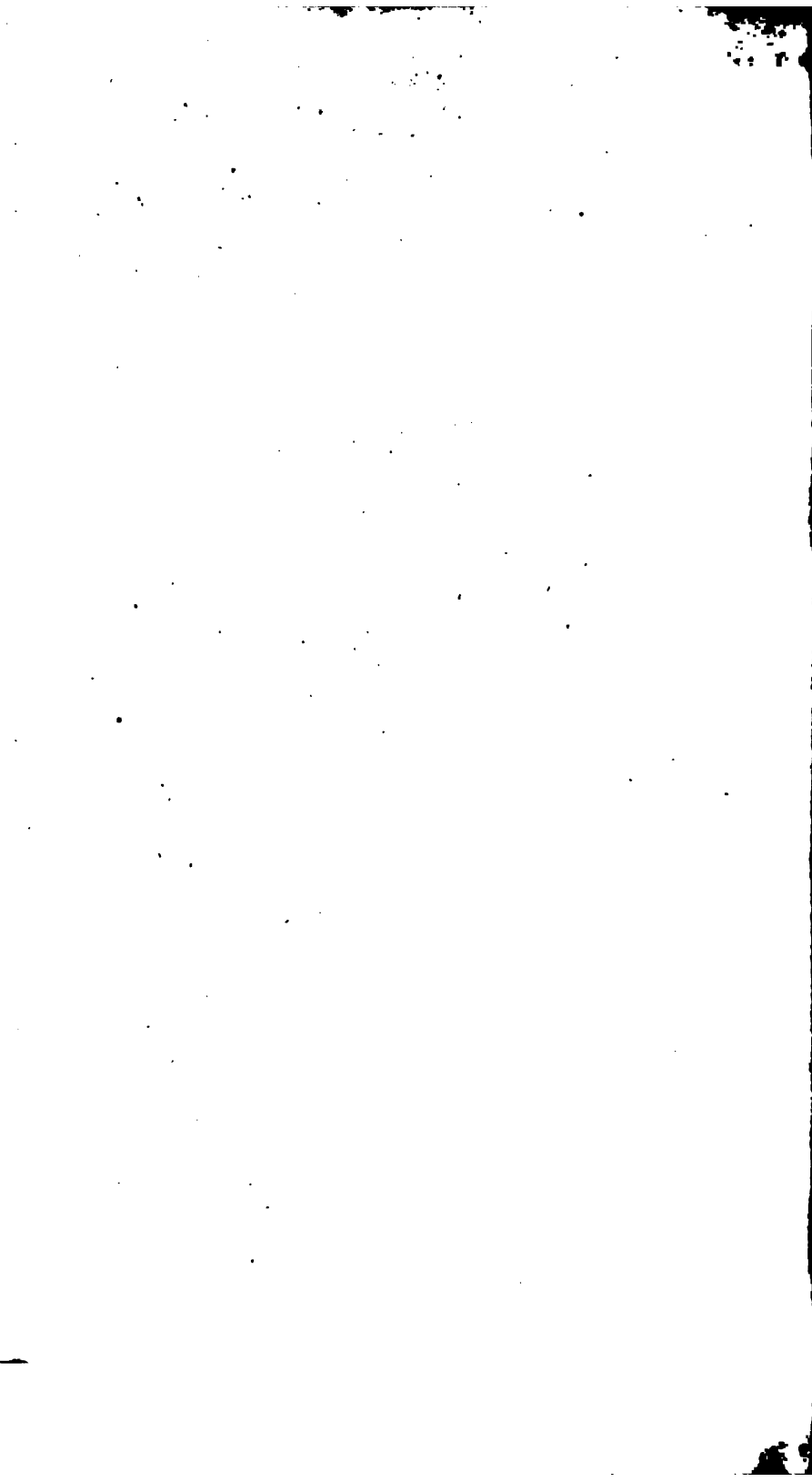
There are four "engravings below," or following the above article, all of which are ours, and will be very familiar to our readers, as we published one of them in this Journal in April, 1844; page 96, and in our Manual, page 61, and the other three in the January number for 1847, and *Manual*, figures 1, 2 and 4. Our readers will also remember the extraordinary results of our labors with the magnetic machine in the first, and the equally extraordinary results of Dr. Kinne's labors in the last. There was not, however, "spare space to give the certificates which are very interesting"—of course they are, and just as much so as any others he may or may not have. There is, however, nothing really extraordinary in all this, as these geniuses employ men daily to write letters to them puffing their medicines, and to write certificates of cures, and prepare them with accompanying puffs for publication, and these things are so well understood that if any intelligent man should call to see one of these letters or certificates in regard to any particular case, he would be esteemed very green, even by the inmates of the office where such wonderful articles of medicine are sold.

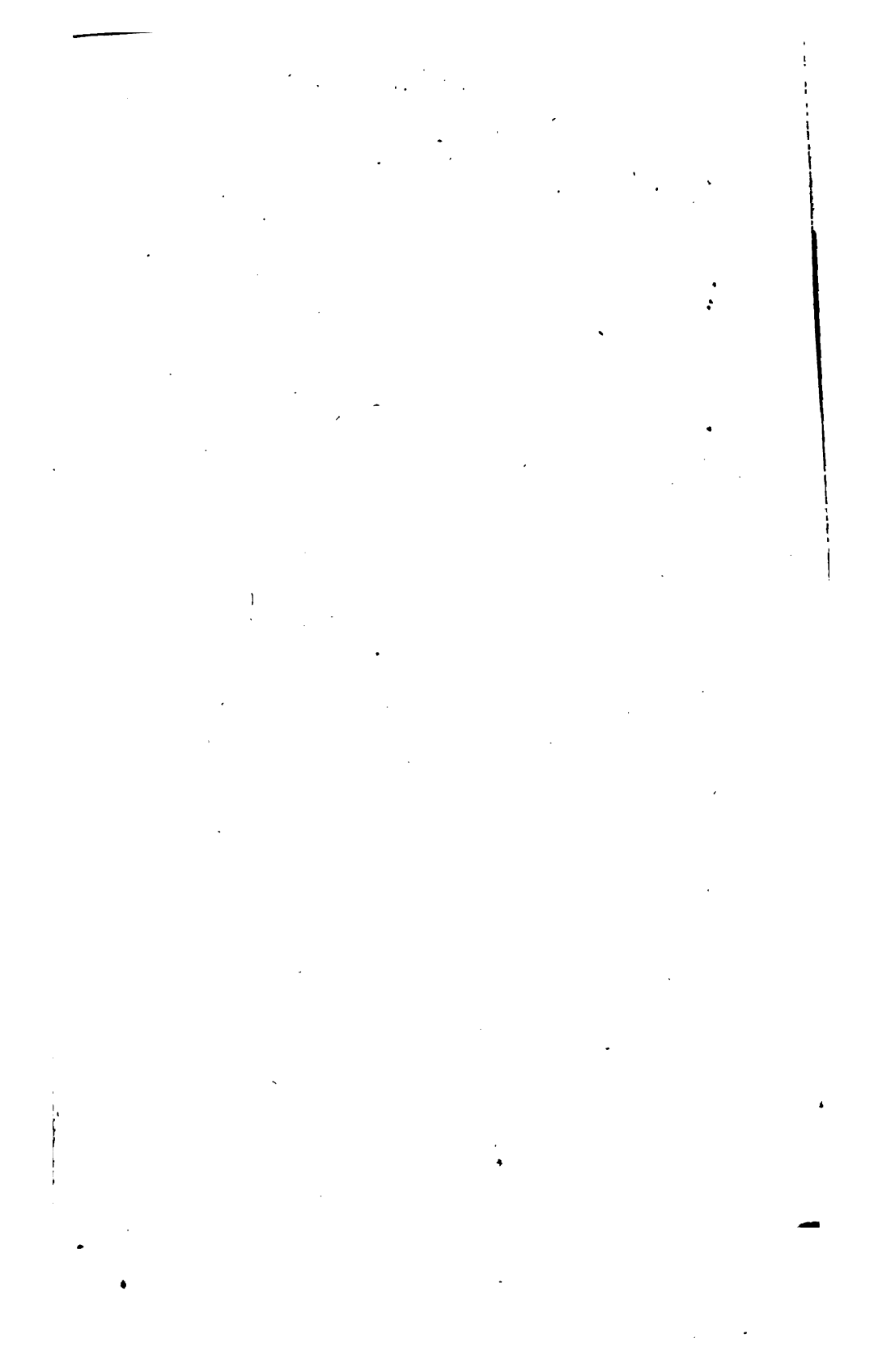














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